RESPIRATORY HEALTH INITIATIVE

COPENHAGEN INSTITUTE FOR FUTURES STUDIES

FROM POLICY TO PRACTICE

A Roadmap for Advancing Respiratory Health by 2030

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FROM NEGLECT TO ACTION

RESPIRATORY HEALTH INITIATIVE

The 2025 UN Political Declaration marks a turning point in chronic respiratory disease (CRD) recognition.

Now, CRDs demand action as an urgent public health priority. This roadmap combined expert collaboration, futures methods, and Respiratory Health Initiative (RHI) insights into real-world actionable steps for decision-makers.

SDG 3.4

2030 TARGET

REDUCE PREMATURE MORTALITY FROM NCDs BY ONE-THIRD BY 2030

2030

By 2030, people around the globe breathe cleaner air, tobacco and nicotine use have declined, and more people with CRDs receive timely diagnosis and care. Essential medicines, affordable diagnostics, and digital tools are widely available. Stronger primary health systems, better data and innovation use, and coordinated action across sectors have turned ambition into measurable results.

ROADMAP FOR ADVANCING RESPIRATORY HEALTH BY 2030

2025

PRESSING GLOBAL CRD BURDEN

Strategic Direction I
Expand access to diagnosis, treatment, and care

Strategic Direction II
Implement comprehensive tobacco and nicotine control

Strategic Direction III
Reduce air pollution and environmental risk factors

2030 TARGETS

ONE THIRD LOWER PREMATURE NCD MORTALITY

- **150 million** fewer people using tobacco
- **>80%** of PHC facilities in all countries providing WHO-recommended essential medicines and technologies for NCDs.
- **>80%** of countries with operational, multisectoral strategies on NCDs and mental health.
- **>80%** of countries implementing comprehensive NCD prevention and health-promoting policies.
- **>60%** of countries with financial protection policies covering essential NCD services and medicines.
- **>80%** of countries with functional surveillance and monitoring systems.

STRATEGIC DIRECTION I

Expand access to diagnosis, treatment, and care

- Primary access and capacity
- Health literacy and empowerment
- Continuum of care

STRATEGIC DIRECTION II

Implement comprehensive tobacco and nicotine control

- Tobacco and nicotine control policies
- Sustaining progress and building resilience

STRATEGIC DIRECTION III

Reduce air pollution and environmental risk factors

- Reducing indoor and outdoor air pollution
- Mitigating climate change effects

Robust data collection and monitoring, also in lower resource settings, through interoperable data systems.

Advancing all three directions in parallel delivers immediate gains for patients and secures long-term prevention, putting countries on a credible path to the 2030 goals.

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EXECUTIVE SUMMARY

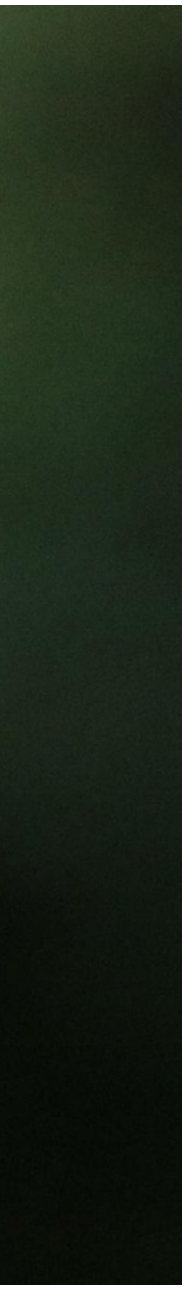
Chronic Respiratory Diseases (CRDs) are a leading yet long-overlooked cause of death, disability, and inequality. Much of this burden is preventable or manageable with earlier diagnosis, effective treatment, and action on the major risks of tobacco use and air pollution. In 2025, United Nations (UN) Member States elevated CRDs within the Political Declaration on the prevention and control of non-communicable diseases (NCDs) and the promotion of mental health and wellbeing (hereafter referred to as "the Declaration"), signalling a stronger commitment to primary care-based services, tobacco and nicotine control, cleaner air, better data, and sustainable financing. Although the formal adoption faced political delays, the Declaration was accepted with broad consensus, reflecting multilateral agreement and a clear path forward.

To chart a credible path forward, we first need to picture the future we are working toward. Futures studies use scenarios not as predictions, but as tools to clarify ambition and guide action. By imagining a realistic vision of 2030, we can measure how far we are from that destination and identify the steps needed to close the gap.

Our preferred future for 2030 is realistic and ambitious. People with CRDs are diagnosed timely and managed well in primary and community care, with seamless referral for complex needs. Essential medicines, affordable diagnostics, and digital tools are widely available, also in low-resource settings, cutting avoidable hospital stays and improving quality of life, while innovative treatments reach the patients who need them most. Tobacco and nicotine use have fallen due to routine cessation support and firm, well-enforced regulation. Exposure to indoor and outdoor air pollution is declining through cleaner household energy, better urban planning, and tighter industrial and transport standards. Robust, interoperable data systems track risks, coverage, and outcomes, guiding investment and reaching underserved groups.

To get there, countries should move now on three reinforcing directions pursued simultaneously: expand access to diagnosis, treatment, and care through stronger primary care and clear referral pathways; implement comprehensive tobacco and nicotine control across pricing, regulation, smoke-free environments, and accessible cessation programmes; and reduce air pollution and environmental risk factors in homes, workplaces, cities, and industry, enabled by monitoring and clean technologies. Advancing all three in parallel delivers immediate gains for patients and secures long-term prevention, putting countries on a credible path to the 2030 goals.

ABBREVIATIONS AND ACRONYMS

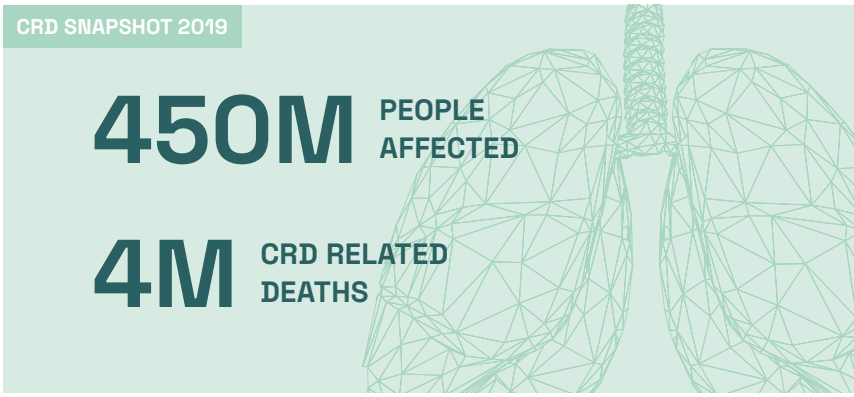


CIFS	Copenhagen Institute for Futures Studies
COPD	Chronic obstructive lung disease
CRD	Chronic respiratory diseases
DALY	Disability-adjusted life years
ENDS	Electronic nicotine delivery systems
FIP	International Pharmaceutical Federation
GARD	Global Alliance against Chronic Respiratory Diseases
GINA	Global Initiative for Asthma
GOLD	Global Initiative for Chronic Obstructive Lung Disease
IPCRG	International Primary Care Respiratory Group
LMICs	low- and middle-income countries
NCDs	Non-communicable diseases
NRT	Nicotine replacement therapy
PHC	Primary health care
RHI	Respiratory Health Initiative
RSV	Respiratory syncytial virus
SDG	Sustainable Development Goal
SWOT	Strengths, Weaknesses, Opportunities, Threats
UHC	Universal health coverage
UN	United Nations
WHO	World Health Organization
WHA	World Health Assembly

INTRODUCTION

This year marks a turning point in global health policy. For the first time, chronic respiratory diseases (CRDs) have been formally recognised in the United Nations (UN) Political Declaration (hereafter referred to as "the Declaration") on non-communicable diseases (NCDs) as an urgent global health priority *(1)*. This reflects years of advocacy, strong evidence, and the undeniable reality that CRDs are among the leading causes of death and disability worldwide.

CRDs, a neglected global health burden



Despite being some of the most common NCDs, CRDs remain undervalued in health policy and care. The most prevalent are chronic obstructive pulmonary disease (COPD), asthma, occupational lung disease, and pulmonary hypertension *(2)*. CRDs drive death, disability, and inequality across societies *(2)*. Together, they affected an estimated **450 million people worldwide** and were the third leading cause of death, responsible for around **4 million deaths in 2019** *(3)*. The societal burden is compounded by an economic one. In the World Health Organisation (WHO) European Region alone, CRDs account for an estimated US $20.7 billion in productivity losses each year *(2)*. Despite the scale, CRDs have long been overlooked in global and national health agendas.

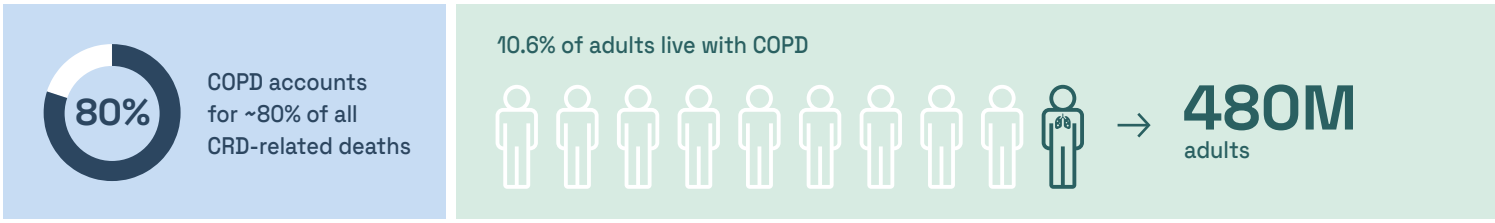
Drivers of CRDs

The disparity is striking, considering many CRDs are preventable or manageable. The most important risk factors for preventable CRDs are tobacco smoke, indoor and outdoor air pollution, allergens, low birth weight, poor nutrition or acute respiratory infections in early childhood, and occupational dusts and chemicals *(2)*. Nearly 70% of all CRD deaths are due to modifiable risk factors, with tobacco use accounting for nearly 1.8 million deaths and air pollution for 1.3 million *(3)*. Globally, tobacco use is the leading cause of CRD deaths and disability-adjusted life years (DALYs), with air pollution taking precedence in lower socioeconomic areas *(4)*.

Air pollution consists of small particles that penetrate deep into the lungs and bloodstream, creating serious risks for CRDs. The primary source of household pollution is the combustion of solid fuels and kerosene for cooking, heating, and lighting, disproportionately affecting women and children *(5, 6)*. Nearly 1.2 billion people live in energy poverty, and half of the households in low- and middle-income countries (LMICs) rely on biomass or coal for cooking, with 90% of them living in rural areas *(7, 8)*. Outdoor air pollution originates from transport, industry, energy generation, chemicals and the open burning of waste and biomass, particularly rural crop residue burning *(9, 10)*. Occupational exposures to vapours, gases, and fumes further raise mortality risks *(11)*.

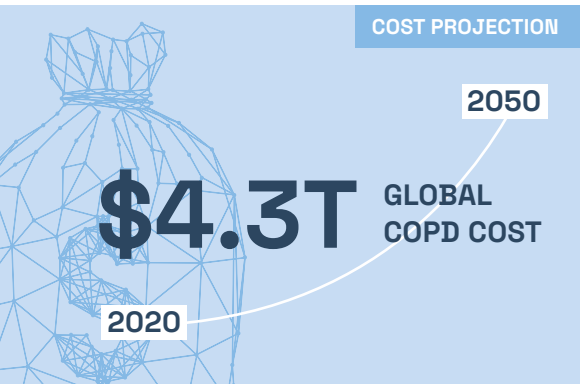
COPD and asthma

COPD and asthma are the most common CRDs, with COPD accounting for nearly 80% of all CRD-related deaths *(2)*. In 2020, approximately 10.6% of adults were estimated to live with COPD, affecting 480 million people *(12)*. This figure is projected to rise to 592 million by 2050, especially in LMICs, where nearly 90% of premature COPD deaths occur *(12, 13)*. Gender inequities further amplify disparities with a growing and greater burden projected among women *(12)*. Asthma is the most common chronic disease among children, affecting an estimated 262 million people and causing nearly 460.000 deaths in 2019 *(14, 15)*.



Underdiagnosis and undertreatment

Underdiagnosis, limited access to treatment are common challenges and are further exacerbated by poverty and gender disparities. Asthma is often underdiagnosed and undertreated in LMICs, where most asthma-related deaths occur *(3, 14)*. Pharmacological therapy remains the only evidence-based intervention for asthma, highlighting the need to improve access and availability of medicines. Globally, as many as 70% of COPD cases may go undetected, and in the United Kingdom alone, an estimated two million people live with undiagnosed COPD *(16, 17)*. Despite the potential for early intervention and better symptom control, many patients experience severe exacerbations and live diminished lives, compounded by broader emotional and economic burdens that affect families and communities.



Future trajectories

With ageing populations and continued exposure to risk factors, the social and economic burden of CRDs is expected to rise even further *(18)*. Without effective investment, the global cost of COPD alone is expected to reach US$4.3 trillion between 2020 and 2050 *(12)*. Nevertheless, investment in CRDs remains disproportionately low, perpetuating the cycle of neglect. This trajectory, however, is not inevitable. Proven, cost-effective interventions exist to reduce tobacco use and air pollution, tackle inequities, enable earlier detection, and expand universal access to quality care *(19)*. Implementing the right strategies could prevent millions of deaths, improve the quality of life for those affected, and reduce the strain on communities and health systems worldwide.

From neglect to recognition: CRDs in the UN Political Declaration

The Declaration is an agreement among United Nations Member States to accelerate action on the prevention and control of NCDs, in line with the Sustainable Development Goal (SDG) 3.4 to reduce premature mortality from NCDs by one-third by 2030. It sets a global agenda with a clear commitment to address CRDs, increasing their visibility among other major NCDs. This reinforces

the earlier adoption of the World Health Assembly's (WHA) Lung Health Resolution and, together, these political commitments promote an integrated approach to lung health *(20)*.

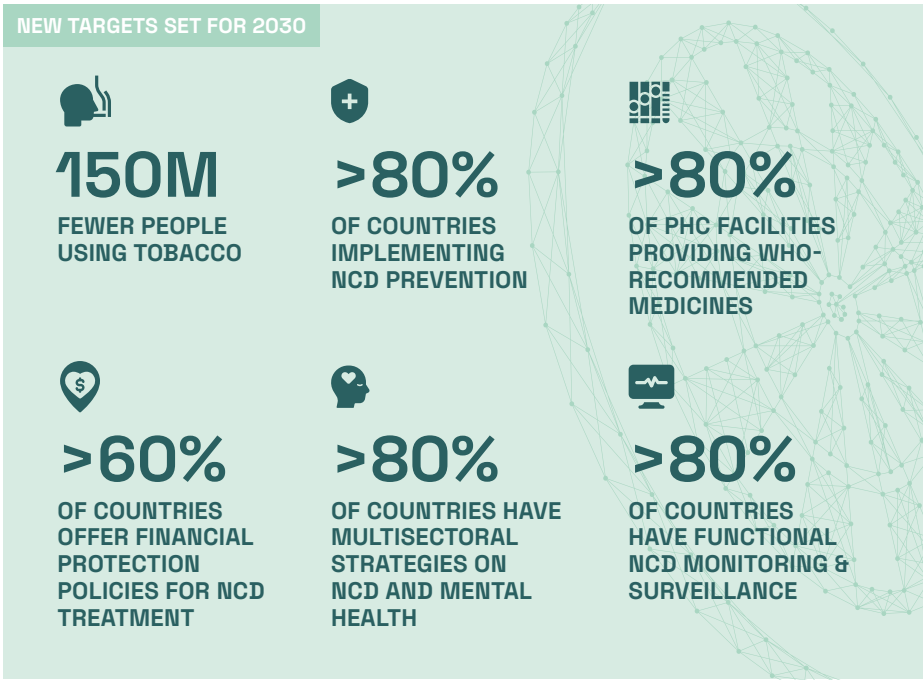
Although most states reached a broad consensus, one country blocked the Declaration's initial adoption. This once again highlighted that despite strong evidence and broad alignment, politics can still delay health progress. Nevertheless, Member States reaffirmed their support for the Declaration's vision, expressed by a consequent majority vote. This publication recognises that while science may win the argument, it is political will that ultimately determines the pace and extent of implementation.

In the Declaration *(1)*,
Member States commit to urgently:

1. **Accelerate action on NCDs**, with CRDs explicitly included.
2. **Promote national policies** for an integrated approach to lung health within primary health care (PHC) as the foundation of universal health coverage (UHC) by:
   - » Expanding community-based services, screening, diagnosis, treatment, referral, and follow-up.
   - » Increasing the number and skills of trained health workers.
   - » Ensuring access to affordable, effective medicines, diagnostics, and digital tools.
3. **Recognise tobacco use and air pollution** as among the main modifiable risk factors.
4. **Implement strong tobacco and nicotine control measures**, including higher taxes, advertising bans, health warnings, smoke-free policies, cessation programmes, and regulation of electronic nicotine delivery systems (ENDSs).
5. **Scale up prevention,** early diagnosis, and treatment of asthma and COPD by:
   - » Improving access to effective treatment,
   - » Strengthening diagnostic services,
   - » Establishing structured programs and services for the long-term management of CRDs.
6. **Address social, economic, and environmental determinants** of CRDs, particularly air pollution and harmful chemical exposure.
7. **Improve health literacy** through sustained, evidence-based communication on the risks of tobacco, nicotine, and air pollution.
8. **Mobilise sustainable financing**, strengthen governance, and support research, data, and surveillance to monitor progress and accountability.

New targets set for 2030 are (1):

- → 150 million fewer people using tobacco.
- → At least 80% of countries implementing comprehensive NCD prevention and health-promoting policies.
- → At least 80% of PHC facilities in all countries providing WHO-recommended essential medicines and technologies for NCDs.
- → At least 60% of countries have financial protection policies covering essential NCD services and medicines.
- → At least 80% of countries have operational, multisectoral strategies on NCDs and mental health.
- → At least 80% of countries have functional surveillance and monitoring systems.



Commitments and financing

As recognised in the Declaration, sustainable improvements in healthcare systems rely on adequate funding and strong governance. The formal acknowledgement of the burden of CRDs signifies a critical expression of political will from Member States, which in turn raises expectations for increased investment into the Declaration's objectives. Importantly, the Declaration and the WHA's Lung Health Resolution mean Member States must navigate both disease-specific, preventive, and systems-strengthening approaches and their different funding streams. This political momentum should be carefully utilised to unlock funding, finance global collaboration, and potentially reallocate existing resources to have the greatest impact.

The WHO has identified a set of evidence-based interventions with a high return on investment, known as the Best Buys *(21)*. According to the Declaration, investing in these measures could save up to 7 million lives and generate 50 million additional years of healthy life, with an estimated return of US$7 for each US$1 spent by 2030 *(1)*. A subset of the Best Buys is the Quick Buys, interventions that deliver measurable health gains within 5 years *(22)*. This report integrates the Quick Buys into its recommendations to help guide resource allocation and promote investment in cost-effective actions that yield tangible results by 2030. While these interventions focus on mortality reduction and cost-effectiveness, they may overlook the broader quality-of-life and long-term benefits of sustained chronic disease management, highlighting the need to complement short-term, high-impact measures with longer-term strategies that strengthen prevention and improve quality of life.

Turning recognition into action

Formal recognition of the burden of CRDs signals that governments acknowledge the urgency for action, but recognition is only the first step. Turning commitments into reality requires national health and environmental policies that translate into concrete measures to strengthen CRD care and prevention.

To meet the 2030 UN targets, this report presents a roadmap aligned with the Declaration's commitments. It aims to support decision-makers by translating global commitments into measurable national action plans. Also, it emphasises shared priorities to align standards of

care, integrate CRD prevention into broader health and environmental agendas, and coordinate action across sectors. The Roadmap is not an exhaustive action plan nor a prescription for local adaptations, but a framework to guide translation of global ambition into tangible improvements in people's lives.

The Roadmap's strategic directions provide comprehensive pathways to reduce the burden of CRDs, particularly premature deaths and disease onset. Doing so, it closes care gaps, strengthens health systems, and ensures CRDs remain high on the political agenda.

The next five years are decisive. By aiming for ambitious but achievable outcomes, we can lay the groundwork for sustained progress on respiratory health beyond 2030. This means doing everything possible now to protect people from preventable CRDs, improve patient outcomes through early diagnosis and quality care, and build a future where respiratory health is safeguarded and promoted for generations to come.

BUILDING THE ROADMAP USING FUTURES STUDIES

Scenario building

Futures studies offer powerful methods for anticipating change and guiding long-term planning, such as scenario-building and backcasting. By defining a narrative scenario of the future, we develop a more comprehensive understanding of our goals and values.

Using this approach, we developed A Preferred Future for Respiratory Health, a scenario drawing from extensive research, expert interviews and high-level events. During one such panel discussion organised by CIFS, global CRD experts explored two contrasting futures: an Aspirational and a Cost of inaction scenario, illustrating what 2040 could look like with or without ambitious action on CRD management. Insights from these discussions helped refine the Aspirational scenario into the Preferred Future, aligning it with the 2030 UN targets, to provide a concrete direction for the years ahead.

The scenario presented is intentionally ambitious. It aligns with global health goals while accounting for real-world constraints and opportunities. Its realisation will depend on the sustained commitment of diverse actors, including political leaders, health professionals, civil society, and international organisations, working together to turn this preferred future into reality.

Towards 2030: a preferred future for respiratory health

By 2030, countries have strengthened their commitment to tackling CRDs, making them a clear public health priority.

Progress has been steady in reducing their burden, with wider access to care, advances in treatment and more effective systems for diagnosis and prevention. The use of tobacco, e-cigarettes, and electronic nicotine products has declined globally, but the biggest health gains stem from improved access to effective medications and more consistent respiratory care. Although the global picture remains mixed, there is growing coherence in how lung health is addressed across health systems. It is a moment for all collaborators to celebrate how far we have come and to renew our dedication to ensuring that everyone, everywhere, will breathe easier in the years ahead.

Large improvements in access to adequate treatment have resulted in a better quality of life for those affected by CRDs. Universal access to effective medications has expanded, with improved availability in low-resource settings. Corticosteroid and bronchodilator dependence are recognised as significant challenges and increasingly balanced with access to innovative treatments. Treatment management has also improved with many countries having strengthened primary and community care, improving continuity between care levels and offering essential therapies. Under-treatment has decreased, and complications are becoming less frequent.

While treatment has improved the quality of life, simultaneous efforts in diagnostics have resulted in more accurate detection of new patients. Primary care professionals are better trained in common diagnostic tools, with spirometry now being generally available and affordable. Professionals are guided on task prioritisation and appropriately reimbursed for additional tasks. Though misdiagnosis remains a concern, improvements in diagnostic training, standardised data systems, and AI-powered tools have reduced the risk and led to screening and monitoring successes. Health care planning is facilitated with novel digital solutions, and care can be more efficiently allocated to those in need.

Preventive measures are expanding, and their health impact is gradually becoming visible. Tobacco and nicotine control policies, including higher taxes, advertising bans, smoke-free zones, and stronger cessation support, have led to a global decline in tobacco and nicotine use. Youth vaping has also become less common in many countries, reflecting stronger regulation and shifting social norms. Several nations have achieved success by channelling tobacco tax revenues into their respiratory health budgets. However, regulation enforcement and community outreach remain key. Air pollution exposure is being tackled through environmental regulations, urban planning, and low-emission zones in highly populated areas. Clean-fuel stoves and novel ventilation solutions have improved indoor air pollution, alleviating the burden on women and children. Health literacy campaigns and digital outreach have increased public recognition of CRD symptoms. As more patients now seek care, the number

of diagnoses has increased; however, through improved disease management, most patients remain in the earlier stages of illness and avoid severe exacerbations.

Improved data collection and monitoring across sectors have enabled better tracking of tobacco and nicotine use, air quality, and health outcomes. Stronger digital health systems and workforce capacity have improved data quality, communication, and progress tracking. In particular, air quality forecasting is increasingly used to inform personalised action plans and reduce exposure to low quality air. Nationwide electronic health records, e-prescription systems, and better data sharing ensure continuity of care for people with CRDs, while patients' access to their own records supports self-management. Advances in real-time sensing and digital monitoring now guide targeted interventions for healthier environments. Improved coding of health service use and outcomes, including patient-reported outcome measures (PROMs) and death records, helps inform monitoring and evaluation. While disparities remain, more health systems are utilising these data to better allocate resources and reach marginalised groups.

Although CRDs haven't been eliminated, the global trajectory has become more hopeful. By 2025, many countries demonstrated real political will to improve lung health for all and followed up by investing in strategic actions. Translating the UN targets into national and regional goals, tailored to local contexts, allowed for diverse paths to progress. Multisectoral collaboration, open dialogue, and continuous monitoring helped turn slow and steady gains into enduring improvement. Together, these efforts have begun to establish the foundations for lasting, sustainable progress in respiratory health and equity, ensuring they remain a policy priority.

Backcasting: the present through the lens of the future

Defining the scenario for 2030 clarifies the destination we aspire to, while looking back from that future to the present gives insight into the necessary steps to get there. To translate the scenario and the Declaration into a strategic framework for action, we brought together respiratory experts for a workshop using a backcasting approach. Unlike forecasting, which projects current trends into the future, backcasting starts from a clearly defined future goal, embedded in a scenario, and works backwards to identify the conditions and strategic actions necessary to reach it. This enables stakeholders to map potential leverage points, clarify the timing and responsibility for key decisions, and identify areas where coordinated action could produce sustained effects. The resulting insights can guide the prioritisation of interventions, the mobilisation of resources, and the cross-sectoral collaboration required to prevent, treat and manage CRDs and advance equity in respiratory health.

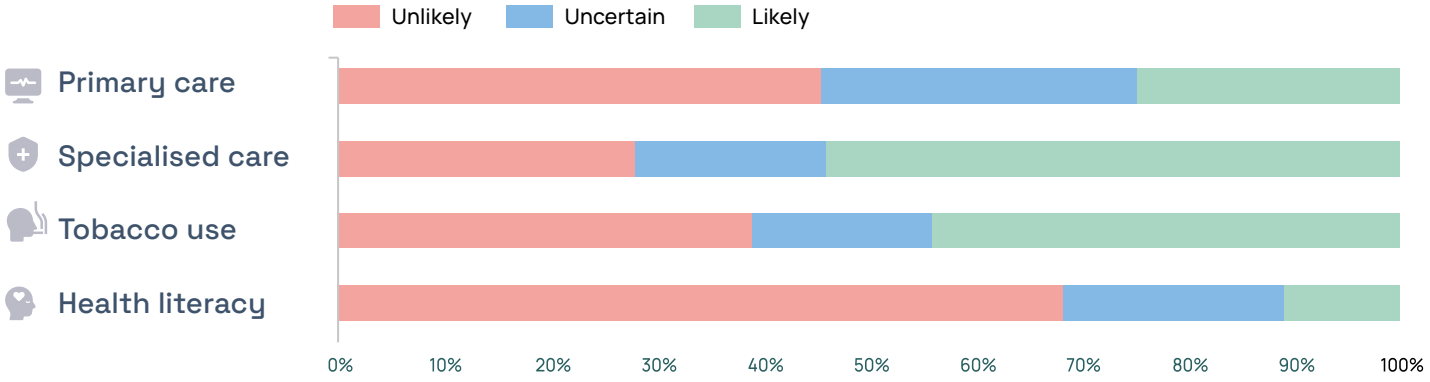
Perspectives from research and practitioners

This process also draws on the knowledge and expertise gained from the development of the COPD and Severe Asthma Indices, which were created using publicly available data and expert input as part of the Respiratory Health Initiative (RHI). These publicly accessible tools were designed to help countries improve the treatment, management, and prevention of CRDs. Insights from the RHI provided a strong foundation for developing both the Scenario and the Roadmap.

During high-level panel discussions organised by CIFS, experts reflected on how to turn global policy commitments into action, bridging the gap between political ambition and the realities of clinical practice. They highlighted the importance of treating the whole person, integrating mental health, and safeguarding the right to clean air. The discussions also underscored the value of trusted community messengers in building health literacy, the need to shrink the gap between primary and secondary care, and the importance of context when translating guidelines into effective local action. Beyond systems and structures, experts emphasised the human side of care, rethinking how primary care is delivered, using specialists' time more efficiently, and ensuring that care is more accessible.

Looking ahead, the audience was invited to envision the future of respiratory health in 2030, using a selection of the Declaration's future-oriented commitments:

STATEMENTS	RESPONSES
01 By 2030, primary care systems will routinely provide integrated management for chronic respiratory diseases, including screening, diagnosis, and long-term follow-up.	Nearly half of respondents (46%) considered this unlikely (40%) or very unlikely (6%), while only one in four (25%) saw it as likely (19%) or very likely (6%). 30% remained uncertain.
02 By 2030, specialised respiratory care centres will be central in managing severe chronic respiratory diseases, providing advanced diagnostics, treatment, and coordinated support for primary care.	Responses were more positive: over half of participants (54%) saw this as likely (40%) or very likely (14%). By contrast, 28% judged it unlikely (20%) or very unlikely (8%), while 18% remained uncertain.
03 By 2030, there will be 150 million fewer people using tobacco globally.	Opinions were sharply divided. Nearly half (44%) considered this outcome likely (33%) or very likely (11%), but 39% judged it unlikely (28%) or very unlikely (11%), with 17% uncertain.
04 By 2030, at least 80% of countries will have implemented sustained health literacy and prevention programs for NCDs and mental health.	Here, respondents were the most sceptical: the majority (69%) thought this unlikely (46%) or very unlikely (23%). Only 11% were considered this likely (8%) or very likely (3%), and 21% remained uncertain.



These divisions in responses underscored the profound uncertainty of our shared future and the urgency of decisive action. Progress requires collaboration across sectors and disciplines, with patients, providers, and policymakers working together to shape the future of respiratory health.

The events and workshops helped prioritise actions. The respiratory experts highlighted that expanding treatment could deliver the greatest and most immediate impact over the next five years. Ensuring access to affordable, effective care and expanding screening for at-risk populations can slow disease progression, reduce avoidable hospitalisations and improve the quality of life for millions. At the same time, experts emphasised the need to address the preventable drivers of CRDs: smoking, second-hand smoke, and air pollution, to curb new cases and support long-term management. Tackling these root causes is essential for sustaining progress in CRD prevention for future generations, just as improving treatment is vital for patients today.

ROADMAP TO 2030

2025

PRESSING GLOBAL CRD BURDEN

Strategic Direction I

Expand access to diagnosis, treatment, and care

Strategic Direction II

Implement comprehensive tobacco and nicotine control

Strategic Direction III

Reduce air pollution and environmental risk factors

2030

ONE THIRD LOWER PREMATURE NCD MORTALITY

150 million fewer people using tobacco

>80% of countries implementing comprehensive NCD prevention and health-promoting policies.

>80% of PHC facilities in all countries providing WHO-recommended essential medicines and technologies for NCDs.

>60% of countries with financial protection policies covering essential NCD services and medicines.

>80% of countries with operational, multisectoral strategies on NCDs and mental health.

>80% of countries with functional surveillance and monitoring systems.

Improving respiratory health requires recognising the interconnected nature of every step along the pathway. Effective treatment depends on accurate diagnosis, which in turn relies on the right tools, trained professionals, and population-level awareness. Similarly, improving access to treatment enhances the quality of life for those already affected, but only preventive action can protect future generations. Therefore, the Roadmap is guided by three strategic directions, as parallel priorities that must be pursued together, not separate paths to choose between:

I. Expand access to diagnosis, treatment, and care
II. Implement comprehensive tobacco and nicotine control
III. Reduce air pollution and environmental risk factors

STRATEGIC DIRECTION I

Expand access to diagnosis, treatment, and care

Ensuring access to affordable therapies

Expanding timely diagnosis

Embedding CRD management into health systems

STRATEGIC DIRECTION II

Implement comprehensive tobacco and nicotine control

Accelerating comprehensive measures to reduce tobacco use and address the rising challenge of novel nicotine products

STRATEGIC DIRECTION III

Reduce air pollution and environmental risk factors

Combat indoor, occupational, and outdoor air pollution

Importance of data monitoring

Across all strategic directions, data collection and monitoring are essential to track the progress toward the Preferred future. Without them, stakeholders cannot determine which actions are effective or need greater attention. Strong data systems enable countries to track prevalence, set targets, and evaluate progress to reduce the burden of CRDs while also supporting efficient health planning, disease monitoring, and government accountability.

Yet data gaps remain widespread. Many countries lack reliable information on CRD prevalence, the number of respiratory specialists and primary care providers, or the availability of spirometry. Inconsistent cause-of-death coding and limited disaggregation of data by gender, socioeconomic status, or geography can obscure inequities and complicate comparisons. Fragmented data systems undermine the impact of interventions and quality control.

Strengthening data capacity requires solid foundations: accurate diagnostics, standardised definitions, reliable tools, and well-trained staff. Investment in interoperability across care levels and adoption of international standards such as the WHO's International Classification of Diseases (ICD) coding is essential.

Reliable data support the delivery of care. Clinicians collect and code information to support clinical decision-making and improve patient outcomes. Accessible and consistent records enhance diagnostic accuracy, coordination among professionals, and continuity of treatment, leading to earlier intervention and fewer exacerbations. At the population level, strong data systems help anticipate health needs and allocate resources accordingly.

Finally, as diagnostics and death coding improve, the reported CRD prevalence and mortality may increase, reflecting the true burden. Accurate data remain vital for targeting resources, guiding treatment, and strengthening health system planning. Over time, through engagement with citizens and patients, the focus may shift from urgently preventing deaths to sustainably improving the quality of life for people living with chronic diseases.

Setting targets and measuring progress

A critical challenge in moving toward the Declaration targets is deciding what to measure. Countries and regions vary significantly in their burden of disease, health system capacity, and resource constraints, making universal intermediary targets for the path to 2030 unfeasible. We acknowledge the difficulty in mobilising funding, especially in LMICs, and the significant variations in needs and challenges both between and within countries.

This report adopts a global approach, providing strategic directions for practical use. To support this, the Roadmap proposes a non-exhaustive set of indicators under each strategic direction, drawing on the COPD and Severe Asthma Indices, academic research, and WHO recommendations. The goal is to provide practical metrics for tracking progress, enabling cross-country comparison, and identifying urgent gaps. All indicators should be disaggregated by gender, age, race/ethnicity, socio-economic status, geography, and other relevant factors.

These indicators are intended to guide practical implementation, rather than serve as a comprehensive list. Each country should begin by assessing its baseline CRD burden and health system characteristics before selecting indicators to enable meaningful comparison across contexts. Additional indicators can then be developed to reflect local priorities, ensuring national ownership and suitable measures.

Measuring progress also requires looking beyond clinical outcomes. CRDs affect not only patients but also their families, influencing education, productivity, caregiving, and mental health. Integrating health economic models can uncover the hidden costs of CRDs, while environmental indicators reveal the broader impact on the natural environment. Together, these measures help decision-makers capture the full impact of policies and interventions.

Table 1. Core indicators of clinical outcomes, indicative of progress in all strategic directions, should be disaggregated by gender, age, race/ethnicity, socioeconomic status, and geography, where relevant.

Indicators of clinical CRD outcomes, absolute, per 100,000, or as a share of the total	Incidence and prevalence of CRDs
	CRD deaths
	CRD-related DALYs
	Number of CRD-related emergency and primary care visits
	Number of CRD-related hospitalisations, including among children
	Average length of hospital stay
	Hospital readmissions after discharge
	90-day post-discharge mortality
	Early life indicators: prematurity rate (%) and respiratory syncytial virus (RSV) infections
	Patient quality of life
	Patient and physician satisfaction
	Proportion of monitoring datasets disaggregated by key equity dimensions

STRATEGIC DIRECTION I:
Expand access to diagnosis, treatment, and care

Reducing the burden of CRDs requires timely diagnosis, effective treatment, and seamless care across all care levels.

Primary care plays a crucial role in the recognition, prevention, and management of CRDs. Strengthening primary care, supported by clear referral pathways, is therefore the foundation of a better PHC system and CRD outcomes. This aligns with the Declaration, which states PHC as the most equitable, affordable and feasible factor to improve lung health and achieve UHC.

Primary prevention, by reducing exposure to risk factors such as tobacco use and air pollution, helps avert the onset of disease. Secondary and tertiary prevention, focused on early detection, effective management, and rehabilitation, are critical to improving survival and quality of life, driving progress toward the 2030 targets. Sustained primary prevention then becomes key to maintaining these gains over time.

Strategic direction I

2025

FRAGMENTED INACCESSIBLE HEALTHCARE SYSTEMS

- Primary care access and capacity
- Health literacy and empowerment
- Continuum of care

2030

TIMELY DIAGNOSIS, EFFECTIVE TREATMENT, AND SEAMLESS CARE

>80%

of PHC facilities in all countries providing WHO-recommended essential medicines and technologies for NCDs.

Primary care access and capacity

Ensuring timely diagnosis and expanding access to effective, affordable treatment for people living with CRDs is an immediate priority across all settings. Primary care plays a crucial role in diagnostics, treatment, prevention, health promotion, and structured follow-up and support. Expanding the reach of primary care services is critical to reducing inequities and improving health outcomes.

TARGET

>80%

"AT LEAST 80% OF PHC FACILITIES IN ALL COUNTRIES HAVE AVAILABILITY OF WHO-RECOMMENDED ESSENTIAL MEDICINES AND BASIC TECHNOLOGIES FOR NCDS AND MENTAL HEALTH CONDITIONS, AT AFFORDABLE PRICES, BY 2030." *(1)*

"REACHING 80% AVAILABILITY OF ESSENTIAL CRD MEDICINES AND TECHNOLOGIES IS KEY TO BETTER HEALTH OUTCOMES AND EQUITY." *(2)*

Access gaps

Access challenges are particularly acute in LMICs, where essential medicines such as inhaled corticosteroids, combination therapies, and even basic diagnostics are often unavailable, excluded from health benefit schemes or unaffordable *(2, 23)*. Essential diagnostic tools such as spirometry should be universally accessible, yet significant gaps persist across all settings. In high-income countries, innovative medicines are more readily available but frequently not reimbursed. High-risk patients everywhere must have equitable access to these treatments to prevent avoidable exacerbations, hospitalisations and deaths.

***Table 2.** Suggested indicators for access to care, disaggregated by gender, age, race/ethnicity, socioeconomic status, and geography, where relevant.*

Suggested indicators for access to care
Number of respiratory specialists per 100,000
Number of primary physicians per 100,000
Number of primary care nurses per 100,000
Gender, ethnic, cultural, and generational diversity of health care staff
Public payor (insurance) coverage for relevant drugs and treatments
Public payor (insurance) coverage for relevant diagnostic tools and methods
Stock-out rates for relevant medicines and diagnostic tools in public sector
Availability of relevant medicine, in percentage sold in public sector versus private sector
Maximum annual costs of treatment per patient
Coverage of UHC services for population
Percentage of patients reporting unmet healthcare needs due to distance from points of care, financial barriers, or waiting lists
Average waiting time for initial and follow-up consultations with a primary care provider, especially in rural or underserved areas
Availability of multidisciplinary care teams, including coverage during evenings and weekends, especially in rural or underserved areas

Capacity building

Primary care providers need a broad mix of competencies: clinical skills for diagnosis and prescribing; counselling skills for nicotine cessation and patient support; and system skills to ensure structured follow-up and timely referral. Task-shifting models can further expand capacity by enabling nurses, pharmacists, and community health workers to deliver essential services, particularly in underserved areas.

Education on CRD management, including treating tobacco dependence, should be embedded in medical curricula and reinforced through ongoing clinical trainings. Proper understanding and use of essential tools such as spirometers, ambulatory oxygen, and medications are crucial. Guidance on task prioritisation and appropriate reimbursement for additional responsibilities can help ensure that expanding roles remain feasible for healthcare professionals. Clear referral guidelines ensure that routine cases are managed at the primary care level, while severe or treatment-resistant cases receive specialised care.

Building confidence among primary care professionals is also essential, ensuring they have the knowledge, support, and resources to manage CRDs effectively, empower patients, and coordinate timely referrals. Expanding the role of primary care also requires investment in teaching and mentoring capacity, ensuring there are enough trained educators to support continuous learning and clinical supervision.

Embedding data collection practices within medical training strengthens surveillance, ensuring that diagnosis is accompanied by consistent recording and reporting. A skilled and adequately staffed workforce can recognise symptoms early, provide appropriate treatment, and make timely referrals, without becoming overburdened.

***Table 3.** Suggested indicators for primary care capacity, disaggregated by gender, age, race/ethnicity, socioeconomic status, and geography, where relevant.*

Suggested indicators for primary care capacity
Capabilities and recognised qualifications among different staff levels
Level of team availability, especially on evenings and weekends
Proportion of facilities with stable staffing or active succession or retention planning mechanisms, especially in rural or underserved areas
Number of vacancies or turnover rate among respiratory and primary care staff
Availability of spirometry in clinics
Trained staff to perform spirometry
Availability of pulse oximetry in clinics and access to ambulatory oxygen when clinically indicated
Medication use according to diagnosis
Percentage of (asthma/COPD) diagnoses made using objective testing
Percentage of (asthma/COPD) diagnoses made using spirometry
Incentive schemes or pay-for-performance models for CRDs management

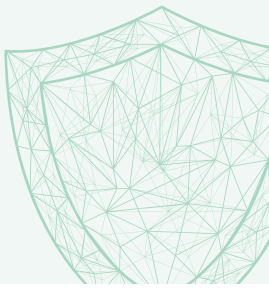
Preventive measures

Preventing disease progression is a cornerstone of effective CRD management. Vaccinations, such as influenza, pneumococcal, and RSV, play a crucial role in reducing exacerbations, preventing hospital admissions, and improving quality of life *(24)*. Smoking and nicotine cessation support should be fully embedded in primary care, where most patients first and most frequently seek help.

Comprehensive preventive counselling enables patients to avoid exposure to nicotine, second-hand smoke, indoor air pollution, and harmful occupational exposures. This includes raising awareness of these risks and advising on safer practices, such as improved ventilation and cleaner cooking methods. Training should equip providers to tailor messages for vulnerable groups, including children, pregnant women, and the elderly, ensuring that preventive advice is both targeted and effective.

***Table 4.** Suggested indicators for preventive measures, disaggregated by gender, age, race/ethnicity, socioeconomic status, and geography, where relevant.*

Suggested indicators for preventive measures	Influenza vaccination rate (particularly over 65 years)
	RSV vaccination rate (particularly over 65 years)
	Compliance with patient counselling
	User satisfaction with patient counselling and training



Screening and digital innovations

Technology can extend the reach of care beyond clinical walls. Pre-diagnostic tools, such as digital symptom checkers, can help identify potential cases for follow-up. Linking targeted screening directly to treatment pathways and referral protocols ensures that identified cases receive appropriate follow-up and care. Combining symptom-based screening (e.g. breathlessness, wheeze) with risk-based approaches (e.g. tobacco/nicotine use, exposure to air pollution or occupational hazards) increases the chances of detecting CRDs early. Integrated and structured processes should also ensure that CRDs identified through other care pathways are captured and managed appropriately, while minimising false positives and unnecessary interventions.

Defining and prioritising high-risk patients

Identifying high-risk patients should go beyond clinical indicators to include social determinants such as gender, isolation, and socioeconomic status. Comprehensive patient assessment should therefore integrate social and demographic variables with medical history and diagnostic data to enable more equitable care planning and early intervention.

Patients should be categorised by risk level, immediate, high, moderate, or lower, with clear guidance on follow-up measures, frequency of reviews, and referral pathways. Prioritising immediate and high-risk patients can significantly reduce hospitalisations and improve outcomes. National or regional guidelines should define these risk groups and ensure consistent application across care settings.

Table 5. Suggested indicators for screening and digital innovation, and prioritising high-risk patients, disaggregated by gender, age, race/ethnicity, socioeconomic status, and geography, where relevant.

Suggested indicators for screening and digital innovation
Number of people screened per risk (immediate, high, moderate, lower) category
Integration of social determinants (gender, isolation, socioeconomic status) in risk identification
Community outreach or mobile screening programs targeting isolated populations
Rate of CRDs detected in screening, per disease stage
Ratio of symptomatic versus asymptomatic detections
Rate of true positive detection
Compliance with patient follow-up
Access to telemedicine, remote care and digital therapeutics and extent of public payor (insurance) coverage
User satisfaction with technology-enabled patient education

Health literacy and empowerment

Early recognition and adherence

Breathlessness is often mistaken for ageing or low fitness, even though it is a common symptom of CRDs. Improving health literacy, the ability to understand and act on health information, is key to early recognition and timely care within the general population. Health literacy initiatives help people recognise when to seek care, leading to earlier diagnosis and treatment.

For those already living with CRDs, health literacy means having the knowledge and confidence to manage their condition and related comorbidities. Stronger health literacy enhances therapy adherence, supports self-management, and reduces avoidable hospital visits. It also helps people navigate the health system more effectively, making better use of services, such as pulmonary rehabilitation, telemedicine, and digital therapeutics. This, in turn, improves satisfaction with care, supports mental well-being, and promotes early recognition of exacerbations.

Education and messaging

Health literacy education should begin early in life and be delivered by trusted messengers such as teachers and peers. Medical professionals and community leaders also play a vital role in creating supportive environments, sharing experiences, and encouraging healthy lifestyles for all. For patients, healthcare providers should explain diagnoses, treatments, and care plans in clear, accessible language, reinforce key points, and allow time to process information. Communication tailored to each patient's needs, goals, and preferences builds shared understanding between the patient and professional.

Everyday interactions with consumer products or digital platforms can help make respiratory health visible and accessible, while community engagement ensures that campaigns are culturally relevant. Simple, repeated messages about lung health, risk factors, and symptoms can correct misconceptions and position lung health as inseparable from overall well-being.

Patient empowerment and stigma

Health-literate patients are better equipped to self-manage their chronic conditions. Currently, only half of patients consistently follow their long-term medication plans *(2)*. Tailored education and consistent treatment plans empower patients to recognise early warning signs and prevent disease progression.

Healthcare providers should be trained to communicate with sensitivity and avoid stigmatisation, helping patients feel confident in seeking care and actively engaging in their treatment. Civil society and patient advocacy groups also play a vital role in giving people with CRDs a platform to speak up for their needs and rights.

***Table 6.** Suggested indicators for health literacy and empowerment, disaggregated by gender, age, race/ethnicity, socioeconomic status, and geography, where relevant.*

Suggested indicators for health literacy and empowerment
Gain of skills and knowledge
Behavioural change following learning activities
Prevention of exacerbations by tracking changes in the frequency of exacerbations
Exercise capacity
Anxiety and depression
Healthcare use (prescribed/unplanned)
Symptom recognition and adequate follow-up

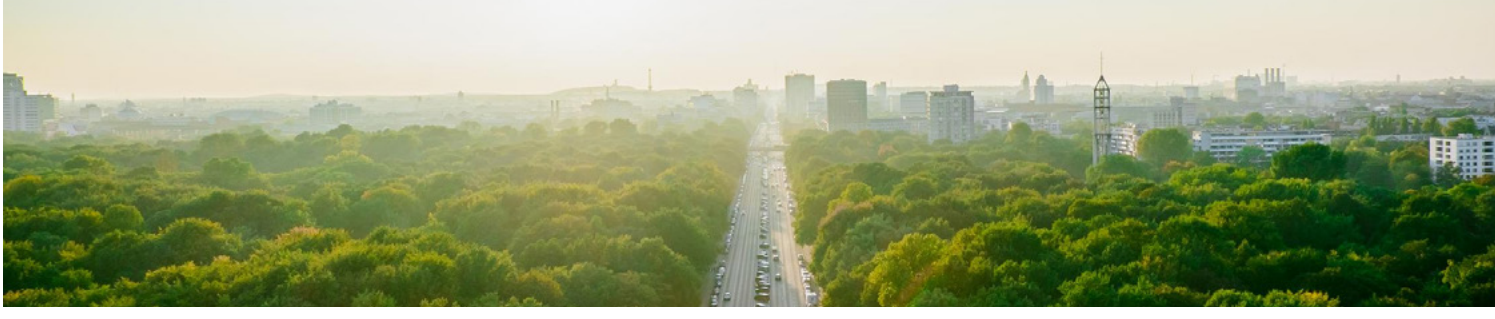
Continuum of care

Strong coordination between primary care and specialised services ensures timely referrals, advanced care when needed, and smooth transitions back to the community. Pulmonary rehabilitation may be delivered within specialised, primary care, or community settings, depending on available capacity, resources, and patient needs. Respiratory specialists can focus on advanced diagnostics and innovative therapies for severe and complex cases.

Effective communication should be supported by interoperable data systems, shared treatment plans, and clear follow-up guidance, not by patient-led record transfer. Continuity should also bridge health and social support. Community health and social workers can assist with everyday needs, helping people maintain their independence and well-being. Structured discharge and re-referral protocols combined with social care coordination further facilitate transition to aftercare.

***Table 7.** Suggested indicators for care continuity, disaggregated by gender, age, race/ethnicity, socioeconomic status, and geography, where relevant.*

Suggested indicators for care continuity
Use of specialist referral pathways and direct access to specialists
Percentage of patients reporting access to their preferred clinician or continuity with a regular care provider
Public payor (insurance) coverage for specialist care
Average waiting time for initial and follow-up consultations with a respiratory specialist, especially in rural or underserved regions
Use of individualised treatment and/or action plans for CRD patients
Re-referral rates: percentage of patients referred back to secondary care within 12-18 months
Percentage of patients referred to, participating in, or completing pulmonary rehabilitation
Post-discharge adverse events
Duplication of tests and imaging
Percentage of patients eligible for phenotyping and biomarker (biologics) receiving biologic treatment
Existence and implementation of standardised discharge protocols, covering both emergency department attendance and hospital admission
Number of regions or districts implementing integrated respiratory care pathways
Proportion of patients with care plans involving both medical and social support



STRATEGIC DIRECTION II:
Implement comprehensive tobacco and nicotine control

Reducing tobacco and nicotine exposure is essential for both preventing and managing CRDs.

Building on Strategic Direction I, nicotine cessation support should be embedded in PHC. Strategic Direction II, however, extends beyond the clinic, embedding nicotine cessation within a broader, population-level strategy that reduces nicotine initiation, addresses the drivers of addiction, and protects people from exposure to second-hand smoke and aerosols.

TARGET

150M

"150 MILLION FEWER PEOPLE ARE USING TOBACCO" *(1)*

Effective implementation must be adapted to context-specific challenges and protected from tobacco industry interference. The rapid growth of alternative nicotine products risks renormalising addiction and reversing gains in tobacco control. Regulations must therefore expand to include novel products such as ENDS and heated tobacco products.

Table 8. Suggested indicators for overall tobacco and nicotine control outcomes, disaggregated by gender, age, race/ethnicity, socioeconomic status, and geography, where relevant.

Suggested indicators for overall tobacco and nicotine control outcomes	Prevalence of tobacco and nicotine use
	Average age of initiation of tobacco or nicotine use
	Share of women smoking or vaping during pregnancy
	Number and proportion of deaths where tobacco use is recorded

Strategic direction II

2025

HIGH EXPOSURE TO TOBACCO AND NICOTINE PRODUCTS AND SMOKE

2030

STRONG TOBACCO CONTROL, CESSATION SUPPORT, AND AWARENESS

Tobacco and nicotine control policies

Awareness, innovation, and monitoring

150M
fewer people using tobacco

Tobacco and nicotine control policies

A strong foundation for tobacco control already exists in the WHO Framework Convention on Tobacco Control (FCTC), the MPOWER strategies (Monitor, Protect, Offer help, Warn, Enforce and Raise taxes), and the Tobacco Control Scale (TCS), which together provide a comprehensive global framework. Achieving the goal of 150 million fewer tobacco users by 2030 requires the rapid implementation of proven measures that deliver measurable results within five years, such as WHO's Quick Buys.

Price and taxation

Raising tobacco excise taxes is the most powerful and cost-effective measure to reduce tobacco use *(25)*. Higher prices deliver substantial health and economic benefits, with the greatest impact among youth and low-income populations *(25)*. Increasing excise taxes can reduce tobacco use within as little as four months, making it one of the fastest-acting public health measures available *(22)*. Tobacco taxation is relatively low-cost to implement, generates immediate benefits, and can be sustained over time.

The WHO's Technical Manual on Tobacco Tax Policy and Administration *(26)* provides practical, context-specific guidance for designing and enforcing effective tax policies, which should be extended to all nicotine and related products. Revenues can be partially earmarked to strengthen CRD prevention and care. Ongoing monitoring should include affordability, price elasticity, sales data, and illicit trade to ensure taxation and regulation remain effective.

Table 9. Suggested indicators for tobacco and nicotine price and taxation.

Suggested indicators for tobacco and nicotine price and taxation
Presence of graphic health warnings on the packaging of tobacco and nicotine products
Bans and regulations on tobacco and nicotine advertising, promotion, and sponsorship
Change in state cigarette excise tax rates
Tobacco excise revenue as share of GDP / per capita
Real price of cigarettes
Real tobacco excise revenue
Average of MPOWER elements of WHO framework

Advertising, packaging and visibility

To maximise the impact of taxation, it must be complemented by all-comprehensive bans on advertising, promotion and sponsorship, together with large graphic health warnings and plain or standardised packaging for all tobacco, nicotine, and related products. Together, these measures reduce the affordability, visibility, accessibility, and attractiveness of harmful products.

Implementing large graphic health warnings and plain or standardised packaging can lower tobacco use within as little as 14 months, while enforcing comprehensive bans on advertising, promotion, and sponsorship can take effect within two years *(22)*. Enforcement must keep pace with evolving marketing tactics, particularly digital and influencer promotion, supported by robust monitoring systems to track youth exposure and detect advertising violations.

Table 10. Suggested indicators for tobacco and nicotine advertising, packaging, and visibility.

Suggested indicators for tobacco and nicotine advertising, packaging, and visibility.
Presence of graphic health warnings on the packaging of tobacco and nicotine products
Bans and regulations on tobacco and nicotine advertising, promotion, and sponsorship

Cessation support

Nicotine cessation programs must be a core component of any tobacco control strategy. Despite nicotine not being the main driver of CRDs, its consumption, particularly through smoking tobacco or inhaled products, substantially increases CRD risk. Moreover, nicotine dependence contributes to other chronic conditions, making comprehensive treatment of tobacco and nicotine use essential for people living with or at risk of CRD.

Providing cost-covered pharmacological interventions can reduce tobacco use within six months *(22)*. Nicotine replacement therapy (NRT), combined with brief advice and referral to quit services, significantly increases successful quitting *(27)*. Cessation efforts should be multifaceted, integrating behavioural and mental health support with pharmacotherapies. This way, cessation therapy addresses both mental and physical dependence and fits within broader disease management strategies.

To maximise reach, cessation services should be easily accessible in primary and community settings. Digital tools, such as quit apps, SMS support and virtual counselling, can engage harder-to-reach populations and provide continuous support between clinical visits. Framing nicotine use as a chronic addiction helps to reduce stigma and encourages help-seeking. Monitoring access to cessation services, including quit attempts and service uptake, is essential to evaluating their reach and effectiveness.

Table 11. Suggested indicators for tobacco and nicotine cessation support, disaggregated by gender, age, race/ethnicity, socioeconomic status, and geography, where relevant.

Suggested indicators for nicotine cessation support	Percentage of users expressing desire to quit tobacco or nicotine products
	Percentage of users attempting to quit tobacco or nicotine products
	Average number of quit attempts
	Sustained cessation of use of tobacco or nicotine products
	Cessation support program drop-out rates
	Number of cessation clinics
	Reach of existing proven services
	Availability of cost-covered cessation support for all age groups, including pharmacotherapies such as nicotine replacement therapy (NRT), varenicline, and cytisine

Eliminate second-hand smoke- and aerosol exposure

Reducing exposure to second-hand smoke and aerosols is a crucial tobacco control measure that delivers immediate health gains and can quickly reduce tobacco use *(22)*. Beyond protecting non-smokers from harmful pollutants, such measures also limit the availability and social normalisation of smoked and inhaled products. Children and young people are especially vulnerable to both early initiation and second-hand smoke and aerosols in homes, schools, and public spaces.

Smoke-free policies should establish smoke and aerosol-free zones in all indoor public spaces, workplaces, public transport, cars carrying children, and outdoor areas such as playgrounds. Importantly, these policies should encompass all inhaled products. Monitoring exposure and enforcement, particularly in places where children are present, is essential to ensuring lasting impact.

Table 12. Suggested indicators for tobacco and nicotine second-hand smoke and aerosol exposure, disaggregated by gender, age, race/ethnicity, socioeconomic status, and geography, where relevant.

Suggested indicators for tobacco and nicotine second-hand smoke	Implementation of smoke-free environments
	Toxicant exposure
	Airborne nicotine
	Proportion of non-smoking adults with measurable cotinine levels
	Geometric mean concentrations of cotinine levels

Regulatory accountability and industry interference

Strong regulation must be supported by effective enforcement and safeguarded against tobacco industry interference. Policymakers should insulate health policy from tobacco industry tactics, ensure compliance mechanisms are adequately resourced, and maintain transparency throughout all regulatory processes.

Table 13. Suggested indicators for tobacco and nicotine regulatory accountability and industry interference.

Suggested indicators for tobacco and nicotine regulatory accountability
Coverage of all nicotine-containing products under national laws
Existence of licensing systems for manufacturers, importers, and retailers
Legally established limits on nicotine concentration and delivery per product type
Regulatory oversight of product tampering or manipulation, including additives and companion products that increase nicotinic effects
Independent product testing and disclosure of nicotine content and chemical composition
Number of inspections per year; number of sanctions issued
Presence of measures to implement WHO FCTC Article 5.3 protections
Documentation of industry lobbying incidents
Presence of regulations preventing government alliances or sponsorship with tobacco industry
Mandatory disclosure of meetings, donations, or partnerships involving the tobacco industry
Transparency of regulatory decisions and public reporting of enforcement outcomes

Awareness, innovation, and monitoring

While the Quick Buys deliver rapid gains, investment in public awareness, innovation, and monitoring creates a system that can adapt to evolving challenges. Combining quick wins with bold, sustained strategies lays the foundations for healthier futures beyond the five-year timeframe.

Youth and public awareness

Prevention requires both targeted and population-wide approaches. Schools are powerful settings for change, making school-based programmes essential for addressing the social and mental health factors of nicotine initiation. The WHO has developed a Toolkit (Freedom from tobacco and nicotine: Guide for schools) to help education systems create tobacco- and nicotine-free campuses, offering practical steps and questions for school-based surveys *(28)*. Framing nicotine use as a health issue, rather than a disciplinary matter, keeps outreach supportive rather than punitive. At the same time, sustained public campaigns, media coverage, and transparent communication of research findings are vital to raise awareness, shift social norms, and reinforce policy measures across the wider population.

***Table 14.** Suggested indicators for tobacco and nicotine awareness, disaggregated by gender, age, race/ethnicity, socioeconomic status, and geography.*

Suggested indicators for tobacco and nicotine awareness	Percentage of adults and adolescents who perceive nicotine use as harmful to health
	Proportion of awareness and utilisation of existing quitlines
	Number of people setting a quit date through a stop smoking service
	Prevalence of media campaigns promoting tobacco/nicotine awareness
	Public support for tobacco and nicotine control measures

Innovation and research

New approaches to cessation are essential to overcome the limitations of existing tools. Investment in technology-based solutions, novel pharmacotherapies, and integrated care models can improve reach to underserved groups. E-health quitting programmes should also incorporate CRD screening and health literacy components, given the high risk among people with nicotine addiction.

Monitoring and mortality data

The contribution of tobacco and nicotine use to CRD-related deaths and mortality from complications or co-morbidities remains insufficiently documented *(19)*. A low-cost, high-impact reform is the inclusion of smoking and nicotine use history in death certification systems *(29)*. This would improve understanding of the true burden of nicotine and tobacco use and enable the tracking of trends over time.

***Table 15.** Suggested indicators for tobacco and nicotine monitoring and innovation, disaggregated by gender, age, race/ethnicity, socioeconomic status, and geography, where relevant.*

Suggested indicators for tobacco and nicotine monitoring and innovation	Product innovation and patterns of use: Emergence, availability and uptake of nicotine and tobacco products
	Shifts in product use: Increase in other drugs of abuse, dual use of other tobacco products, use of reduced nicotine cigarettes as a start product
	Shifts in marketing strategies
	Shifts in social media culture and popularity of products
	Prevalence of cross-border retail, illicit trade and sales on unregulated platforms

STRATEGIC DIRECTION III:
Reduce air pollution and environmental risk factors

Treatment is essential for the hundreds of millions of people worldwide living with CRDs, yet preventing disease onset is equally important.

Air pollution is one of the leading risk factors for causing and worsening CRDs. Several measures to reduce air pollution can begin immediately, delivering both short-term health gains and long-term, sustained benefits for patients and the wider population. The role of climate change must also be considered carefully, together with the differing challenges and priorities across regions, climates, and environments.

Strategic direction III

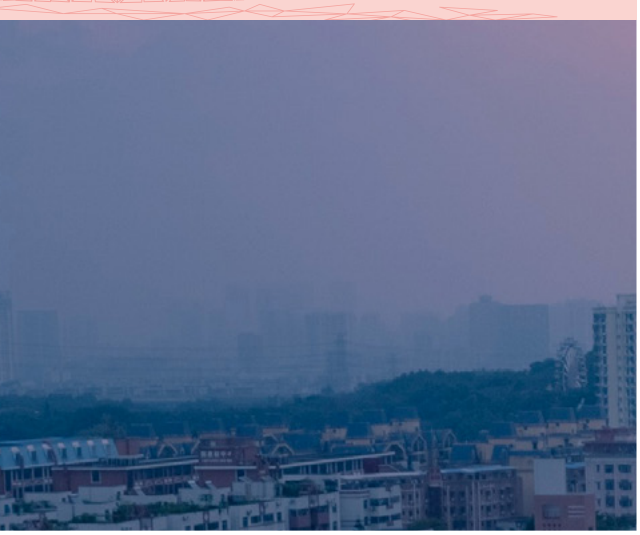
2025

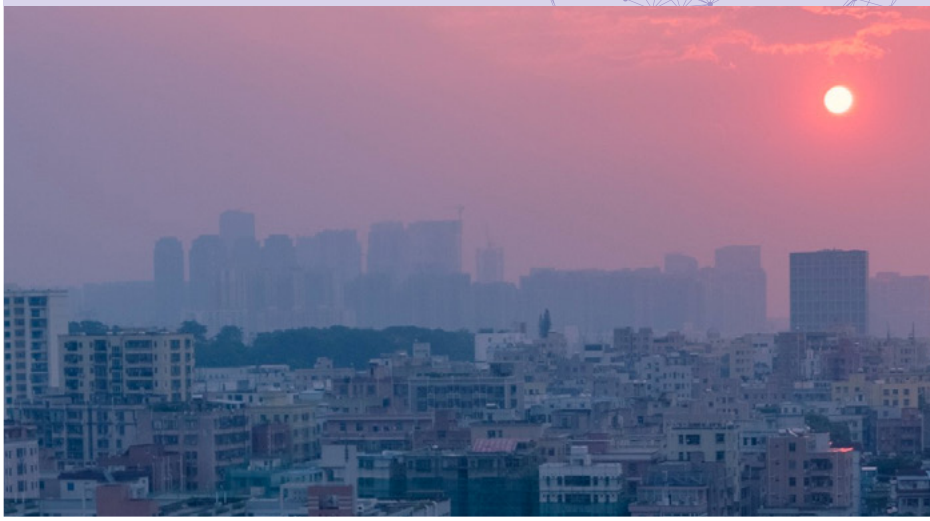
ALMOST ALL AIR IS BELOW WHO STANDARDS WITH MANY POLLUTANT SOURCES

2030

PEOPLE ALL OVER THE WORLD BREATHE CLEANER AIR, LOWERING CRD RISK

- Indoor and outdoor air quality
- Climate change mitigation





Indoor and outdoor air quality

Around 99% of the global population breathe air that is below WHO standards *(9)*. Major sources of pollution range from household fuel combustion and urban transport emissions to hazardous chemicals and open waste burning. Tackling air pollution requires strong political leadership, cross-sector collaboration, and long-term commitments, with locally tailored solutions that account for diverse sources and exposure patterns.

***Table 16.** Suggested indicators for air pollution levels, disaggregated by gender, age, race/ethnicity, socioeconomic status, and geography.*

Suggested indicators for air pollution levels	Average level of exposure to concentrations of suspended particles smaller than PM2.5, ozone, NOx, SO2, CO, and volatile organic compounds.

Household air pollution

Many people live in energy poverty, relying on biomass for cooking. Immediate action should focus on scaling up access to affordable, sustainable, and less-polluting cooking and heating options, particularly in rural and underserved areas *(30)*. Large-scale dissemination of improved cookstoves, subsidies for household ventilation, and promotion of affordable high-efficiency particulate air filters can rapidly reduce indoor particulate matter *(8)*.

Long-term processes are electrification and improved building practices. Governments can subsidise cleaner fuels, electricity, and biogas, while supporting local manufacturers to produce and maintain clean energy solutions that also create jobs. Indoor air quality guidelines aligned with WHO standards must be implemented, enforced and systematically monitored. Building standards, including ventilation requirements, should be implemented and enforced.

Healthcare professionals play a crucial role in raising awareness of household air pollution during patient care and should advise on ventilation and safe cooking practices. Community engagement and locally tailored campaigns are equally important to ensure interventions are culturally relevant, widely adopted, and sustained. Particular attention must be given to vulnerable groups, including children, pregnant women, and the elderly, who face the greatest risks from indoor exposures.

***Table 17.** Suggested indicators for indoor air pollution, disaggregated by gender, age, race/ethnicity, socioeconomic status, and geography.*

Suggested indicators for indoor air pollution	Percentage of population primarily using clean cooking fuels and technologies for cooking Percentage of population living in a dwelling with a leaking roof, damp walls, floors or foundation, or rot in window frames or floor Percentage of CRD DALYs attributable to household or occupational exposure Indication of occupational exposures that may influence health outcomes for CRD patients

Outdoor air pollution

In the short term, governments must enforce stricter industrial, transport, and energy sector emissions standards, improve and regulate waste management, and promote the shift to cleaner fuels and technologies. Urban planning can prioritise investments in green infrastructure and measures, such as establishing clean air zones, optimising traffic flow, stimulating public transport, and promoting active travel (cycling and walking).

Long-term strategies require multisectoral policies that align air quality goals with climate and health targets. By collaborating across sectors, clean air must be made a priority in various sectors and geographical settings. Cities can be designed to promote clean air through strategic land use planning, ventilation corridors, and sustainable transport systems. Inclusive approaches are vital to ensure disadvantaged communities benefit from the transition to clean energy and mobility equitably.

Table 18. Suggested indicators for outdoor air pollution, disaggregated by gender, age, race/ethnicity, socioeconomic status, and geography.

Suggested indicators for outdoor air pollution
Percentage of CRD DALYs attributable to air pollution
Percentage of total primary energy consumption from fossil fuels
Hectares unprocessed tobacco harvested
Production of minerals through mining by tonnage
Assessment of chemical exposure regulations that may influence CRD risk factors and patient outcomes and their level of implementation
Mean surface temperature change during 1961-2023 using temperatures between 1951 and 1980 as baseline
Correlation between temporal trends and NOx concentrations

Technology and innovation

Technological solutions should be utilised to strengthen the prevention and control of air pollution. Low-cost sensors and satellite-based monitoring allow for real-time data collection, even in low-resource settings, while digital platforms and cross-border data sharing improve forecasting, support coordinated responses and increase transparency. Sensors could also provide early warnings of poor air quality, helping communities avoid exposure hotspots and prepare for high-pollution events.

Emerging innovations such as advanced filtration systems, nanotechnology, and AI-driven tools offer new ways to reduce emissions by capturing pollutants, optimising energy use, and guiding pollution control strategies. To assess progress, systematic measurement of air quality, occupational exposures, and second-hand smoke prevalence is essential, with digital technologies enabling policies to be tracked, evaluated, and refined in real time.

***Table 19.** Suggested indicators for environmental data quality and collection, disaggregated by gender, age, race/ethnicity, socioeconomic status, and geography.*

Suggested indicators for environmental data quality and collection	Reporting of health and environmental data to recognised registries, and to which kind of registries these data are reported
	Level of granularity and interoperability of CRD-relevant health and environmental data

Climate change mitigation

Climate change increases the frequency and intensity of extreme weather events, amplifying air pollution levels and risk of CRDs, especially COPD and asthma *(30)*. Air pollutants, adverse meteorological conditions, extreme temperatures, sandstorms, wildfires, and environmental allergens are projected to rise with climate change *(31, 32)*. Climate change can also influence the deposition of particles in the lungs, affecting respiratory disease development *(33)*. Socioeconomic status, age, medical services, and behavioural factors influence the effects of climate change.

Public health measures are required to mitigate the effects of climate change and air pollution. Greenhouse gas emissions need to be reduced to slow climate change and lessen the severity of extreme events, also contributing to improved air quality. Regulatory and technological innovations can help to enhance air quality. Improving healthcare access and social support can assist in decreasing the vulnerability of populations to the adverse health effects of air pollution and climate change.

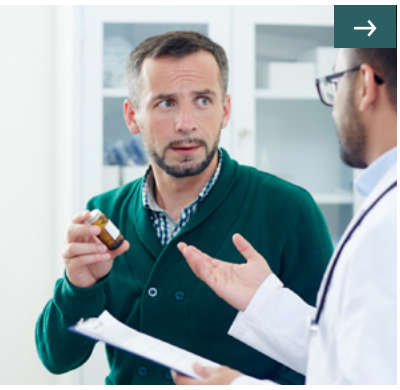
STRENGTHENING NATIONAL RESPONSES TO CRDS USING THE FORESIGHT ROADMAP

Keep the momentum going

Although adoption was delayed due to political disagreements, blocked by a single Member State, the overwhelming consensus remains clear. Most countries are committed to advancing this vision.

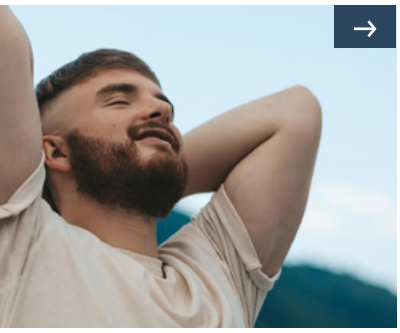
The Foresight Roadmap is a guide to translate global ambition into tangible improvements rather than a prescriptive plan. It lays out three strategic directions that reinforce one another thus must be pursued together. By acting immediately across all three directions, progress in one area will reinforce and enable advances across the rest, creating a synergistic pathway toward a more breathable future.

Strategic directions for action



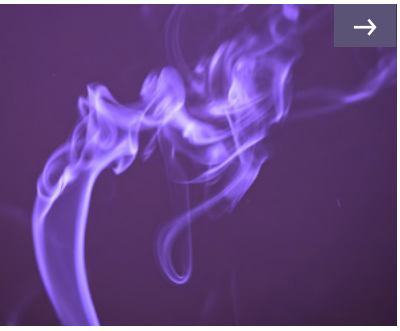
01

Expanding access to diagnosis, treatment, and care is anchored in strong primary care systems. With the right tools, medicines, and training, timely diagnosis and effective treatment can reduce avoidable hospitalisations and improve quality of life. At the same time, clear referral pathways ensure that complex cases receive appropriate specialist care. Prioritising this area will have the greatest impact on reducing CRD mortality by 2030, but sustained progress depends on close coordination with tobacco control, prevention and environmental action to reinforce these gains.



02

Reducing air pollution and environmental risk factors tackles one of the most important drivers of CRD onset and progression. Action across households, cities, and industries, combined with innovation in monitoring and clean energy, can rapidly lower exposure, delivering both health and climate benefits. Protecting populations from polluted air today also prevents CRD among generations to come.



03

Implementing comprehensive tobacco and nicotine control addresses the leading cause of CRDs and offers the fastest-acting intervention for prevention. Embedding cessation in primary care, enforcing smoke-free policies, raising taxes, and regulating emerging nicotine products can drive down use, protect non-smokers, and prevent initiation among youth, strengthening treatment outcomes and accelerating overall mortality reduction.

Together, these strategic directions form mutually reinforcing strands, creating a continuous pathway from early identification to effective management and prevention. Advancing all three ensures that today's actions deliver both immediate and lasting gains for respiratory health.

Tailor the Roadmap to national realities

While the Declaration and the Roadmap set out global priorities, each country will need to adapt the three strategic directions to its own context. The burden of disease, the structure of health systems, and the availability of resources vary widely across regions, which means there can be no one-size-fits-all approach. For example, reducing household air pollution may be most urgent in regions where household biomass cooking remains common, such as parts of South America, while in high-income countries, the focus may be more on transport emissions or occupational exposures.

It is essential to translate the Declaration into national policy either through a dedicated respiratory strategy or as part of broader NCD plans that give sufficient attention to CRDs. National frameworks should clearly outline CRD priorities with defined targets, resources, and accountability mechanisms to ensure sustained implementation and measurable progress.

The Declaration sets ambitious global targets for 2030 to help achieve the overarching goal of reducing premature mortality from NCDs by one-third. These include 150 million fewer tobacco users, 80% of countries with comprehensive prevention policies, and most countries providing essential NCD services and medicines through PHC *(1)*. To realise this ambition, these commitments must be translated into specific, measurable actions for CRDs at the national level.

To make the Roadmap actionable, countries should identify a set of priority interventions that can be scaled up quickly *(34)*. Early wins help address immediate challenges while also preparing the ground for broader reforms. The Roadmap should serve as a flexible guide rather than as a fixed blueprint.

The first step is to assess the current national CRD burden and review existing prevention and control measures. In some cases, improved monitoring may initially reveal a higher prevalence than previously recorded, underlining the urgency of action. This requires reliable data on mortality, risk factor prevalence, including tobacco and nicotine use, indoor and outdoor air pollution, and health system capacity. National assessments should also include structured exercises such as SWOT (strengths, weaknesses, opportunities, and threats) analysis *(34)*, stakeholder consultations, and financial flow reviews. These can help identify existing high-quality services and successful models of care that can be analysed, shared, and scaled up across settings.

National and subnational implementation

Translating global and national commitments into real impact requires action at multiple levels. While national respiratory or NCD plans provide overarching direction, implementation often depends on subnational health authorities. Local governments and mayors play a crucial role in shaping urban environments that affect respiratory health, from air quality and transport to housing and public spaces.

In parallel with national action plans, separate but complementary initiatives can strengthen local resilience and accelerate progress. For instance, city-level programmes on clean transport, green spaces, or air quality monitoring, such as those supported by networks like C40 Cities or Resilient Cities, help address environmental determinants of CRDs directly. These efforts are not substitutes for national policies but reinforce them, creating multiple entry points for healthier environments and stronger respiratory health systems.

Measure the path to a healthier future

A key challenge is deciding what to measure. Countries differ in their epidemiology, system capacity, and resources, so universal intermediary targets are not always feasible. This is particularly acute in low- and middle-income countries where funding is constrained and competing priorities are many.

Based on the national baseline CRD burden and health system characteristics, countries must select relevant indicators that allow meaningful progress tracking. Measuring progress means more than tracking single indicators; what matters is whether actions collectively move us closer to the future we aspire to. One number alone says little, only by linking indicators can we show real impact, such as cases prevented, earlier diagnoses, or healthier environments.

Robust data surveillance is essential to set meaningful targets, evaluate interventions, and hold health systems accountable. Strong data systems also improve outcomes directly by making diagnoses more accurate, care more coordinated, and resources more efficiently allocated.

Yet many countries face data gaps, from underreported CRD prevalence to inconsistent death coding. Strengthening monitoring requires standardised definitions, interoperable systems, trained staff, and digital tools. Importantly, improved diagnostics may initially raise recorded prevalence, not because health worsens but because we see reality more clearly, an essential step toward better treatment, prevention, and planning.

Coordinating action

Achieving meaningful progress on CRDs will require coordinated action across sectors, sustained advocacy, and continued political momentum. Global CRD organisations are already providing guidance, such as the Global Initiative for Asthma (GINA) and Global Initiative for Chronic Obstructive Lung Disease (GOLD) guidelines for severe asthma and COPD *(35, 36)*. Both the International Primary Care Respiratory Group (IPCRG) and the International Pharmaceutical Federation (FIP) provide research and resources for primary care and pharmacy professionals worldwide *(37, 38)*. This can support local professionals to develop national strategies.

Sharing national measures and experiences creates opportunities to learn from good practices and build collective capacity, also across sectors. The Global Alliance against Chronic Respiratory Diseases (GARD) is WHO's global network of multisectoral stakeholders with the Knowledge Action Portal platform for knowledge sharing and collaboration *(39)*. National extensions can facilitate practical coordination. Effective coordination between stakeholders is essential to align timing, resources, and planning, ensuring that efforts reinforce one another rather than compete. By working together across health, environment, finance, and policy spheres, countries can turn commitments into action and secure a breathable future for all.

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