

The global state of COPD

**SPEAK
UP**
for COPD

Driving change to tackle a lung health crisis



#SpeakUpforCOPD

Speak Up for COPD is supported by a coalition of partners across the non-profit sector and pharmaceutical industry to establish COPD as a public health priority. Funding is provided by pharmaceutical industry partners. All partners contributed to this document.



About this report

This report was developed to shed light on current responses to chronic obstructive pulmonary disease (COPD) around the world, and highlight key opportunities for policy action and system change by showcasing promising initiatives that are already taking place. It is based on desk research and interviews with 26 national clinical and patient experts, with a particular focus on 10 countries: Australia, Belgium, Brazil, Canada, China, Malaysia, Nigeria, Poland, Saudi Arabia and the UK. The report is intended neither to provide a robust comparison of the respective merits of different approaches to COPD policy and care, nor to represent a systematic review of the literature.

Standalone profiles of the ten countries are also available. These countries were chosen by the Speak Up for COPD coalition so that all continents are represented, and to gain perspectives from different health systems.

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Foreword

Chronic obstructive pulmonary disease (COPD) is a lung disease that is responsible for millions of deaths every year, all around the world. It has a significant, debilitating and often fatal impact on individuals. And yet, many people do not know what COPD is. In too many countries, it remains under-prioritised and under-funded in government strategies and health systems.

While COPD is a pressing issue, it will become even more urgent in years to come. The prevalence of the disease is projected to increase with ageing populations. The burden will also increase unless we tackle some of its core risk factors, such as smoking, poor air quality, indoor and outdoor pollution. COPD is one of the leading causes of hospital admissions in many countries – and health systems that are already overstretched will continue to fall behind if the burden of COPD is not alleviated.

Most importantly, the toll of COPD on people living with the disease is considerable in terms of compromised quality of life and independence; many people with COPD and their carers are forced into early retirement due to the impact of living with reduced lung function. And this toll disproportionately affects the most disadvantaged and marginalised populations in our society, who are more likely to be exposed to risk factors, and to receive inadequate access to appropriate care.

But things do not have to be this way. COPD can be managed. Effective interventions exist. Inspiring case studies from around the world demonstrate that better care – and a better life for people with COPD – is possible. What we need now is a cohesive, joint commitment from all stakeholders to reverse the current trajectory, and to invest our energies into tackling COPD proportionally to the enormous burden it is placing on our societies.

This report was developed to highlight the state of COPD prevention and care, and to inspire respiratory experts, patient and clinical advocates, and health system leaders to improve COPD care and, ultimately, the lives of people living with the condition.

The report builds on Speak Up for COPD's ongoing commitment to raise the profile of COPD. Please join us in speaking up for COPD as a public health priority so that, together, we can improve outcomes for everyone living with the condition.

Ricardo Baptista Leite



Dr Ricardo Baptista Leite
Founder & President, UNITE Parliamentarians Network for Global Health

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via the QR code.



Contents

COPD: the need for political action now	5
--	----------

Building blocks for meaningful change	7
--	----------



Protecting population health: reducing prevalence and risk factors	9
--	---



Identifying it early: proactive detection and diagnosis	10
---	----



Facilitating timely and equitable access to comprehensive COPD care	11
---	----



Strengthening government strategies, research and data	12
--	----

Driving change: what can policymakers do?	13
--	-----------

References	15
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COPD: the need for political action now

Chronic obstructive pulmonary disease (COPD) is an often life-threatening lung condition that affects millions of people around the world. Accurate estimates of the number of people living with COPD are difficult to obtain, as many people may be undiagnosed.¹ Recent epidemiological data suggest there are 213 million people currently living with COPD around the world, but other estimates suggest this figure could be as high as 391 million.^{2,3} COPD is the third leading cause of death worldwide (excluding COVID-19): every hour, 425 people die of the condition.^{2,4,5} It contributes significantly to premature mortality: 90% of COPD deaths occur in people younger than 70 who live in low- and middle-income countries.⁵



425 people
are estimated to die of COPD **every hour.**

COPD will cost the global economy
\$4.3 trillion
between 2020 and 2050 without investment
in effective interventions.

COPD is highly intertwined with health inequalities. People of lower socioeconomic position are at increased risk of developing COPD due to factors that may include exposure to household and outdoor air pollutants, poor nutrition, infections and smoking tobacco.^{4,5}

The impact of COPD on people's quality of life is nothing short of debilitating. COPD is the seventh leading cause of poor health worldwide.⁵ The disease is caused by the progressive narrowing of the airways, making it difficult for people to breathe.⁴ Symptoms gradually worsen and manifest as flare-ups, which, when severe, require emergency hospital admission.⁴ More than one in five people die within one year of being hospitalised for a COPD flare-up.⁶⁻⁸ Living with COPD can curtail a person's independence (for instance, they may need help dressing and bathing), impact their relationships with friends and family, and limit their ability to travel.⁹ It can even force people to give up their jobs; around 40% of people with COPD have to reduce or stop working altogether.^{10,11}

*'You don't see
my COPD,
but I feel it.'*

*Rita Ferraz,
a person living with
COPD in Brazil*

‘It’s difficult for my family. My children and I are extremely close, and I feel bad that I can’t go visit them and that I can’t take my grandson to the theatre.’

*Suzanne Edmonds,
a person living with COPD in Canada*

The pressure COPD places on health systems is unsustainable. COPD is a leading cause of hospital admissions in many countries.¹²⁻¹⁵ Flare-ups are 70–80% higher in the winter than in the summer, stretching already overwhelmed health systems.¹⁶⁻¹⁷ European data suggest COPD costs health systems up to €10,000 per person every year;¹⁸ between 45% and 70% of these costs may be attributable to managing flare-ups.¹⁹ These costs could be reduced if health systems moved from reactive to proactive strategies, with all people receiving earlier diagnosis and guideline-recommended treatment.²⁰

The human, public health and societal costs of the disease are simply too great; it is time to prioritise COPD. The price of inaction is daunting; without investment in evidence-based interventions, COPD is predicted to cost the global economy INT \$4.3 trillion between 2020 and 2050.²¹ And yet awareness of, and political attention to, COPD remain inadequate: a 2022 Ipsos poll conducted in 14 countries showed that 45% of the public and 31% of policymakers did not know that COPD was a lung disease, and only 5% of policymakers considered it a priority.²² It is imperative to enhance awareness and prioritisation of COPD among health system decision-makers: this is a key starting point to drive effective system change that will improve both health outcomes and, ultimately, improve people’s lives.

Governments urgently need to invest in COPD. Significant investment will also be essential for countries to meet the Sustainable Development Goals they committed to achieving by 2030, such as reducing premature mortality from non-communicable diseases,²³⁻²⁴ and to offer everyone with COPD the best possible healthcare and outcomes.

‘Give the person with COPD a voice, a face.’

Victor Nevelsteen, a person living with COPD in Belgium

Building blocks for meaningful change

*‘We know exactly what we need to do now.
We just need to take action.’*

Gitta Vanpeborgh, a policymaker in Belgium

Much of the burden of COPD could be avoided through prevention and disease management. Risk factors are known and can be addressed through targeted, multisectoral prevention. Global clinical recommendations, such as the Global Strategy for Prevention, Diagnosis and Management of COPD (GOLD),⁴ offer a clear clinical consensus on what needs to be done to offer people living with COPD the best possible care.^{4 25-27}

Four key areas present common opportunities for governments to drive action and system change, based on their existing health system context and resource availability. In doing so, they should always ensure changes are implemented equitably and be mindful to address underlying variances in risk, access and outcomes for COPD across the population:



Protecting population health: reducing prevalence and risk factors

Prevention is paramount to addressing COPD:

- ▶ Approximately 70% of COPD cases in high-income countries and 30–45% in low- and middle-income countries (LMICs) are attributable to smoking.⁵ However, 25–45% of people with COPD have never smoked.²⁸
- ▶ Up to 23% of all COPD deaths in LMICs are associated with household air pollution.²⁹ Women in lower-income countries are at particular risk of developing COPD due to exposure to biomass smoke during cooking.³⁰
- ▶ Vaccination rates among people with COPD are low, ranging from approximately 11% to 33% for pneumococcus and 24% to 40% for influenza.³¹⁻³³ Exposure to these respiratory viruses early in life is a known risk factor for developing COPD.^{34 35}



Identifying COPD early: proactive detection and diagnosis

Proactive detection of COPD in people at high risk of disease is vital to optimise outcomes and reduce healthcare costs,³⁶ but many people receive care too late:

- ▶ Between 65 and 80% of people who have COPD remain undiagnosed.³⁷
- ▶ In the UK, some people report waiting more than ten years before receiving an accurate COPD diagnosis.³⁸
- ▶ People who are diagnosed with COPD late are almost 70% more likely to have a flare-up compared with those diagnosed early.³⁹



Facilitating timely access to comprehensive care

Effective management of COPD is crucial, yet access to best-practice care (including ongoing monitoring and support with self-management) remains inadequate:

- ▶ People admitted to hospital for a COPD flare-up only receive 40% of guideline-recommended care.⁴⁰
- ▶ Approximately 30% of people hospitalised for a COPD flare-up are readmitted within 90 days of their previous admission.^{41 42} This is because people are often not offered a comprehensive package of care after discharge from hospital.⁴³ One study found that only 25% of people living with moderate COPD flare-ups receive maintenance follow-up care.⁴⁴
- ▶ Studies report referral rates of less than 35% for pulmonary rehabilitation.⁴⁵



Strengthening government strategies, research and data

COPD is under-recognised and under-prioritised:

- ▶ In a 2023 Ipsos survey of over 23,000 adults in 31 countries, COPD was not considered a top health concern,⁴⁶ despite it being the third leading cause of death globally (excluding COVID-19) in 2021.²
- ▶ In 2019, COPD received 96% less funding than cancer from the US National Institutes of Health, despite being responsible for 64% more years of life lost due to ill health and disability.⁴⁷



Protecting population health: reducing prevalence and risk factors

What are the current challenges?

- ▶ **Persistently high smoking rates:** Despite global tobacco control policies,⁴⁸ implementation of smoking-cessation services remains inadequate.⁴⁹ Front-line healthcare professionals are not proactively offered training to help their patients stop smoking.⁵⁰ Stigma, along with normalisation of smoking-related respiratory symptoms, can prevent people seeking medical help.¹³
- ▶ **Immunisation coverage is insufficient to protect against respiratory infections throughout the life course:** Respiratory viruses have been linked to approximately 30% of COPD flare-ups, and exposure to respiratory infections (i.e. pneumonia) in childhood can be a precursor to COPD; yet vaccination rates remain suboptimal and vary between countries.^{34 35 51}
- ▶ **High levels of exposure to poor air quality, indoors and outdoors:** Vehicle emissions and work-related exposures to substances such as silica and asbestos continue to contribute to the development of COPD.^{53 54} The burning of biomass fuels indoors is of additional concern in LMICs.^{29 55}

In the UK, only 1 in 13 people who smoke are referred to smoking cessation services.⁵⁰

In Brazil, one study found that only 28% of people hospitalised with COPD reported having received a pneumococcal vaccine.⁵²

In Nigeria, air pollution (ground-level ozone) exacerbates chronic respiratory diseases (including COPD), causing approximately 2,000 deaths per year.⁵⁴

'Most people with COPD have a history of smoking. But some, especially women, have never smoked, but were exposed to biomass or dust, which caused their COPD.'

Prof. Mohammed Al Ghobain, an expert from Saudi Arabia

Overcoming challenges: inspiration from around the world



India's government is tackling household air pollution by providing people below the poverty line with liquefied petroleum gas (LPG) for cooking in place of solid fuels (which are highly polluting in the home). In a study of the impact of this change on non-smoking women from rural Maharashtra, those who cooked using LPG had a lower prevalence of obstructive airway disease, including COPD (1.3%) compared with the group that used solid fuels (7.6%).⁵⁷



In Sydney, Australia, a specialised pharmacy-based care model has been trialled to improve uptake of prevention activities, inhaler technique and medication adherence in people with COPD. People were offered three in-pharmacy visits and two follow-up phone calls over a six-month period. The model led to a significant increase in the uptake of the pneumococcal vaccine, with coverage increasing from 40% to 81% over the course of the pilot.⁵⁸



Identifying it early: proactive detection and diagnosis

What are the current challenges?

- ▶ **Low public and professional awareness:** Public and professional knowledge about COPD symptoms and the importance of prompt detection is generally low.⁵⁹⁻⁶³ This can lead to people not seeking care and not being referred to essential respiratory care services (e.g. pulmonary rehabilitation).^{4,45} Social stigma surrounding COPD can further affect people's willingness to engage with health services.⁶⁴
- ▶ **Inadequate access to, and use of, effective diagnostic tools such as spirometry:** In some countries, underdiagnosis of COPD is linked to limited availability of spirometry (a globally recommended diagnostic test).⁴ Even if it is available, spirometry is underused in primary care, often as a result of time constraints and insufficient training among clinical personnel on how to interpret results.⁶⁶⁻⁶⁸ There is also significant misdiagnosis of COPD, particularly with overlapping conditions such as asthma, which leads to improper and unnecessary treatment.⁶⁹

In Saudi Arabia, a survey in the Aseer region found that two thirds of people were not familiar with the symptoms of the disease.⁶⁵

In Nigeria, fewer than 30% of tertiary care hospitals have a spirometer, and fewer than 30% of hospital-based clinicians know how to assess COPD severity.⁶⁷

'In the [COVID-19] pandemic, virtually all respiratory labs were closed, and this led to a long waiting list for spirometry. Some places are only now doing spirometry tests that were ordered three years ago.'

Dr Frederico Fernandes, an expert from Brazil

Overcoming challenges: inspiration from around the world



A preventive health check in France is offered to people aged over 45; it includes the assessment of symptoms that could indicate the presence of COPD. If COPD is indicated, further confirmation is obtained through spirometry testing.⁷⁰



In the UK, comprehensive lung health checks are offered to people considered to be at high risk of lung cancer. People are screened for lung cancer using low-dose computed tomography (LDCT) and tested for other respiratory conditions, including COPD, using spirometry.⁷¹



To streamline the early detection of respiratory diseases (including COPD) in Vietnam, the Society of Asthma and Allergy and Clinical Immunology has introduced screening for respiratory disease among higher-risk groups. The intervention uses five simple questions, a chest X-ray and a spirometry test.⁷² In a single morning in Le Van Thinh Hospital, 39 people participated in screening and 11 cases of respiratory disease were identified.⁷³



The Telespirometry System introduced in Brazil is a tool which supports conducting spirometry tests locally, with the result sent to a respiratory specialist for interpretation. It has been implemented in primary healthcare facilities in lower-income cities.^{74,75}



In Piedmont, Italy, pharmacists were trained to identify people at high risk of COPD via a questionnaire and test their respiratory function using a portable spirometer. This intervention was trialled from October 2017 to February 2018, finding that almost half of those at high risk of COPD had inadequate respiratory function. These people were subsequently referred to their primary care physician.⁷⁶



Facilitating timely and equitable access to comprehensive COPD care

What are the current challenges?

- ▶ **Poor implementation of clinical guidelines:** Implementation of global recommendations across different care settings is suboptimal, leading to variations in quality of care.²⁷ In particular, lack of monitoring and support for self-management increases the risk of hospitalisations.⁷⁷
- ▶ **Lack of integration between primary and secondary care:** Poor coordination of COPD care services across health settings results in fragmented care delivery.^{79 80} Reasons for this include shortages of respiratory specialists and the need to upskill and clarify roles for nurses and pharmacists in COPD management.⁸¹⁻⁸³
- ▶ **Limited and inequitable access to, and reimbursement for, evidence-based care:** Reimbursement and funding for COPD varies within countries, and all the elements of comprehensive COPD care may not be covered, leading to inequities in access to guideline-recommended care.^{68 84 85} In countries of all levels of resourcing there are disparities in access to essential COPD medicines, leading to inadequate disease management.⁸⁶⁻⁸⁸
- ▶ **Limited access to pulmonary rehabilitation:** Although pulmonary rehabilitation (an intervention to promote physical activity)⁴ is cost-effective and guideline-recommended, referrals are inadequate, often due to the limited availability of the service and healthcare professionals being unaware of its benefits for people living with COPD.^{45 89}

In Malaysia, inconsistent clinical pathways and the lack of a clear framework to execute recommendations in hospital settings have led to a highly variable quality of care, according to a study from 2012.⁷⁸

In Poland, there is a need for better coordination between primary care and specialists for people with respiratory disease (including COPD).⁸⁰

'To have an inhaler in Nigeria is so expensive. It's too expensive.'

Uchenna Ogbonnia, a person living with COPD in Nigeria

In the UK, only 37% of eligible people with COPD were offered a referral to pulmonary rehabilitation in 2021 and 2022.³⁸

'There is limited contact with specialist healthcare professionals in hospitals, and families struggle to speak with people who can discuss the person's care.'

Carer for a person with COPD in China

Overcoming challenges: inspiration from around the world



In Egypt, through national health insurance, the government has expanded screening for COPD, updated treatment guidelines, trained nurses in spirometry, and established 15 Centre of Excellence chest clinics. Electronic medical records have also been launched, which will support better data collection and continuity of care.⁹⁰



In Spain, during the COVID-19 pandemic, restrictions were lifted to allow physicians to prescribe a single inhaler that delivers multiple medicines for COPD (as opposed to several inhalers delivering the same medication). This led to significant improvements in flare-ups, survival and healthcare resource use; as a result, it has remained post-pandemic.^{91 92}



In Ontario, Canada, the Best Care COPD integrated disease management programme has been deployed. Certified Respiratory Educators (CREs) are embedded within primary care and collaborate with clinicians and patients to promote best-practice care, including confirming diagnosis and optimising treatment regimens. The programme has been associated with a significant and progressive reduction in COPD-related hospitalisations.⁹³



Strengthening government strategies, research and data

What are the current challenges?

- ▶ **Limited political prioritisation of COPD:** None of the ten countries studied has a dedicated national plan for COPD, and less than half of the countries mention COPD in their national health strategies. There do not appear to be any prominent COPD governmental working groups.
- ▶ **A lack of reliable COPD data:** Robust data collection on COPD prevalence, mortality, hospitalisations and patient outcomes is scarce in many countries.^{3 94} This can severely affect the ability to monitor the burden of COPD and its risk factors, and to assess the effectiveness of public health strategies, treatments and models of care on patient outcomes.
- ▶ **Underinvestment in COPD research and innovation:** In the ten countries studied, there were no notable national research funds devoted to investigating innovative COPD diagnostic tools and treatments, care management strategies or risk factors.

'COPD awareness among policymakers is low compared with other chronic diseases. Most policymakers do not know the difference between asthma and COPD.'

Prof. Mohammed Al Ghobain, an expert from Saudi Arabia

'We have limited insights into what proportion of COPD in Malaysia is due to different risk factors, because there is no data collected on this.'

Prof. Ee Ming Khoo, an expert from Malaysia

'There have been so many initiatives around some diseases, such as cancer for raising funds, or developing healthcare pathways such as for diabetes or chronic kidney disease. But this is not the case for COPD.'

Prof. Dr Eric Marchand, an expert from Belgium

'The places where COPD is more prevalent because of greater socioeconomic disadvantage are also the places that have less money for care, resulting in worse care provision where there is the greatest need.'

Prof. John Hurst, an expert from the UK

Overcoming challenges: inspiration from around the world



Japan's national health strategy, 'Health Japan 21 (third phase)', includes a clear target to reduce COPD deaths from 13.3 per 100,000 people to 10 per 100,000 by 2032.⁹⁵ To help achieve this target, the Japanese Respiratory Society has launched the COPD Mortality Reduction Project by 2032, which provides information on COPD mortality rates and efforts to reduce them.⁹⁵



In Germany, the Decade of the Lung was founded as an alliance of healthcare professionals and patient organisations. The alliance aims to develop recommendations and advance policy action to reduce the burden of chronic respiratory diseases, including COPD.^{96 97}

Driving change: what can policymakers do?

The state of COPD prevention and care demands urgent attention. Millions of people around the world see their lives significantly affected by COPD, and much of this impact could be prevented. Positive examples exist of how countries with both higher and lower resource availability have helped reduce the burden of COPD. Other governments should emulate these examples and build COPD into their policies and programmes. We call on governments to:

Bolster prevention



- ▶ **Expand the delivery of smoking-cessation services** by training additional healthcare professionals, such as nurses and community pharmacists, to intervene as early as possible.
- ▶ **Invest in better environmental protection measures**, including urban planning, cleaner fuel sources, safer cooking stoves and heaters, and better ventilation to reduce exposure to outdoor and indoor pollution and poor air quality.
- ▶ **Support the delivery of vaccination programmes** to protect against respiratory infections by simplifying and streamlining the process, and diversifying the types of healthcare professionals who can deliver them (including pharmacists and nurses). This could include establishing a protocol that enables vaccination without the need for a medical prescription.

Improve awareness, proactive detection and diagnosis



- ▶ **Develop public awareness campaigns** that focus on key symptoms such as breathlessness to encourage people to seek timely clinical care.
- ▶ **Improve access to spirometry**, expanding training for healthcare professionals on how to administer it and interpret results and addressing disparities in access to services in underserved areas.
- ▶ **Integrate COPD into lung health check-ups** for high-risk populations as well as existing screening programmes for lung cancer and/or tuberculosis.

Improve timely and equitable access to care and management



- ▶ **Upskill the entire health workforce** to improve proactive identification in primary care and support long-term management of COPD; identify clear roles for nurses, pharmacists and other health professionals in multidisciplinary care pathways.
- ▶ **Incentivise the effective delivery of best-practice COPD care** in line with global quality standards, ensuring equitable access to both pharmacological and non-pharmacological therapy solutions across the population. This requires the provision of comprehensive funding and reimbursement for evidence-based care and implementation of proven self-management models and protocols to avoid costly hospital readmissions.
- ▶ **Expand access to pulmonary rehabilitation** by funding more services and promoting referrals from respiratory physicians. This could be achieved through the implementation of hospital discharge bundles that include pulmonary rehabilitation. Metrics should be tracked to measure the success of implementation and hold systems to account.

Strengthen government strategies, research and data



- ▶ **Develop comprehensive national strategies** for respiratory diseases that include specific and measurable goals for the prevention, early diagnosis and treatment of COPD; these already exist for other common non-communicable diseases.
- ▶ **Build robust national databases on COPD** that allow health systems to accurately calculate prevalence and mortality; better understand what causes flare-ups, complications, hospital admissions and readmissions; and track patient outcomes and healthcare utilisation.
- ▶ **Invest in research and innovation** to help identify optimal diagnostic, treatment and care strategies for COPD, leveraging digital advances such as artificial intelligence and machine learning.

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