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Special Article

Equity in Respiratory Health: Actionable Recommendations for Spain

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ABSTRACT

Chronic respiratory diseases are a major public health burden, affecting over 7 million people in Spain and representing the third leading cause of death. Conditions such as chronic obstructive pulmonary disease, asthma, and lung cancer are heavily influenced by social and environmental determinants, including socioeconomic status, air quality, and smoking. Moreover, the increasingly aging Spanish population and persistent urban pollution levels further expand the burden of these diseases. This article underscores the urgent need to address inequities in respiratory healthcare through comprehensive policy action. To this end, we herein propose measures such as strengthening primary care to ensure early diagnosis, enhancing coordination between community pharmacy, primary and hospital care, incorporating specialised roles such as continuity-of-care nurses, prioritising access to cost-effective innovative treatments, promoting healthy environments, and reinforcing anti-smoking initiatives. We also advocate for inclusion of social determinants of health indicators in electronic health records and for development of patient education programmes. Tackling respiratory health disparities requires targeted strategies that involve all healthcare and social stakeholders to optimise resource use and improve the quality of life of patients with respiratory diseases in Spain.

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Equidad en la salud respiratoria: recomendaciones prácticas para España

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Equidad
Desigualdades
Determinantes sociales de la salud
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R E S U M E N

Las enfermedades respiratorias crónicas representan una importante carga para la salud pública, afectando a más de siete millones de personas en España, y constituyendo la tercera causa de muerte. Afecciones como la enfermedad pulmonar obstructiva crónica (EPOC), el asma y el cáncer de pulmón están fuertemente condicionadas por determinantes sociales y medioambientales, entre los que se incluyen el nivel socioeconómico, la calidad del aire y el tabaquismo. Además, el progresivo envejecimiento de la población española y los persistentes niveles de contaminación urbana agravan aún más esta carga. El presente artículo subraya la necesidad urgente de abordar las desigualdades en la atención respiratoria mediante una acción política integral. Con este objetivo, se proponen medidas como el refuerzo de la atención primaria para garantizar un diagnóstico precoz, la mejora de la coordinación entre la farmacia comunitaria, la atención primaria y hospitalaria, la incorporación de roles especializados como las enfermeras de continuidad asistencial, la priorización del acceso a tratamientos innovadores coste-efectivos, la promoción de entornos saludables y el refuerzo de las iniciativas antitabaco. Asimismo, se aboga por la inclusión de indicadores de los determinantes sociales de la salud en las historias clínicas electrónicas, y por el desarrollo de programas de educación para pacientes. Abordar las desigualdades en salud respiratoria requiere estrategias específicas que involucren a todos los agentes sanitarios y sociales, con el fin de optimizar el uso de recursos, y mejorar la calidad de vida de los pacientes con enfermedades respiratorias en España.

Introduction

Respiratory health is essential for overall health and well-being. Respiratory diseases remain largely underrecognised by many sectors of the population and, therefore, underdiagnosed and undertreated, despite their significant burden.[1] In Europe alone, respiratory conditions are one of the leading causes of morbidity and mortality, generating an annual social cost of €803.5 billion in the European Union as of 2021.[2] Worldwide, over a billion people – approximately one-eighth of the total population – live with a chronic respiratory disease. Among these, over 200 million have chronic obstructive pulmonary disease (COPD), approximately 300 million people have asthma, and over 50 million people have occupational lung disease.[3] Beyond lung cancer and communicable respiratory diseases, other chronic respiratory conditions include obstructive sleep apnoea, interstitial lung disease, pulmonary arterial hypertension, and bronchiectasis.[4,5]

Chronic respiratory diseases are a major driver of worldwide health loss, together with cancer, diabetes, and cardiovascular disease, some of which may be present in multimorbidly.[6–11]

With over 14% of the population in Spain affected,[1] chronic respiratory diseases are a major source of physical, emotional, and financial strain for patients, caregivers, the health system, and society at large. Indeed, chronic respiratory diseases were the third leading cause of death in Spain in 2022 (following cardiovascular disease and cancer). Further, it was estimated that combining deaths from lung cancer, tuberculosis, and COVID-19 with those of all chronic respiratory diseases led to a total respiratory mortality in Spain in 2022 that surpassed cancer and came close to cardiovascular disease mortality.[12]

Respiratory diseases accounted for approximately 2 million emergency care visits in 2022 in Spain.[13] Patients with respiratory diseases visit primary care services 1.4 times more frequently than the general population; this figure rises to 2.5 times for COPD, and 3 times for pneumonia.[13] Care for patients with respiratory diseases often involves multiple specialists, including pulmonologists, allergists, internists, pharmacists, psychologists, and nurses. The burden of chronic respiratory disease in Spain is expected to rise because of the increasingly aging population, among the oldest within the European Union,[14] plus tobacco smoke exposure, among other factors. In Spain, the gap between life expectancy and healthy life expectancy is 11.1 years, making it one of the countries with the largest difference (Fig. 1).[15] This gap is 3.4 years greater for women than for men – a gender difference surpassed only in Germany.[15] This demographic shift will likely increase the prevalence of all chronic conditions, including the respiratory ones. This trend is exacerbated by increasing air pollution, persistent smoking, and growing vaping among youth. Further changes in epidemiological determinants of mortality and morbidity will impact the prevalence of chronic diseases.[16,17]

The 2022 Public Health Strategy developed by the Spanish Ministry of Health emphasised the burden of non-communicable diseases, highlighting that cardiovascular diseases, cancer, Alzheimer's disease, and COPD, together accounted for 55% of all deaths in Spain.[16] These chronic diseases are also major drivers for disability, dependence, poor health, and workforce attrition, with substantial socioeconomic costs. Asthma, despite not being included among the top four in mortality, is also associated with a considerable morbidity burden.

In this context, equity becomes a central pillar of public health in Spain, as chronic respiratory diseases disproportionately affect disadvantaged populations due to unequal exposure to risk factors, limited access to healthcare, and disparities in diagnosis, treatment, and health outcomes.[18] Health equity refers to the fair and just opportunity for everyone to be as healthy as possible, which requires addressing and eliminating obstacles such as poverty, discrimination, and unequal access to quality healthcare, education, or housing.[19]

Definitions from experts such as Whitehead and Braveman highlight that, while equality and equity are distinct, measuring equity often relies on identifying and reducing health disparities, especially those that are avoidable, unjust, and systemic.[20,21] Respiratory diseases exemplify this issue, as they often affect the most vulnerable groups due to disproportionate exposure to risk factors and barriers to care. According to the World Health Organization (WHO), reducing and eliminating health inequities is key to fulfilling the promise to 'leave no one behind' and attaining the health-related Sustainable Development Goals (SDGs) that include SDG 3 – good health and well-being – and SDG 10 – reduced inequalities.[22]

The effort to improve the healthcare system was long guided by the Triple Aim framework, seeking to improve the patient experi-

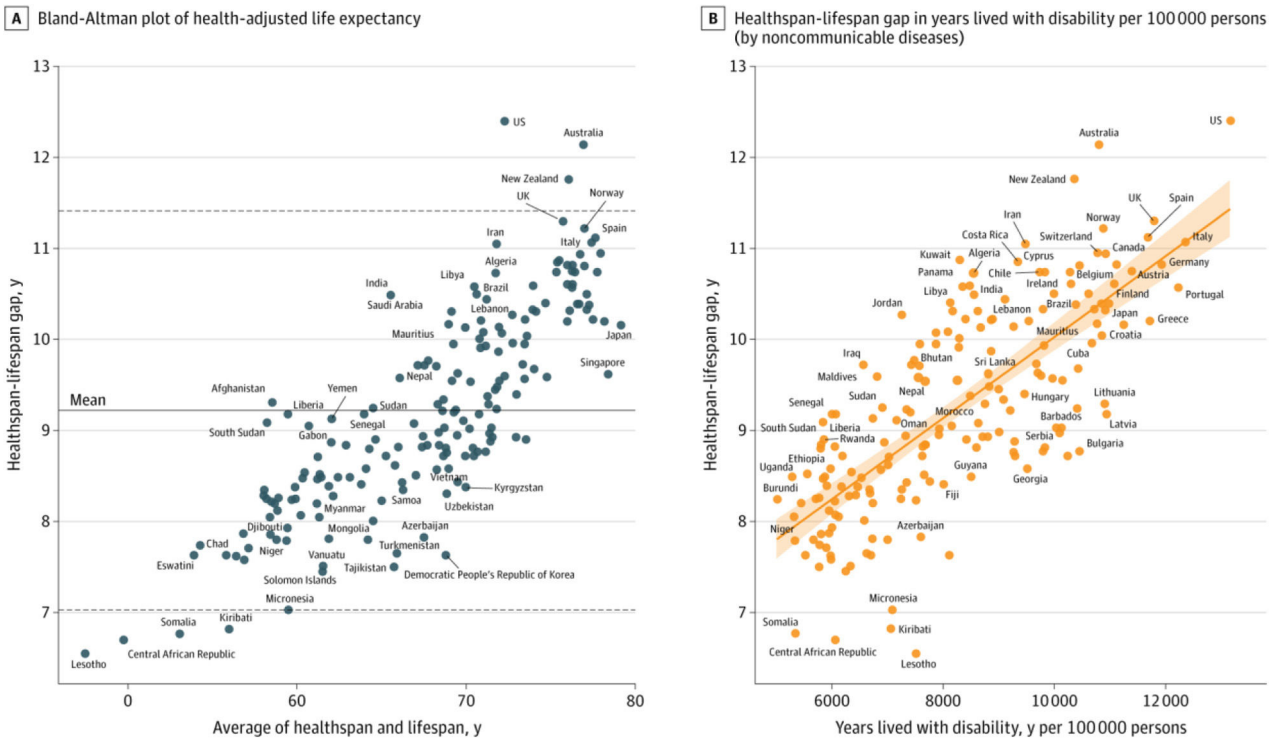


Fig. 1. Healthspan–lifespan gap association with life expectancy and disease burden in 183 countries.[15] (A) Bland–Altman plot of the health-adjusted life expectancy and life expectancy. Solid line represents the mean healthspan–lifespan gap. Dotted lines represent the 95% CI for the healthspan–lifespan gap. (B) The healthspan–lifespan gap as a function of years lived with disability per 100 000 persons contributed by noncommunicable diseases. Solid line represents the line of best fit and the shaded ribbon represents the 95% CI for the regression line.

Fig. 2. Quintuple aim for healthcare improvement.

ence, population health, and healthcare costs.[23] This framework evolved to include two additional aims: supporting healthcare professionals[24] and promoting equity (Fig. 2).[25] This evolution reflects an increasing recognition that achieving value-based care requires actively addressing health disparities, both across populations and in interpersonal care.[26] Ensuring equity demands not just technical skill, but also cultural competence, communication, and a commitment to human rights.[27]

This article provides multidisciplinary recommendations to help address inequity in respiratory health in Spain, with a focus on chronic respiratory diseases. We examine social determinants of health (SDH) and risk factors, the structure and organisation of healthcare systems in Spain, and current initiatives that exemplify good practices in addressing SDH along the patient journey.

Social determinants of health and risk factors

Social determinants of health

SDH comprise the social, cultural, political, financial, and environmental conditions in which people are born, raised, live, work, and age within a community.[28] Their unequal distribution among the population results in health inequities.[29,30] The Commission on Social Determinants of Health, established by the World Health Organization (WHO), introduced in 2007 a framework classifying SDH mainly as either political and socioeconomic, structural (income, education level, social class, gender, ethnicity), or intermediate (psychosocial factors, behaviours, habits, healthcare-related).[18] The Commission's efforts were instrumental in increasing global awareness on SDH.[31] Following the WHO Commission's landmark work, the Spanish Commission to Reduce Social Health Inequities identified in 2008 four areas of intervention to tackle health disparities: distribution of power, wealth and resources; living and working conditions throughout the life course; health-promoting environments; and healthcare services.[16]

Inequities in health arise from the unequal distribution of resources, wealth, and power.[32] SDH encompass income, education level, health education, food security, healthy diet, exercise, work conditions, housing, and the environment (see Table 1).[33–36] There is mounting evidence on the impact of SDH on disease burden. For example, the environment in which a person is raised affects their life expectancy,[37] the social gradient in health and disease is observed across various diseases and causes of death,[38,39] and loneliness is linked to a decline in health.[40] Loneliness can make people, particularly the elderly, more vulnerable, which poses a challenge to social and health services.[18] In Spain, over 5 million people lived alone in 2022, and this figure is projected to rise to 6 million over the next 15 years.[18]

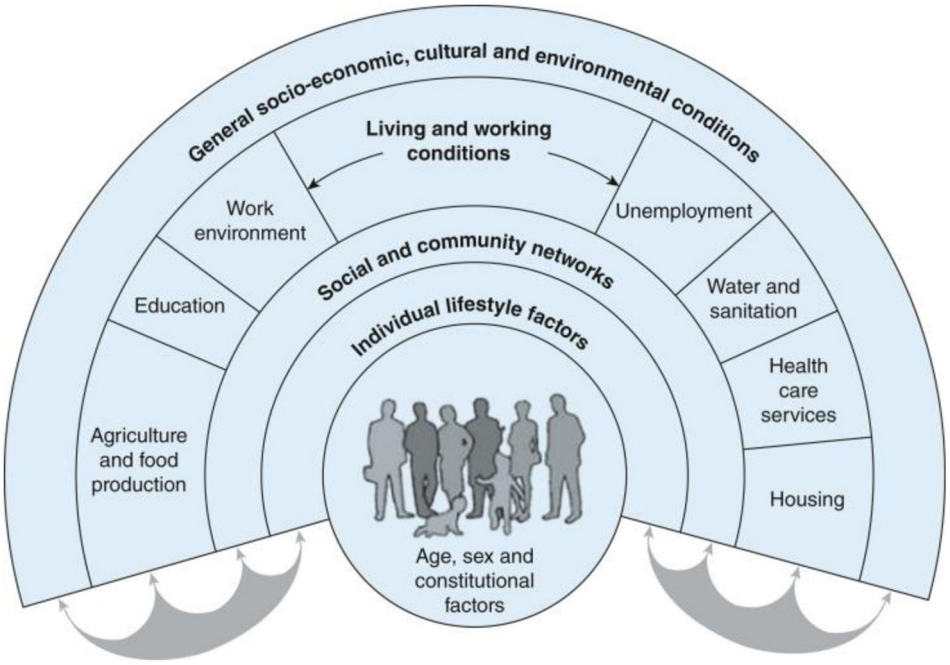
Table 1
Social determinants of health and potential interventions to reduce inequities in respiratory health.

Category	Determinants	Possible respiratory health inequities	Specific interventions
Biological	Age	Children and elderly	Respiratory health protection in extreme age groups
	Gender	Gender bias and disparities	Improved research and healthcare education
	Marital status	Deterioration based on processes and life stages	Detection and prevention
	Ethnic minorities	Inequities associated with Roma, Latino, and others	
Lifestyle	Smoking	Higher prevalence of respiratory diseases in smokers and passive exposure in populations with less access to smoke-free spaces	Strengthen tobacco control with stricter regulations; accessible smoking cessation programs for all populations
	Other lifestyle habits	Overweight/obesity; exercise/sedentary lifestyle	Emphasis on promoting overall and respiratory health
	Sexual identity	Anxiety/depression/mental health in the LGBTQ+ community	Increased collaboration with civil society
	Socioeconomic level	Higher prevalence of COPD, asthma, and lung cancer in lower-income/education populations with greater exposure to risk factors (e.g. smoking, pollution)	Prevention programs targeting vulnerable populations; equitable access to innovative treatments; specific public health campaigns
	Disease awareness	Low scientific and medical culture in vulnerable populations	Awareness campaigns
	Digital health divide	Inequity in access to telemedicine, affecting aging populations and areas with poor connectivity	Development of digital literacy strategies, ensuring connectivity in rural areas and interoperability of digital health records
	Adherence	Poor adherence in vulnerable populations	Educational campaigns; more support for nursing
Social	Family	Unwanted loneliness	
	Religion		
	Neighbours and community	Integration	
	Unemployment	Worse overall health in unemployed individuals	Welfare state
	Migration	Undocumented migrants have worse health	Specific campaigns
	Prison		
Environmental	Home/dwelling	Worse living conditions in homes of respiratory disease patients	Awareness and education
	Pollution	While ubiquitous, greater impact of air pollution on individuals with chronic diseases	Implement pollution reduction policies; air quality monitoring; traffic restrictions in vulnerable urban areas
	Occupation	Work conditions and exposure	Dialogue with unions and employers
	Education	Low knowledge about respiratory diseases and treatments affects therapeutic adherence and prevention	Educational programs for patients; inclusion of community pharmacists for personalised follow-up
	Culture		
	Nutrition	Poor dietary habits affect respiratory health and development	Nutrition education campaigns
Society	Primary care	Lack of staff and proper equipment in health centres affects diagnosis and monitoring of chronic respiratory diseases	Increase investment in primary care; incorporate continuity care nurses and other specialised profiles
	Access to healthcare services	Difficulty in accessing early diagnosis and treatment due to inter- and intra-regional differences	Improve healthcare coordination. Private healthcare?
	Urban/rural	Distance to healthcare centres	Protect depopulated areas
	Hygiene and health	Decline in both	Investment in health and education
	Crisis	Major determinant	General interventions
	Climate Change	Major determinant	Very general interventions

COPD, chronic obstructive pulmonary disease.

Addressing social inequities, especially in vulnerable populations, is key to improving health, and respiratory health in particular.[32,41–44] The WHO SDH framework has been adapted to chronic respiratory diseases (Fig. 3), to illustrate how socioeconomic inequality directly impacts respiratory health outcomes, especially in vulnerable populations. Indeed, low socioeconomic status is associated with increased respiratory symptoms and risk of respiratory disease mortality.[45,46] These effects may be related to poor housing quality, exposure to smoking, and environment/atmospheric pollution, which highlights the bidirectional relationship between poverty and health.[32] Moreover, socioeconomic and gender inequities have an impact in child respiratory health.[47] Access to and understanding of educational resources are influenced by SDH, including health education, income, employment status, and cultural background.[48] Health education is closely linked to overall education level, and limited knowledge about a disease and its treatment is a key factor affecting adherence to therapy.[49,50]

There is a need for studies that evaluate the collective impact of SDH on health outcomes, rather than examining individual factors in isolation; standardised criteria and global methodologies are also needed to holistically assess the impact of SDH. Establishing a unified approach to assess SDH, not only within Spain but also at an international level, would be highly valuable. Additionally,



Dahlgren-Whitehead Mediators	Category Name	Included Trials
Age, sex, and constitutional factors	Biologic	Interventions aiming to target unique biology leading to health disparities (eg, differing dosing strategies for Black patients)
Individual lifestyle factors	Individual	Interventions aiming to change patient knowledge of disease, change adherence with treatment, and increase healthy behaviors
Social and community networks	Social	Interventions which improved patient interaction with local support networks (family, church, other patients) or facilitated access to existing community resources
Living and working conditions	Environment	Interventions which sought to improve access to resources, housing, education, food, and so forth
General socioeconomic, cultural, and environmental conditions	Societal	Interventions specifically tailored for the cultural experience of a patient population or seeking policy change

Fig. 3. Social determinants of respiratory health model. Reproduced with permission from Harper et al.[42]

further data on the effectiveness of community-based programs – including those led by pharmacies – would provide important insights.[51–53]

Risk factors

SDH influence both the diseases affecting a population and the risk factors to which individuals are exposed.[18] Smoking is a key risk factor in respiratory health, as it causes and/or exacerbates respiratory and non-respiratory diseases. It is also associated with six of the eight main causes of death worldwide.

In Spain, tobacco control policies introduced in 2006 and 2011 led to a decline in smoking prevalence over the past 15 years,[54] with 2024 marking the lowest number of smokers in the past 30 years.[55] Despite this progress, smoking remains the leading risk factor for disability-adjusted life years in Spain.[56] Smoking is strongly influenced by gender and socioeconomic factors,[57] and both prevalence and intensity of smoking in Spain increase in groups of lower social class and lower level of education.[58] Significant decreases of smoking in men were not seen in women, as female smoking prevalence plateaued a decade ago in Spain.[59] As such, these and other determinants should be considered in policies that address smoking.

Environmental factors have a major impact on health. In fact, four of the top five causes of mortality in Spain are linked to environmental risk factors; for instance, 33.3% of COPD mortality risk was related to environmental factors in Spain 2021.[60] Exposure to air pollutants contributes to the onset or worsening of chronic respiratory diseases, as pollutants induce oxidative stress and inflammation, particularly in people with pre-existing conditions.[61] Patients with chronic respiratory diseases show increased susceptibility to airborne pollutants due to impaired lung function and immune responses.[61] Notably, nine out of ten people worldwide breathe polluted air, according to the WHO.[62] Air quality is important outdoors but also inside homes and classrooms,[63] which are related to socioeconomic factors. Exposure to green spaces in childhood has been linked to improved lung function, but unequal access, especially limited in low-income neighbourhoods, highlights inequities in health.[18,64,65] Children are particularly vulnerable to air pollution because of their faster breathing rate and immature respiratory and immune systems, among others.[18] On this note, 26% of mortality in children under five years can be attributed to environmental factors.[66] Moreover, lower socioeconomic status is a risk factor for hospitalisation of patients with chronic respiratory disease.[67] Exposure to environmental factors such as mould, tobacco smoke, and coal burning have been linked to a higher prevalence of respiratory symptoms and asthma.[68] The location where a person lives – both rural vs urban and even postal codes within an urban area – plays a role in health equity.[69] Another risk factor affecting health is climate change, which should be considered in policies addressing health inequity.[37] Overall, socioeconomic and environmental factors lead to health inequities in patients with chronic respiratory diseases, who also are affected by loneliness.

Functioning and organisation of healthcare systems in Spain

The healthcare system is one of the health determinants, and equity in access to healthcare services and coordinated care can pave the way to equity in health.[31,70] While not the most influential SDH, it can either reduce or worsen health inequities depending on how care is delivered and accessed. The National Healthcare System in Spain follows the Beveridge model (universal and financed by taxes) and was decentralised in 2002. Each autonomous community manages healthcare separately, which may lead to inter- and intra- regional disparities. Addressing these inequities requires strong coordination between healthcare levels across regions.

The role of primary care

Healthcare systems that prioritise primary care as the basic point of entry, as in Spain, are more effective in reducing health inequities.[37,71,72] This aligns with Starfield's principles: first contact access, continuity, coordination, and comprehensiveness, and derivates, such as community and family focus, and quality orientation.

Even though adequate primary care is essential, its funding in Spain has not grown in line with its relevance. Instead, investment has continued to focus on hospital care and specialised services.[73] Primary care in Spain currently faces serious challenges, including shortages in human resources and infrastructure, professional burnout, organisational problems, and the design of incentives. These issues have contributed to growing difficulties such as limited integration of community pharmacies into the public health system, increased workload, and longer waiting times.[74]

Timely diagnosis of chronic respiratory diseases is highly dependent on primary care, yet access to essential diagnostic tools, such as spirometry, co-oximetry, and thoracic imaging, remains limited.[75] Management of chronic respiratory diseases requires coordination between primary, hospital, social, and home care. Case manager nurses and liaison nurses play a key role by helping reduce hospital stays; improving communication between healthcare professionals, patients, and caregivers; personalising follow-up care after discharge; and reducing emergency visits.[76,77] Social workers and pharmacists also contribute considerably to patient follow-up, besides pharmacists supporting correct treatment administration and adherence.[78,79]

The WHO and Spain's Ministry of Health recommend integrating community pharmacies into the care for patients with chronic diseases and promoting bidirectional communication with primary care.[72,80]

Technology may help reduce health inequities, for example through telemedicine or telepharmacy, but it also involves certain challenges[42]; digital literacy gaps, especially among the elderly and rural populations, may drive inequities if not adequately addressed.[81] Interoperability of clinical records across regions is needed, along with standardised data systems. Clinical records should also include indicators related to SDH to allow more efficient follow-up. The development of relevant indicators in different healthcare settings, and the establishment of their thresholds should require additional resources and investment for achieving true implementation research.[82,83]

'Health area committees' that link primary care with community pharmacy services can help detect local health inequities and find available resources to mitigate them. Prioritising equity in the care of respiratory diseases will ultimately improve outcomes for these and other chronic conditions.

The role of hospital care

Pneumologists, allergologists, and internal medicine specialists play a fundamental role in the diagnosis and management of patients with chronic respiratory diseases, particularly the most severe ones.[84] Together with nursing, these specialists conduct follow-up of high-risk patients, prescribe treatment, coordinate with other healthcare levels, and contribute to research, education, and prevention of chronic respiratory diseases, which ultimately leads to better outcomes and improving the quality of life of patients.[84] A multidisciplinary approach is needed to address SDH, involving ongoing education for healthcare professionals to help prevent or mitigate the impact of respiratory diseases. This not only benefits patients but also promotes health equity.

The importance of optimising coordination of care

Primary care serves as the gateway to the healthcare system and plays a key role in coordinating community elements, such as community pharmacy, sport facilities, schools, and nursing homes. Promoting bidirectional communication among these sectors is essential to expedite care for patients with chronic respiratory diseases. This coordination must always be adapted to the geographical characteristics and the healthcare structure of a given area.

To address SDH, a comprehensive care approach needs to consider improved interpersonal communication, coordinated care, and community involvement.[85] Integrating SDH in respiratory care can improve patients' quality of life and contribute to reducing health inequities. This requires coordination between primary and hospital care, pharmacy, community services, and various health professionals to promote policies that improve social and environmental factors to reduce the incidence of respiratory diseases.

Good practices and initiatives of interest

Several initiatives have been adequately implemented across Spain to address social, environmental, and behavioural determinants that contribute to inequities in respiratory health. These programmes, developed by professional societies, local governments, and community organisations, aim to improve awareness, education, access to care, and social support for vulnerable populations. Below are some examples that illustrate ongoing efforts to reduce disparities and promote more equitable respiratory healthcare; these best practices may be expanded or adapted elsewhere.

Working group on social determinants of health

The Spanish Society of Pneumology and Thoracic Surgery (SEPAR) developed a working group focused on social determinants of respiratory health.[32] The working group aims to provide evidence-based information on these determinants, promote training on this topic, strengthen ties with healthcare professionals, and advise the board of directors of SEPAR on improving communication with health authorities.

SEPAR patients

Patients with respiratory diseases face unexpected situations on a daily basis. The working group SEPARpatients was developed by SEPAR to educate patients, relatives, and caregivers on managing respiratory diseases and making informed decisions.[86] This initiative also promotes social awareness of respiratory diseases.

Asthma Right Care

The Respiratory Group in Primary Care (GRAP) developed the Asthma Right Care initiative in Spain, targeting primary care physicians and community pharmacists, through the General Pharmaceutical Council of Spain. The goal of the initiative is to raise awareness on the negative impact of overusing short-acting beta-agonists in patients with asthma (increased exacerbations and mortality[87]), especially in patients who primarily use this rescue therapy as the main treatment approach without adequate maintenance treatment according to guidelines.[88]

'I am an allergy expert'

The project 'I am an allergy expert' was developed in 2018 by the Spanish Society of Allergology and Clinical Immunology (SEAIC) to educate patients, relatives, and caregivers on the most prevalent allergic diseases.[89] A website was developed with information for teenagers and adults. The initiative also aims to establish a support network and bring patient associations to light.

Radars

The Radars project was initiated by the social services of Barcelona city council to make neighbourhoods more humane, safe, participatory, and supportive.[90] The goal is to mitigate loneliness in the elderly and have a network of participants (neighbours, businesses, pharmacies) that can notify social services about elderly people who might need help.

'Madrid is with you'

Madrid city council developed the 'Madrid is with you' initiative to build connections between volunteers and Madrid city residents aged 65 and above.[91] The goal is to mitigate loneliness in elderly residents, who can request a volunteer for assistance with everyday tasks, leisure activities, and medical appointments.

'Rural health schools'

The 'Rural health schools' Project was launched in 2023 by the General Pharmaceutical Council of Spain and the Castilla y León Pharmaceutical Council to provide healthcare education and promote health in rural areas in Castilla y León.[92] Through training sessions for different population groups, the programme aimed to strengthen economic, social, and territorial cohesion in vulnerable rural areas, improve residents' health and quality of life, and reinforce the role of pharmacists in guiding and supporting patients.

'Accessible medication plus' app

A free mobile application, 'Accessible medication plus' was developed by the General Pharmaceutical Council of Spain, ONCE Foundation, and Fundación Vodafone España to enable access to updated medication information by anyone who uses the app.[93] A user can create a profile with key information, such as allergies or pregnancy status, allowing the app to alert them about any potential incompatibility with medications they search for. The app was developed to be accessible to people with visual and/or hearing impairment, and the elderly.

Recommendations

As a result of this review, we have identified a need for a pragmatic country-wide strategy that promotes coordinated management of respiratory diseases, considers equity, and evaluates the impact of SDH. Ultimately, this approach would optimise the respiratory diseases patient journey and enable respiratory diseases to be considered specifically in healthcare policy. This strategy should be developed by the public administration (healthcare and social services), all healthcare levels (primary, hospital, and community care) involved directly or indirectly in care for respiratory diseases, and scientific societies, general councils, and patient associations. This approach could be enhanced by reinforcing existing regulations and implementing public policies to create and protect healthy environments (particularly focused on reducing smoking and improving air quality). Our role as an independent party is limited to raise the flag and identify the unmet needs related with chronic respiratory diseases. Future engagement of the relevant autonomic and national authorities should address on the who/what/how/when additional financial and human resources necessary to tackle them in full.

To ensure equity, the consensus group proposes the following recommendations:

R1. Ensure a holistic and comprehensive approach to manage patients with chronic respiratory diseases by coordinating different healthcare levels (primary, hospital, and community care) and public administration departments (health and social services). This requires:
   a. Developing comprehensive care plans for respiratory diseases.
   b. Establishing reference centres or specialised units for respiratory conditions of varying complexity.
   c. Promoting accreditation programs for nurses with advanced competencies in respiratory care and strengthening case manager and liaison nurse roles in all health centres.
   d. Enhancing the role of nurses specialised in family and community care to promote health and prevent disease, especially in vulnerable areas.
   e. Including some key SDH data in a unified clinical record.
   f. Strengthening health councils as tools to identify the SDH affecting each health area.
   g. Expanding the role of pharmacies (primary, hospital, and community care) in treatment support, health literacy, and patient counselling.

R2. Facilitate early diagnosis of respiratory diseases by strengthening the role of primary care and its coordination with specialised care by training and providing quick access to diagnostic tests and tools (e.g. spirometry, chest imaging) when there is clinical suspicion.

R3. Consider available resources and prioritisation strategies, promote equitable access to treatment and inclusion of cost-effective therapeutic innovations focusing on equity across regions, individuals, and healthcare services.

R4. Implement therapeutic education programs and healthy lifestyle recommendations to empower patients and caregivers in managing the disease and improving treatment adherence during follow-up and treatment.

R5. Launch awareness campaigns across all regions to strengthen prevention efforts and promote respiratory health.

R6. Establish quality indicators that allow regions to measure and evaluate the efficiency of chronic respiratory disease management using the same agreed-upon criteria.

R7. Assign the following responsibilities to the future State Agency for Public Health, which has been proposed in a draft bill approved by the Council of Ministers of Spain:
   a. Develop a unified methodology to continuously analyse and monitor the impact of SDH on respiratory diseases from a multidisciplinary and interregional perspective.

b. Identify key SDH data that should be integrated as indicators in the unified clinical record.

Other potential obstacles to overcome include resistance to change, data privacy issues, or lack of interdepartmental coordination with and beyond primary care. Again, in due course any corrective strategies should require a dialogue with all relevant authorities.

Beyond authorities at the autonomic and national levels, any particular project/program targeting vulnerable populations should require the active engagement of representatives from the respective communities – such as migrants (civil society, Red Cross, ...), ethnic minorities (Roma, Latino, and other representatives), LGTBIQ+ representatives, rural communities (city halls, politicians, ...), prisoners (inmate representatives and their families, Department of Interior, ...), or children (paediatric societies, parents' associations, Education departments, ...).

Recently, the WHO framed social inequalities as a global strategy to fulfil the health-related SDGs.[94,95] The work we present here is a further step to implement the WHO's "no one left behind" campaign for people who suffer chronic respiratory disease, and their carers.

Conclusions

Chronic respiratory diseases represent an important and probably underestimated public health issue, characterised by high prevalence and mortality, and associated with a substantial socioeconomic burden. These challenges are exacerbated by significant inequities linked to social, environmental, and behavioural determinants such as poverty, pollution, and smoking, among others. Although Spain has a universal healthcare system, inequities persist due to underfunding, regional fragmentation, and technological barriers. To address this, it is essential to implement equity-focused health policies, strengthen coordination between primary, community, and hospital care, promote interventions targeting modifiable determinants, and integrate accessible digital tools. Community-based initiatives and targeted educational programmes have shown preliminary effectiveness and should be expanded to further reduce respiratory health disparities.

Declaration of generative AI and AI-assisted technologies in the writing process

No artificial intelligence tools were used in the conception, writing, or editing of this manuscript.

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Authors' contributions

All authors contributed to the development of the manuscript. CA and JBS led the conceptualization, drafting and coordination of the document along with EC. GF, BGLV, CH, RM, RM, MP, VR and IU participated in the meetings held, literature and evidence review, and critical discussion of the document. All authors were involved in iterative rounds of review and approved the final version of the manuscript.

Conflicts of interest

CA has received grants or contracts from EIT Health – ROUTE2SPAIN; consulting fees from GSK, AstraZeneca, Chiesi, Gebro, and Sanofi; honoraria for lectures, presentations, speaker bureau participation, manuscript writing, or educational events from GSK, AstraZeneca, Chiesi, Gebro, Menarini, Faes, and Sanofi; and support for attending meetings and/or travel from GSK, AstraZeneca, Chiesi, Gebro, Menarini, and Faes.

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