



Expert Perspectives on Transforming Care in Asthma and Chronic Obstructive Pulmonary Disease Today



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Disclosure:

Couillard reports the following: he has received non-restricted research grants from the NIHR Oxford Biomedical Research Centre (BRC), the Quebec Respiratory Health Research Network, the Association Pulmonaire du Québec, the Academy of Medical Sciences, AstraZeneca, bioMérieux, Circassia Niox Group, and Sanofi-Genzyme-Regeneron; he is the holder of the Association Pulmonaire du Québec's Research Chair in Respiratory medicine and is a Clinical research scholar of the Fonds de recherche du Québec; he has received speaker honoraria from AstraZeneca, GlaxoSmithKline, Sanofi-Regeneron, and Valeo Pharma; he received consultancy fees for FirstThought, AstraZeneca, GlaxoSmithKline, Sanofi-Regeneron, Access Biotechnology and Access Industries; he has received sponsorship to attend/speak at international scientific meetings by/for AstraZeneca and Sanofi-Regeneron. He is an advisory board member and detains stock options for Biometry Inc – a company that is developing a fractional exhaled nitric oxide (FeNO) device (myBiometry, Boston, Massachusetts, USA). He advised the Institut national d'excellence en santé et services sociaux (INESSS) for an update of the asthma general practice information booklet for general practitioners, and is a member of the asthma steering committee of the Canadian Thoracic Society.

Yorgancioglu reports the following: she has received grants and research support from Sanofi; she has received speaker honoraria or consultation fees from AstraZeneca, Adbi Ibrahim, GlaxoSmithKline, Novartis, and Chiesi; she has advised for and participated with the World Health Organization (WHO), the

Turkish Ministry of Health, the WHO GARD Global Alliance against Respiratory Diseases, the Global Initiative for Asthma (GINA), and the European Respiratory Society (ERS).

Russell reports the following: he has received grant support to attend conferences from Chiesi UK and honoraria as a speaker for AstraZeneca, Chiesi, GSK, Sanofi and Boehringer Ingelheim. He is the Editor of the International Journal of COPD and the Chairman of the British Thoracic Society

Brindicci is an employee of AstraZeneca and may hold company stock or stock options.

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Interview Summary

Asthma and chronic obstructive pulmonary disease (COPD) affect more than 550 million people worldwide and are associated with substantial morbidity and mortality. Despite the availability of treatments that can slow disease progression, including combination therapies and biologics, many patients have uncontrolled disease and face a high risk of exacerbations, hospitalisations, and mortality. Preventable exacerbations and the associated hospitalisations place significant burden on already strained healthcare systems, as well as negatively impact our environment. To gather insights on how early intervention in asthma and COPD using guideline-directed and evidence-based medicine can transform respiratory care, EMJ interviewed three experts: Simon Couillard, Richard Russell, and Arzu Yorgancioglu.

CHAIR

Caterina Brindicci

“As a pulmonologist, I was heartened by the passion at the 2024 European Respiratory Society Congress and the shared optimism that we, as a respiratory community, can do better for people, society, and the planet,” Brindicci said.

AstraZeneca is on a mission to help eliminate COPD as a leading cause of death,¹ stop asthma attacks, and achieve clinical remission, and an incredible groundswell of support from the respiratory community has been noted around these goals. To achieve

these longer-term ambitions, partnership is essential to collectively advance key practice and policy goals. This includes changes to clinical practice to ensure at-risk patients receive timely reviews and interventions to avoid hospitalisations. It also includes policy changes that elevate chronic respiratory diseases as public health priorities to reduce their impact on both patients and the environment. “In tandem, we are developing a large portfolio of new medicines to help ensure that there are viable solutions for patients with respiratory diseases at every stage, and decarbonising our respiratory medicines to do better for our planet,” Brindicci said.

“We know our work at AstraZeneca is intrinsically tied to strong partnerships across the respiratory community. As Arzu Yorgancioglu, Simon Couillard, and Richard Russell explore, it’s imperative that together we advance earlier intervention to transform respiratory care, improve millions of lives around the world and reduce the impact of respiratory diseases on the planet.”

THE IMPACT OF EARLY INTERVENTION ON OUTCOMES IN PATIENTS WITH SEVERE ASTHMA

Simon Couillard

What Are The Key Challenges That Exist In Severe Asthma Care Today?

Approximately 50% of people with severe asthma have uncontrolled disease, increasing their risk of exacerbations and disease progression.² Yet, current asthma guidelines recommend escalation of therapy only once a patient has experienced multiple attacks and significant loss of lung function. In the meantime, these patients often over-rely on oral corticosteroids (OCS), a therapy often associated with adverse effects including diabetes, hypertension, cardiovascular disease, osteoporosis, cataracts, and mood disorders.^{3,4} Up to €1 billion is incurred in excess costs treating patients with asthma requiring OCS due to these comorbidities.⁵

To prevent disease progression and reduce costs, including those associated with hospital readmission, early intervention specifically targeting the underlying inflammatory process is essential, rather than escalating therapy only after irreversible damage has occurred.^{6,7} The Global Initiative for Asthma (GINA) recommendations and national guidelines offer referral guidance;⁸ referring at-risk patients after their first asthma attack may ensure more timely initiation of advanced therapy. Rapid access clinics, like those for rheumatoid arthritis, could facilitate prompt interventions. Preliminary data from Couillard and team’s ongoing PRISMA

study found that in Canada, around 40% of patients seen in their acute asthma attack clinics received life-changing biological therapy, demonstrating the potential effectiveness of this approach.⁹

Asthma is predominantly managed in primary care, presenting a clear opportunity for innovation. General practitioners already deliver effective biomarker-guided care for other diseases; for example, lowering a person’s risk of a heart attack by treating elevations in measurable biomarkers, such as blood pressure and cholesterol, with antihypertensive drugs and anti-cholesterol medications.¹⁰ Researchers are in the process of identifying easily measurable biomarkers to identify high-risk patients with asthma earlier in primary care for referral to a specialist when their disease is not well controlled.^{11,12} This would improve the management of both severe and high-risk asthma.⁷ The Severe Asthma Policy Steering Group issued a call to action earlier this year that outlined key changes required to improve severe asthma care.¹³

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Are There Any Other Diseases That Can Be Used to Inform Best Practice in Severe Asthma Care?

Lessons from rheumatoid arthritis management, another chronic inflammatory disease, can be taken to enhance asthma care. Rheumatologists use a treat-to-target approach, aiming for biological remission rather than symptom control, which enables patients to avoid outcomes like ‘rheumatoid hands’ and maintain a good quality of life.¹⁴ Similarly, remission is achievable in asthma;

20–50% of people on therapy (biologics, macrolides, and inhaled drugs) experience no more asthma attacks and are able to live a more normal life.¹⁵ Earlier intervention paired with a treat-to-target approach could further advance remission as an attainable treatment goal in asthma.¹⁶

COPD AND CARDIOPULMONARY RISK: THE NEED FOR EARLY INTERVENTION

Richard Russell

How Are COPD and Cardiopulmonary Risk Connected?

COPD is a major public health problem causing an estimated 3 million deaths per year, and incurring substantial costs for millions of patients and global healthcare systems, yet remains under-prioritised, underfunded, and undertreated.^{1,17-21} It is becoming increasingly recognised that COPD has inherent risk due to the interaction between the heart and lungs.²² The overall result is that COPD increases the risk of both pulmonary and cardiovascular events, increasing the risk of mortality.²³⁻²⁵

What Change Is Needed In Clinical Practice to Address the Risks Associated with COPD?

A change in mindset is needed to ensure COPD is diagnosed at the earliest opportunity using appropriate tests and is promptly treated with guideline-directed, evidence-based treatment to prevent further exacerbations and other cardiopulmonary events.

When it comes to treating cardiac disease, prevention and risk are central to management. For example, identifying at-risk patients using risk factors like BMI or age and working to optimise treatment to prevent cardiac events with disease-modifying agents or lifestyle changes.¹⁰ The same proactive approach is not implemented in COPD. Opportunities to optimise therapy early in patients with COPD are being missed, and treatment escalation is often only occurring after significant events such as exacerbations and/or hospitalisations occur. It is critical to act more proactively to better manage risk in COPD to prevent pulmonary and cardiac events and reduce mortality.

“Earlier intervention paired with a treat-to-target approach could further advance remission as an attainable treatment goal in asthma”

How Does Early Intervention Work in the Real World?

Below are two real-world cases that Couillard handled.

Patient A: A 50-year-old, non-smoker with lifelong severe asthma and recurrent OCS-treated asthma attacks since childhood. His lung function was 30% of that expected for his age, and he suffered multiple OCS-related side effects. Despite starting biological therapy, disease progression had already occurred, and he remained chronically breathless.

Patient B: A 21-year-old new father and former hockey player with recent severe asthma symptoms. He attended the rapid asthma clinic where Type 2 inflammation was confirmed, and he was started on biological therapy within 6 months. His lung function is now stronger, and he has resumed playing hockey.

Patient B is likely to avoid lung function loss or a decline in quality of life.

These cases reinforce that seeing patients promptly, accurately diagnosing, promptly assessing disease activity, and initiating the appropriate therapies early can achieve the best outcomes for patients.



Treating COPD earlier and preventing exacerbations could therefore improve pulmonary outcomes, reduce the risk of cardiopulmonary events, and decrease mortality



How Can COPD Care Be Optimised To Further Improve Outcomes?

Treatment optimisation aims to prevent a first exacerbation as well as prevent exacerbation recurrence. COPD exacerbations are critical events associated with morbidity, disease progression, and mortality as a result of increased cardiopulmonary risk.²³⁻²⁶ For example, the risk of myocardial infarction is doubled for the first five days following an exacerbation, while the risk of stroke, hospitalisation, further exacerbations, and cardiopulmonary-related death are also increased.^{23,27-29} Treating COPD earlier and preventing exacerbations could therefore improve pulmonary outcomes, reduce the risk of cardiopulmonary events, and decrease mortality.

The patient's first point of contact is usually a primary care physician. At this point a COPD diagnosis must be considered including the associated elevated cardiopulmonary risk. Seamless transfer of information and integrated primary and secondary care pathways are essential, for example, ensuring primary care follow-ups post-hospitalisation to reduce high readmission rates. Similarly, multidisciplinary coordination across respiratory and cardiovascular teams will significantly improve care.

Despite evidence-based guidelines for treating COPD, there is persistent cynicism about COPD outcomes across the global healthcare community. But the reality is that there are now therapies that, when initiated early and optimised alongside non-pharmacological measures, can reduce exacerbations and subsequently may reduce the risk of cardiopulmonary

events, improve quality of life, and decrease mortality.¹ By getting the treatment approach and timing right, massive transformations can be made in people's lives, which as a respiratory physician would be wonderful to see.

THE INTERSECTION OF OPTIMISING CARE AND REDUCING ENVIRONMENTAL BURDEN

Arzu Yorgancioglu

What is the Impact of Chronic Respiratory Disease on the Environment?

Caring for the millions of people living with chronic respiratory diseases like COPD and asthma carries a significant environmental impact through medicine use, hospitalisation and primary care visits.^{8,17,30,31} The global climate crisis necessitates urgent action from the respiratory community to reduce this carbon footprint. It is becoming increasingly clear that optimising patient care through guideline implementation can be a key way to improve outcomes and reduce the environmental impact of care.

Multiple respiratory treatments, such as pressurised metered dose inhalers, rely on a greenhouse gas as a propellant. A transition to propellants with near-zero Global Warming Potential is anticipated from 2025. The carbon footprint due to daily inhaled respiratory medicines, however, represents only a fraction of the overall environmental impact of treating respiratory diseases such as COPD. The EXACOS CARBON study found that the HealthCare Resource Utilisation (HCRU) associated with patients with a history of multiple COPD exacerbations was seven times higher than the carbon footprint from routine COPD medicine use. Exacerbations resulted in a disproportionate carbon impact due to additional HCRU up to a year post-event.³⁰ Similarly, the carbon footprint associated with poorly controlled asthma is three-fold higher than that of well-controlled asthma.³¹

Since exacerbations of COPD and asthma contribute a disproportionate amount to the carbon footprint of care, good disease control is crucial to improve outcomes and minimise environmental impact. Maintaining clinical and patient choice for inhaled medicines allows treatment to be tailored to an individual patient's need, maximising the potential for disease control. It is essential to ensure that the phase out of F-gases does not put patients in danger by removing access to essential medicines before the transition to low- and near-zero Global Warming Potential (GWP) alternatives has taken place. Implementing restrictions too rapidly could harm patients, especially in low- and middle-income countries, which account for the majority of pressurised metered dose inhaler use, as well as increase emissions.³²

The ERS has introduced the concept of the “green asthma patient” who benefits from greener healthcare regulations and can make conscious choices to reduce their carbon footprint without compromising their health.³³ Physicians should consider both patient-specific features and environmental impact when choosing medicines. Switching inhaler regimens for non-clinical reasons can increase health risks for patients and carbon footprints due to poorer disease control. Patient safety, treatment efficacy, and choice must remain the primary drivers when selecting an inhaled respiratory medicine.³⁴ Importantly, the ‘greenest’ inhaler is the one that the patient can use and will use to maintain good disease control.

How Does Early Intervention Contribute to Decarbonising Respiratory Care?

Early diagnosis and guideline-based management, aiming to prevent disease progression and exacerbations, will reduce the impact of asthma and COPD on the environment. Implementing guideline-directed care and evidence-based medicine, with individualised inhaler selection to ensure optimal treatment, is essential for greener respiratory care.

“Implementing guideline-directed care and evidence-based medicine, with individualised inhaler selection to ensure optimal treatment, is essential for greener respiratory care”

CONCLUSION

Interviews with the three experts highlighted how early intervention and optimised care can transform the management of chronic respiratory diseases.

Yorgancioglu emphasised that “the ‘greenest’ inhaler is the one that the patient can and will use, as poor control of their disease will lead to exacerbations that increase the carbon footprint.”

Couillard highlighted the opportunity to reduce the burden of asthma: “It is a very exciting time in asthma research... there is a real opportunity to identify at-risk patients earlier and to treat targets earlier to achieve remission for more patients.”

Russell advocated for early diagnosis and a preventative, risk-driven approach to optimise care and address cardiopulmonary risk. “We can reduce risk, optimally treat, and improve outcomes for our patients. We have the opportunity to change the trajectory of COPD and eliminate it as a major cause of death.”

In making the case for the respiratory community to advance earlier intervention and optimised treatment in COPD and asthma, they share a vision for transforming respiratory care to improve outcomes for patients, societies, and the planet.

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