Patient Perspectives on the Lifelong Impact of Preterm Birth in Chronic Respiratory Disease Care

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Introduction

Approximately 15 million infants are born prematurely each year, a status often associated with an increased risk of chronic respiratory conditions such as asthma and Chronic Obstructive Pulmonary Disease (COPD). [1,2]. Data on prematurity impact on respiratory disease progression and management in adulthood remain limited.

Objective

This study aims to investigate **patient awareness** of their **preterm status**, its **perceived impact** on their respiratory health, and how **healthcare professionals** (HCPs) consider preterm status when **managing** these conditions.

Methods

- This cross-sectional international study, based on a web-based survey, was approved by the WCG investigator's institutional review board (IRB) and was composed of 34 questions.
- Adults who **were born preterm** (before 38 weeks of pregnancy) and **diagnosed with asthma, COPD or another chronic respiratory disease** were recruited through Carenity, an online patient community, social media campaigns and Carenity's partners.
- Differences between subgroups were assessed using **Chi-2 tests** and **Wilcoxon tests. Multivariate logistic regression models** explored the impact of preterm status on comorbidities, disease perception, and management.

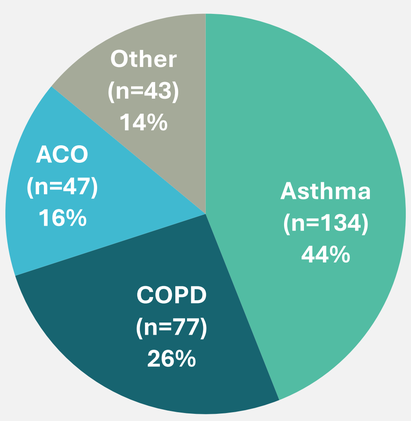
➔ Data from **301 participants** were collected from March to June 2024, in **France**, **Germany, Spain**, the **UK** and the **US**.

n=109 n=37 n=39 n=72 n=44

Results

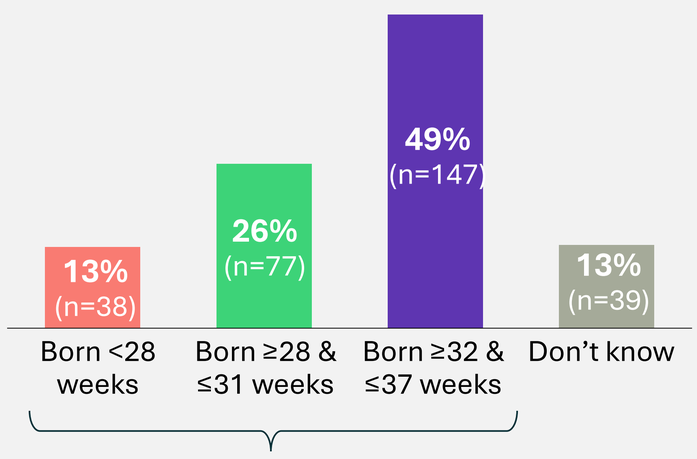
Patients' medical profile and preterm status

Fig1. Reported respiratory conditions (n=301). ACO: Asthma-COPD overlap syndrome



Mean age (y): 51.9 (SD:15.3)
Gender ratio: 74% women, 26% men

Fig2. Reported preterm status (n=301)

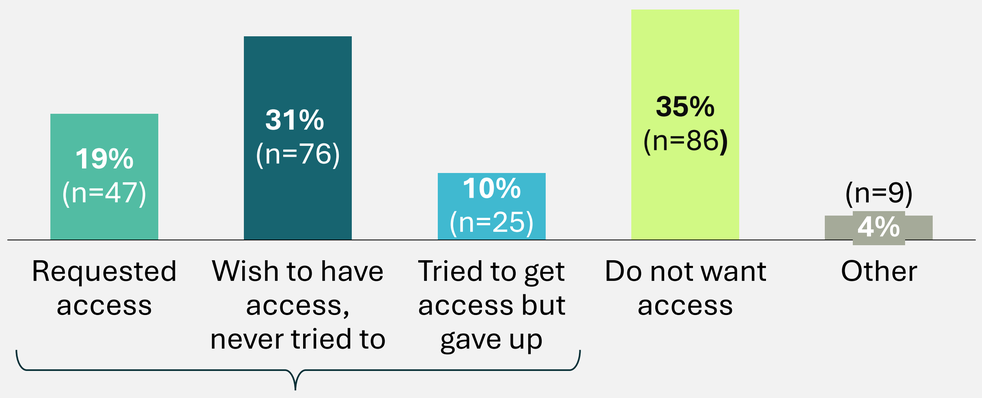


➔ **87%** of patients **knew** their preterm status

Awareness and access to medical history

➔ **87%** of respondents had **medical information** on their first days of life, mostly through **discussions** with relatives (81%).
➔ **19%** had access to their **medical files**.

Fig3. Among respondents without access to their medical dossier (n=243), willingness to have access to these files regarding their first days of life



➔ **60%** wanted access or had tried to get access to their files in the past

Impact of preterm birth on respiratory condition severity in adulthood

Fig4. Odds of having a severe to very severe respiratory condition, results from a multivariate logistic regression (n=240)

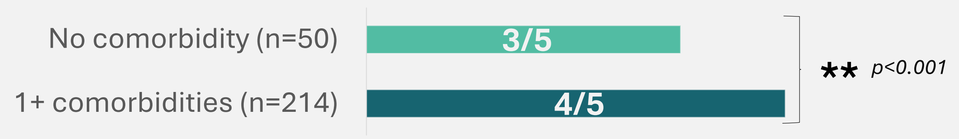
➔ The odds of having **a severe to very severe respiratory condition** were significantly higher for **patients over 60** years old, patients with **COPD** (with or without asthma) and other respiratory conditions

➔ Respiratory condition **severity** was **not influenced** by the **degree of prematurity**

Estimated impact of preterm birth on lifelong health

Fig5. Median patients' estimation of preterm birth impact on lifelong health by respiratory condition, on a scale of 1: no impact to 5: important impact (n=262)

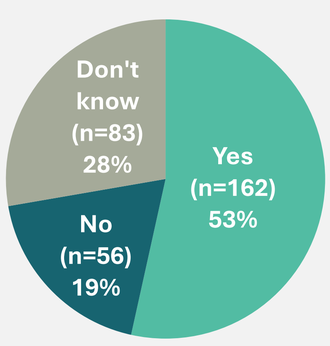
Fig6. Median patients' estimation of preterm birth impact on lifelong health by presence of comorbidity, on a scale of 1: no impact to 5: important impact (n=264)



➔ **Impact** of preterm birth on lifelong health was considered **moderate** (median rating: 3/5) by patients and **varied** with **existing conditions**

HCP's consideration of preterm status during care journey

Fig7. Proportion of patients thinking that prematurity should be considered when managing their respiratory condition(s) (n=301)



➔ Most patients believed that their preterm status **should be considered** when managing their condition
➔ Yet, only **1/4** shared it spontaneously when meeting their current HCP
➔ **1/3** of the HCPs with who preterm status was shared **did not react**.

Fig8. Proportion of patients who shared their preterm status during the first appointment with the HCP currently managing their condition(s) (n=287)

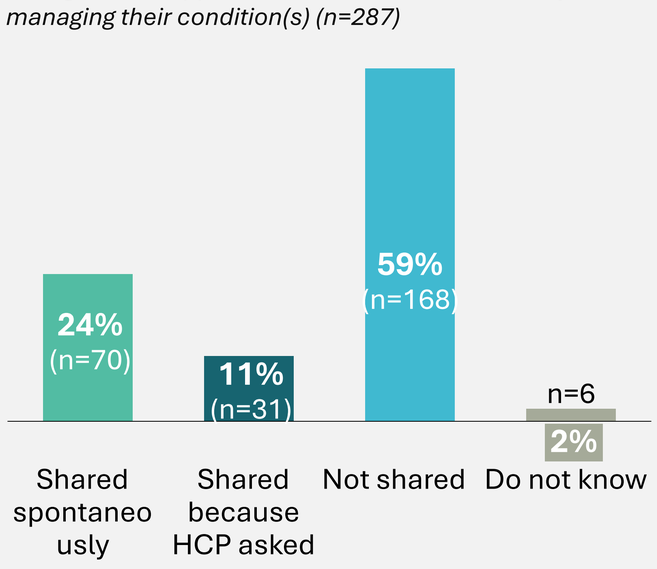
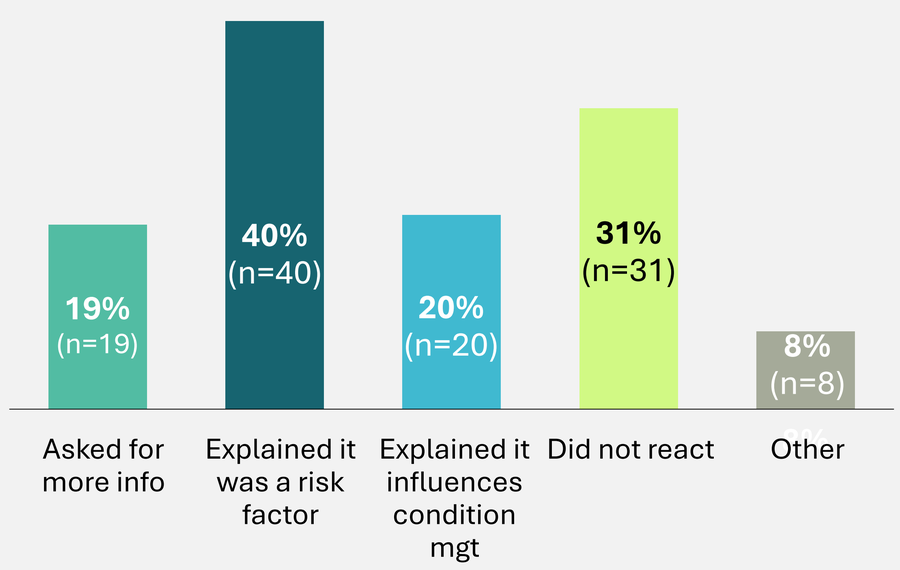


Fig9. HCP reaction to preterm status being shared (for patients who shared their preterm status, n=101)



Conclusion

- **Most adults** with **chronic respiratory conditions** born prematurely are **aware of their preterm status** and perceive it as having a **moderate lifelong impact on their health**.
- **Prematurity does not** appear to **significantly influence the severity** of **respiratory diseases** in **adulthood.**
- While many patients believe preterm status **should be considered in their care**, **HCPs rarely incorporate** this information.

➔ **Increasing awareness** among HCPs about the **long-term effects of prematurity** may support **more tailored disease management strategies**.

References & Funding statements

1. Torchin H, Ancel PY, Jarreau PH, Goffinet F. [Epidemiology of preterm birth: Prevalence, recent trends, short- and long-term outcomes]. *J Gynecol Obstet Biol Reprod (Paris)*. 2015;44(8):723-731. doi:10.1016/j.jgyn.2015.06.010
2. 2. Di Filippo P, Dodi G, Ciarelli F, Di Pillo S, Chiarelli F, Attanasi M. Lifelong lung sequelae of prematurity. *Int J Environ Res Public Health*. 2022;19(9):5273. doi:10.3390/ijerph19095273

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