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Evaluating the Burden of Chronic Cough in Patients with Interstitial Lung Disease: A US Survey-Based Analysis of Its Effects on Daily Life and Emotional and Social Well-Being

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Background

- Chronic cough is common in patients with idiopathic pulmonary fibrosis (IPF) and non-IPF interstitial lung diseases (ILDs)[1-3]
- Chronic cough is persistent (lasting ≥8 weeks) and may worsen over time, contributing to substantial disease burden[4,5]
- Beyond physical symptoms, such as fatigue and pain, chronic cough can negatively impact multiple aspects of health-related quality of life, including daily functioning, emotional well-being, and social interactions[5-7]
- Currently, there are no US Food and Drug Administration–approved therapies for chronic cough in patients with IPF or non-IPF ILD
- Further characterization of the patient-reported burden of chronic cough in these populations is needed to inform patient-centered care and future therapeutic development

Objective

- To characterize the multidimensional burden of chronic cough from the perspective of patients with IPF and non-IPF ILD

Methods

- An anonymous online survey was administered via a third-party platform to US Pulmonary Fibrosis Foundation Community Registry participants (June and July 2025)
- Eligible participants were adults who self-reported a diagnosis of ILD including IPF or non-IPF ILD and chronic cough (lasting ≥8 weeks)
- Cough severity during the previous 24 hours was assessed using the 11-point Cough Severity Numerical Rating Scale (CS-NRS; 0 = no cough to 10 = worst possible cough)[8]
  - Cough severity was categorized as none (0), mild (1-3), moderate (4-6), or severe (7-10)
- The survey included multiple-choice and open-ended questions covering 6 domains: demographics; disease history; cough characteristics; impact of cough on daily life; social, emotional, and longterm impact; and healthcare experience
- Numerical data were summarized using descriptive statistics. Open-text responses were reviewed and grouped into themes, with representative quotes selected to illustrate key concepts

Results

Study Population

- The survey was opened by 211 people; 206 initiated the survey by accepting the consent statement, and 197 met eligibility criteria and completed the survey
- Most were aged 60-79 years (68.5%), diagnosed with IPF (75.6%), and had cough for ≥2 years (75.6%) (**Table 1**)

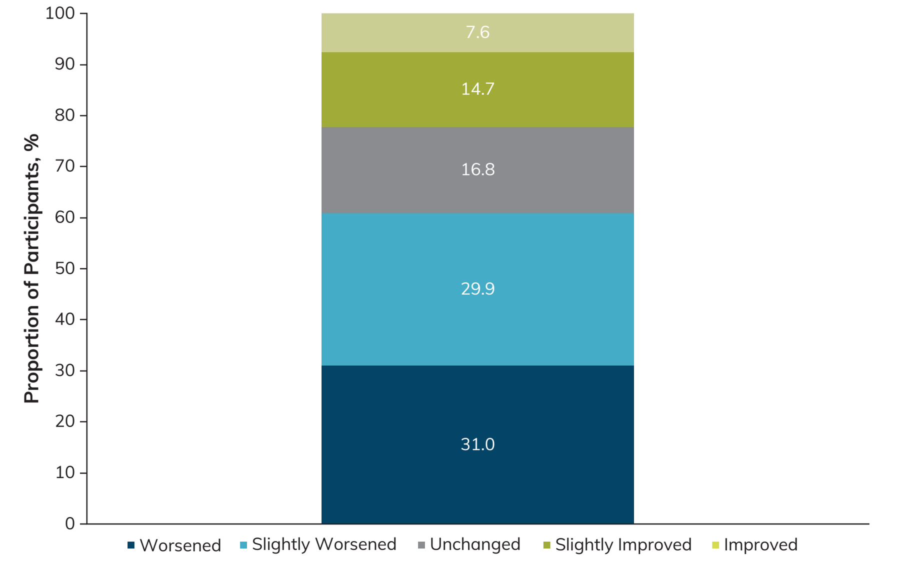
Table 1. Participant Demographics

Category	n (%)
Age, years (n=197)	
30-39	1 (0.5)
40-59	27 (13.7)
60-79	135 (68.5)
80+	34 (17.3)
Sex (n=197)	
Female	96 (48.7)
Male	100 (50.8)
Prefer not to say	1 (0.5)
Location (n=197)	
Rural	39 (19.8)
Suburban	118 (59.9)
Urban	40 (20.3)
Duration of cough (n=197)	
8 weeks to 1 year	20 (10.2)
1-2 years	28 (14.2)
2-5 years	69 (35.0)
>5 years	80 (40.6)
ILD diagnosis (n=197)	
IPF	149 (75.6)
Non-IPF ILD	42 (21.3)
Awaiting further ILD diagnosis	6 (3.0)
Time since ILD diagnosis (n=191)	
>5 years	72 (37.7)
2-5 years	86 (45.0)
1-2 years	24 (12.6)
6-12 months	7 (3.7)
<6 months	2 (1.0)

Cough Characteristics

- 60.9% of participants reported worsening cough severity over time (**Figure 1**)

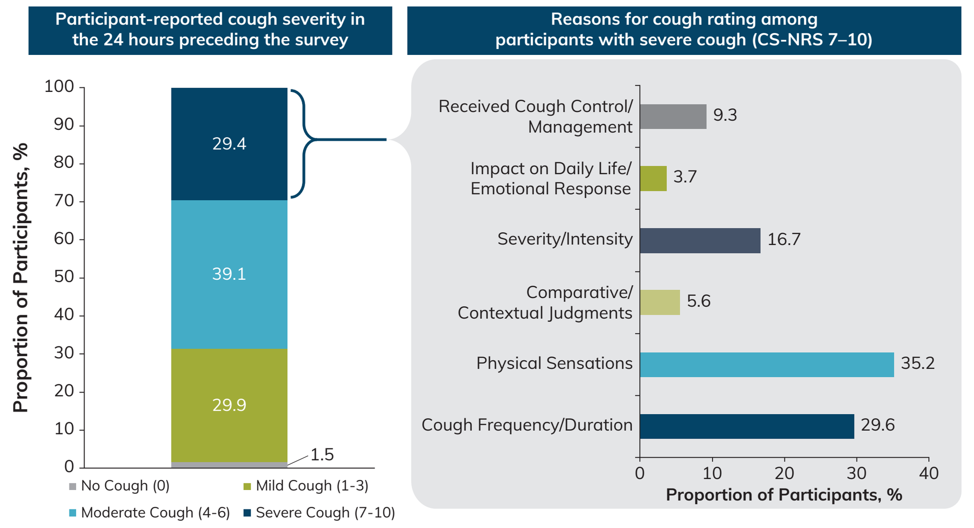
Figure 1. Participant-Reported Change in Cough Severity Since Onset



Participants were asked: "How has the severity of your cough changed since it started?" (n=197 responses).

- 29.4% of participants reported severe cough (7-10) in the past 24 hours (**Figure 2**)
  - Among these participants, physical sensations and cough frequency/duration were the most frequently cited reasons for their rating

Figure 2. Participant-Reported Cough Severity and Key Drivers of Severe Cough Rating in the 24 Hours Preceding the Survey

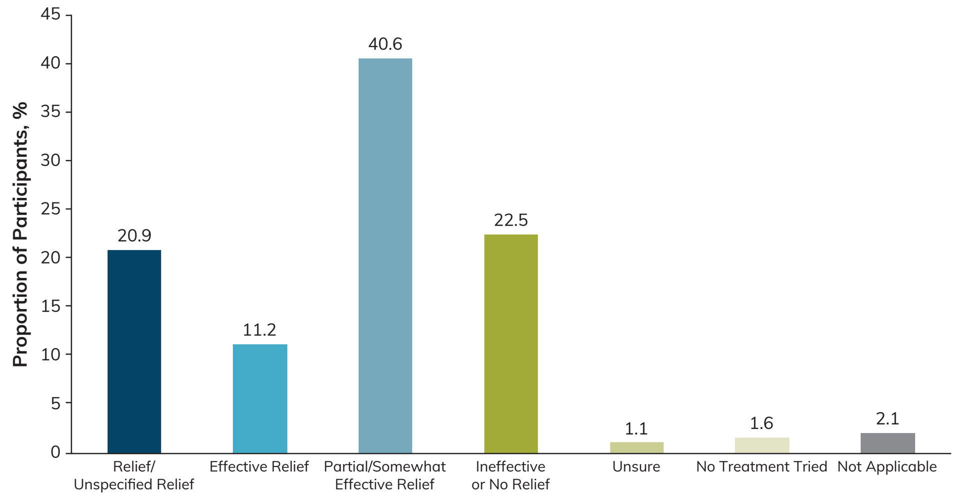


Cough severity measured using the CS-NRS 0-10 scale for the past 24 hours. Reason for cough rating based on open text question: "What was it about your cough that made you give it the rating you did in the previous question?" (n=186 responses).

Treatment Experience

- At the time of the survey, participants reported currently using an average of 2 therapeutic classes for treatment of their cough
  - The most used therapeutic classes were over-the-counter remedies such as cough syrup and lozenges (62.8% previous use; 56.1% current use) and inhalers/nebulizers (58.7% previous use; 52.6% current use)
- Many participants reported limited improvement in cough from therapeutic interventions, with only 11.2% reporting effective relief (**Figure 3**)

Figure 3. Participant-Reported Relief From Treatments for Chronic Cough

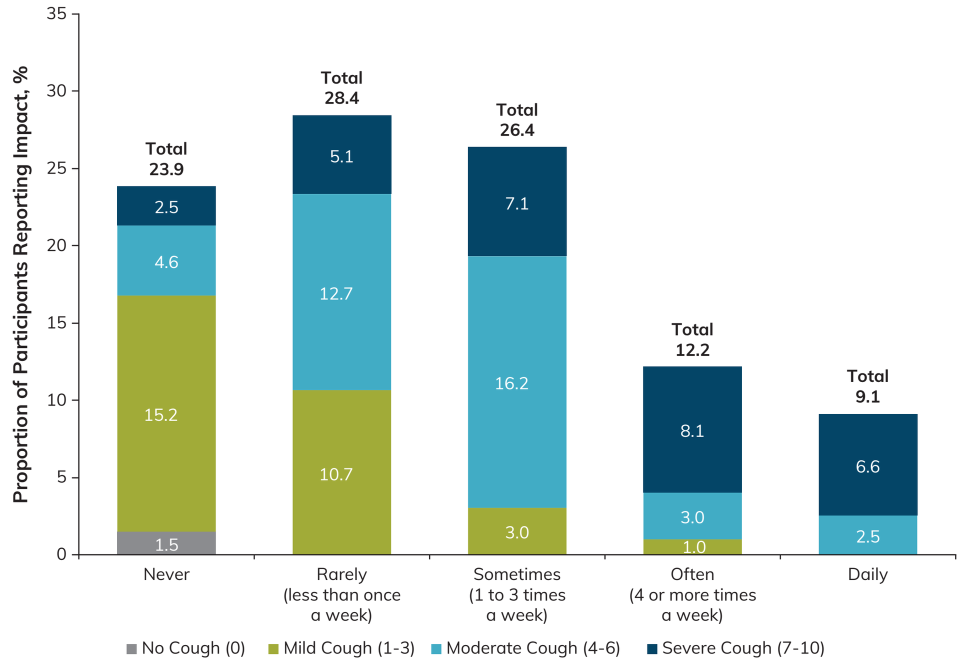


Based on open text question: "For any treatments you are currently using or have tried, please specify if any have provided relief from your cough." (n=187 responses).

Impact on Daily Life

- 76.1% of participants felt their cough interfered with routine activities (**Figure 4**)

Figure 4. Participant-Reported Cough Impact on Daily Routine



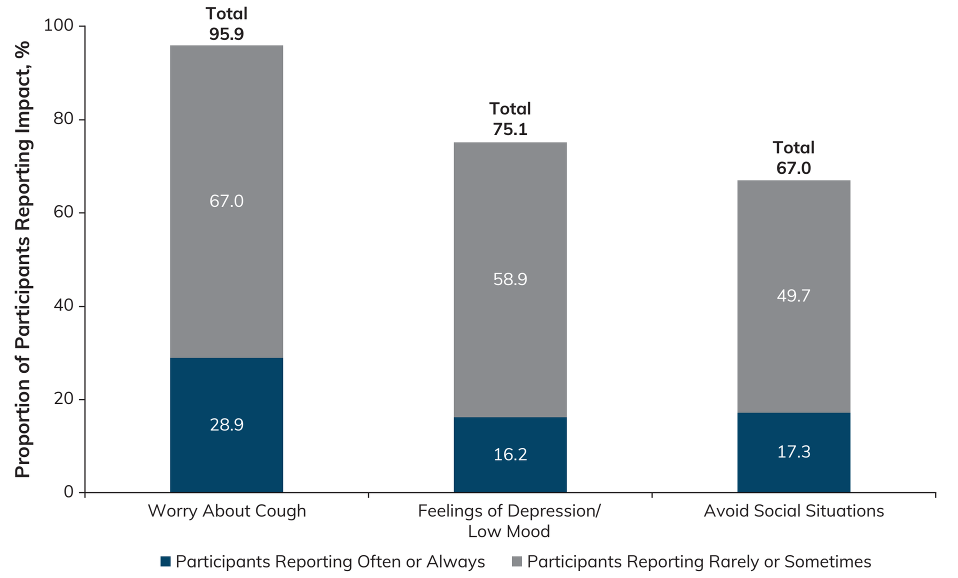
Participants were asked: "Now thinking on the past week, how much did your cough interfere with your ability to do the things you need or like to do in your daily routine?" (n=197 responses).
Cough severity measured using the CS-NRS 0-10 scale for the past 24 hours.

- Among participants who indicated that coughing affects their energy levels or ability to function, qualitative responses indicated that coughing was physically exhausting and fatiguing, frequently disrupting routine tasks and social or professional commitments

Emotional Burden

- 95.9% of participants reported worrying about their cough, with 28.9% reporting that they are "often" or "always" worried (**Figure 5**)
- 75.1% felt their cough contributed to feelings of depression, sadness, or low mood at some point (**Figure 5**)
- Additionally, cough resulted in 67.0% of participants avoiding social situations (**Figure 5**)

Figure 5. Participant-Reported Emotional and Social Burden of Chronic Cough

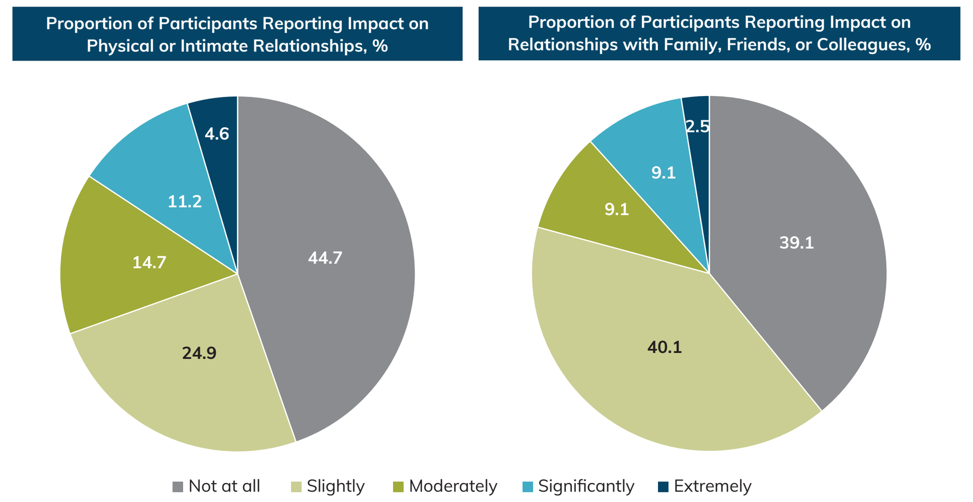


Participants were asked: "How often do you worry about your cough?", "How often do you feel your cough has contributed to feelings of depression, sadness, or low mood?", and "How often has your cough made you avoid social situations?" (n=197 responses).

Social and Relationship Impact

- 55.3% of participants felt their cough affected their ability or desire to maintain physical or intimate relationships, and 60.9% felt their cough impacted relationships with family, friends, or colleagues (**Figure 6**)

Figure 6. Participant-Reported Impact of Chronic Cough on Physical/Intimate and Social Relationships



Participants were asked: "Has your cough affected your ability or desire to maintain physical or intimate relationships (such as hugging, kissing, or sexual activity)?" and "To what extent do you feel your cough has impacted your relationships with family, friends, or colleagues?" (n=197 responses).

Conclusions

- Chronic cough affects patients living with IPF and non-IPF ILD across multiple domains of life
- Negative impacts of cough on emotional well-being and social functioning were reported by many participants, and disruption to daily routines was common, particularly among those with severe cough
- Cough generally worsened over time, and treatment attempts were often unsuccessful
- There is a significant unmet need for effective treatments to address the multiple burdens of chronic cough

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Abbreviations

CS-NRS, Cough Severity Numerical Rating Scale; ILD, interstitial lung disease; IPF, idiopathic pulmonary fibrosis.

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