

Understanding Nebulizer Utilization in Clinical Practice: A COPD Foundation Nebulizer Consortium Survey Study

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RATIONALE: Inhaled medications are the mainstay of chronic obstructive pulmonary disease (COPD) management. While consensus guidelines for pharmacological management in COPD are well-established, few guidelines exist regarding inhaled medication delivery systems. The COPD Foundation Nebulizer Consortium conducted a cross-sectional survey of patients with COPD and healthcare providers to better understand their perception of nebulizers and assess nebulizer utilization in clinical practice. **METHODS:** An online survey was conducted from February 7 through April 9, 2024 among patients and healthcare providers from the COPD Foundation's online patient platform, newsletters, and social media channels. Patients completed a 42-question survey, including demographic information, smoking history, lung disease history, symptom and exacerbation history, and the role of nebulizers in their treatment. Providers responded to 17 questions about their treatment experience with nebulizers, nebulized medications, and other delivery devices. **RESULTS:** We analyzed 578 responses (462 from patients and 116 from healthcare providers). Of the patient respondents, 95% (433/454) reported a diagnosis of COPD, 75% (344/454) were ≥65 years old, 72% (263/364) female, 93% (341/364) white, and 91% (331/364) had current or former smoking history. Regarding disease activity, 78% (277/356) reported at least one exacerbation in the past year and 70% (250/356) used some form of supplemental oxygen. Nebulizer use was reported by 40% (143/356) on a scheduled basis, 45% (161/356) as needed, and 15% (52/356) reported not using a nebulizer at all. Most patients used short-acting therapy and 23% (61/264) used long-acting nebulized medications. While respondents reported that hand-held inhaler devices were easier to use (70%, 178/254), patients reported that nebulized therapy in comparison had lower copay (68%, 172/254) and better COPD symptom control (65%, 165/254). Of the providers surveyed, 79% (33/42) were pulmonologists and about half (51%, 58/113) prescribe nebulizers. Common reported barriers to prescribing nebulizers were insurance coverage (64%, 27/42), cost (48%, 20/42), and lack of availability of combination drugs

for nebulization (43%, 18/42), and two-thirds of providers (28/42) thought that nebulizers were underused. Most prescribers (81%, 34/42) believed nebulizers are preferable for patients experiencing exacerbations. **CONCLUSION:** Nebulized medications are widely used for COPD, and both patients and providers believe that nebulizers offer superior symptom control compared to hand-held inhaler devices. Simultaneously, most providers believed nebulizers are underutilized, nearly half did not prescribe them, and when prescribed, it was rarely for administration of long-acting medication. There is discordance between patient and provider perception of nebulizer efficacy and nebulizer use in clinical management of COPD.

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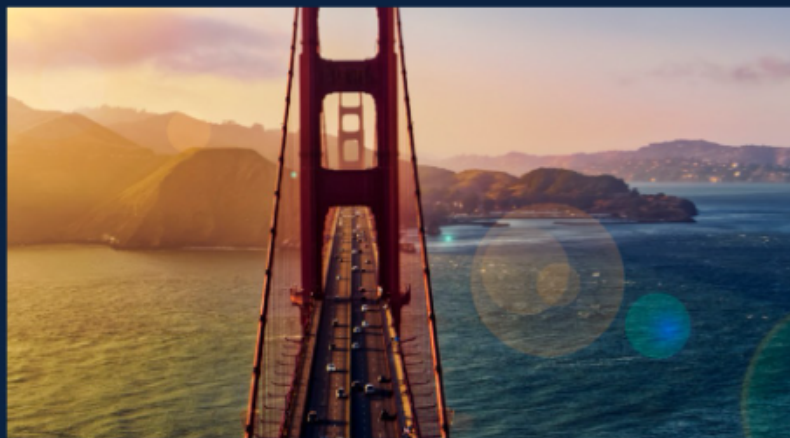
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