

**Submission Id: 2837**

**Title**

*Nebulizer Use by Black and Latinx Adults with Moderate to Severe Asthma*

**Priority 1 (Research Category)**

Health Care Disparities

**Presenters**

Elizabeth Staton, , MSTC, Juan Carlos Cardet, MD, MPH, Nancy Maher, MPH, Rubin Cohen, MD, MB, MSc, FACP, Wilfredo Morales Cosme, MPH, Victoria Forth, PA-C, MA, MMS, Jacqueline Rodriguez-Louis, MPH, M.Ed., Jennifer Carroll, MD, MPH, Elliot Israel, MD, Andrea Apter

**Abstract**

Context: Short-acting beta-agonists (SABAs) are used for rapid asthma symptom relief. Guidelines advise delivering SABA with a metered-dose inhaler (MDI) instead of a nebulizer except for severe exacerbations. In the PeRson EmPOWERed Asthma RELief (PREPARE) study, 67% reported using a nebulizer. Exploring this use may improve understanding of the experience of asthma, support self-management, and optimize treatment. Objective: To describe nebulizer use among Black and Latinx adults with a significant asthma exacerbation history. Study Design: Qualitative study. Data were analyzed using Rapid Assessment Procedures approach informed by grounded theory. Setting or Dataset: Transcripts from interviews and descriptive survey data. The PREPARE study enrolled patients visiting primary care and specialty practices in the U.S. and Puerto Rico. Population studied: 40 (20 each Black and Latinx) were interviewed. Interviewees were age 18–75 yrs, had the following: asthma for at least 1 year, were prescribed daily inhaled corticosteroid therapy, a baseline asthma control test (ACT) score of  $\leq 19$  or an asthma exacerbation in the past year, and reported nebulizer in the past month. Outcome Measures: N/A. Results: The average age was 50 yrs, mostly female, residing primarily in the northeast U.S. Participants reported using a nebulizer 3 times/week on average. The majority had multiple chronic conditions, and 60% of Black and 80% of Latinx participants reported their general health to be fair or poor. Nearly all had a long history of nebulizer use. The most common reason for nebulizer prescription was to avoid ER visits or hospitalization. Daily use was frequent and ranged up to six times/day. Most understood and reported using their MDI as reliever therapy, and also used a nebulizer as the next step in rescue therapy if the MDI was ineffective. Predominant reasons for nebulizer use were symptoms that were either refractory to the MDI or escalating despite use of the MDI. Most participants felt that the nebulizer was more effective than the MDI. Conclusions: This study increases our understanding of the real-world use of nebulizers in asthma. Nebulizer use was common and perceived as more effective than MDI therapy in some circumstances. We conclude that, among Black and Latinx adults with a significant asthma exacerbation history, it is important to explore

preferences and reasons for nebulizer use as part of a comprehensive and patient-centered approach to asthma care.