

# Healthcare resource utilization and associated costs in COPD patients at high risk of exacerbation despite treatment with dual or triple inhaled therapy: results from the SIRIUS observational study in the US

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## Why did we perform this research?

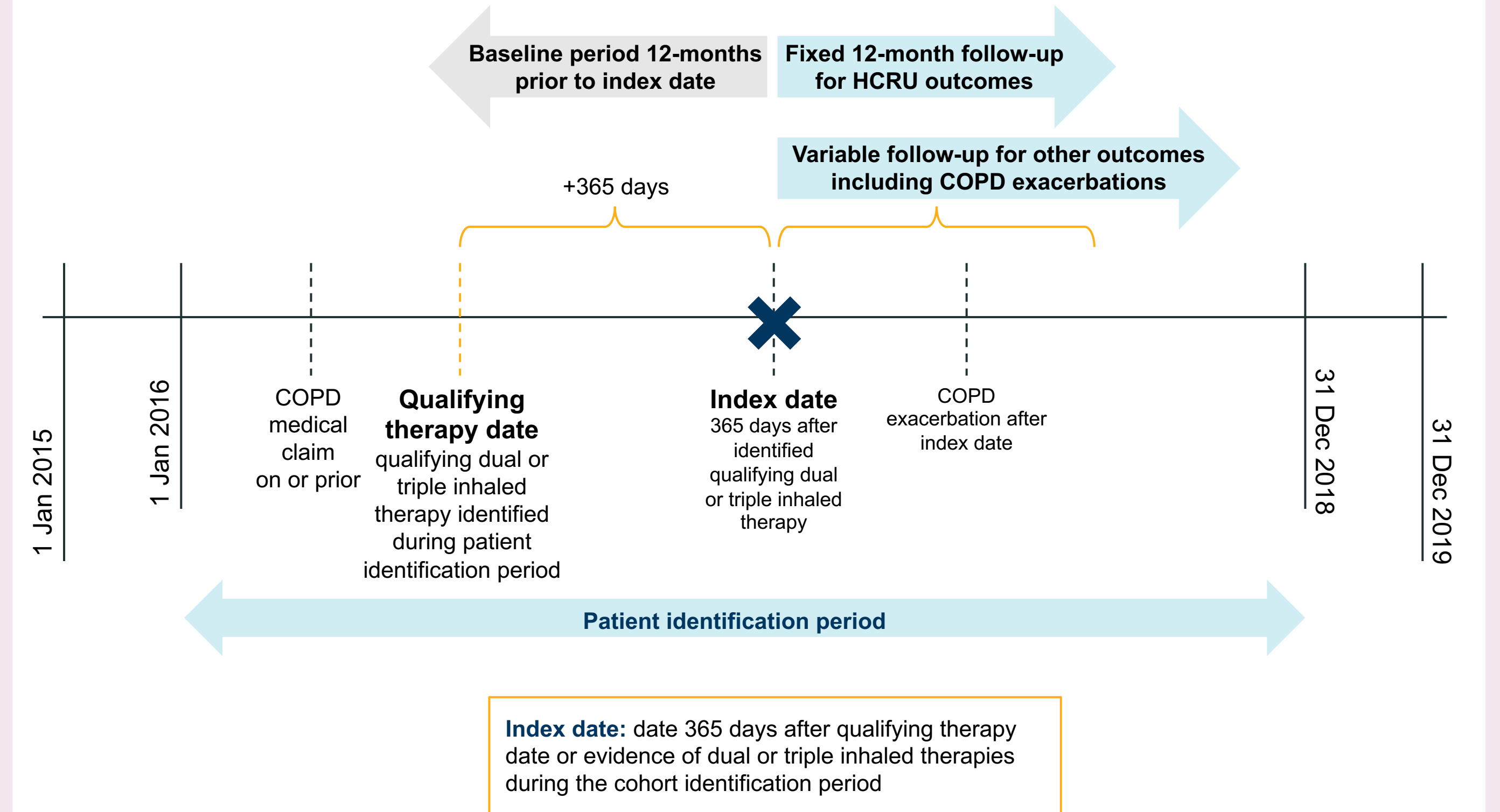
- Chronic obstructive pulmonary disease (COPD) is a common lung disease characterized by persistent respiratory symptoms and limited airflow, and periods of symptoms worsening (exacerbations). A subset of patients still experience COPD exacerbations while on maximized inhaled maintenance treatment.
- This study aims to estimate annual healthcare resource utilization (HCRU) and related costs in US patients with COPD at high risk of exacerbation while on dual or triple inhaled maintenance therapy, by exacerbation history.

## How did we perform this research?

### Study design and participants

- In this retrospective US COPD cohort study, all-cause and COPD-related HCRU and associated costs were assessed using the Optum's de-identified Market Clarity Data (Market Clarity)<sup>a</sup> from 1 January 2015 through 31 December 2019 in patients with ≥12 months of follow-up. Items of interest included outpatient visits, hospitalizations, and emergency room (ER) visits.
- Index date started after the following criteria were met (Figure 1):
  - Patients had a continuous 12-month baseline period of treatment with dual/triple maintenance inhaler between 2016–2018.
  - Patients had evidence of either ≥2 moderate (Group A) or ≥1 severe (Group B) exacerbations during that baseline period.
- Patients were followed up for another fixed 12 months from index date.

Figure 1. Study design and observation period



<sup>a</sup>Market Clarity deterministically links medical and pharmacy claims with electronic health record data from providers across the continuum of care.

## What did we find?

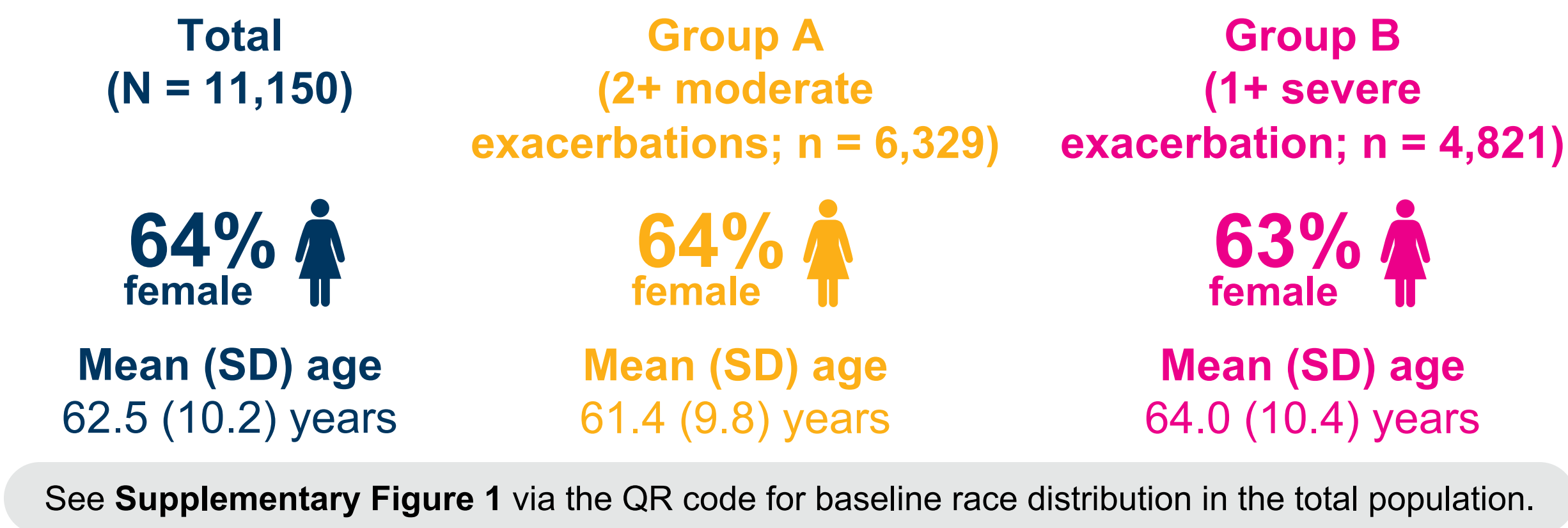


Figure 2. Count of all-cause HCRU: (A) hospitalizations and (B) ER visits at baseline and follow-up

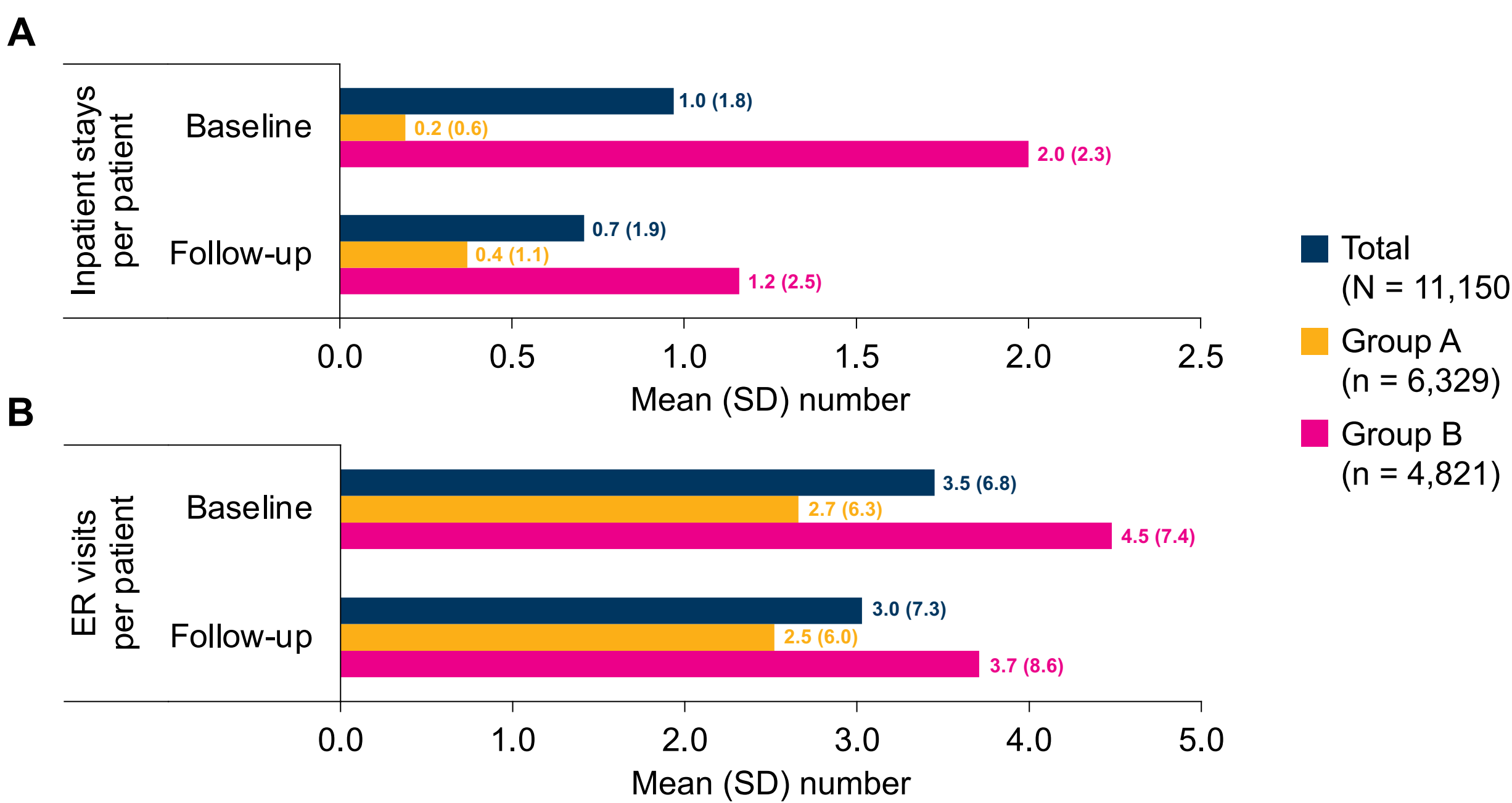
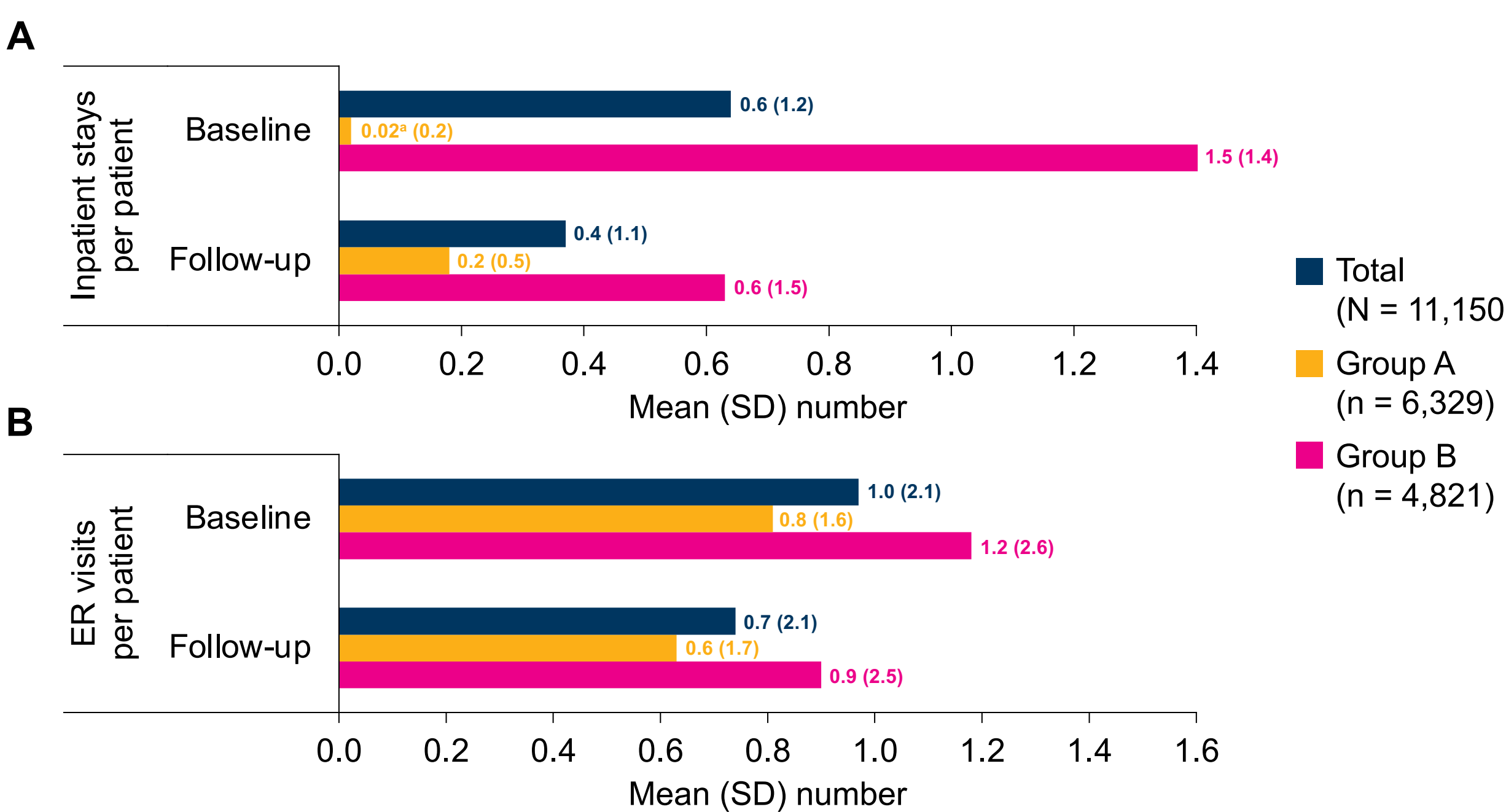


Figure 3. Count of COPD-related HCRU: (A) hospitalizations and (B) ER visits at baseline and follow-up



\*This value should be equal to 0 owing to the definition of Group A (0 severe exacerbation).

See Supplementary Tables 1–3 via the QR code for additional HCRU details.

## How might this impact current clinical practice?

- COPD patients at risk of exacerbation while on dual or triple therapy incur substantial and persistent medical costs.
- Further management options need to be developed for this high-risk population to decrease the economic burden of COPD.

### Abbreviations

COPD, chronic obstructive pulmonary disease.  
ER, emergency room. HCRU, healthcare resource utilization.

### Acknowledgments

This study was sponsored by AstraZeneca (Cambridge, UK).  
Medical writing and editorial support for the preparation of this poster was provided by Vanessa Ducas, PhD, and Elizabeth Wassmer of Envision Pharma Group (Fairfield, CT, USA); funding was provided by AstraZeneca.

### Disclosures

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