Abstract for ATS 2021

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Characterization of COPD in U.S. Primary Care: Data from a Real-Life COPD Registry.

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Rationale: To improve COPD management in primary care, it is first necessary to describe these patients using clinically-relevant variables that can be collected practically and monitored longitudinally. Our aim was to describe the demographic and clinical characteristics of COPD patients managed in U.S. primary care.

Methods: This is an observational, patient registry study using data from the COPD Optimum Patient care DARTNet Research Database (COPD-RD) from which the Advancing the Patient Experience (APEX) COPD registry is derived. The APEX in COPD registry is the first U.S. primary care, based registry, to collect both retrospective and prospective electronic health record (EHR) data and patient reported information/outcomes and plans to include 3,000 COPD patients. COPD patients included in the registry were aged ≥35 years at diagnosis with a COPD diagnosis code [ICD9CM, ICD10CM]. Baseline demographic and clinical EHR data for all available patients were accessed (Dec 2019-Jan 2020) from 5 U.S. large primary care medical groups located in TX, CO, NC, OH and NY. Most data extend back as far as 2009.

Results: Baseline data from 17,192 available patients (mean age (SD): 67.4 years (11.3)) were included. Patients were predominantly female (n=9,689/17,192; 56.4%), white (n=9,732/15,216; 56.6%), current- (n=6,428/17,192; 37.4%) and ex-smokers (n=7,356/17,192; 42.8%) and over-weight/obese (n=8,620/12,475; 69.1%). Overall, 38.3% of patients (n=6,579/17,192) experienced ≥1 exacerbation (acute lower respiratory event) in the last 12 months; 22.3%, 8.4% and 7.6% experienced 1, 2 and ≥3 exacerbations, respectively. Of those patients with a blood eosinophil count (BEC) reading (n=8,882/17,192; 51.7%) most had a BEC (ever) in the range 150-300 cells/µL (n=4,062/8,882; 45.7%) and >300 cells/µL (n=3,102/8,882; 34.9%). Overall, 2.9% of patients (n=494/17,192) received no therapy (last 12 months), 9.2% (n=1,587/17,192) were on short-acting bronchodilators only, 12.4% (n=2,127/17,192) were on LAMA, 13.2% (n=2,265/17,192) on LABA/LAMA, 5.7% (n=979/17,192) on ICS monotherapy, 28.9% (n=4,970/17,192) on ICS/LABA and 27.1% (n=4,658/17,192) on ICS/LAMA/LABA therapy. The most common comorbidities were hypertension (n=12,488/17,192; 72.6%), diabetes mellitus (7,724/17,192; 44.9%), depression (n=7,240/17,192; 42.1%), osteoarthritis (n=7,098/17,192; 41.3%), anxiety (n=5,403/17,192; 31.4%), obstructive sleep apnea (n=6,295/17,192; 36.6%), GERD (n=6,758/17,192; 39.3%), and asthma (5,713/17,192; 33.2%).

Conclusion: These data comprehensively describe patients diagnosed with COPD managed in U.S. primary care, emphasizing the high exacerbation and co-morbidity burden. Approximately 20% of patients coded as COPD are not treated with correct maintenance medication.

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Conflict of Interest:

Alan Kaplan is a member of the advisory board of, or speakers bureau for, AstraZeneca, Behring, Boehringer Ingelheim, Covis, Grifols, GlaxoSmithKline, Merck Frosst, Novo Nordisk, Novartis, Pfizer, Purdue, Sanofi, Teva, and Trudel.

Barbara Yawn has served on COPD-related advisory boards for GlaxoSmithKline, AstraZeneca, Novartis, and Boehringer Ingelheim, and received COPD-related investigator-initiated research funds from GlaxoSmithKline, Boehringer Ingelheim, AstraZeneca, and Novartis.

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Chester Fox declares no conflict of interest.

Janwillem Kocks declares grants and personal fees from AstraZeneca, Boehringer Ingelheim, GlaxoSmithKline, and Novartis, and grants from Chiesi, Mundipharma and Teva.

Ku-Lang Chang declares no conflict of interest.

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Neil Skolnik is on advisory boards for AstraZeneca, Teva, Lilly, Boehringer Ingelheim, Sanofi, Janssen Pharmaceuticals, Intarcia, Mylan, and GlaxoSmithKline; Payment for lectures/speaking engagements from AstraZeneca and Boehringer Ingelheim; Research Support from Sanofi, AstraZeneca, Boehringer Ingelheim, and GlaxoSmithKline.

Wilson Pace is on the advisory board for Mylan; stock from Novo Nordisk, Pfizer, Novartis, Johnson & Johnson, Stryker, Amgen, Gilead, and Sanofi.

Asif Shaikh and **Cathy Mahle** are employees of Boehringer Ingelheim, a co-founder of the APEX COPD initiative.

Amanda Ratigan, **Gabriela Gaona**, **Rachel Kent**, and **Elias Brandt** are employees of the DARTNet Institute and report no conflict of interest.

Victoria Carter, **Chelsea Edwards**, **Alexander Evans, Maja Kruszyk**, **Chantal Le Lievre**, **Tessa Li Voti**, and **Brooklyn Stanley** are employees of Optimum Patient Care, a co-founder of the APEX COPD initiative.

David Price has board membership with Amgen, AstraZeneca, Boehringer Ingelheim, Chiesi, Circassia, Mylan, Mundipharma, Novartis, Regeneron Pharmaceuticals, Sanofi Genzyme, Teva Pharmaceuticals, Thermofisher; consultancy agreements with Amgen, AstraZeneca, Boehringer Ingelheim, Chiesi, GlaxoSmithKline, Mylan, Mundipharma, Novartis, Pfizer, Teva Pharmaceuticals, Theravance; grants and unrestricted funding for investigator-initiated studies (conducted through Observational and Pragmatic Research Institute Pte Ltd) from AstraZeneca, Boehringer Ingelheim, Chiesi, Circassia, Mylan, Mundipharma, Novartis, Pfizer, Regeneron Pharmaceuticals, Respiratory Effectiveness Group, Sanofi Genzyme, Teva Pharmaceuticals, Theravance, UK National Health Service; payment for lectures/speaking engagements from AstraZeneca, Boehringer Ingelheim, Chiesi, Cipla, GlaxoSmithKline, Kyorin, Mylan, Mundipharma, Novartis, Regeneron Pharmaceuticals, Sanofi Genzyme, Teva Pharmaceuticals; payment for the development of educational materials from Mundipharma, Novartis; payment for travel/accommodation/meeting expenses from AstraZeneca, Boehringer Ingelheim, Mundipharma, Mylan, Novartis, Thermofisher; funding for patient enrolment or completion of research from Novartis; stock/stock options from AKL Research and Development Ltd which produces phytopharmaceuticals; owns 74% of the social enterprise Optimum Patient Care Ltd (Australia and UK) and 74% of Observational and Pragmatic Research Institute Pte Ltd (Singapore); 5% shareholding in Timestamp which develops adherence monitoring technology; is peer reviewer for grant committees of the Efficacy and Mechanism Evaluation programme, and Health Technology Assessment; and was an expert witness for GlaxoSmithKline.