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Title: Cost effectiveness of budesonide/formoterol vs fluticasone/salmeterol: Real-world effectiveness and safety in COPD

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Body: Rationale Comparative cost-effectiveness analyses of budesonide/formoterol (B/F; Symbicort® Turbuhaler®) and fluticasone/salmeterol (F/S; Seretide® Diskus®) are scarce in COPD. The cost effectiveness of B/F vs F/S based on real-world effectiveness and safety data (NCT01146392) in COPD patients (pts) was examined from a Swedish healthcare perspective. Methods Resource use, effectiveness and safety data were collected retrospectively from primary care medical records for pts ≥18 yrs with a diagnosis of COPD (J44) and merged with hospital, drug and cause of death register data (01 Jan 1999 to 31 Dec 2009) in Sweden. Propensity score matching of groups was done at index date (first ICS/LABA prescription post COPD diagnosis). The effectiveness variable was the number of exacerbations (COPD-related hospitalisations and emergency visits, and collection of oral steroids or antibiotics) avoided. Direct costs were calculated by applying 2011 unit costs to annual resource use (exacerbations and pneumonia-related hospitalisations [J10–18]). Bootstrapping and one-way sensitivity analyses were used to quantify uncertainty around estimates. Results The annual exacerbation rates and average hospitalisation days (exacerbation- and/or pneumonia-related) were 0.80 and 0.87 for B/F-treated pts (n=2734) vs 1.09 and 1.36 for F/S-treated pts (n=2734; 27% and 36% reductions, respectively; both p<0.0001). B/F was cost saving vs F/S: total average annual per-pt costs were SEK12,495 (€1384) and SEK16,301 (€1805), respectively. Conclusion B/F was dominant (more effective at lower cost) vs F/S for COPD treatment based on real-world effectiveness and safety data. Funding AstraZeneca.