

Inhaled Corticosteroids

Update #1

Key Questions and Inclusion Criteria

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1. For outpatients with asthma or chronic obstructive pulmonary disease (COPD), do inhaled corticosteroids differ in effectiveness?
2. For outpatients with asthma or COPD, do inhaled corticosteroids differ in safety or adverse events?
3. Are there subgroups of patients based on demographics (age, racial groups, gender), other medications (drug-drug interactions), comorbidities (drug-disease interactions), or pregnancy for which one inhaled corticosteroid is more effective or associated with fewer adverse events?

Inclusion Criteria

Populations

- Adult or pediatric outpatients with asthma
- Adult outpatients with COPD

Interventions

- Beclomethasone (Qvar, Vanceril)
- Budesonide [Pulmicort Turbuhaler (powder), Pulmicort Respules (suspension)]
- Flunisolide (AeroBid, Bronalide)
- Fluticasone [Flovent (aerosol), Flovent Rotadisk (powder), Flovent Diskus (powder)]
- Triamcinolone (Azmacort)

Effectiveness outcomes

- Alleviation of symptoms (e.g., rate of asthma episodes, COPD exacerbations, days/nights with symptoms)
- Functional capacity (quality of life, improved sleep, ability to participate in work/school/sports/physical activity)
- Emergency department /urgent medical care visits
- Hospitalization
- Mortality
- Change in rescue medication use
- Use of co-interventions (e.g., oral steroids, long-acting beta agonists, etc.)

Safety outcomes

- Overall adverse effects reported (oral candidiasis, cough)
- Withdrawals due to adverse effects
- Serious adverse events reported (e.g., growth suppression, hypothalamus-pituitary-adrenal axis suppression, osteoporosis)
- Specific adverse events or withdrawals due to specific adverse events

Study designs

- For effectiveness, randomized controlled trials and systematic reviews
- For safety, randomized controlled trials and observational studies