EBP Asthma Intervention

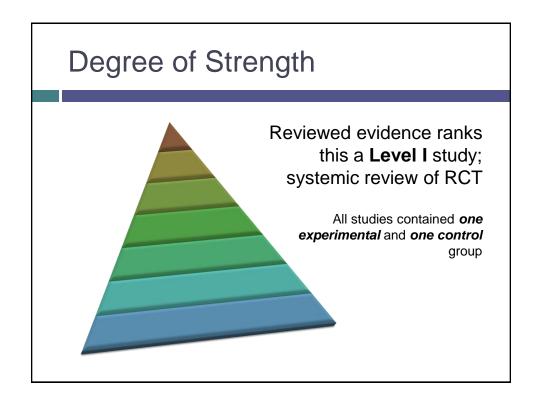
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Problem

In children with persistent asthma (P) what is the effect of a combination inhaled long acting beta agonist and inhaled corticosteroid (I) in comparison to inhaled corticosteroids alone (C) on asthma control measured by morning peak expiratory flow [PEF] volumes (O) over a 12 week period (T)?

Summary

All reviewed studies *support* combination inhaled long acting beta agonist and inhaled corticosteroid (I) over inhaled corticosteroids alone (C)



Recommendation

Based on reviewed evidence, this study is suggesting a change from inhaled corticosteroids alone (C) to a combination inhaled long acting beta agonist and inhaled corticosteroid (I) for asthma disease management

Evaluate Work Environment

- Saint Louis Children's Hospital
 - Pediatric Level One Trauma Center
 - Emergency Department
 - Over 58,000 visits annually
 - 130-140 visits daily
 - Asthma Action Plan
 - A.C.E. Classes
 - Asthma Control Education



Strategy for Change

EBP Model

Change Model

Larrabee Model

Kotter & Cohen's 8 Step Model for Change

Evaluate Impact

- Outcome measures
- Quality Care Improvement
- Patient-centered quality care
- □ Efficiency of processes
- Environmental changes
- □ Professional expertise

Evaluate Intervention

Obtain evidence of change in practice from corticosteroid treatment alone to combined steroid with long acting bronchodilator

Evaluate evidence and compare morning peak expiratory flows prior and post change in intervention

References

Alexandrov, A. W., & Brewer, B. B. (2911). The role of outcomes in evaluating practice change. In B. M. Melynk, & E. Fineout-Overholt, *Evidence-based practice in nursing & healthcare: A guide to best practice* (2nd ed., pp. 226-237). Philadelphia: Lippincott Williams & Wilkins.

Ciliska, D., DiCenso, A., Melynk, B. M., Fineout-Overholt, E., Stetler, C. B., Cullen, L., et al. (2011). Models to guide imiplementation of evidence-based practice. In B. M. Melynk, & E. Fineout-Overholt, *Evidence based practice in nursing & healthcare: A guide to best practice* (2nd ed., pp. 241-275). Philadeplphia: Lippincott Wilkins & Williams.

Hockenberry, M. J., Brown, T. L., & Melynk, B. M. (2011). Implementing evidence in clinical settings. In B. M. Melynk, & E. Fineout-Overholt, *Evidence-based practice in nursing & healthcare: A guide to best pratice* (2nd ed., pp. 205-225). Philadelphia: Lippincott Williams & Wilkins.

References

- Morice, A. H., Peterson, S., Beckman, O., & Zuzana, K. (2008). Efficacy and safety of a new pressurised metered-dose inhaler formulation of budesonide/formoterol in children with asthma: A superiority and therapeutic equivalence study. *Pulmonary Pharacology & Therapeutics*, 21, 152-159.
- Pohunek, P., Kuna, P., & Boeck, K. D. (2006). Budesonide/formoterol improves lung function compared with budesonide alone in children with asthma. *Pediatric Allergy* and *Immunology*, 17, 458-465.
- Tal, A., Simon, G., Vermeulin, J. H., Petru, V., Cobos, N., Everard, M. L., et al. (2002). Budesonide/formoterol in a single inhaler versus inhaled corticosteroids alone in the treatment of asthma. *Pediatric Pulmonology*, 34, 342-350.