

Association of Asthma Educators 2019 Poster Abstract Submission Page (DATA)

Title: A QUALITY IMPROVEMENT PROJECT TO IMPROVE TRAINING AND ASSESSMENT OF METERED DOSE INHALER AND SPACER TECHNIQUE IN A PEDIATRIC EMERGENCY DEPARTMENT

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Background: Inhaled corticosteroids are the cornerstone of preventive asthma therapy, however efficacy is dependent upon proper administration technique. Rates of metered dose inhaler (MDI) and spacer misuse are high among both patients and healthcare providers, and gaps in patient education practices are widespread. Practice guidelines recommend patient technique be demonstrated and assessed at every encounter using a checklist of critical steps with repetition until competency is achieved. The purpose of this project was to improve MDI and spacer technique training in an inner city pediatric emergency department (PED).

Methods: All RNs (n=20) were educated on proper MDI/spacer technique and assessed for competency. Checklists were developed and incorporated into the electronic medical record (EMR) based upon national guidelines. Every asthmatic treated in the PED was asked by an RN to demonstrate their MDI/spacer technique prior to discharge. RN assessment of technique was documented using the checklist reflecting ability to complete the critical steps correctly, and instruction was provided to remedy any errors until each patient was able to demonstrate competency.

Results: Chart audits were conducted over a 10-week period; 138 charts met audit criteria, 95 of which had documented checklists. One-hundred percent of patients and/or caregivers with checklists were able to demonstrate competency in all critical steps, with thirty-five percent requiring additional education to correct errors. Most commonly documented errors were: breathing in slowly over 3-5 seconds, holding breath for 5-10 seconds after actuation, exhaling completely after actuation, and waiting one minute between actuations.

Conclusion: This project demonstrates the benefit of maximizing an ED encounter to provide standardized evidence-based, preventive asthma education on a critical component of asthma management in a particularly vulnerable population of inner city children with asthma.