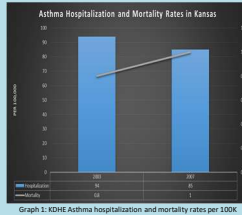
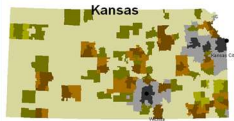


Are Health Care Providers in Rural Kansas Following Recommended Asthma Treatment Guidelines as Published by the NHLBI?

Michael Kennedy, MD; Matthew Sharpe, MD; David Burnett, PhD
Presented at: 2016 NRHA Annual Conference

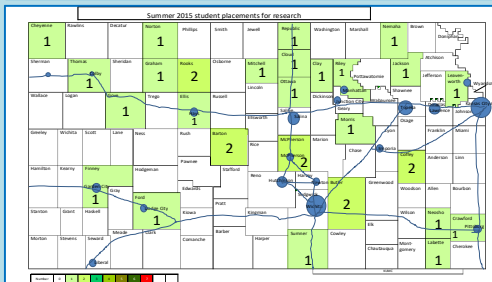
Introduction

Asthma represents a disease with significant morbidity and mortality in Kansas. According to the KDHE it is estimated that 8.4% of adults and 11.3% of children have asthma. It represents 3,000 hospitalizations and accounts for approximately 300 deaths annually. Despite the existence of well-defined diagnosis and treatment guidelines, there has been little change in the over-all disease burden. Asthma hospitalization rates declined modestly from 2003 (94/100K) to 2007 (85/100K). Despite this decline in hospitalization, mortality rates over the same time period have risen slightly from 0.8/100K to 1.0/100K. Following the recommended treatment guidelines as published by the National Heart, Lung and Blood Institute Expert Panel Report 3: Guidelines for the Diagnosis and Management of Asthma has demonstrated improved control of asthma and decreased mortality. Yet, there is less than ideal use of the guidelines by primary care physicians. In preparation for an intervention strategy, we surveyed rural primary care providers about the use of three indicators of compliance with asthma management guidelines – administration of inhaled corticosteroids (ICS), use of spirometry, and use of asthma action plans (AAP). We also surveyed physicians about their self-reported confidence level with several factors surrounding asthma treatment and management.



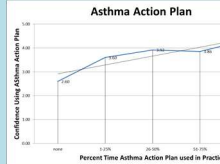
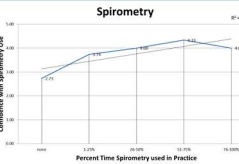
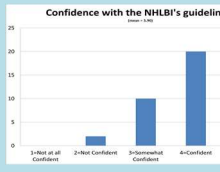
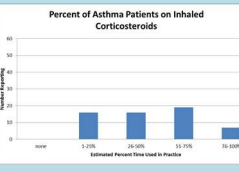
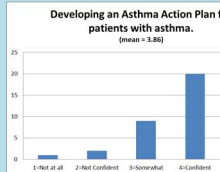
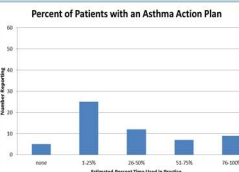
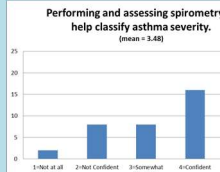
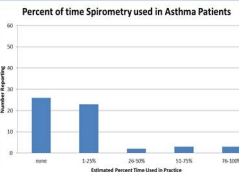
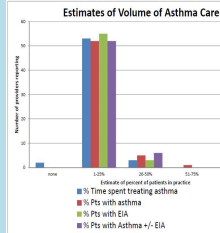
Methods

Medical students enrolled in the Summer Rural Research and Clinical Practice elective interviewed 63 physicians, nurses, physician's assistants and nurse practitioners in rural practices about prevalence of asthma in their practice, frequency of using spirometry, ICS and AAP and confidence with treating asthma. Students then entered the responses in a RedCap firewall protected database. All protocols were approved by the HSC. A de-identified spreadsheet was downloaded for analysis. Four surveys had incomplete data and were not used.



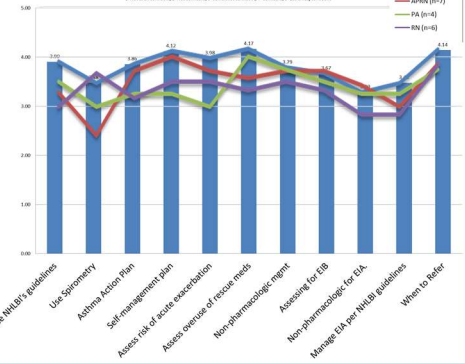
Results

Respondents were 42 physicians, 7 APRNs, 4 PAs and 6 nurses. The overall self-reported estimated prevalence of asthma in the represented sample was consistent with prevalence in the state (11.3%), about 10,174 patients with asthma. Individual practices ranged from 1% to 63% reported patients in the practice with asthma. Most providers reported 1-25% of their time spent treating patients with asthma. Only 50% reported using all three guideline recommendations at least some of the time. Two providers reported 100% use of all three recommendations. 26 (44%) providers did not use spirometry and 5 (8.5%) did not use AAP. 72.3% of respondents reported using the three recommendations less than 50% of the time for their asthma patients. Confidence using spirometry was directly correlated with percent of time used, as was use of AAP.



Results (cont.)

Average Level of Self-Reported Provider Confidence for Management of Asthma



Conclusions and Discussion

- Many providers reported decreased confidence with various aspects of asthma treatment.
- This decreased confidence was found to correlate with a reported decrease percent of time that the related asthma guidelines were used.
- Spirometry use and asthma action plan use are areas that providers report both lower confidence and usage.
- Intervention design will emphasize:
 - Using spirometry
 - Developing an Asthma Action Plan
 - Improving overall knowledge
- It is our hope that this will improve overall confidence and translate into better adherence to guidelines, subsequently create a positive impact on the morbidity and mortality of asthma in Kansas.

