

455 Strategies for Implementation of an Asthma Counseling Intervention: From Research to the "Real World"

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RATIONALE: To provide strategies for the implementation of an asthma counseling intervention structured to address the issues associated with a high level of asthma morbidity in the inner city.

METHODS: In 1996 an individualized intervention tailored to address the increased levels of asthma morbidity associated with inner-city children and adults was implemented at Howard University. The intervention is similar to the National Cooperative Inner-City Asthma Study protocol but was enhanced to address additional "real world" issues. Asthma counselors with credentials in social work, health education, or respiratory therapy have been utilized to provide a high quality intervention. Information such as morbidity, quality of life, and issues and concerns that impact asthma management are collected and addressed. Assistance with social services, educational materials, management devices, medications, and free asthma medical care are included. Counselors focus on advocacy, empowerment, and doable solutions. The counselors are evaluated throughout the year on their asthma knowledge, communication, and problem solving skills. We have developed various forms, outreach activities, and collaborations that are essential to the continued success and availability of this service.

RESULTS: Appropriate and flexible strategies, knowledgeable, and skilled asthma counselors have resulted in an established program with longevity, community accessibility and high quality services that have benefited hundreds of individuals in the metropolitan D.C. area.

CONCLUSIONS: Successful implementation of this intervention must incorporate an array of strategies that promote empowerment, cultural awareness and education.

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456 Treating Allergic Rhinitis in Comorbid Allergic Rhinitis and Asthma Patients Reduces Healthcare Costs

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RATIONALE: To determine whether treating allergic rhinitis (AR) in patients with comorbid asthma reduces asthma-related healthcare costs compared to patients without AR treatment.

METHODS: A retrospective analysis was conducted on patients with AR and comorbid asthma using the 1998-2000 MarketScan® Commercial Claims and Encounters databases. Patients were identified as having AR by either a diagnosis of AR or at least two outpatient prescriptions for treatment. Asthma patients were identified by a diagnosis and one prescribed asthma-specific medication or by two outpatient asthma prescriptions. All patients were also required to have continuous health insurance coverage with pharmacy benefits during the 12-month observation period. Asthma-related healthcare expenditures of patients with AR treatment and patients without AR treatment were compared.

RESULTS: Of 2,534,389 patient records examined, 13.7% (n=347,363) and 4.8% (n=122,557) of patients were diagnosed with AR and asthma, respectively. Of these, 16.3% (n=56,503) had AR with comorbid asthma, with 90.8% of patients receiving at least one AR treatment (newer-generation antihistamine, nasal antihistamine or inhaled nasal corticosteroid). AR with comorbid asthma patients receiving any AR treatment had significantly lower mean total asthma-related expenditures (inpatient, ER, outpatient and outpatient drug expenditures) compared with untreated patients (\$760 versus \$820, respectively, p<0.05). The greatest difference was observed among patients treated with newer-generation antihistamines compared with untreated patients (\$713 versus \$820, respectively, p<0.05).

CONCLUSIONS: Asthma is a common comorbid condition with AR. Treatment of AR with a prescribed newer-generation antihistamine was associated with reduced asthma-related expenditures.

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457 Responsibility for Asthma: Who's Taking Care?

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RATIONALE: Responsibility for care away from the physician's office is an important clinical issue in pediatric asthma management. Who takes the onus for management - parent or child? How do these issues relate to medication compliance?

METHODS: Children & parents completed a questionnaire on asthma responsibility as part of a larger study to examine children's ability to report on their own health status.

RESULTS: 60% of the sample were males; child age M=10.8 years; 49% African American. Mean sx days in the previous 2 weeks reported by parent and child were 3.2 and 2.7 days, respectively. Asked how often the child takes medications on his/her own, 65% of parents reported "all or pretty much" of the time; child report was slightly higher (69%). Parent-child agreement on child's responsibility for medication use was 65%. Based on parent report, nearly 1/3 of children took medications as prescribed only "some to none" of the time. Among parents who reported poor compliance, over 50% reported that the child took meds by self "most" or "all" of the time (X²=7.6, p<.01). Parent account of child responsibility for self-medication increased with child age - 51% of 7-9 year olds had primary responsibility while 75% of 14-16 year olds had similar responsibility.

CONCLUSIONS: In this study, a majority of youth reportedly had primary responsibility for taking their asthma medications with less than optimal compliance. These findings emphasize the need to understand what happens when families leave the office setting and to provide developmentally appropriate education regarding why and how asthma medications should be taken.

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458 Limited Access to Asthma Equipment: Results of a Pharmacy Study

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RATIONALE: Pharmacists can play a key role in enhancing delivery of care to asthmatic patients by providing access to and education regarding appropriate asthma medications and delivery devices.

METHODS: In order to evaluate the capacity of pharmacies in the Hampton Roads region of Virginia to provide the necessary asthma delivery devices and peak flow meters a randomly selected sample of pharmacies from a pharmacy database were asked to complete a structured telephone survey.

RESULTS: Of the 121 pharmacies contacted, 112 took part in the study. Only 64% had spacers available for dispensing, 55% had spacers with masks, 17% had peak flow meters and only 1% had nebulizers. Over 70% of pharmacies needed prior approval from insurance companies before they could dispense spacers and 55% for peak flow meters. Nebulizers had to be ordered directly by the physician and dispensed by a home health agency. Only 35% of the pharmacies received reimbursement for spacers, only 30% for spacers with masks, only 20% for peak flow meters and only 7% for nebulizers. 47% stated that patients refused to fill a prescription for a spacer because of co-payment. Co-payment for spacers ranged from \$16 to \$63 with a mean of \$45. Only 25% of pharmacies offered patient education.

CONCLUSIONS: These results suggest that access to asthma equipment in our area is severely limited, that pharmacies do not receive adequate reimbursement, that patient related co-payments could be a disincentive for filling prescription for spacer devices and that patient education in the pharmacy is often not available.

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