PARENTS OF ASTHMATIC CHILDREN WERE ACCURATE REPORTERS OF URGENT HEALTH SERVICES USE—A RETROSPECTIVE AGREEMENT ANALYSIS

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OBJECTIVES: While parents are frequently relied upon to report their children’s health services use for epidemiological and health economic evaluations, the accuracy of parental proxy reports remains unknown. The objective was to assess agreement between parents’ proxy reports of children’s respiratory-related health service use and administrative data in a sample of pediatric asthma patients. METHODS: A retrospective analysis of statistical agreement between clinical and claims data for reports of outpatient physician visits, Emergency Department (ED) visits and hospitalizations was conducted for 543 asthmatic children recruited from urban and suburban clinics and ED sites in the greater Toronto area. Health services use data were extracted from the Ontario Health Insurance Plan and Canadian Institute for Health Information administrative databases for each child for the interval coinciding with the proxy report for each type of health service. RESULTS: Agreement between administrative data and respondent reports was substantial for inpatient admissions (κ = 0.80, 95% CI 0.74, 0.86) in the past year, moderate for ED visits (κ = 0.60, 95% CI 0.53, 0.67) in the past year and poor for outpatient physician visits (κ = 0.13, 95% CI 0.00, 0.27) in the past 6 months. Income, parent’s education and child quality of life symptom scores did not affect agreement. Agreement for ED visits was significantly higher (p < 0.05) for children that had an asthma attack in the past 6 months (κ = 0.61, 95% CI 0.54, 0.68) compared to children that did not (κ = 0.25, 95% CI 0.00, 0.59). CONCLUSION: Parents of asthmatic children are good proxy reporters of their child’s respiratory-related health services utilization for ED visits and inpatient admissions. Parent proxy reports of urgent care, important markers of asthma morbidity, can be used reliably in epidemiological and health economic studies.

ALLERGY/ASTHMA—Methods & Concepts

DATA EXTRACTION METHODS, ECONOMETRIC MODELING AND FACTORIAL ANALYSIS REVEAL CLINICALLY IMPORTANT PATIENT PROFILES IN CHRONIC ASTHMA

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OBJECTIVES: To evaluate the clinical factors contributing to the severity of chronic asthma. METHODS: A total of 1860 patients with chronic pulmonary disease were invited to the study and comprehensive 10 yr medical history was collected for every participant from their health care providers. Data included all recorded symptoms, signs, adverse drug effects, diagnostic test results, treatments, and procedures. The data were converted into electronic format and advanced text-information extraction methods were used to measure contact-by-contact all cost related and clinical attributes. We developed a medication independent score for the stability of asthma, allergies and other pertinent entities and applied a fuzzy classification rule by disease specific variables to determine the respective costs. Individual-periodic variation in the cost of care was modeled by econometric methods. A multidimensional correspondence analysis (MCA) was used to distinguish meaningful patient clusters within the cost context. RESULTS: Of 230,000 health care contacts analyzed, approximately 35% were identified as asthma-related. The average cost of annual asthma care excluding medication and indirect costs was 520€. Hospitalizations and urgent visits explained a significant part of the high expenses. Two distinct patient cohorts were identified with the MCA, an elderly cohort with significant co-morbidities and a younger with preponderance toward infectious and allergic symptoms and findings. These altogether 16% of patients explained 81% of the total costs of care for asthma in our study. CONCLUSION: This real world data on health care utilization can be used to identify different patient profiles, a prerequisite for individualized health care interventions.

IMPACT OF ADHERENCE TO INHALED CORTICOSTEROID ON HEALTH CARE UTILIZATION

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OBJECTIVES: To evaluate the impact of adherence to inhaled corticosteroids (ICS) on health care utilization in patients with