WEB-ENABLED ASTHMA APPLICATION FOR PERSONALIZED MEDICAL COMMUNICATION WITHIN A MULTI-GROUP PRACTICE SETTING
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OBJECTIVES: 1) Integrate the Automated Live E-Health Response Tracking System (ALERTS) disease management program’s Internet platform with existing interactive voice response (IVR) and other technologies; 2) Customize patient templates for recording Peak Expiratory Flow measurements, answering questionnaires that assess asthma symptoms and severity, and receiving feedback to enhance asthma control; 3) Customize provider templates to generate appropriate individualized patient reports that can be retrieved on demand, enabling better triage of asthmatic cases through rules-based triggers and alerts; and 4) Deploy ALERTS to representative asthmatic patients at ProHealth Physicians (PHP).

METHODS: PHP recruited 71 patients at 6 clinics. Patients signed informed consent and accessed the program via their preferred method(s) of communication. Overall acceptability of the program was assessed using a participant satisfaction survey. Patients and providers were paid for participating for a minimum of 3 months.

RESULTS: The ALERTS program was initiated successfully with 71 asthmatic patients of varying ages and disease severity. Patients had indicated that they lacked a mechanism to interact with their physician and nurses before and after the office visits (25% rarely, 25% frequently and 50% never interact with health care providers) and 40% of them said they received care in the Emergency Room at least once per year. Although initially skeptical, the majority of patients and physicians liked the program and were able to use it; 22% of patients accessed the program via Internet and the remainder used IVR.

CONCLUSION: The Asthma ALERTS program addressed these issues by enhancing the participation and engagement of patients and empowering them in self-management of their asthma. Issues currently being addressed include incentives for patient and physician participation and streamlining of enrollment processes.

INHALED SALMETEROL UTILIZATION AND ASTHMA PATIENT OUTCOMES IN A GROUP-MODEL MANAGED CARE ORGANIZATION
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OBJECTIVE: To evaluate utilization and asthma patient outcomes of inhaled salmeterol (long-acting beta-agonist [LABA]) alone and in combination with an inhaled corticosteroid (ICS) in a group-model managed care organization (MCO).

METHODS: Using medical and pharmacy claims from a group-model MCO with approximately 175,000 covered lives, patients with a diagnosis of asthma receiving at least one inhaled salmeterol prescription during a 9-month (October 1, 2000 to June 30, 2001) period were identified. Patients were stratified into two groups, LABA and LABA/ICS, based on ICS utilization. Age, short-acting beta-agonist (SABA) use, and asthma-related emergency room (ER) visits and hospital admissions were assessed. A literature-validated medication use index was used to classify asthma severity.

RESULTS: A total of 1025 asthma patients were identified (mean age 49.2 years, 61% female). Approximately 28% of patients were in the LABA group and 72% in LABA/ICS group. LABA/ICS patients were more likely to be greater than 19 years of age (87% vs. 82% in LABA group) and to receive a SABA prescription during the study period (63% vs. 43%). LABA/ICS patients had a disproportionate greater number of ER visits (22 [3%] in comparison to LABA patients (2 [0.7%]). No hospitalizations were observed in either group. Regarding asthma severity, LABA patients had less severe forms of asthma; mild asthma (15% vs. 0% in LABA/ICS group), moderate asthma (40% vs. 13%), and severe asthma (45% vs. 87%).

CONCLUSION: In comparison to inhaled salmeterol monotherapy, the addition of an ICS was a marker for more severe forms of asthma. Development of asthma quality improvement programs should consider this observation when evaluating asthma severity.

ASTHMA/ALLERGY (including ARDS)

LOCAL ADVERSE EVENT RATES AND COSTS ASSOCIATED WITH INHALED CORTICOSTEROIDS USE
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OBJECTIVES: Inhaled corticosteroids (ICS) are an important part of asthma treatment; however, their use is associated with localized adverse events (LAEs). This study quantified LAE rates and costs associated with ICS use in the community.

METHODS: We assembled a 1:2 age/gender matched cohort of asthmatics age ≥18 who did and did not initiate ICS using 1998–2002 administrative claims data from a large, US managed care organization (N = 20,280). All ICS formulations were considered; patients were followed for one year, and were required to have had no more than one oral or injectable steroid. LAEs were defined as dysphonia, oral candidiasis, throat irritation, cough, upper respiratory infections and sinusitis. We compared LAE rates in two cohorts stratified by asthma severity and selected comorbidities; the incremental cost of a LAE was estimated using multivariate regression that controlled for demographic characteristics, asthma severity, and selected comorbid conditions.

RESULTS: The LAE rate among ICS users was 2.2 percentage points (5.6%) higher than non-ICS users (41.2% vs. 39.0%, p < 0.01). LAE rates were similar in the two groups when stratified by asthma severity, but were significantly higher among ICS users who had other comorbidities, compared to non-ICS asthmatics with the same conditions. Asthmatics who experienced a LAE had mean charges (exclusive of ICS prescriptions) estimated 49% higher than asthmatics who did not after controlling for confounding (p < 0.03). Given sample non-ICS median charges of $249 per-patient-per-month (PPPM), the estimated cost of a LAE was $122 PPPM (49% × $249), and the estimated cost of an ICS-induced LAE was $2.68 PPPM (2.2% × $122).

CONCLUSIONS: Our cohort of ICS users has a higher rate of LAEs than non-ICS users. LAEs are associated with ICS use and likely to increase total cost of asthma care. Health care decision makers should consider the LAE profiles and their potential economic impact when evaluating choices for asthma therapy.