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have the potential to improve medication safety and reduce health care costs in the context of meaningful use.

PHS115 IMPACT OF MEDICATION THERAPY MANAGEMENT (MTM) SERVICES ON HEALTH CARE COSTS IN POLYPHARMACY PATIENTS: EVIDENCE FROM RETROSPECTIVE CLAIMS ANALYSIS OF COMMERCIALLY INSURED US POPULATION

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OBJECTIVES: MTM services aim to optimize care and reduce costs for patients taking multiple chronic drugs (poly-pharmacy). This study examined the impact of face-to-face MTM services on drug expenditures and total health care costs in METHODS: MarketScan Commercial Claims and Encounters Database was used to select: adults ≥18 years between January 1, 2007 and December 31, 2010, with face-to-face MTM (CPT codes 99605, 99606, 99607), and poly-pharmacy (≥4 or more chronic medications in the 6-months prior to index date). The date of the first MTM encounter was the index date. A (100:1) age, gender-matched poly-pharmacy control group was formed; the index date was that of the matched MTM patient. Nearest-neighbor propensity score matching within a caliper (1:1) was run to form two exchangeable study groups (n=401) controlling for demographic, drug-related, clinical status-related and health services utilization-related covariates. A difference-in-differences (DID) model with gamma distribution and log link accounting for three time points (period 0: 6 months prior, period 1: 6 and 12 months post-index date respectively) was run for total costs and medical costs. RESULTS: Unadjusted DID estimates for period 1 were $3,527 and $6,496 for period 2. DID models showed that the total health care costs were not significantly different between the two groups in period 1 but were 32% less (C1=5.1%, p-value=0.017) in the MTM group in period 2. Period 2 cost reduction was driven by medical costs (34% reduction, CI:2-44%, p-value=0.037); no significant differences in pharmacy costs were observed in period 1. CONCLUSIONS: Face-to-face MTM services reduced medical costs with no change in pharmacy costs for poly-pharmacy patients. Favorable economic outcomes were detected seven months after initial MTM exposure. MTM plays a crucial role in reducing overall health care costs for chronic poly-pharmacy patients.

PHS116 DRUG THERAPY MANAGEMENT REDUCES HOSPITAL UTILIZATION AND COSTS IN PATIENTS WITH DIABETES WHO ARE HIGH MEDICATION UTILIZERS

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OBJECTIVES: Patients whose diabetes is managed with polypharmacy are subject to increased risk of medication-related problems and non-adherence. The objective of this drug therapy management (DTM) program is to integrate pharmacy management with care to improve medication adherence, reduce hospital utilization, and reduce cost. METHODS: The DTM program is a collaboration between pharmacy benefits management (PerfomerRx) and health plan-based care management (Keystone Managed Care Plan [KMHP] and AmeriHealth Mercy Health Plan [AMHP]) targeting members with diabetes who are high utilizers (>15 medications). Pharmacists review member profiles to recommend evidence-based prescriber and/or non-pharmacy interventions (e.g., adherence counseling in therapy, medication reminders) directly. Pharmacists work directly with prescribers to optimize drug therapy, while care management provides detailed member coaching to enhance medication adherence. The profiles of 954 DTM participants (690 KMHP, 264 AMHP)—with a mean age greater distance between the prescriber and pharmacist, prospective risk scoring—were reviewed for services between November 1, 2010 to July 1, 2011, followed by a 3-month claims run-out period, while profiles of a control participant were reviewed. RESULTS: Inpatient (IP) admissions and emergency room (ER) utilization rates were lower in the DTM population; however, only the DTM group in KMHP demonstrated a statistically significant reduction in IP admissions compared to the control group (76.4%, p=0.0002). Additionally, although pharmacy-related costs were significantly increased across-the-board, the changes were not statistically significant between DTM and control groups; however, total costs (medical-pharmacy) were significantly reduced in the DTM group compared to the control group (47.8% for KMHP, p=0.0039; 50.7% for AMHP, p=0.0497). The overall acceptance rates for diabetes-specific DTM interventions for KMHP and AMHP members were 33% and 26%, respectively. CONCLUSIONS: DTM Participants demonstrated a statistically significant reduction in total costs, and modest-to-significant reductions in ER visits and IP admission compared to non-participants.

PHS117 THE RELATIONSHIP BETWEEN NURSE STAFFING AND PATIENT SATISFACTION IN EMERGENCY DEPARTMENTS

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OBJECTIVES: Nurse satisfaction is a key outcome measure being examined by researchers exploring the relationships between patient outcomes and hospital structure and process factors. Only a few non-generalizable studies, however, have explored the relationship of nurse staffing and patient satisfaction with nursing care in emergency departments of hospitals. METHODS: A multi-level multivariate model was developed using more than 180,000 patient-surgeon surveys collected over a five-year period from 153 emergency departments (EDs) in 107 hospitals in a range of Canadian ED settings including urban and rural, community and academic, and small and large health care institutions with varying sizes and case mix using an established conceptual framework for investigating the relationship between nurse staffing and patient outcomes, nine nurse staffing variables were initially investigated. Ultimately, however, only five staffing variables were used in the multi-level regression analyzes. These five variables included registered nurse (RN) proportion, agency nurse proportion, percent full-time nurse worked hours, RN worked hours per patient length of stay and registered nurse work (RNP) worked hours per length of stay. Emergency department case mix index, patient age and gender, hospital peer group, size, wait times, cleanliness of the emergency department, physician courtesy, and year of measurement were controlled to account for their effect on the relationship between nursing staffing and patient satisfaction in the ED. RESULTS: The study revealed a subset of six patient satisfaction variables representing the overall variation in patient satisfaction with nursing care in EDs for which RN proportion, percent full-time nurse worked hours, RN worked hours per patient length of stay and registered nurse work (RNP) worked hours per length of stay were found to have a statistical association with patient satisfaction in the ED, the association was weak and not administratively actionable. Interpersonal and environmental factors such as physician and nurse courtesy, ED cleanliness and timeliness, however, were areas where hospital administrators could improve patient satisfaction in EDs.

PHS118 ATTITUDES TOWARDS THE ROLE OF COMMUNITY PHARMACISTS IN IRAQ

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OBJECTIVES: To assess public use of community pharmacies; evaluate attitudes towards the role of community pharmacist; and determine the required pharmacists' characteristics and future services. METHODS: It was a cross-sectional study using stratified random sampling methodology pharmacy-attenders in Baghdad from January to March 2012. Data gathered by using a validated self-administered questionnaire. Mann-Whitney and Kruskal-Wallis tests were performed to find the statistical differences among the respondents. Further analysis by Chi-square test and logistic regression detected the predictors of public's attitudes. RESULTS: More than two thirds of respondents (70.0%) visited their local community pharmacies once a month or more. The majority of respondents (55.4%) rated community pharmacist as the first person to contact in case of any drug-related problem. However, poor attitudes towards the pharmacist's role were recognized among the majority of respondents (79.8%). Respondent characteristics as gender and age were the influential predictors for the model. CONCLUSIONS: The use of community pharmacy in Iraq was characterized by 55% of the surveyed visits for purchase medicines. The selection of pharmacy depended on its location. Public has