insulin was the predominant type and increased from 38% to 48% of patients taking insulin alone or combined with OADs. Patients without prescription claims for T2D medication dropped from 48% to 36%. Overall annual costs/T2D patient rose by $1466, from $13,743 to $15,175, adjusted to 2012 dollars. **CONCLUSIONS:** For patients in this database, T2D incidence rate decreased from 2007 to 2012, but increased pharmacy claims, comorbidity rates and resource utilization expanded the clinical and economic burden of managing T2D.

RESEARCH POSTER PRESENTATIONS - SESSION II

HEALTH CARE USE & POLICY STUDIES
HEALTH CARE USE & POLICY STUDIES – Consumer Role in Health Care

PHP1
ASSOCIATION BETWEEN INFORMAL CAREGIVERS' ASSISTANCE IN MANAGEMENT OF CARE-RECIPIENTS' MEDICATIONS AND THEIR USE OF TRAINING SERVICES-A NATIONAL RETROSPECTIVE STUDY

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OBJECTIVES: Approximately 36% of family caregivers help older adults manage medications. Caregivers have an extensive unmet need for information and training, however, the relationship between caregivers' assistance in managing care-recipients' medications and their use of training services is unclear. The objectives of this study are to examine the association between informal caregivers' assistance in managing care-recipients' medications and their a) receipt and b) initiation to seek caregiving-related training. **METHODS:** A retrospective non-experimental study was conducted utilizing data from the National Health and Aging Trends Study (NHATS), and its supplement, the National Study of Caregiving (NSOC). NHATS is comprised of a nationally representative sample of Medicare beneficiaries (≥65 years) while NSOC includes a sample of their informal caregivers. Caregiver assistance in managing care-recipients' medications was assessed using an item asking caregivers if they help keep track of care-recipients' medications. Use of training services was assessed using two items asking if caregivers have received or looked for training to help provide care. Descriptive statistics and logistic regression were performed. **RESULTS:** Fifty four percent of caregivers (N=1367) helped keep track of care-recipients' medications. Approximately 7% indicated they received training and 10.2% reported looking for training. After adjusting for caregivers' education and gender and care-recipients' gender, race, and number of chronic conditions, the adjusted odds of receiving training were 2.58 (95% CI: 1.42, 4.69) fold higher for caregivers who kept track of medications. The adjusted odds of seeking training were 2.29 (95% CI: 1.36, 3.86) fold higher for caregivers who kept track. **CONCLUSIONS:** Results suggest that relatively few caregivers receive or seek training, however, caregivers who manage medications are more likely to have training for their care. Future research should examine the nature of training and how it impacts caregivers' ability to manage medications.

PHP2
PATIENTS SENT TO THE EMERGENCY DEPARTMENT BY ADVANCED HEALTHCARE PROVIDERS ARE MORE LIKELY TO NEED ADMISSION

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OBJECTIVES: We sought to determine whether admission rates (as a marker for more essential ED utilization) differed based on the type of outpatient provider contact patients experienced prior to their ED visits. **METHODS:** We performed a prospective, cross-sectional survey study of adult ED patients who presented to a single tertiary care referral center. Patients were asked whether they had attempted to contact healthcare providers prior to their visit, what type of provider, whether it was in person or by phone, and what instructions they received. Responses were matched with patient disposition. Those seen by a provider or told by phone to go the ED were considered "sent" to the ED. Others were considered "self-triaged." Patients were considered to have had an "informed" decision to be sent to the ED if they were seen in person or spoke with a physician, as opposed to being sent by a nurse or office clerk. Pearson's Chi-Square testing was used to determine associations between the type of outpatient provider contact and ED disposition. **RESULTS:** There was no difference in admission rate between those sent to the ED (86/166, 51%) and those who self-triaged (134/292, 46%). Patients who received an informed decision to be sent to the ED were more likely to be admitted (59/99, 60%) than others who were sent to the ED (23/61, 38%), $p<0.01$. **CONCLUSIONS:** Patients directed to the ED by a physician were more likely to be admitted than those sent in by other ancillary staff. Admission rate might be one indicator of patient acuity. This indicates that a more informed decision to send patients to the ED may reduce avoidable ED utilization. Therefore, improving patients' access to a physician by phone or expanding acute unscheduled care options for assessments may reduce ED visits that do not require hospital admission.

HEALTH CARE USE & POLICY STUDIES – Diagnosis Related Group

PHP3
THE EFFECT OF DRG-BASED PERFORMANCE- VOLUME LIMIT ON THE ANNUAL BUDGET OF THE CLINICAL CENTRE OF UNIVERSITY OF PÉCS IN HUNGARY

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OBJECTIVES: Diagnosis related groups (DRG) like financing method was introduced in Hungary in 1993 for acute care hospital reimbursement. Due to the increased activity of the hospitals, an upper ceiling, the so called performance volume limit (PVL) was introduced in acute care hospital financing in 2006. The aim of our study was to analyze the effect of performance volume limit on DRG based hospital financing on the example of a Hungarian tertiary teaching hospital, the Clinical Centre of the University of Pécs. **METHODS:** Data derived from the financial database of the National Health Insurance Fund Administration, the only health care financing agency in Hungary. We analyzed the annual DRG based health insurance revenues with and without performance volume limit ceiling. We calculated the proportion of hospital activity over that ceiling measured by DRG cost-weights. The period 2007-2013 was involved into the study. **RESULTS:** We found a significant loss in DRG reimbursement due to performance volume limit. The annual loss in DRG reimbursement varied between 2.4-10.5 million USD between 2007-2013. The highest revenue loss was observed in 2009, and after 2009 the financial loss decreased to 7.0 (2010), 5.2 (2011), 3.0 (2012) and 2.8 (2013) million USD. This annual revenue loss represented 3.0-14.9 % of the annual revenues of the Clinical Centre of the University of Pécs. **CONCLUSIONS:** The introduction of performance volume limit into the DRG based hospital financing resulted in a partial loss of hospitals' revenues. The Clinical Centre of the University of Pécs experienced significant loss its revenues due to this regulation.

HEALTH CARE USE & POLICY STUDIES – Disease Management

PHP4
PREVENTABLE HOSPITALIZATIONS AMONG WEST VIRGINIA MEDICAID BENEFICIARIES WITH CHRONIC CONDITIONS

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OBJECTIVES: Hospitalizations for Ambulatory Care Sensitive Conditions also known as preventable hospitalizations can be prevented by proper management in the primary care settings. West Virginia (WV) has highest per person preventable hospitalization cost as compared to other states. The objective of this study is to examine the rates of preventable hospitalizations and patient- and county-level factors that may be associated with preventable hospitalizations among Medicaid beneficiaries with chronic conditions in WV. **METHODS:** Longitudinal dynamic cohort design with baseline and follow-up years was used. Patient-level data were obtained from 2007-2010 Medicaid claims files and county-level data were derived from the Area Health Resource File for WV. The study population included non-elderly inpatient users with selected chronic conditions and 24-months continuous fee-for-service enrollment in Medicaid and not enrolled in Medicare (n=2,938). The dependent variable was any preventable hospitalization in the follow-up year and these were identified using the Prevention Quality Indicator software developed by the Agency for Healthcare Research and Quality. All patient-level (e.g. demographic characteristics, healthcare utilization, and care continuity) and county-level factors (e.g. county level of healthcare infrastructure) were measured during the baseline. Chi-square tests and logistic regressions were used to determine the association between patient- and county-level factors and preventable hospitalizations. **RESULTS:** In this study population 65% were women, 96.3% were whites; 18.5% had any preventable hospitalizations; 12.2% had chronic and 7.2% had acute preventable hospitalizations. A higher percentage of adults in the age group 35-44 had any preventable hospitalization (22.2%) compared to adults in the age-group 25-34 (14.0%). The results from multivariable analysis suggest that patients living in the counties with higher income were less likely to have acute preventable hospitalizations [AOR=0.48, 95% CI (0.28, 0.83)]. **CONCLUSIONS:** Economic climate in WV counties may impact the risk of acute preventable hospitalizations.

PHP5
PREPARATION OF A DATASET FOR ANALYSIS TO DEVELOP A PREDICTOR ALGORITHM FOR DISEASE STATE MANAGEMENT

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OBJECTIVES: The purpose of this study is to provide a source document in the creation of a dataset for analysis to develop a predictor algorithm for disease management. **METHODS:** A review of the literature was performed to determine best practices in the development of a dataset to design a predictor model. Algorithms improve applicability across health settings to meet various disease management aims. Peer reviewed articles and reports were retrieved from the published literature from 2004 to 2014. To summarize results a case study is also provided related to the need for a patient to enroll in a disease state management program based on predicting their chance to have a heart attack. **RESULTS:** Results revealed a total of 33 articles and reports. A summary of this information is provided as a step-by-step guide on how to setup a dataset to predict disease state management patient outcomes. The purpose of data collection should be discussed in detail (e.g. collection of data to identify high risk members). Using predictive modeling tools, data can be synthesized such as diagnoses, hospitalizations, emergency room encounters, expenditures and demographics to develop individualized risk profiles. The assessment period and outcomes of interest should be clearly defined followed by an analysis of model sensitivity and specificity. Members are assigned a chronic illness intensity index score based on these factors. Once scored, members are filtered through clinical criteria that prioritize individuals with clinically manageable conditions. The resulting list represents those members with the most acute and complex illness burden. **CONCLUSIONS:** Findings from this study have implications for clinical care, patient outcomes, research, and policy. Many patients are not receiving appropriate preventive care, lack recommended care and receive contraindicated care. An increase in the creation of databases to be used effectively to develop predictor models is needed to intervene early in the disease cycle.