sonnel and patient time. Assessments at a single time point may under- or overestimate the time required to perform related activities. In this study, we use data from a large clinical trial of exercise therapy in patients with heart failure to evaluate whether there is evidence of a learning curve with regard to time spent on non-exercise activities across 36 supervised exercise training sessions across 12 weeks. METHODS: As part of the economic evaluation planned alongside the NIH-sponsored HF-ACTION trial, a Provider and Patient Time Assessment Survey was administered across 9 study sites representing a subset of 56 patients. The survey was designed to assess provider time with and without the patient, pre- and post-exercise, to account for a variety of related tasks (e.g. pulling charts, patient education, scheduling, etc.). Linear growth models were used to model the trajectory change of time spent on ‘non-exercise’ activities across 36 visits. RESULTS: Data were available for 39 (69.6%) patients who completed all 36 exercise sessions, 7 (12.5%) patients who were still enrolled in ongoing exercise training, and 10 (17.9%) patients who discontinued exercise training. The average non-exercise time associated with supervised training was 30.3 (SD = 19.8) minutes, comprised of 20.6 minutes spent with patients and 9.5 minutes without patients. After adjusting for whether warm-up/cool-down activities were included, the total time spent on non-exercise activities decreased significantly (parameter estimate: −1.04 minutes/week; p = 0.007), with approximately equal reductions in time with patients (−0.57 minutes/week; p = 0.038), and without patients (−0.65 minutes/week; p = 0.058) over 12 weeks. CONCLUSION: Our analysis suggests that providers and patients experienced efficiency gains in regard to time spent on activities associated with supervised exercise training. These results demonstrate the potential importance of comprehensive time assessment when evaluating disease management programs.

THE EFFECTS OF STEP THERAPY: LOOKING BEYOND IMPACTS ON PRESCRIBING RATES AND COSTS

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OBJECTIVE: The goal of the study was to test the effects of step therapy on pharmaceutical and medical utilization and costs. This study examined the effect of step therapy for antidepressant and antihypertensive medications. METHODS: The data was extracted from the MarketScan database, representing the health care experience of enrollees in employer-sponsored, commercial health plans. The sample consisted of employees and dependents of 4 employers (2-step therapy and 2 controls) who were continuously enrolled in the MarketScan database from 2003 through the third quarter of 2006 and who used antidepressants (N = 15,552 step therapy; N = 45,244 control) or antihypertensives (N = 11,851 step therapy; N = 30,822 control) at least once during the study period. An analytic file was created using a panel data framework, yielding 15 observations or quarters of data per patient. Chi-square and Student’s t-tests were computed to compare demographic and clinical characteristics as well as outcome variables between the step therapy and comparison groups after step therapy had been implemented for plans with step therapy. Multivariate generalized estimating equation (GEE) models were used to estimate the effects of step therapy on spending and utilization while controlling for important covariates and adjusting for clustering by patient. RESULTS: Step therapy had the intended effect of increasing generic prescribing and lowering brand prescribing. Overall, medication costs were reduced in the step therapy plans in the initial period following implementation. However, inpatient, outpatient, and emergency room utilization and costs were higher in the step therapy plans after step therapy was implemented relative to the comparison groups. Medication discontinuation rates for the targeted drugs increased in step therapy plans. CONCLUSION: Implementation of step therapy produces intended and unintended results. The intended results of reducing drug costs are found to co-occur with unintended results that may adversely affect patients as evidenced by higher ER and inpatient utilization.

THE FIRST MOVES STRIKES AGAIN. COST-EFFECTIVENESS OF STATINS AND PRESCRIBING BEHAVIOR IN PORTUGAL

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OBJECTIVE: In this study, cost-effectiveness of different doses of Atorvastatin, Pravastatin, Rosuvastatin and Simvastatin are compared. The results are used to evaluate if prescription decisions follow willingness to pay. METHODS: Incremental cost-effectiveness ratios (ICERs) were calculated using a model to be published in Value in Health. However, for this analysis, we used efficacy estimates from a meta-analysis that compared several statins across dose ranges. Furthermore, we considered two scenarios. In scenario 1, doses are doubled after 12 weeks of treatment if the LDL level is over 115 mg/dL; in scenario 2, the dose is fixed. For the analysis of prescription patterns and costs per dose, we used official data. RESULTS: Results show that, in both scenarios, Pravastatin 10 mg and 20 mg and Atorvastatin 10 mg are dominated. Taking Simvastatin 10 mg as reference, the ICER of Simvastatin 20 mg in scenario 1 is €203,780 and the ICER of Rosuvastatin 10 mg is €108,293, while the ICER of Rosuvastatin 10 mg compared to Simvastatin 20 mg is €61,670. In scenario 2, the ICERs of Simvastatin 20 mg and Rosuvastatin 10 mg are €199,933 and €61,238, respectively, while Rosuvastatin 10 mg dominates Simvastatin 20 mg. In both cases the Simvastatin 20 mg ICER is well above the €50,000 per life year gained threshold. However, Simvastatin 20 mg is the most prescribed alternative in Portugal. In fact, during 2006 its market share was around 66%, while Simvastatin 10 mg accounted just for 2% and Rosuvastatin 10 mg for 12%. Future research will show how results change with the market launch of Rosuvastatin 5 mg. CONCLUSION: Doctors are not influenced by economic evaluation when prescribing statins. Results show that Simvastatin 10 mg should be used as first line and Rosuvastatin 10 mg as second line strategies. Most probably, the high market share of Simvastatin 20 mg reflects the “first mover” advantage in the market.

THE EFFECTIVENESS OF A PATIENT AND PHYSICIAN EDUCATIONAL PROGRAM IN INITIATING STATIN THERAPY AMONG DIABETICS

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OBJECTIVE: To evaluate the effectiveness of a patient- and physician-directed communication program to consider initiation of statin therapy among diabetics. METHODS: Educational letters were sent to physicians and patients from a large commercial health plan. Physician- and patient-directed letters were sent to 593 and 379 patients respectively. Letters to the
Physicians were sent prior to the patient letters. Diabetic patients absent of statin treatment in a prior 120-day period were identified. Continuous eligibility was required for the evaluation and only patients over 17 years of age were included. Patients were observed for adding a statin during a 120-day follow-up period. Controls were identified from four other plans with similar characteristics. One-to-one case-control matching and t-test were performed to evaluate the effect of the interventions. Regression analyses were performed to determine the predictors of intervention responsiveness. 

**Results:** Mean age for patients in the program was approximately 55 years. There were 760 unique patients in both the patient and physician intervention components. Overall, 170 (22.4%) and 112 (11.0%) patients added a statin in the case versus control group (difference 11.4%, p < 0.0001). Specifically, among the physician intervention component there were 17.8% and 16.6% of cases versus controls who added a statin (difference = 6.22%, p < 0.05). Among the patient intervention component there were 12.3% and 8.6% cases versus controls who added a statin (difference 3.84%, p < 0.05). Significant positive predictors of adding a statin include presence of cardiovascular disease, females, and higher comorbidities. 

**Conclusion:** Educational letter-based programs that are directed to physicians and patients are effective in promoting the use of statin therapy among diabetics.

**Withdawn**

**PCV102**

**The Assessing Cardiovascular Targets (ACT '07) Program: Preliminary Results From a Practice Reflective Assessment Across Canada**

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**Objective:** To examine patients’ level of cardiovascular risk in community based clinical practice and assess whether treatment targets as specified in Canadian clinical guidelines (hypertension—2007, dyslipidemia—2006, diabetes—2003, metabolic syndrome—2006) are met. 

**Methods:** A convenience sample of more than 375 general practitioners recruited from across Canada participated between September and December 2007. Case report forms were completed for at least 20 patients during normally scheduled office visits. Current survey results were compared to a similar survey of 450 general practitioners and 17,188 patients conducted in January to April 2006 that used the 2003 dyslipidemia, 2003 diabetes, & 2005 hyperlipidemia criteria for metabolic syndrome. Patients NOT at guideline targets 2007 survey vs. 2006 survey: hypertension 22% vs. 26%, LDL-C 47% vs. 34%, TC : HDL-C 35% vs. 31%, triglycerides 42% vs. 51%, FBG > 6.2 mmol. 34% vs. 44%, waist circumference 55% vs. 55%. 

**Conclusion:** Preliminary aggregate data shows that despite drug treatment many patients are still not at lipid or blood pressure target levels. Community practice physicians in this survey prescribe lipid-lowering drugs to predominantly high (59%) and moderate (24%) CV risk patients.

**PCV103**

**The Patient Safety Standards of Acute Stroke Management in Hungary**

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**Objective:** The environment of caring for acute stroke patients impacts the outcomes of the process. The aim of the study was to explore the present institutional conditions of acute stroke units and to compare these to the Hungarian national standards. 

**Methods:** A cross sectional study design was used to explore the present conditions for acute stroke nursing (nurse staffing, skill mix, shift patterns, physical environment, etc.) in 11 institutions representing all regions of Hungary. The collected data were compared to the professional standards lied in the government decree. The data were collected in the beginning of 2005. The data analysis was done with Chi-square and ANOVA method using SPSS 11.0. 

**Results:** The examined institutions represent 19% (658) of active neurological beds in Hungary. The nursing posts were not filled in 13% of the 11 units, furthermore the total number of nursing posts were under the minimum recommended standards with 17%. A total of 81% (219) of the filled nursing posts are staffed with qualified registered nurses, out of them 5% has a degree. In three institutions degree nurses are not available at all. 80% of the nurses are between 21–45 years. The average nurse-patient ratio: 2.4:1 (lowest: 1.8, the more: 3.6). In 10 out of 11 institutions have ISO 9001 QA accreditation. The tools for helping nurses’ work are not enough and correlating with lower qualification levels significantly (p < 0.01). 

**Conclusion:** The nursing shortage is a serious problem in stroke units (30%). Therefore, nursing can not meet the criteria lied in the government decree and in the ISO 9001 system. Although the majority of the nursing staff are qualified not all department employs degree nurses who could develop the professional nursing.

**PCV104**

**Relationship Between Quality of Care and Excessive Cost for Medicare Patients Undergoing Lower Extremity Bypass Surgery**

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**Objective:** To examine the relationship between the excessive cost and quality of care across US hospitals for Medicare patients undergoing lower extremity by pass surgery. 

**Methods:** We examined outlier payments in patients undergoing lower extremity bypass surgery (n = 43,886) using National Medicare claims database. Using multiple logistic regression we explored the relationship between hospital outlier payments and hospital quality as reflected by risk-adjusted mortality rates.

**Results:** The proportion of patient associated with outlier payments was 10%. Total Medicare outlier payments for lower-extremity bypass graft was $78,921,669 averaging $18,214 per patient. There was a negative correlation between risk-adjusted mortality rates and outlier payments. Proportion of systematic variation in hospital outlier payment rates explained by hospital factors explained 7.8% of in-between variation of outlier rates in lower extremity bypass. 

**Conclusion:** There exist negative relationship between quality and excessive cost across the hospitals. However,