ABSTRACTS

RESEARCH PODIUM PRESENTATIONS – SESSION I

B11 RETURN ON INVESTMENT OF A DIGITAL LIFESTYLE MANAGEMENT PROGRAM IN A MEDICAL POPULATION
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OBJECTIVES: To estimate the return on investment of a digital lifestyle management program for the Medicare population. METHODS: ‘Prevent’ (recognized by the CDC Diabetes Prevention Recognition Program) is a digital lifestyle management program with one-on-one behavior change coaching by health educators and peer group discussion. The analysis sample included 1,121 Medicare-eligible Prevent users who were overweight or obese. Prevent was used to calculate weight loss due to the program. A microsimulation model simulated the onset of obesity and diabetes comorbidities in the following 10 years, assuming participants regained 1/3 of lost weight within 5 years. The simulation produced separate direct cost estimation for 5 settings – inpatient stays, outpatient visits, prescription drugs, emergency visits, and other, corresponding to different parts of the Medicare program. Return on investment (ROI) was calculated as the cost saving between 2 scenarios (1) weight loss after ‘Prevent’ and (2) natural progression in the absence of ‘Prevent’. The analysis focused on 2 populations – those with prediabetes and those with cardiovascular risk factors who met USPSTF’s recommendation for intensive behavior counseling. All costs are in 2015 US dollars. RESULTS: Participants lost an average of 6.8% baseline body weight over 26 weeks. The investment in lifestyle management broke even within 2 years. For those who completed the program, 10-year ROI was $12,600 and $8,900 for the prediabetes and CVD risk populations, respectively. Cost reduction in prescription drugs, outpatient visits, and inpatient stays accounted for 55%, 30%, and 10% of total savings, respectively. CONCLUSIONS: Digital lifestyle management like ‘Prevent’ can produce sizable return on investments for Medicare recipients over 10 years, with more than half of the savings coming from prescription drug benefits.

B12 ESTIMATING THE COSTS OF SUPPORTING SAFETY-NET TRANSFORMATION INTO PATIENT-CENTERED MEDICAL HOMES IN POST-KATRINA NEW ORLEANS
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OBJECTIVES: There is an urgent need to understand the costs associated with supporting, implementing, and maintaining the system redesign of small and medium sized safety-net clinics, which are serving 20 million patients in the United States. The study aimed to understand the characteristics of safety net primary care clinics that transformed into PCMHs, the trend of cost before and after PCMH transformation and the incremental cost for this transformation process in the Greater New Orleans. METHODS: The study sample was 110 primary care clinics, which were given grant from the Primary Care Access and Stabilization Grant (PCASG) program (09/21/2007-09/20/2010) to support their PCMH transformation. The study period was divided into baseline (09/21/2007-03/21/2008), transformation (03/22/2008-03/21/2009) and maintenance (03/22/2009-09/20/2010) period and data were collected at six-month intervals. Baseline characteristics for the clinics later transformed into PCMHs were compared to those who did not. Trend analysis and econometric models (i.e., fixed-effect difference-in-difference models) were conducted for cost estimation, controlled for baseline differences by propensity score weights. RESULTS: Among the 110 clinics, 38% (41/110) achieved NCQA PCMH recognition by the end of the study period. The clinics which transformed into PCMHs had higher total cost, more clinic visits and a larger female patient proportion ($156,771 vs $47,823, 2,741 visits vs 785 visits, 59.71% vs 47.22%, all p<0.001) at baseline. The estimated incremental costs for clinics which underwent PCMH transformation was $37.61 per visit per six months, and it overall cost PCASG grant $24.86 per visit per six month to support a clinic’s transformation into PCMHs. CONCLUSIONS: Larger sized and higher female proportioned safety-net clinics likely transform into PCMHs. The PCASG program provided approximately $23.73 per visit over the three years. This estimated incremental cost could be used as a reference to guide future policy implementation for supporting primary care transformation in the United States.

B13 ASSESSING PRESCRIPTION DRUG VALUE IN THE UNITED STATES: A HYPOTHETICAL EXAMPLE COMPARING ASCO AND ICER FRAMEWORK OUTCOMES
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OBJECTIVES: Increasing oncology drug prices have led to several value-based frameworks that are being used in the US. To understand the key determinants and impact of decision-making, a hypothetical oncology treatment was evaluated using the American Society of Clinical Oncology (ASCO) and Institute for Clinical and Economic Review (ICER) frameworks. METHODS: The ASCO adjuvant setting value framework estimates the net health benefit (NHB) of an oncology drug using trial-based clinical benefit and toxicity. ICER’s framework evaluates the “Care Value” in the context of clinical effectiveness, incremental cost, benefits/disadvantages, and other concerns including payer perspectives. Results: This hypothetical treatment was compared to best standard care (BSC) for a population with 0.5% disease prevalence. Treatment was assumed to reduce risk by 5% (overall survival [OS]) and 10% (progression-free survival [PFS]), cost $10 million more than BSC, improve tolerability, and reduce administration burden. NHB was calculated using the ASCO framework. Incremental cost-utility-adjusted life-year (QALY) was determined using a partitioned survival model, budget impact was assessed separately using drug, medical, and adverse event costs. Costs were assessed within ICER’s value-based framework using these models. Various scenarios were utilized to compare and contrast outcomes of the frameworks. RESULTS: NHB, cost/QALY gained, and budget impact were $59,100, $318,274, and -$11 million, respectively. Changes in OS impact assessed drug value within both frameworks. The ASCO framework is sensitive to changes in tolerability while this effect was modest in the ICER framework. Substantial drug price reductions may be necessary in order to meet ICER thresholds even when maximum NHBS are present as assessed within the ASCO framework. Overall budget impact is considered in the ICER framework, but is unlikely to impact decision-making for low-prevalence diseases. CONCLUSIONS: The ASCO and ICER value frameworks may favor different types of drugs depending upon their clinical and economic profile.

COMPARATIVE EFFECTIVENESS RESEARCH

C01 COMPARATIVE EFFECTIVENESS OF CORONARY ARTERY BYPASS GRAFTING VERSUS PERCUTANEOUS CORONARY INTERVENTION AMONG ELDERLY MEDICARE BENEFICIARIES IN TERMS OF COST AND RESOURCE USE
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OBJECTIVES: To compare the relative effectiveness of coronary artery bypass grafting (CABG) versus percutaneous coronary intervention (PCI) among elderly Medicare beneficiaries in terms of in-hospital mortality, hospital length of stay (LOS), one year post-discharge cost and mortality. METHODS: A retrospective cohort design was employed using the 5% national sample of Medicare administrative claims data from 2006-2008. Elderly (≥ 65 years of age) Medicare beneficiaries who underwent CABG or PCI between July 1, 2006 to June 30, 2008 were identified using ICD-9 diagnosis and procedure codes. Generalized linear models (GLMs) were used in order to assess whether CABG and PCI differed in terms of the outcomes of interest. A modified Park’s test was used in order to determine the family of distribution which must be used in the GLMs for each outcome. A propensity score, generated using baseline demographics and comorbidities for each eligible beneficiary, was used as a covariate in all multivariate analyses. RESULTS: The study sample consisted of 34,827 beneficiaries (8,054 CABG and 26,773 PCI patients). Patients undergoing CABG were 40.04% less likely to have in-hospital mortality as compared to those undergoing PCI (Odds Ratio [OR]: 0.596, 95% Confidence Interval [CI]: 0.464 – 0.764). LOS for patients undergoing CABG was significantly longer as compared to patients who underwent PCI (Estimate: 0.0829; 95% CI: 0.0637 – 0.1020; p<0.0001). One year post-discharge all-cause costs were significantly higher for CABG patients as compared to PCI patients (Estimate: 0.1064; 95% CI: 0.0731 – 0.1390, p<0.0001). One year post-discharge mortality was significantly lower for CABG patients versus PCI patients (OR: 0.599, 95% CI: 0.498 – 0.721). CONCLUSIONS: The study shows that undergoing CABG is associated with a lower risk of mortality as compared to undergoing PCI among elderly Medicare beneficiaries. CABG was associated with a longer LOS and higher post-discharge costs as compared to PCI.