OBJECTIVE: To investigate if a health-related quality of life (HRQOL) measure can predict pharmacy costs in insured adult asthmatics independently and in conjunction with a baseline pharmacy claims risk index and prior pharmacy costs.

METHODS: Historical cohort analysis of pharmacy claims and HRQOL. Asthmatics were invited to complete the SF-36 quality of life instrument between May 12, 2001 and November 30, 2002. Pharmacy claims for the year prior to this interview were used to derive baseline measures of the AdvancePCS pharmacy claims health risk index and prior pharmacy costs. The study’s outcome measure, pharmacy costs in the year following the baseline interview, was calculated for those who remained eligible for pharmacy benefits during the entire study period. Correlation statistics were calculated. Linear regression modeling evaluated the association between the outcome measure and each SF-36 domain, the risk index, prior costs, member sex, and age at baseline.

RESULTS: A population of 247 adult asthmatics from a million-member, Mid-Atlantic health plan was included. Follow-up year pharmacy costs were moderately correlated with the pharmacy risk index (Spearman $r=0.576, p<0.001$) and weakly negatively correlated with the physical summary score (Spearman $r=-0.340, p<0.001$). However, prior pharmacy costs had the strongest correlation (Spearman $r=0.87, p<0.001$). The physical summary score was a significant predictor of next year’s pharmacy costs (Coefficient $-110.92; p<0.001$) after adjustment for age in linear models ($R^2=0.134$). However including the pharmacy risk index (Coefficient 72.770; $p=0.06$) and prior pharmacy costs (Coefficient 0.948; $p<0.001$) vastly improved the explanation of variation in follow-up pharmacy costs ($R^2=0.774$) and eliminated the independent significant effect of the physical summary score (Coefficient $-8.236, p=0.518$). Similar removal of significance occurred with other SF-36 domains after adjusting for claims measures. CONCLUSIONS: While HRQOL independently predicts follow-up costs, it does not improve predictive models using prior pharmacy utilization in this study population of adult asthmatics.
ICER would be $53,964/QALY and the W would be $362 (SD 3322). If the subjects were to improve after dropout, the ICER would be $29,475/QALY and the W would be $5434 (SD 3309).

CONCLUSIONS: The results of cost-effectiveness analysis are fairly robust to the choice of imputation scenario. While point estimates indicate that over 4 years pramipexole is a cost-effective alternative to levodopa, significant statistical uncertainty exists. The uncertainty associated with the assumptions regarding post-dropout QoL is dwarfed by the uncertainty associated with the ICER estimate.

SCREENING

PATIENT PREFERENCES FOR COLORECTAL CANCER (CRC) SCREENING STRATEGIES
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The success of population screening for CRC depends largely on public uptake. Available strategies differ in multiple dimensions of process and outcome. OBJECTIVE: To measure patient preferences for CRC screening attributes and estimate willingness to pay (WTP) for changes in attribute levels using a discrete choice experiment ("conjoint analysis"). METHODS: Six key attributes of CRC screening strategies were identified through structured focus groups. Questionnaires included 10 choice sets based on a fractional factorial design to maximize D efficiency. Surveys were mailed to a random sample of patients aged 40–60 years from an Ontario primary care network (response rate = 51% (547/1074), 88% of whom completed all 10 choice sets (n = 485)); b coefficients from regression analyses estimated the marginal utilities of attribute levels from which WTP was calculated. Differences among subgroups were tested using likelihood ratio tests. RESULTS: Respondents had the strongest preferences for sensitivity, with the highest utility for high sensitivity and the lowest utility for low sensitivity. Individuals would be willing to pay an additional CDN$910 (~US$640) for a test with high vs. low sensitivity. Following sensitivity, respondents had the highest preferences (in descending order) for specificity, preparation, pain, and price. Preferences differed significantly by gender, age (<50yrs vs. >50yrs), income (<$50,000 vs. >$50,000) and education (high school or less versus college or higher). In follow-up questions for each choice set where individuals were asked if they would prefer no test, 26% of respondents chose no testing in more than 5 of their 10 choice sets. CONCLUSIONS: Results show a wide range of marginal utility for attribute levels of CRC screening tests, and many respondents preferred no test. Better understanding of patient preferences can help improve the design, promotion and uptake of CRC screening programs.

COST EFFECTIVENESS OF SCREENING AND STATIN THERAPY IN CLINICAL GUIDELINES FOR CARDIOVASCULAR PROPHYLAXIS
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OBJECTIVES: To quantify the cost effectiveness of updated clinical guidelines for risk screening and prevention of cardiovascular disease (CVD) with “statin” therapy in individuals free of cardiovascular disease. METHODS: Risk profiles were collected in 1992-1993 for 4704 men age 35–84y and 1216 women age 45–84y without CVD. Five-year risk of a cardiovascular hospital admission for each individual was estimated using a locally validated Framingham risk equation. The predicted number of incident events in 5 years was scaled to the 2001 NZ population and integrated over age groups. In the base case, costs, benefits and cost effectiveness were estimated at screening age thresholds of 45 for men and 55 for women (10 years younger for smokers); concurrent treatment thresholds of 15% 5-year cardiovascular risk and TC/HDLc = 4.5; and 5% discount rate. RESULTS: In the NZ population of 784K men age 35–84y and 558K women age 45–84y, 72K men and 53K women would be eligible for prophylaxis. Compared to no intervention, 5y prophylaxis with 84% treatment adherence at a 15% treatment threshold would avert 6716 incident cardiovascular events and add 17,205 life years or 21,317 QALYs at an incremental cost of $NZ270M. The base case ICER is $10,439 per event avoided, $4083 per LYG or $3295 per QALY and it is sensitive to the threshold lipid ratio, screening and treatment ages, risk threshold, treatment efficacy, 5y cardiovascular fatality, statin unit price and the discount rate. CONCLUSIONS: Screening and prophylaxis with statins is very cost effective at current drug prices and clinically realistic screening and treatment thresholds.

FACTORS IMPACTING MAMMOGRAPHY SCREENING IN RURAL AND URBAN AREAS
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OBJECTIVE: To compare mammography screening in rural and urban areas and to assess the effect of various predisposing and enabling factors on mammography screening. METHODS: Retrospective self-reported cross-sectional data from Behavioral Risk Factor Surveillance System (BRFSS) for year 2000 along with county level contextual variables from area resource file (ARF) were used in the analysis. The analysis was restricted to females between 40–69 years of age. Logistic regression analysis was performed using an indicator of mammography screening as a dependent variable and race, age, rural dummy as independent variables. Series of multiple logistic regressions adding predisposing and enabling factors consecutively to this model were conducted. All the results were adjusted for complex survey design. RESULTS: Seventy eight percent of women reported having had a mammography within the last two years for routine check up. Women living in rural area were less likely to be screened for mammography as compared to women residing in urban areas (OR = 0.80, CI = 0.72–0.86). This difference in screening no longer persisted after controlling for predisposing (smoking status, education level), enabling (income, insurance status) and contextual level enabling factors (physician population ratio). In general, women with higher education and better financial condition were more likely to screen. CONCLUSIONS: Insurance status was one of the major determinants of mammography screening for females residing in rural area. Availability of health care services also had an impact on screening rates. In an environment where rural areas are faced with shortage of health care services, the active participation of health care workers like physicians in advocating use of screening services becomes crucial.

ECONOMIC EVALUATION OF SCREENING FOR THE A-ADDUCIN GENE VARIANT IN HYPERTENSIVE PATIENTS
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OBJECTIVES: The purpose of this study was to determine whether screening for the a-adducin gene variant among hyper-