The standard deviation of units-per-day over the year was used as the proxy measure of non-adherence. Total and diabetes-attributable costs were computed including insurance payments and patients’ co-payments. Multivariate log-linear regressions were estimated for costs using variability in long/intermediate-acting insulin, diabetes severity, overall comorbidity burden, hospitalization in prior six-months, insulin pump use, concomitant use of short-acting insulin, oral antidiabetic medications, patient initiating antidiabetic therapy, insurance plan, and demographic variables. RESULTS: A total of 11,125 patients had at least three prescriptions for long-acting or intermediate-acting insulin and were used in the models. The standard deviation of units-per-day ranged from zero to 210, with a median of 11 and 20th and 80th percentiles of five and 23, respectively. Total costs increased 0.39% and diabetes-attributable costs increased 0.31% for each unit increase in the standard deviation of insulin units-per-day. CONCLUSIONS: Increased variability of insulin use increases total and diabetes-attributable annual costs.

OBJECTIVES: The Diabetes Prevention Program (DPP) excluded subjects at baseline due to multiple disease states. The objectives of this study were to 1) design a long-term cost-effectiveness model to evaluate the use of intensive lifestyle intervention to prevent type-2 diabetes (T2DM) based on the DPP study design; and 2) attempt to project these findings onto a more generalized hypothetical population than that studied by the DPP. METHODS: Markov models were developed based on the DPP results incorporating the states of normal glucose tolerance, impaired glucose tolerance, T2DM and death. Transition probabilities were derived from DPP and current literature. A three-year intervention was assumed with outcomes of 1) a three-year duration of effect; and 2) a lifetime duration of effect. A second set of models, based on a hypothetical, more generalized population included higher direct medical cost of illness, and US Life Table mortality figures. RESULTS: Lifestyle dominated placebo in both models, with the following results derived for incremental cost-effectiveness ratios: 1) DPP model—3-year duration = $86,319/LY; 2) DPP model—lifetime duration = $11,804/LY; 3) generalized model—3-year duration = $16,064/LY; and 4) generalized model—lifetime duration = $19,496/LY. A maximal acceptable cost of intervention per year for the three-year duration of effect that could be used to maintain lifestyle domination was also established. These values were: 1) DPP model—three-year duration = $1820/year; 2) DPP model—lifetime duration = $6500/year; 3) generalized model—three-year duration = $2910, and 4) generalized model—lifetime duration = $9750. CONCLUSION: In this model that examined an intervention that had little apparent effect on life expectancy, increasing control cost of illness increased incremental costs and incremental cost-effectiveness ratios, and ultimately increased the apparent cost-effectiveness of this preventive treatment.

PDB39 DEVELOPMENT OF AN INTEGRATED DIABETES DATABASE ACROSS COMMUNITY CLINICS AND HOSPITALS
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Electronic medical records (EMR) have been incorporated into many health care settings to assist physicians in sharing patient information effectively across health care providers. Most EMRs were designed to optimize sharing of clinical information and not to accommodate the needs of health services researchers. Building a comprehensive database that includes information from multiple databases and EMR sources can be challenging. OBJECTIVE: To develop a comprehensive diabetes dataset of clinical resource utilization information and costs using a community clinics and hospital based EMR and charge data. This allows a direct comparison of resource utilization and economics associated with various anti-diabetic treatments. METHODS: Prescription order data for patients on anti-diabetic medications or with a diagnosis of diabetes in 2001–2003 were obtained from the community clinics EMR system. Other health care information was collected from the hospital outpatient clinics and hospital EMR systems. Pertinent health care information included site of care, procedures performed, laboratory tests results, and diagnosis. Missing information was retrieved manually from the EMR chart from physician notes which are not transferred to the EMR database or imputed from retrieved data sources. Resource use information was matched to financial data based on patient visit numbers. Professional charges were matched to each visit based on patient identifier and approximate visitation date, with Institutional Review Board approval. RESULTS: The final dataset includes pertinent clinical, costs resource utilization information for patients suffering from diabetes across 810 patients receiving insulin. This dataset was used to determine the differences in resources and cost differences between different insulin regimens. CONCLUSION: Integrated data systems across outpatient and inpatient settings can be very useful in outcomes research however pulling together information from various datasets can be challenging.

PDB40 THE USE OF DIABETES PREVENTION PROGRAM RESULTS TO MODEL COST-EFFECTIVENESS OF THE INTERVENTION IN A MORE GENERALIZED HYPOTHETICAL POPULATION
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Objective: To develop a comprehensive diabetes dataset of clinical resource utilization information and costs using a community clinics and hospital based EMR and charge data. This allows a direct comparison of resource utilization and economics associated with various anti-diabetic treatments. METHODS: Prescription order data for patients on anti-diabetic medications or with a diagnosis of diabetes in 2001–2003 were obtained from the community clinics EMR system. Other health care information was collected from the hospital outpatient clinics and hospital EMR systems. Pertinent health care information included site of care, procedures performed, laboratory tests results, and diagnosis. Missing information was retrieved manually from the EMR chart from physician notes which are not transferred to the EMR database or imputed from retrieved data sources. Resource use information was matched to financial data based on patient visit numbers. Professional charges were matched to each visit based on patient identifier and approximate visitation date, with Institutional Review Board approval. RESULTS: The final dataset includes pertinent clinical, costs resource utilization information for patients suffering from diabetes across 810 patients receiving insulin. This dataset was used to determine the differences in resources and cost differences between different insulin regimens. CONCLUSION: Integrated data systems across outpatient and inpatient settings can be very useful in outcomes research however pulling together information from various datasets can be challenging.

PDB41 VALIDATION OF THE GERMAN TRANSLATION OF THE NORFOLK QOL-DN, NERVE FIBER SPECIFIC QUESTIONNAIRE IN A NATIONAL, MULTICENTER COST OF ILLNESS STUDY (DIMICO) FOR DIABETIC MICROCIRCULATORY COMPLICATIONS IN GERMANY
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OBJECTIVE: The objective was to validate the construct of the German-translated version of the Norfolk QOL-DN by factor analysis in a German population with five stages of neuropathy and correlate the resulting factors with degrees of neuropathy. METHODS: Conducted in 97 sites in Germany, 186 patients (type-1 n = 33; type-2 n = 153) with diabetic neuropathy were assessed and categorized: asymptomatic DN (n = 40); symptomatic DN (n = 46); DN with history of foot ulcers (n = 32); DN with amputations (n = 22); and DN with history of amputations (n = 46). Data was assessed from completion of two self-administered HQOL questionnaires: Short Form-12 (SF-12) and Norfolk QOL-DN, a 47 item nerve fiber specific tool, back and forward translated from English into German. Factor analysis by Varimax rotation was performed; relationship of the factors to stages of complications was conducted using two METHODS: least squares regression and PLUM. Complication stage was entered as the dependent variable, with all five factors as predictors. RESULTS: Five factors resulted from analysis of this German neuropathy population (multi-staged), matching factors from a European study population (mild neuropathy). The first factor (Functional Status/Large Fiber) and third factor Activities...