

**POSTER ABSTRACTS**  
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**Chronic Disease**  
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**Diabetes Quality Improvement: Should We Target Patients,  
Physicians, or Clinics?**

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**Background:** Few data are available which assess in sophisticated hierarchical models whether observed variation in diabetes quality of care is primarily attributable to characteristics of patients, providers, or clinics.

**Methods:** This study was conducted at a large medical group with 120 primary care physicians caring for 2,589 eligible adults with diabetes at 19 primary care clinics. Patients were followed from January 1, 1995 to December 31, 1997. Data on glycated hemoglobin (A1c), LDL-cholesterol (LDL), and diabetes eye exams were extracted from computerized clinical databases. Multivariate multilevel hierarchical models were constructed to assess whether variation in baseline and follow-up HBA1c, LDL, or eye exam rates was primarily attributable to characteristics of patients, physicians, or clinics.

**Results:** For A1c, LDL, and eye exams, over 80% of explainable variation was related to characteristics of patients. A small but significant fraction of variance was related to physicians, and a small and insignificant portion of variance was related to clinics. Consideration of a range of covariates at each level did not change this pattern. The fraction of variance explained by the model was approximately 10%.

**Conclusions:** These data suggest that in well-organized clinics with diabetes registries, diabetes guidelines, and relatively good baseline measures of diabetes care, the majority of explainable variance in diabetes care quality is related to patient factors, many of which (such as intensification of pharmacologic treatment) involve patient-physician interaction.