Objective: Because of the rising prevalence of diabetes, the objective of this study was to better understand the population of patients who are at high risk for developing diabetes, but not yet diagnosed. Specifically, this study examined the health outcomes between those at-risk for developing diabetes and controls.

Methods: This study utilized data from two large, cross-sectional, Internet-based survey databases, supplemented in China with centralized locations: the 2009 US and 2009 China National Health and Wellness Surveys (NHWS). Applying a previously-developed algorithm (Bang et al, 2009), patients in each country who were not diagnosed with diabetes were classified as having or not having a high risk for developing diabetes. High-risk patients were compared with controls on health-related quality of life (physical component summary (PCS) scores of the SF-12v2) and the number of emergency room (ER) visits, controlling for demographics (country, age, gender, ethnicity, income, education) and patient characteristics (BMI and Charlson comorbidity index).

Results: Of those not diagnosed with diabetes, 2.46% of patients (n=310) in China and 16.64% of patients (n=10,778) in the US were classified as high risk for diabetes. After controlling for demographics and patient characteristics, those at high risk for diabetes reported significantly lower levels of PCS (Adjusted Mean (Madj)=45.5 vs. 48.8, p<.0001). Although high-risk patients reported significantly more ER visits than controls in China (M=0.44 vs. 0.40) they reported significantly less than controls in the US (M=0.12 vs. 0.17). These effects were significantly different between countries (χ²(1)=5.25, p<.02).

Discussion: Although substantially more US patients were at high risk for developing diabetes relative to Chinese patients, the health outcome differences between those at high-risk and controls were more dramatic in China. Chinese patients at high-risk for diabetes reported significantly worse physical quality of life and more ER visits than controls.

References