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## Diabetes and Employment Productivity

### Does Diabetes Management Matter?

Diabetes is a disease which has economic implications. The American Diabetes Association estimates that diabetes costs \$132 billion per year—and an important part of these costs are labor productivity costs. The US Census Bureau estimates that from 2002 to 2020 the number of individuals diagnosed with diabetes will increase by 44 percent to 17.4 million. With the prevalence and incidence of diabetes increasing, accurate estimates of the labor market cost of diabetes are important in order to develop appropriate health policy responses.

Given the high economic costs of diabetes, public health officials have been arguing that diabetes prevention is important. Prevention could mean one of two things: The prevention of the onset of diabetes, or the prevention of diabetes-related problems through the management of glycosylated hemoglobin levels (HbA1c) for people already diagnosed with diabetes. If the productivity costs of diabetes when diabetes is managed are low, scarce prevention dollars could be concentrated on the much smaller group already diagnosed with diabetes. On the other hand, if the costs are associated with diabetes whether managed or not, then prevention dollars must be spread over the much larger general population.

Of course, it is likely that dollars should be spent on both preventing the onset of

diabetes as well as its management after onset. However, there is currently no information to inform policy-makers on how to apportion scarce prevention dollars between diabetes onset and diabetes management.

The labor market component of the overall cost of diabetes is important. While overall diabetes-related costs are rising, it is not clear that per capita labor costs associated with diabetes are increasing.

A recent study by Shelton H. Brown III, José A. Pagán, Craig Hanis, and Adriana Pérez published in the Spring 2007 issue of *Social Perspectives* examines whether poor diabetes management is the cause of adverse labor market outcomes rather than diabetes per se. In the data used in this study, HbA1c levels were measured in a laboratory for all participants, whether or not they had diabetes. Thus, the authors knew the extent to which persons with diabetes have managed their HbA1c. The study also examined whether diabetes affected labor productivity, whether managed or not, across different wage levels. The data utilized came from the Diabetes Impact Project, an ongoing survey from a predominantly Mexican American area of South Texas

The authors found that at the high end of the wage distribution, the productivity of females with diabetes was lower than for



females without diabetes. This is possibly due to the fact that women with diabetes earn wages near the lower portion of the wage distribution. For males, the wage productivity premium for avoiding diabetes was approximately 42%. For those with diabetes, there was approximately a four percentage point wage premium for every unit of HbA1c increase.

The results suggest that in order to avoid productivity losses for males associated with diabetes, scarce prevention resources should be spent on the prevention of onset of diabetes rather than the management of HbA1c for those already diagnosed with diabetes. This is not to say that management of diabetes will not improve quality of life or prevent medical costs in the future. Productivity in the future will likely be higher for those who currently are managing their diabetes.

*IPHP Research Brief 08-09 is based on excerpts/summary from the article: Brown III, H. Shelton, Pagán, José A., Hanis, Craig, and Pérez, Adriana. 2007. Diabetes and Employment Productivity: Does Diabetes Management Matter? Social Perspectives, 9(1), 177-196.*