



## **The Relationship between Modifiable Health Risks and Group-Level Health Care Expenditures**

This study uses the HERO database in which 46,026 employees met all inclusion criteria for the analysis. The purpose was to assess the relationship between modifiable health risks and total health care expenditures for a large group of employees. This study is different than Research Project Two which examined individual health care expenditures as the outcome. Here the outcome is the total cost impact of a given health risk.

Risk data were collected through voluntary participation in health risk assessments (HRA) and workplace biometric screening. These data were linked to health care plan enrollment and employee health care expenditures from employer's fee-for-service health care plans over a six year period.

Several research questions were addressed:

- What is the association between each of the eleven modifiable health risks and health care expenditures?
- What percent of total health care expenditures are associated with each of the eleven modifiable risks?

It was found that employees with modifiable health risks were responsible for 25% total expenditures. Those employees who reported being under constant stress with no methods for coping were responsible for 7.9% of total health care costs. Being a former smoker was associated with 5.6% total medical expenditures followed by obesity at 4.1%. The association between risks and expenditures was estimated using a two-part regression model, controlling for demographics and other confounders. Risk prevalence data were used to estimated group-level impact of risks on expenditures.

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