Association of Healthcare Costs with per unit Body Mass Index Increase. Feifei Wang. Tim McDonald, Joel Bender, Bonnie Reffitt, Adam Miller, Dee W. Edington.

Journal of Occupational and Environmental Medicine. 48(7):668-74, 2006.

OBJECTIVE: The objective of this study was to quantify the healthcare costs per unit increase in body mass index (BMI). METHODS: This cross-sectional study included 35,932 employees and spouses in a manufacturing company who participated in an indemnity/PPO plan and one health risk appraisal during 2001 and 2002. RESULTS: Within the BMI range of 25 to 45 kg/m, medical costs and pharmaceutical costs increased dollar 119.7 (4%) and dollar 82.6 (7%) per BMI unit, respectively, adjusted for age and gender. The adjusted medical costs related to diabetes and heart disease increased by dollar 6.2 and dollar 20.3 per BMI unit. The likelihood of having any medical claim increased 11.6% per BMI unit for diabetes and 5.2% for heart disease. CONCLUSIONS: Each unit increase in BMI is associated with higher healthcare costs and increased likelihood of having claims for most major diagnostic codes and for diabetes and heart diseases.