

An Employer Case for Population Health: Quantifying the Direct and Indirect Costs of the Top 20 Health Condition Cost Drivers at One Employer

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Research Objective:

The primary objective was to quantify the direct and indirect costs of the top 20 health conditions in one workforce population. A secondary objective was to rely solely on administrative data sources to identify these conditions and attribute costs.

Study Design, Population, and Time Frame:

The study was a cross-sectional analysis of administrative data for 4,100 employees of a health insurance company in the southeastern United States in 2004. Medical and pharmacy claims, as well as personnel and benefits data, were obtained and merged at the individual employee level. Direct costs were defined as allowed dollars paid for medical treatment of employees and consisted of three broad service categories: inpatient, professional/outpatient, and pharmacy. Indirect costs were defined as labor resources lost by the employer due to illness and consisted of five categories: absenteeism, presenteeism, short and long term disability, and family and medical leave. Direct medical costs were attributed to disease status using episode treatment groups, and indirect costs were attributed using regression models and relative weights. The study underwent internal review board approval prior to commencement and strict patient confidentiality protocols were followed.

Principal Findings:

Results of the case study demonstrated that for every 60 cents spent on the direct costs of disease for employees there was an additional indirect cost burden to the employer of 40 cents. In 2004, the total cost burden was \$23.2 million—an average loss of \$5,631 per full time equivalent employee. The top 5 costliest health conditions in the employee population were: 1)

joint degeneration and inflammation, 2) benign neoplasms, 3) gastroenterological infections and inflammations, 4) hypertension, and 5) depression and anxiety disorders.

Conclusions & Implications:

As a result of linking healthcare claims with employee benefits and personnel data it was possible to discover a more accurate picture of the direct and indirect costs of disease in the employee population. These costs had a significant negative impact on the employer's medical expenses and workforce productivity in 2004. In addition, most of the top 20 health condition drivers of total cost were of lower severity and higher prevalence than those targeted by traditional disease management programs.

Such findings may cause employers to re-evaluate their current resource allocation and focus for disease management in favor of a more population-based approach that addresses health conditions affecting a larger segment of the workforce. It may also be worth considering methods for quantifying direct and indirect costs of employee disease that utilize available administrative data sources given their utility.

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Learning Objectives:

1. Explain a method for quantifying the direct and indirect costs of disease in an employee population relying solely on administrative data sources
2. Discuss the employer financial case for re-evaluating a traditional disease management approach in favor of a more population health based intervention