

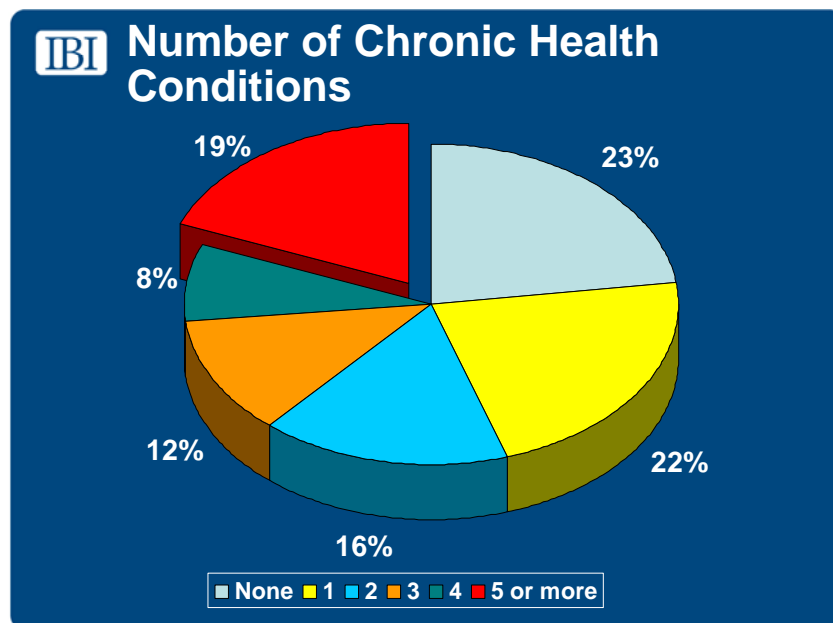
## Diseases vs. Populations

### – The Impact of Chronic Conditions –

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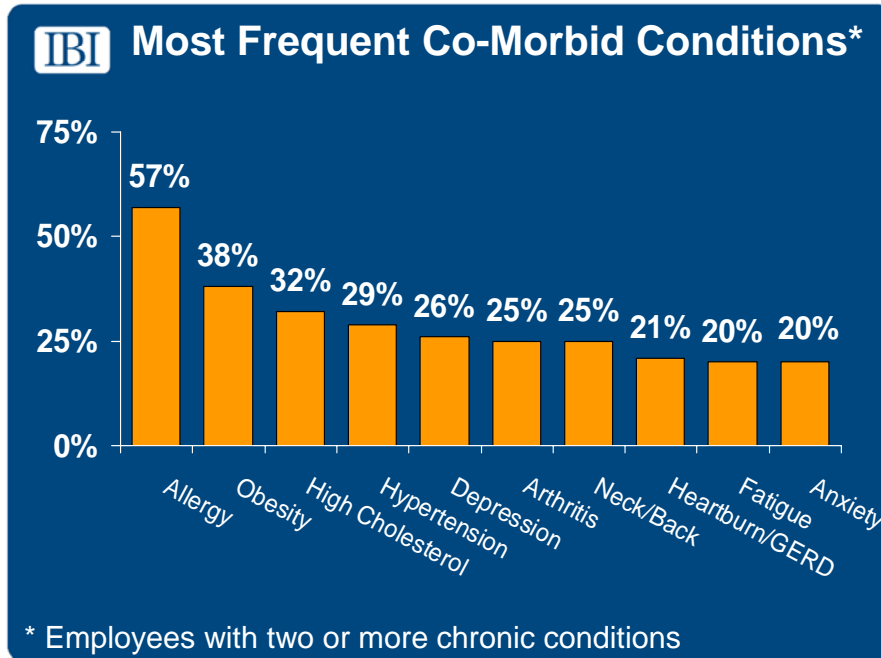
Historically, employers have managed their benefits programs in “vertical slices” as a way to maximize claims-processing efficiency and to minimize costs. Managing these programs in individual silos may have generated these efficiencies but also promoted risk and cost shifting from one program to another, and from the business to employees.

Early approaches to disease management took a similar approach: Efficiently manage a small number of high claims-cost diseases with a claims cost-control focus. However, as chronic health conditions have become more prevalent, co-morbidities more prominent and lost time and lost productivity more important, many employers are re-thinking their disease management strategies. They seek to manage the health of their workforce towards broader business goals than simply controlling out of pocket claims costs.

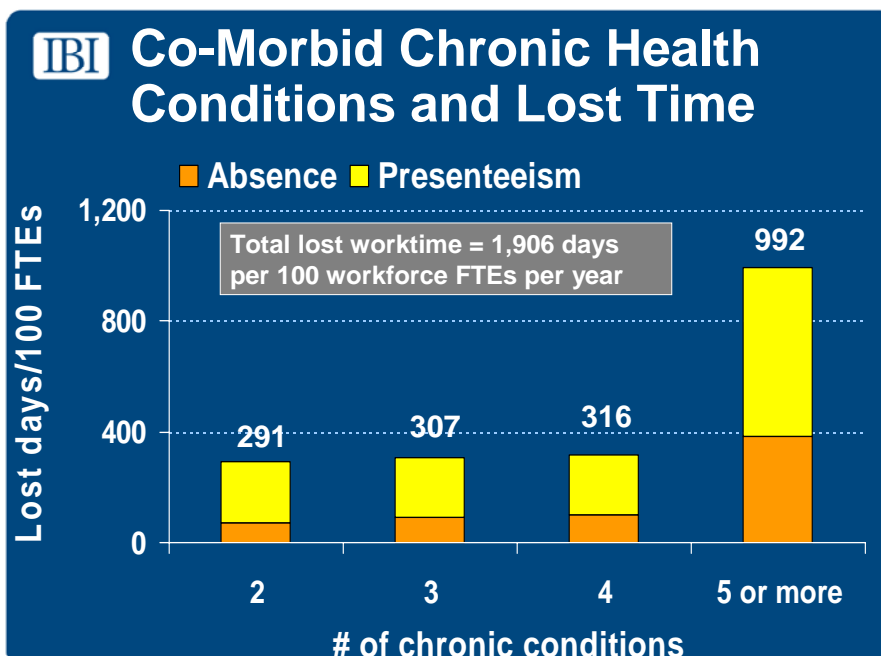


**Prevalence of chronic health conditions.** Analysis of data on nearly 120,000 employees from the Health and Work Performance Questionnaire (HPQ) self-report surveys<sup>1</sup> provides strong evidence for this re-evaluation. More than three quarters of the survey respondents have at least one chronic health condition and 55% have two or more. Nearly two in ten of respondents have at least five chronic health conditions. If these results are indicative of broader populations, explicitly recognizing co-morbidity needs to be a significant factor in structuring any healthcare approach.

In developing such an approach, the particular types of co-morbidities are critical. Perhaps not surprisingly, allergies are the most prevalent co-morbidity in those individuals with two or more chronic conditions (e.g., 57% of individuals with two or more chronic conditions have allergies as one of those conditions), followed by obesity (38%), high cholesterol (32%), hypertension (29%) and depression (26%). But perhaps the bigger challenge for employers in relating health to their business is to better understand the relationship between co-morbidities, lost time and lost productivity.



**Co-morbidity and time loss from work.** Co-morbidity has taken on much broader significance than simply as a driver of healthcare costs. The exhibit below shows the relationship between the number of co-morbid conditions and average lost time from absence and presenteeism (since the actual lost productivity resulting from this lost time is employer specific, we focus here only on lost time estimates<sup>2</sup>).



As noted above, the first exhibit shows that 55% of the population analyzed has two or more co-morbid chronic conditions. The figure above illustrates that lost time for this same group equals 1,900 days of lost worktime for every 100 full-time equivalents (FTEs) per year in their respective workforces. Thus, when lost time from this group is spread out over the entire workforce, it is comparable to each person in the company losing 19 workdays per year.

The exhibit also shows little differentiation in lost work time among those with two, three and four co-morbid conditions – although each of these groups still accounts for the equivalent of about three lost workdays per person in their workforces per year. However, there is a huge leap for those with five conditions or more. This group – 19% of the overall HPQ population – is responsible for the lost-time equivalent of nearly 10 days per person in the entire workforce over the course of a year – a Pareto group to be sure.

**Absence vs. presenteeism.** Overall, for those with two or more chronic health conditions, lost time from presenteeism<sup>3</sup> is about twice that of absence.<sup>4</sup> What also is interesting is that the relative impact of absence increases with the number of chronic conditions: from 25% of total lost time for those with two conditions to about 40% for those with five or more. This makes intuitive sense. One would expect that the cumulative impact of an increased number of conditions would make it more and more difficult to show up for work each day.

**Commentary.** This analysis leads to several conclusions: (1) co-morbidity is not just a healthcare cost issue, but a much broader business issue because of the lost-time consequences, (2) employers are challenged not only by how to manage such healthcare complexity but how to prevent the conditions creating this complexity in the first place, (3) such complexity emphasizes a “whole-person” rather than an “individual-disease” approach, and a focus on populations and prevention, and (4) employers need to look beyond their program silos and cost/risk shifting to workforce health and related business results.

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<sup>1</sup> As part of the development of the HPQ-Select with Dr. Ron Kessler of Harvard Medical School, IBI has research access to the HPQ database. Data on 119,343 employees across 21 employers are used for this analysis.

<sup>2</sup> See Sean Nicholson, Mark Pauly, et al., “Measuring the Effects of Work Loss on Productivity with Team Production,” *Health Economics* 15: 111-123 (2006) for this discussion.

<sup>3</sup> See the November 2006 *IBI Research Insights* for a discussion on the validity of self-reported data on presenteeism. [<http://ibiweb.org/do/PublicAccess?documentId=822>]

<sup>4</sup> HPQ self-reported absence tends not to include disability lost time. See the May 2008 *IBI Research Insight*. [<http://ibiweb.org/do/PublicAccess?documentId=867>]