



Clinical and Behavioral Predictors of Short-Term Work Disability

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About IBI

- 501(c)(6) non-profit business association
 - ≈1,000 organizational members
- Provide research on the relationships between workforce health, worker productivity and business performance
- Largest single repository of disability claims data from corporate insurance policies
 - Used to generate industry-level disability lost work time and costs benchmarks

Introduction

- Extended absences from work due to illness are costly to workers, their employers and society at large.
- Many disability absences may be preventable in the near term.
- This study analyzes prospectively how observable modifiable health risks and biometric indicators predict short-term work disability (STD).

Data

- We analyze data from eight U.S. organizations that held employee group health and disability insurance policies with Aetna between 2010 and 2012.
 - The data were collected by Aetna in accordance with HIPAA regulations.
 - Information that could be used to identify individual employees or the organizations for which they worked was not included.
- The data include $\approx 245,000$ employees eligible for corporate medical and disability leave benefits, observed monthly.
 - $\approx 35,000$ employees had a health risk assessment survey (HRA) used to determine modifiable health risks.
 - Biometric lab results were available for between 8,000 to 57,000 employees, depending on the test.

Measures

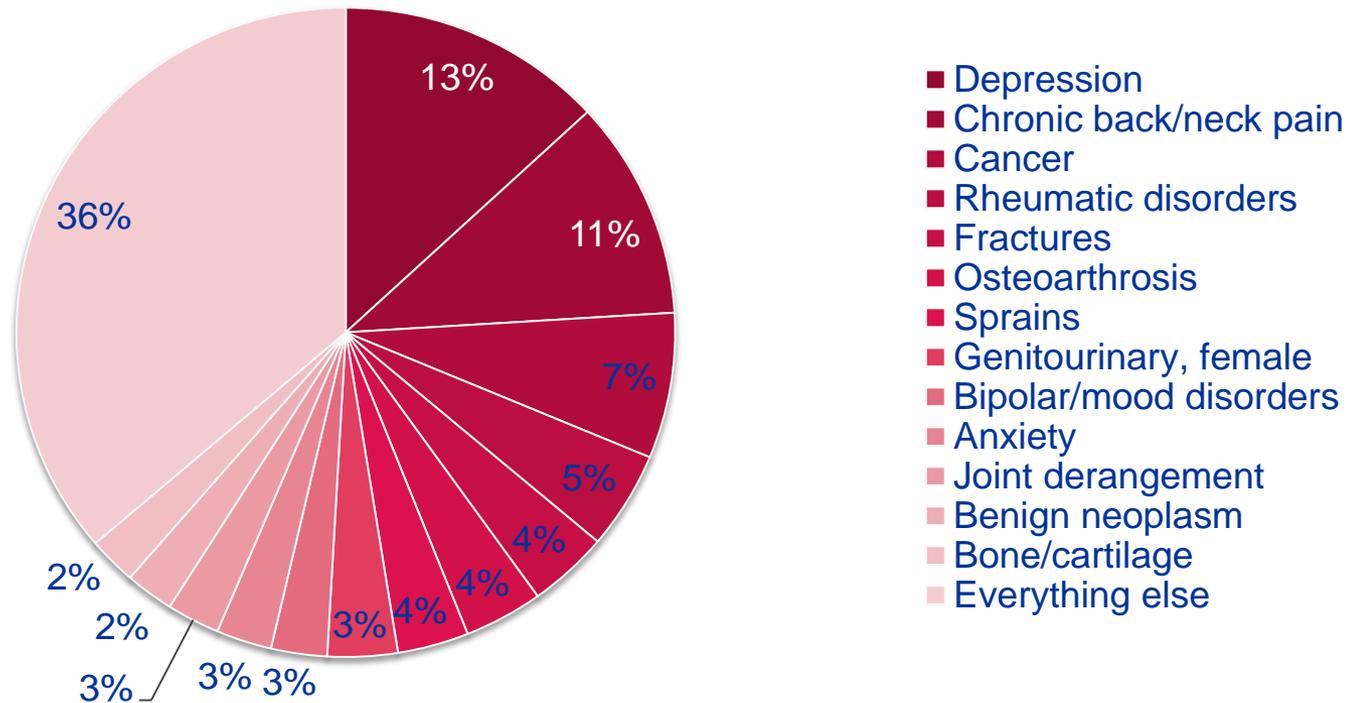
- STD is measured by whether an employee filed a non-pregnancy disability insurance claim with Aetna in the 12-months following their HRA or lab results.
- HRA surveys includes items on stress, psychological distress, physical activity, nutrition, smoking, typical hours of sleep and body mass index (BMI) based on height and weight.
- Biometric values are the results of lab tests, coded according to commonly used categories.

One in 20 employees* had a short-term work disability within the next 12 months

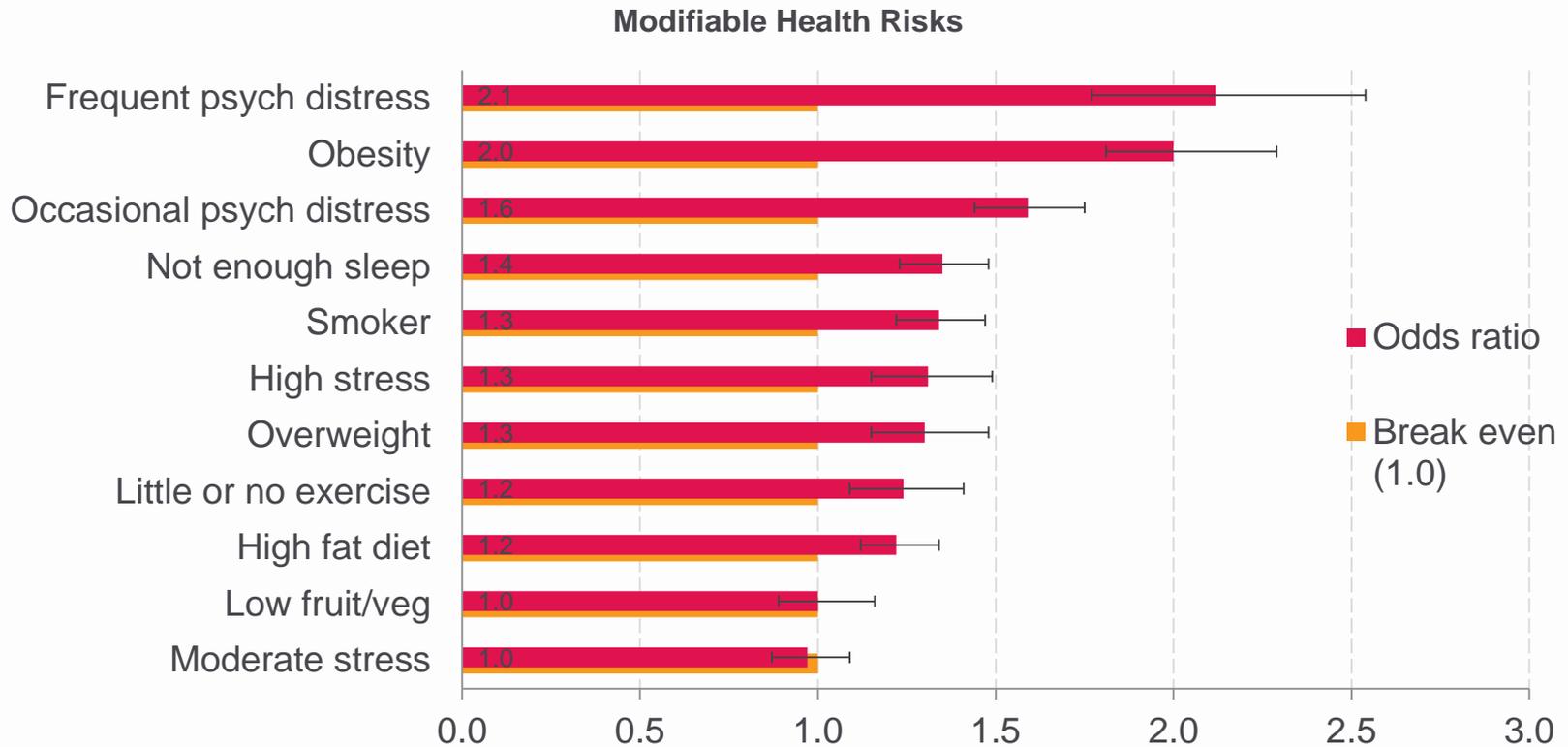
- STD leaves typically resulted in 3 to 10 weeks of missed work
 - Median = 42 days
 - IQR = 27-77
- Under common disability insurance policies (60% wage replacement), this represents wage losses to the employee of between 5% to 12%

* All results refer to employees who had no disability claims in the previous 12 months.

A small number of conditions account for a majority of STD lost work time



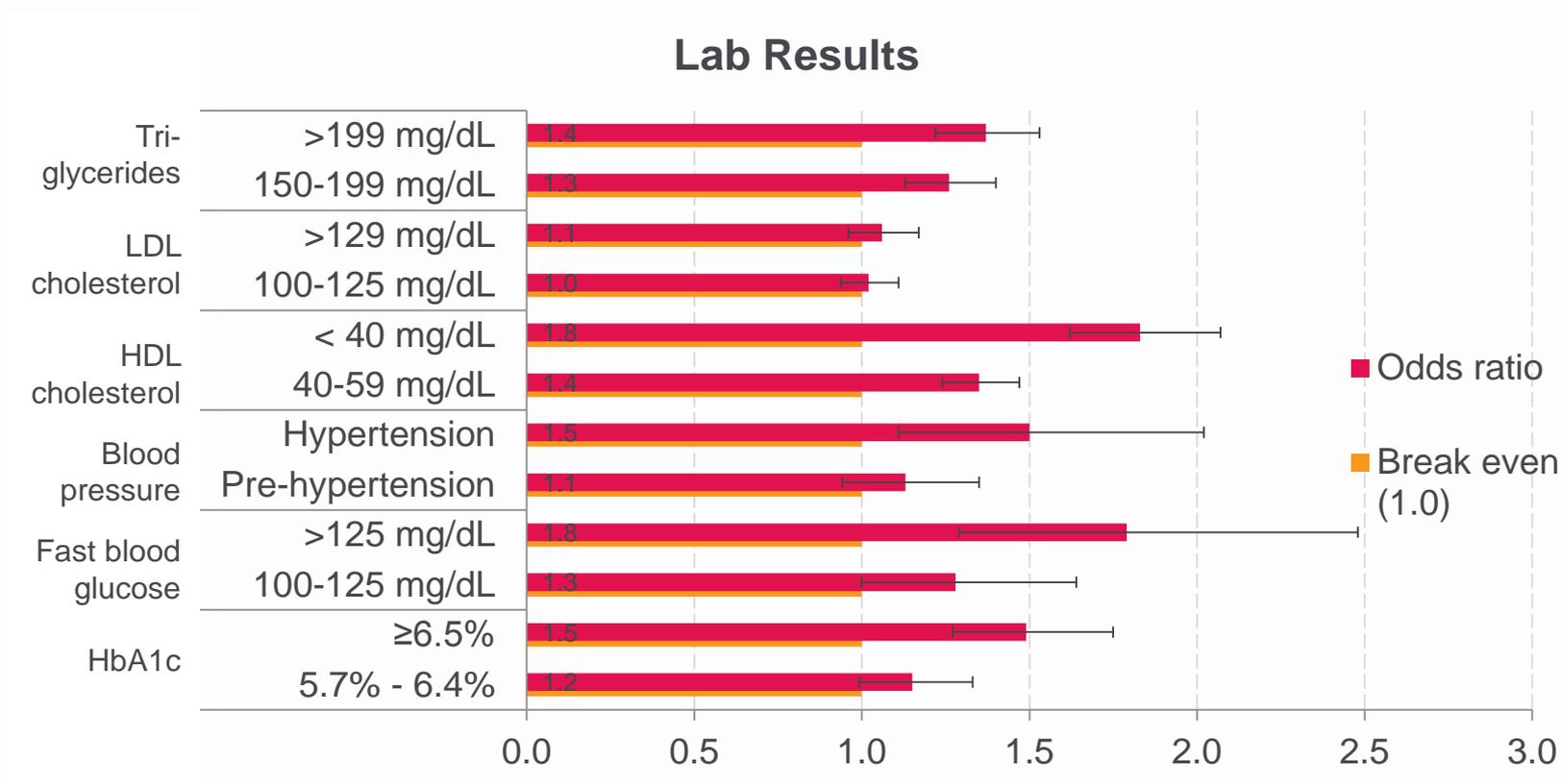
Psychological distress and obesity are of particular concern for the risk of an STD in the next 12 months



Odds ratios from logistic regression analysis predicting a STD claim in the next 12 months among employees with no STD claims in the prior 12 months. Each health risk is modelled separately. Models control for age, sex, industry, region, and median household income in employee's 3 digit zip code area.



Unhealthy biometric values indicate a higher than average chance of an STD



Odds ratios from logistic regression analysis predicting a STD claim in the next 12 months among employees with no STD claims in the prior 12 months. Each health risk is modelled separately. Models control for age, sex, industry, region, and median household income in employee's 3 digit zip code area.



Practice Implications

- While this analysis does not permit causal interpretations, the findings are consistent with the proposition that much of the productivity losses due to illness are preventable.
- Clinical and workplace initiatives that help workers manage their weight, eat healthier, become more active or quit smoking may lower the risk of a disabling illness episode.
- At the same time, the role of workplace environments in producing illness needs closer examination
 - To the extent that the organization of work or workplace culture exacerbates stress and psychological distress or presents obstacles to healthier behaviors – such as long hours or minimal access to healthy food options – employers may be sacrificing longer-term productivity for shorter-term gains.

Limitations

- The data come from a convenience sample of employees at a handful of employers (primarily in the manufacturing and retail sectors).
 - The results may not be representative of the workforce as a whole.
- HRA responses are self-reported rather than objectively measured.
- Results for employees who are currently in the disability system are not reported.
 - This suggests that the reported results underreport the level of illness in the sample workforce.

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