

## Reporting Basis

### 142,549,250 employees in NAICS US - US workforce

IBI's Full Cost Estimator (FCE) models the absence, disability, presenteeism and opportunity costs of illness in the workforce. Results are based on millions of disability claims in IBI's Benchmarking data, the Health and Productivity Questionnaire (HPQ), and nationally-representative data from the Centers for Disease Control and Prevention (CDC) and the Bureau of Labor Statistics (BLS).

## Health and Productivity summary

### Among 142,549,250 employees in NAICS US

893.9M illness-related absence days each year

The equivalent of 527.4M days lost to presenteeism (underperformance on the job by employees with chronic health conditions) each year

\$530.0B in illness-related absence, presenteeism, and opportunity costs each year\*

Compared to \$879.8B in estimated employer healthcare benefits:

For every dollar spent on healthcare benefits, \$0.60 of productivity is lost to illness and injury.

\* Opportunity costs assume that an employer replaced only part of absent workers' lost output at the cost of their normal wages - or conversely, that it replaced all of their output at a cost higher than their normal wages. See model assumptions for more information. Costs include WC indemnity, medical, Rx, permanent disability payments, legal fees, and other expenses.

## Lost Workdays and Costs Summary

### Annual illness-related absences and presenteeism (Days)

|              |             |
|--------------|-------------|
| <b>Total</b> | <b>1.4B</b> |
| Sick days    | 364.2M      |
| STD          | 100.6M      |
| LTD          | 150.3M      |
| FMLA         | 86.8M       |
| WC           | 192.0M      |
| Presenteeism | 527.4M      |

### Annual illness-related absence, presenteeism, and opportunity costs\*

|              |                 |
|--------------|-----------------|
| <b>Total</b> | <b>\$530.0B</b> |
| Sick days    | \$122.3B        |
| STD          | \$32.3B         |
| LTD          | \$24.7B         |
| FMLA         | \$17.4B         |
| WC*          | \$135.8B        |
| Presenteeism | \$197.6B        |

\* Opportunity costs assume that an employer replaced only part of absent workers' lost output at the cost of their normal wages - or conversely, that it replaced all of their output at a cost higher than their normal wages. See model assumptions for more information. WC costs include indemnity, medical, Rx, permanent disability payments, legal fees, and other expenses.

Totals may not sum due to rounding.

## Detailed sick day results

|   |                 |
|---|-----------------|
| Total absence days                          | 364.2M          |
| Absences PEPY                               | 2.6             |
| Missing FTEs                                | 1,400,865       |
| % of current labor inputs lost              | 1.1%            |
| Wage and benefits replacement costs per day | \$225           |
| Total wages and benefits replacement costs  | \$82.0B         |
| Total opportunity costs*                    | \$40.3B         |
| <b>Total costs</b>                          | <b>\$122.3B</b> |

\* Opportunity costs assume that an employer replaced only 72% of the value of absent workers' lost output at the cost of their normal wages - or conversely, that it replaced 100% of their output at a cost of 139% of their normal wages.

Totals may not sum due to rounding.

## Detailed STD results

|   |                |
|---|----------------|
| Total active claims                         | 3,336,619      |
| Avg. days per claim                         | 30.2           |
| Total absence days                          | 100.6M         |
| Absences PEPY                               | 0.7            |
| Missing FTEs                                | 386,922        |
| % of current labor inputs lost              | 0.3%           |
| Wage and benefits replacement costs per day | \$211          |
| Total wages and benefits replacement costs  | \$21.2B        |
| Total opportunity costs*                    | \$11.1B        |
| <b>Total costs</b>                          | <b>\$32.3B</b> |

\* Opportunity costs assume that an employer replaced only 72% of the value of absent workers' lost output at the cost of their normal wages - or conversely, that it replaced 100% of their output at a cost of 139% of their normal wages.

Totals may not sum due to rounding.

## Detailed LTD results

|   |                |
|---|----------------|
| Total active claims                         | 730,321        |
| Avg. days per claim                         | 205.8          |
| Total absence days                          | 150.3M         |
| Absences PEPY                               | 1.1            |
| Missing FTEs                                | 578,041        |
| % of current labor inputs lost              | 0.4%           |
| Wage and benefits replacement costs per day | \$164          |
| Total wages and benefits replacement costs  | \$24.7B        |
| Total opportunity costs*                    | 0              |
| <b>Total costs</b>                          | <b>\$24.7B</b> |

\* Opportunity costs for LTD are assumed to be zero since absent employees are likely to be replaced permanently.

Totals may not sum due to rounding.

## Detailed WC results

|   |                 |
|---|-----------------|
| Total active claims with lost workdays      | 5,635,359       |
| Total active claims without lost workdays   | 4,976,656       |
| Total absence days                          | 192.0M          |
| Absences PEPY                               | 1.3             |
| Missing FTEs                                | 738,300         |
| % of current labor inputs lost              | 0.6%            |
| Wage and benefits replacement costs per day | \$218           |
| Total wages and benefits replacement costs  | \$41.9B         |
| Total WC medical treatments                 | \$45.7B         |
| Total WC Rx treatments                      | \$2.1B          |
| Total other WC claim costs*                 | \$24.7B         |
| Total opportunity costs*                    | \$21.3B         |
| <b>Total costs</b>                          | <b>\$135.8B</b> |

\* Other costs include permanent disability payments and legal fees. Opportunity costs assume that an employer replaced only 72% of the value of absent workers' lost output at the cost of their normal wages - or conversely, that it replaced 100% of their output at a cost of 139% of their normal wages.

Totals may not sum due to rounding.

## Detailed FMLA results

|                                     |                |
|-------------------------------------|----------------|
| Total stand-alone leaves            | 6,304,488      |
| Avg. days per leave                 | 15.2           |
| Total absence days                  | 86.8M          |
| Absences PEPY                       | 0.6            |
| Missing FTEs                        | 333,896        |
| % of current labor inputs lost      | 0.3%           |
| Benefits continuation costs per day | \$90           |
| Total benefits continuation costs   | \$7.8B         |
| Total opportunity costs*            | \$9.6B         |
| <b>Total costs</b>                  | <b>\$17.4B</b> |

\* Opportunity costs assume that an employer replaced only 72% of the value of absent workers' lost output at the cost of their normal wages - or conversely, that it replaced 100% of their output at a cost of 139% of their normal wages.

Totals may not sum due to rounding.

## Detailed presenteeism results

|   |                 |
|---|-----------------|
| % of employees with at least one of 26 chronic illnesses  | 75%             |
| Average daily decrease in job performance (i.e., presenteeism) among employees with a chronic illness compared to employees with no chronic illness | 2.3%            |
| Total equivalent workdays lost to presenteeism  | 527.4M          |
| Absences PEPY   | 3.7             |
| Missing FTEs  | 2,028,404       |
| % of current labor inputs lost  | 1.6%            |
| Opportunity costs for each day of presenteeism  | \$375           |
| <b>Total opportunity costs</b>  | <b>\$197.6B</b> |

\* Opportunity costs assume that an employer replaced only 76% of the value of workers' lost output at the cost of their normal wages - or conversely, that it replaced 100% of their output at a cost of 132% of their normal wages.

Totals may not sum due to rounding.



## Detailed full results

|              | Absence & lost productivity |             |                  |                        | Illness-related costs |                   |                    |               |                | Total           |
|--------------|-----------------------------|-------------|------------------|------------------------|-----------------------|-------------------|--------------------|---------------|----------------|-----------------|
|              | Days                        | Days PEPY   | Missing FTEs     | % of labor inputs lost | Wages & benefits      | Opportunity costs | Medical treatments | Rx treatments | Other WC       |                 |
| Sick days    | 364.2M                      | 2.6         | 1,400,865        | 1.1%                   | \$82.0B               | \$40.3B           | ---                | ---           | ---            | <b>\$122.3B</b> |
| STD          | 100.6M                      | 0.7         | 386,922          | 0.3%                   | \$21.2B               | \$11.1B           | ---                | ---           | ---            | <b>\$32.3B</b>  |
| LTD          | 150.3M                      | 1.1         | 578,041          | 0.4%                   | \$24.7B               | ---               | ---                | ---           | ---            | <b>\$24.7B</b>  |
| FMLA         | 86.8M                       | 0.6         | 333,896          | 0.3%                   | \$7.8B                | \$9.6B            | ---                | ---           | ---            | <b>\$17.4B</b>  |
| WC           | 192.0M                      | 1.3         | 738,300          | 0.6%                   | \$41.9B               | \$21.3B           | \$45.7B            | \$2.1B        | \$24.7B        | <b>\$135.8B</b> |
| Presenteeism | 527.4M                      | 3.7         | 2,028,404        | 1.6%                   | ---                   | \$197.6B          | ---                | ---           | ---            | <b>\$197.6B</b> |
| <b>Total</b> | <b>1.4B</b>                 | <b>10.0</b> | <b>5,466,428</b> | <b>4.4%</b>            | <b>\$177.5B</b>       | <b>\$279.9B</b>   | <b>\$45.7B</b>     | <b>\$2.1B</b> | <b>\$24.7B</b> | <b>\$530.0B</b> |

### Opportunity cost assumptions

*Absences: an employer replaced only 72% of the value of workers' lost output at the cost of their normal wages - or conversely, that it replaced 100% of their output at a cost of 139% of their normal wages.*

*Presenteeism (underperformance on the job by employees with chronic health conditions): employer replaced only 76% of the value of workers' lost output at the cost of their normal wages - or conversely, that it replaced 100% of their output at a cost of 132% of their normal wages.*

*Other WC costs include permanent disability payments, legal fees and other expenses.*

*Totals may not sum due to rounding.*

## Model Assumptions

|   |          |
|---|----------|
| Total wages and benefits  | \$10.6T  |
| Healthcare benefits (based on \$0.12 for every dollar of payroll wages) | \$879.8B |
| Full-time %   | 81%      |
| Average daily wages   | \$195    |
| Average daily benefits  | \$90     |
| % eligible for paid sick days   | 64%      |
| % eligible for federal FMLA leave                                       | 59%      |
| % eligible for STD benefits   | 38%      |
| STD wage replacement rate   | 62%      |
| STD maximum weekly benefit  | \$604    |
| % eligible for LTD benefits   | 33%      |
| LTD wage replacement rate   | 58%      |
| LTD maximum monthly benefit   | \$7,500  |
| WC wage replacement rate  | 66%      |
| WC maximum weekly benefits  | \$967    |
| % of employees who are:   |          |
| Female  | 49%      |
| % 18-24 years old   | 13%      |
| % 25-34 years old   | 23%      |
| % 35-44 years old   | 21%      |
| % 45-54 years old   | 22%      |
| % 55-64 years old   | 16%      |
| % 65-84 years old   | 5%       |

## Model Assumptions

### % of employees in each EEO occupation class:

|                                    |     |
|------------------------------------|-----|
| Class 1 (officials & managers)     | 9%  |
| Class 2 (professionals)            | 19% |
| Class 3 (technicians)              | 3%  |
| Class 4 (sales workers)            | 10% |
| Class 5 (administrative support)   | 17% |
| Class 6 (skilled crafts & repairs) | 8%  |
| Class 7 (operators)                | 8%  |
| Class 8 (laborers)                 | 5%  |
| Class 9 (service workers)          | 21% |

### Opportunity cost assumptions

*Absences: an employer replaced only 72% of the value of workers' lost output at the cost of their normal wages - or conversely, that it replaced 100% of their output at a cost of 139% of their normal wages.*

*Presenteeism (underperformance on the job by employees with chronic health conditions): employer replaced only 76% of the value of workers' lost output at the cost of their normal wages - or conversely, that it replaced 100% of their output at a cost of 132% of their normal wages.*

## Data Sources

| Source   | Data year  | Resource  | Data Element   |
|--|------------|---|--|
| Bureau of Labor Statistics (BLS)               | 2017       | Occupational Employment Statistics  | Industry employee headcount                                |
|  |            |   | Average wage   |
|  |            |   | Industry occupational distribution                         |
|  | March 2017 | National Compensation Survey  | Benefits load  |
| Centers for Disease Control and Prevention     | 2006-2016  | National Health Interview Survey (NHIS)   | Sick day absence rate                                      |
| Integrated Benefits Institute                  | 2004, 2009 | HPQ-Select  | Presenteeism   |
| Bureau of Labor Statistics (BLS)               | 2016       | Injuries, Illness and Fatalities  | WC incidence rate  |
| National Academy of Social Insurance           | 2017       | Workers' Compensation: Benefits, Coverage, and Costs, 2015, 2017. Washington, DC: National Academy of Social Insurance.   | State WC wage replacement rates and maximum benefit values |
| Integrated Benefits Institute                  | 2017       | IBI Health and Productivity Benchmarking  | STD incidence rate   |
|  |            |   | STD absence duration                                       |
|  |            |   | LTD incidence rate   |
|  |            |   | LTD absence duration                                       |
|  |            |   | FMLA absence duration                                      |
|  |            |   | WC Absence duration  |
|  |            |   | WC Medical costs   |
|  |            |   | WC non-wage indemnity costs                                |
| BLS  | March 2017 | Employee Benefits Survey  | STD and LTD participation and wage replacement rates       |
|  | March 2016 | Current Population Survey   | Industry sex distribution                                  |
|  |            |   | Industry age distribution                                  |
| Nicholson, S., Pauly, M.V., Polsky, D., et al. | N.A.       | "Measuring the effects of work loss on productivity with team production," Health Economics, vol. 15, issue 2, pp111-123. | Opportunity cost multiplier method                         |

## *Disclaimer*

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