IBI BENCHMARKING ANALYTICS

IBI members occasionally request information about disability leaves that is not included in the standard benchmarking reports. When IBI can provide an answer that may interest other members, we share the results in a brief publication of analytic findings.

SHORT-TERM DISABILITY INCIDENCE RATES ACROSS DEMOGRAPHIC GROUPS

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Background

Data contained in IBI's Disability and Leave Benchmarking system can describe claimants' age and sex—for example, the proportion who are female or in the prime working ages of 35 to 54 years old. Such information can provide employers and their supplier partners with a context for better understanding claimant populations—but offer few insights about employees' differential risks for disability leaves. This creates knowledge gaps when setting priorities for programs designed to reduce incidence rates for specific employee populations.

To help close this gap, several members have asked for information about short-term disability (STD) incidence rates among different demographic groups and for specific diagnoses. One common challenge in this effort is that covered lives information used to create industry or employer level incidence rates typically is not disaggregated into demographic categories such as males and females.

This analysis describes an approach to creating counts of covered lives by different age and sex combinations (i.e., demographic groups) based on the national representation of employees in different industries. This allows for estimates of overall demographic incidence rates. Combining these incidence rates with the distribution of diagnoses (i.e., the share of total claims for specific diagnosis codes or categories of diagnoses) allows for a more granular view of the disability risk for specific employee populations.

Summary Findings

- Incidence rates ranged from 1.4 new claim per 100 covered males aged 18-24, to 10.7 new claims per 100 covered females aged 25 to 34.

- Across all age groups, females had higher incidence rates than males. Some—but not all—of the difference was driven by pregnancy claims.

- Pregnancy was the most common reason women younger than 45 took STD leave, ranging from 21 to 70 claims per 1,000 covered lives. For women ages 25-34, 65% of the claims filed were for pregnancies.

- For women 45 and older and men 35 and older, musculoskeletal and connective disorders were the most common types of claims.

- For men under age 35, injuries were the most common type of claim, ranging from 5 to 7 claims per 1,000 covered lives.

- Neoplasms—which include both benign and malignant diagnoses—were virtually absent among new claims for men and women aged 18-24. By age 45 for women and age 55 for men, incidence rates for neoplasms ranged from 7 to 8 per 1,000 covered lives.

- Generally, for both men and women, the incidence rate of non-pregnancy diagnoses increased with age. One exception was mental and behavioral disorders, which were more common among the middle-age claimants (25-54) than among the youngest (18-24) or oldest (55-64) claimants.

Data

The analysis was conducted using disability claims data from IBI's Disability and Leave Benchmarking system. Each year, 14 major US disability insurers and absence management firms provide IBI with more than 6 million short-term disability (STD), long-term disability (LTD), Worker's Compensation (WC), and federal Family and Medical Leave Act (FMLA) claims from more than 65,000 employers' disability and leave management policies. Claims include information on costs and durations of disability, as well as claim, claimant, and employer characteristics such as industry, plan design, state, date of birth, sex, and the primary diagnosis (International Classification of Diseases, 9th Revision [ICD-9] or 10th Revision [ICD-10]) or reason for leave.

Data preparation

BENCHMARKING DATA
We included information from claims filed from 2011 to 2018. The analysis is based on almost 12 million claims from nearly 63,000 employers.

NATIONAL DEMOGRAPHIC DATA
Next, we obtained the share of each demographic group employed in each North American Industry Classification System (NAICS) sector[1] using person-level data from the U.S. Census Bureau's Current Population Survey (CPS), Annual Social and Economic (ASEC) supplement, for 2010-2018.[2] These data were weighted to reflect the U.S. population in each year.

To estimate the STD incidence rate by age and sex, we first assumed that employers' demographics resemble that of their industry. We identify 12 demographic groups based on the combination sex categories (male or female) and the following age categories: 18-24 years old; 25-34; 35-44; 45-54; 55-64; 65-84.

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[1] North American Industry Classification System, https://www.census.gov/cgi-bin/sssd/naics/naicsrch?chart=2017, accessed April 20, 2020.

[2] Sarah Flood, Miriam King, Renae Rodgers, Steven Ruggles and J. Robert Warren. Integrated Public Use Microdata Series, Current Population Survey: Version 7.0 [dataset]. Minneapolis, MN: IPUMS, 2020. https://doi.org/10.18128/D030.V7.0

These age and sex demographic groups captured nearly 99% of the employed persons in the CPS.

CREATING DEMOGRAPHIC POPULATIONS IN THE BENCHMARKING DATA

Each demographic group in a Sector was used as its share of covered lives for each Benchmarking employer in that same sector. For example, in the CPS data, about 18% of manufacturing sector (NAICS 31-33) employees are males aged 35-44. For a hypothetical 1,000 life manufacturing employer in the Benchmarking data, we would calculate that 180 employees are males aged 35-44.

INCIDENCE RATES FOR DEMOGRAPHIC GROUPS

We summed the total covered lives for each demographic group and divided by the count of new claims filed by persons in the same demographic group. This produced the proportion of covered lives with a new claim in each demographic group, which for ease of reporting we multiplied by 100 (i.e., "New claims per 100 covered lives). In principle, demographic incidence rates are reportable by year. For ease of presentation, this analysis reports the overall incidence rates for all years.

DIAGNOSIS CLAIMS RATE BY DEMOGRAPHIC GROUP

The demographic groups' overall incident rates can be used to calculate estimated incidence rates for specific diagnoses or for groups of diagnoses. In principle, the denominator for a diagnosis incidence rate could be the sum of new claims for that diagnosis. However, 25% the Benchmarking STD claims with usable information about diagnoses (ICD-10 codes for most claims since 2016, ICD-9 codes prior to 2016)[3] do not have usable covered lives information, and 5% of claims with covered lives information do not have usable diagnosis codes.

Rather than lose either source of information, we calculated the share of new claims diagnoses for each demographic group, and multiplied by the overall incidence rates to estimate diagnosis incidence rates (scaling to populations sizes that generally allow reporting in whole numbers, e.g. "per 1,000 covered lives").

Results

OVERALL INCIDENCE RATES

Figure 1 shows incidence rates for each demographic group. As claiming activity may be impacted by Social Security Normal Retirement Age, rates for employees age 65 and older are not reported.

Incidence rates ranged from 1.4 new claim per 100 covered males aged 18-24 to 10.7 new claims per 100 covered females aged 25 to 34. Across all age group, females had higher incidence rates than males—particularly among the 25–34 and 35–44-year old groups (as is described in the next section, this was mostly due to pregnancy claims). Incidence rates increased with age for men. For example, the claims rate for 55–64-year old men was almost six times the rate for 18-24-year old men. The age pattern for women was non-linear—again, a reflection of pregnancies among 25–44-year old women.

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[3] World Health Organization (WHO), International Classification of Diseases, https://www.who.int/classifications/en/, accessed April 21, 2020.

Figure 1: New STD claims per 100 covered population, by sex and age group
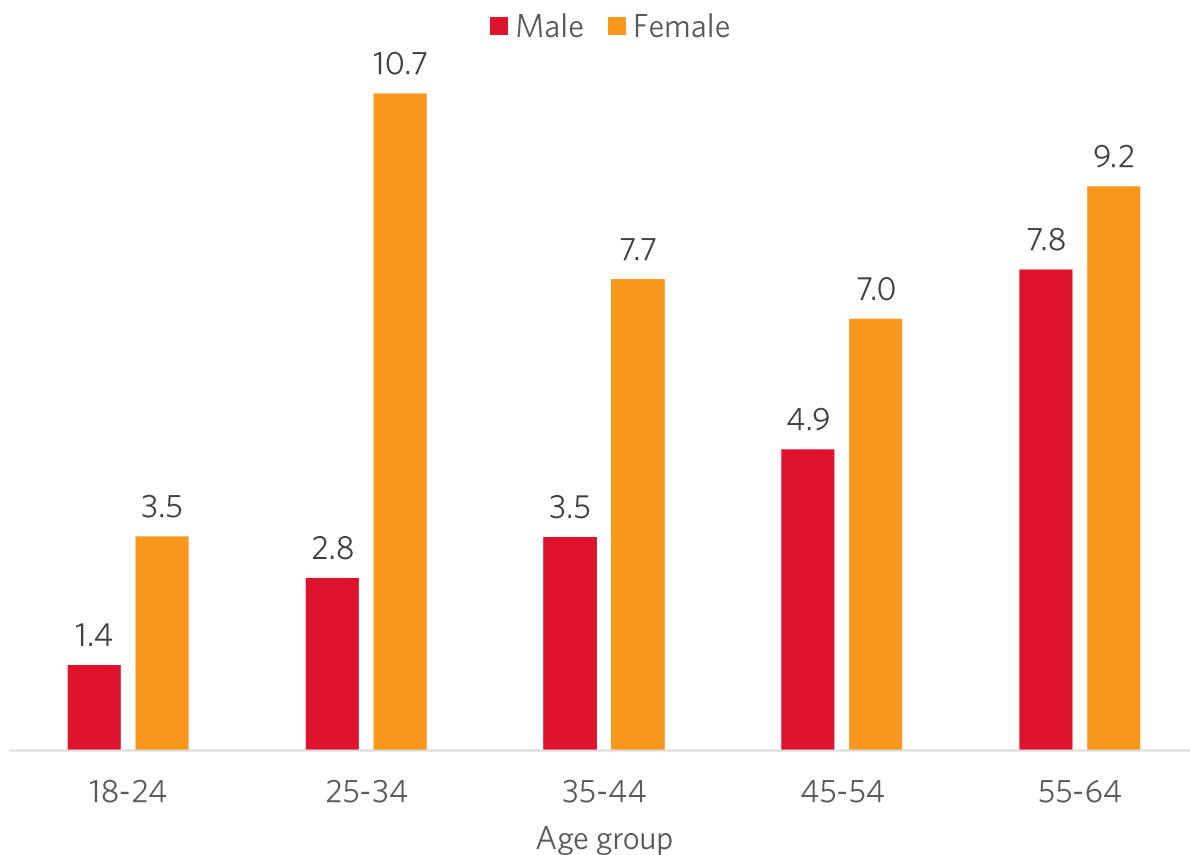

DIAGNOSIS RATES

Figure 2 shows the incidence rate for select diagnoses for each demographic group (scaled to each 1,000 covered population). For ease of presentation, the figure shows the six most common diagnosis categories (one of which, pregnancy, accounts for nearly one in five claims). The "All other diagnoses" category combines 15 ICD-10 categories, each of which separately accounts for less than 5% of all new claims.

The most common reason for filing a claim varies by both sex and age group. Some findings include:

- Pregnancy was the most common reason for filing an STD claim for women younger than age 45 ranging from 21 to 70 claims per 1,000 covered lives (and was the majority category for women aged 25–34). For women ages 25-34, 65% of the claims filed were for pregnancies.

- For women 45 and older and men 35 and older, musculoskeletal and connective disorders were the most common types of claims.

- For men under age 35, injuries were the most common type, ranging from 5 to 7 claims per 1,000 lives.

- Neoplasms—which include both benign and malignant diagnoses—were virtually absent among new claims for men and women aged 18-24. By age 45 for women and age 55 for men, incidence rates for neoplasms ranged between 7 to 8 per 1,000 covered lives.

- Generally, for both men and women, the incidence rate of non-pregnancy diagnoses increased with age. One exception is mental and behavioral disorders, which were more common among the middle-age claimants (25-54) than among the youngest (18-24) or oldest (55-64) claimants.

Figure 2: New claims per 1,000 covered population, by sex and age group, select diagnoses
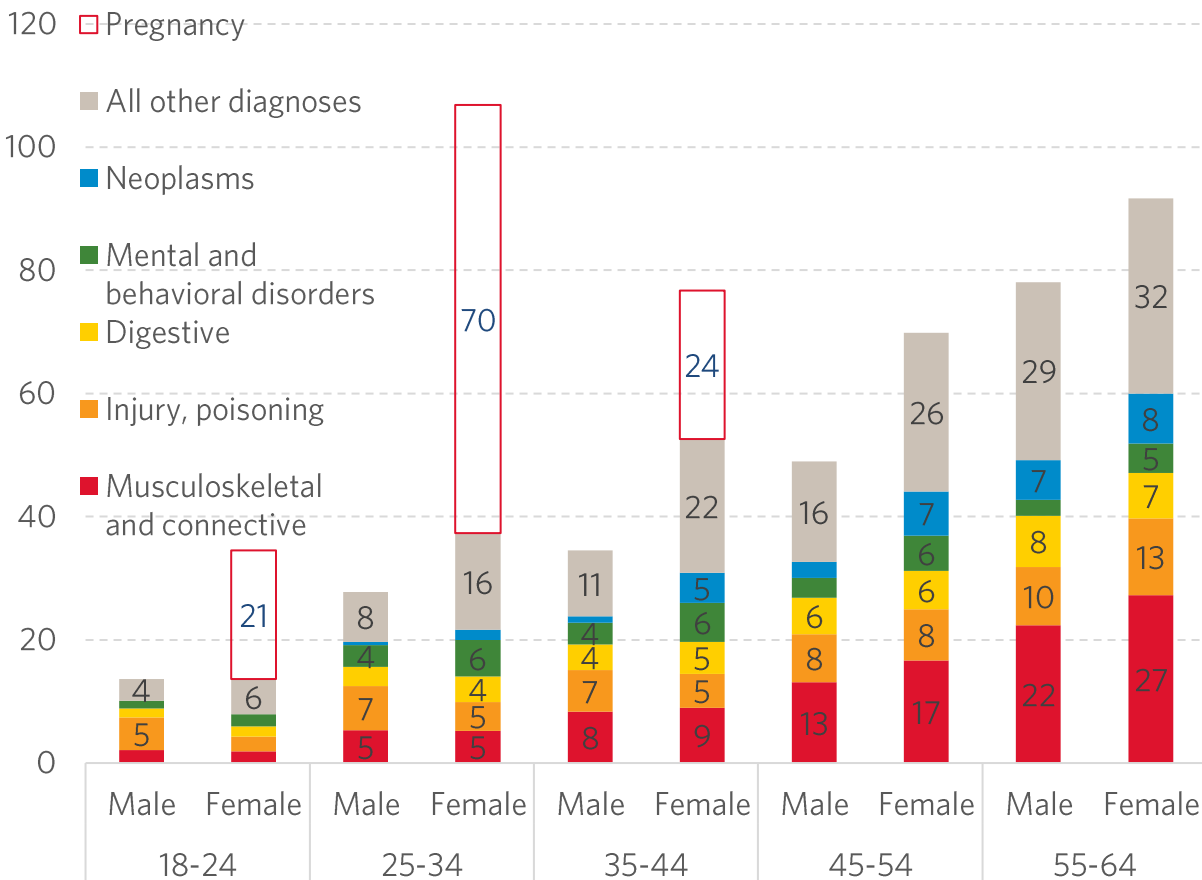
Commentary

The demographic incidence rates shown in both Figure 1 mask variation across different sectors, and the categories shown in Figure 2 mask detail about the breadth of underlying diagnoses. While exploring industries and diagnosis codes is beyond the scope of this report, the approach described here provides a foundation for more focused analyses and member tools. Future analyses could also examine demographic differences in leaves taken under the Family Medical Leave Act (FMLA) for reasons such as bonding with a new child, a family member's serious medical condition, and an employee's own serious medical condition.

About IBI

Founded in 1995, the Integrated Benefits Institute (IBI) is a national, nonprofit research and educational organization focused on workforce health and productivity. IBI provides data, research, tools and engagement opportunities to help business leaders make sound investments in their employees' health. IBI is supported by more than 1,200 member companies representing over 20 million workers.

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