

Long- and Short-Term Disability and Workers' Compensation Trends for Employees with Systemic Lupus Erythematosus or Connective Tissue Disorders in the United States

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Background

- United States (US) employee benefits include:
 - Sick Leave (SL) for paid time off, generally without a specific reason.
 - Short- and Long-term Disability (STD and LTD, respectively) for non-work-related injuries/illnesses.
 - Workers' Compensation (WC) for work-related injuries/illnesses.
- Absences due to SL, STD, LTD, and WC can have significant impact on business performance.
- Employers are intensifying efforts to manage these benefits and make connections with employee health.
- The 2020 Kaiser Family Foundation survey on employer health benefits¹ provides an excellent overview of typical employer coverage for direct medical and prescription costs.
 - It did not include any information on Sick Leave, Short- and Long-term Disability or Workers' Compensation.
- Published research on absence costs and lost time often inappropriately uses:
 - Proxies and subjective data (from surveys) to estimate absences, which:
 - Are subject to recall issues.
 - May report absences or impairments that didn't occur during their work hours.
 - Constant dollars and fixed salary-replacement percentages to estimate absence costs across benefits and diseases.
- This study compares all-cause STD, LTD, and WC utilization and explores changes from baseline for employees with systemic lupus erythematosus and connective tissue disorders category.

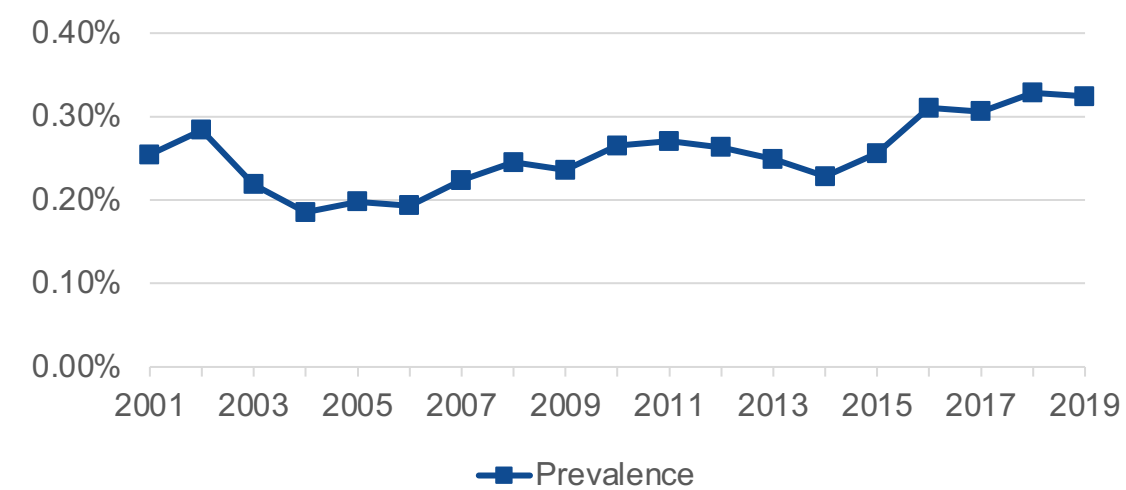
Study Population

- US employees within the Workpartners (formerly HCMS) Research Reference Database (RRDb) from 2001–2019.
- Workpartners RRDb contains:
 - Medical and pharmaceutical claims for over 3 million employees and dependents.
 - Enhanced employee demographics (including self-reported race).
 - Job-related employee information (salary, job type, full/part-time status, exempt/non-exempt status).
 - Employees in all states.
 - Claims with absence durations and payments for employee populations eligible for STD=1.2 million, LTD=1.1 million, WC=1.4 million, SL=710,000.
- The Workpartners RRDb has been used for research in:
 - Painful conditions including fibromyalgia^{2,3}, osteoarthritis³, gout⁴, and Rheumatoid Arthritis⁵.
 - Specialty pharmacy-managed conditions such as Hepatitis-C^{6,7}, multiple sclerosis⁸ and acromegaly⁹.
 - Various other conditions.

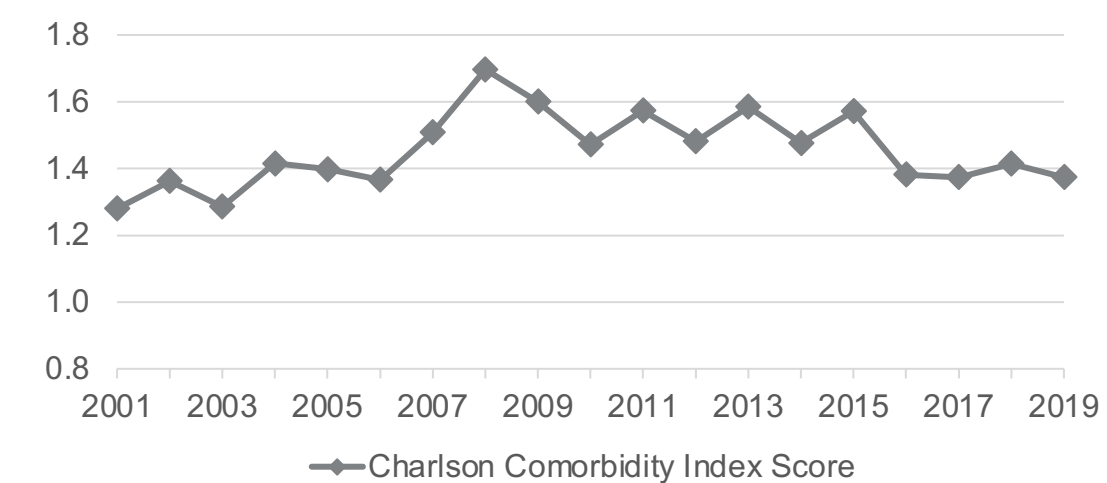
Methods

- Retrospective analysis of US employees in each year with medical claims in the Workpartners RRDb from the US Agency for Healthcare Research and Quality (AHRQ) systemic lupus erythematosus and connective tissue disorders (Lupus/CTD) category.
- For Lupus/CTD, each year the analysis focused on:
 - The prevalence and Charlson Comorbidity Index score¹⁰ for each year's population.
 - The percent of eligible employees utilizing each benefit.
 - Mean leave length (in days).
 - Median payments as a percent of salary.
- Short- and Long-term Disability and Workers' Compensation payments included lump-sum distributions and potentially extended beyond the year initially incurred.
- Workplace accidents were paid under the Workers' Compensation benefit.
- Excluded claims:
 - Workers' Compensation claims without absence from work (medical only).
 - Sick Leave claims may be taken for any reason and were excluded.
- All employees' absences were aggregated based on the initiation year.
- For each benefit, average leave length and median payment were calculated and compared with baseline (2001).

Annual Disease Prevalence

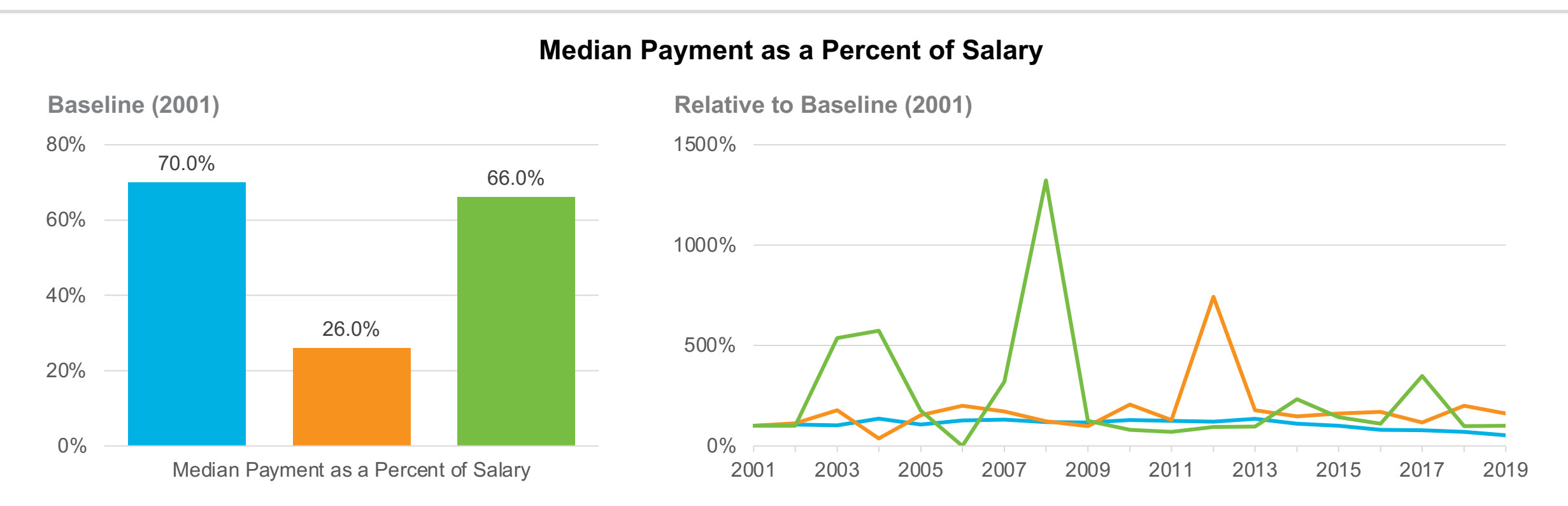
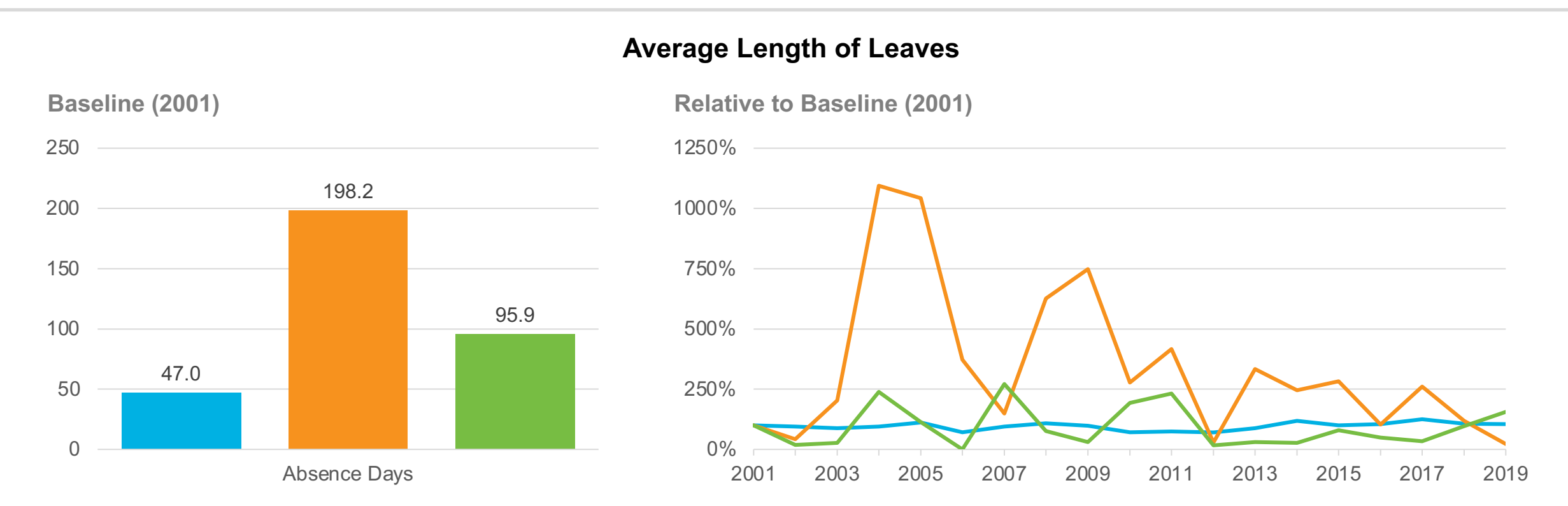
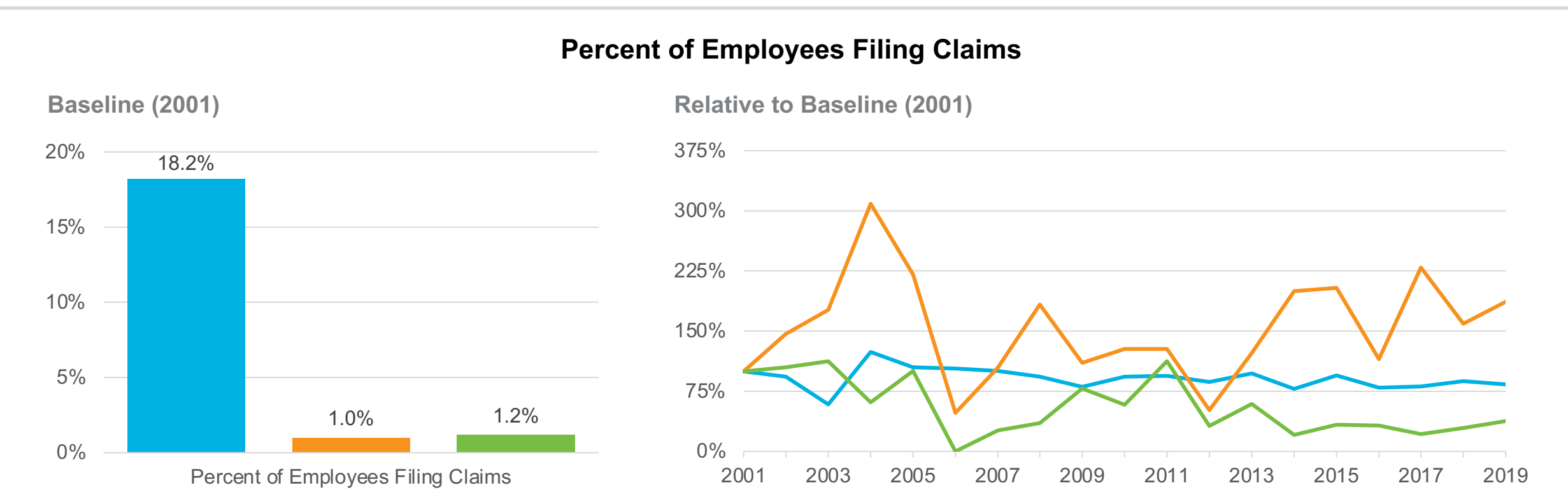


Annual Charlson Comorbidity Index Scores



Results

Legend: Short-term Disability (Blue), Long-term Disability (Orange), Workers' Compensation (Green)



Most Impacted Years

	STD	LTD	WC
Highest median payments	2004	2012	2008
Longest claim lengths	2017	2004	2007

Conclusions

- Lupus/CTD is a rare disease with the prevalence trending slightly higher since 2004.
- The percent of employees with Lupus/CTD filing claims varies by benefit.
- For each benefit, the leave lengths and payments as a percent of salary vary over time.
- Using a constant cost or salary replacement factor over time for all benefits is not accurate or appropriate.

Implications for Policy or Practice

- Coordination of benefits is important.
- Analysis of the impact of workplace accident and disability leaves and payments by use of a constant salary-replacement factor is inappropriate.
- Person-level data by year and benefit should be used.

References

- The 2020 Kaiser Family Foundation Survey of Employer Health Benefits. Available at: http://files.kff.org/attachment/Report_Employer-Health-Benefits-2020-Annual-Survey.pdf.
- Kleinman NL, et al. *Pain Pract.* 2011;11(5):540-51.
- Kleinman NL, et al. *J Occup Environ Med.* 2009;51(12):1384-93.
- Brook RA, et al. *Curr Med Res Opin.* 2006 Jul;22(7):1381-9.
- Kleinman NL, et al. *J Occup Environ Med.* 2013 Mar;55(3):240-4.
- Su J, et al. *Hepatology.* 2010 Aug;52(2):436-42.
- Baran RW, et al. *J Med Econ.* 2015;18(9):691-703.
- Brook RA, et al. *Curr Med Res Opin.* 2009 Jun;25(6):1469-76.
- Ribeiro-Oliveira A Jr, et al. *J Med Econ.* 2021 Mar; Mar 5:1.
- Charlson ME, et al. *J Chronic Dis.* 1987;40:373-83.