



COMMENTARY/POLICY

Improving Public Health in Ohio by Refining Measurement of Paid Sick Leave

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ABSTRACT

Paid sick leave is an active health policy consideration. Publicly and privately funded datasets have been used to evaluate paid sick leave in relation to business, employment, and health outcomes. These findings have informed 40 states and localities that have passed legislation since 2006 that requires paid sick leave to be available to certain employees. During the same time frame, 24 states, including Ohio, enacted preemptive laws prohibiting the adoption of a local paid sick leave regulation by a local city or county. The present investigation organizes, compares, and evaluates the implications of how paid sick leave is measured in 9 datasets. Findings from this investigation can be used to refine the measurement of paid sick leave to inform this ongoing public health policy debate in Ohio and countrywide.

Keywords: Measurement; Paid sick leave; Paid sick days; Health policy

INTRODUCTION

Some families struggle to make ends meet as they balance work and health.¹⁻³ As a remedy, paid sick leave is an employment benefit designed to allow workers to manage their personal and familial health without jeopardizing their income or employment. Since the United States lacks a guaranteed paid sick leave policy, access to paid sick leave disproportionately lies with full-time workers employed by large businesses, with the lowest rate of benefit among Hispanic, low-income, and service sector workers.⁴ The proportion of employees with access to paid sick leave has increased by 15% over the last decade, with 79% of US workers in private industry in 2024 having access to this workplace benefit.⁴ After 12 months on the job, most civilian workers with access to paid sick days have a mean of 8 days available each year.⁵

Review of the Literature

Over the last 10 years, a robust literature has developed that establishes the personal, familial, and public health benefits of paid sick leave. For example, employees with paid sick leave are more likely to promptly access necessary medical care than workers without paid sick leave.⁶ Workers with paid sick leave are also more likely to engage in preventive health care screenings for can-

cer,⁷ diabetes, high cholesterol, and high blood pressure, and they are also more likely to receive an annual influenza vaccination.⁸ Having paid sick leave is related to higher sleep quality,⁹ lower indicators of psychological distress,¹⁰ and even lower mortality from all causes.¹¹ There are also benefits to general public health in that workers with paid sick days are less likely to contribute to the spread of contagious illness,¹² partly because they are more likely to stay home from work when ill. Employees with paid sick leave are safer since occupational injuries are decreased among workers with access to paid sick leave benefits.¹³

Families also benefit when a working adult has paid sick leave benefits. For example, when a parent has paid sick leave benefits, their family members are more likely to receive prompt medical care when necessary.⁶ In the United States, employees with paid sick leave have an increased ability to afford prescription medications, prescription eyeglasses, and dental visits.¹⁴ Families with paid sick leave also have decreased health care expenses and, thus, decreased economic anxiety,¹⁵ greater retirement wealth,¹⁶ and they are less likely to be in poverty.¹⁴ Correspondingly, workers with paid sick leave are less likely to need welfare benefits for food, housing, childcare, and transportation.¹⁷





These findings have directly influenced policy. For example, when the United States was faced with the most impactful public health crisis in a century during the COVID-19 pandemic, the US government relied on published paid sick leave research findings¹⁸ to inform their decision to pass the Families First Coronavirus Response Act (FFCRA), which was the first US federal law that guaranteed access to paid sick leave from April 1 to December 31, 2020, for most US employees.¹⁹ The FFCRA is credited with reducing the spread of COVID-19 by 400 cases each day in the early stages of the pandemic.²⁰ In addition to this federal law, 18 states and 22 localities have passed laws since 2006 mandating that certain workers be eligible for paid sick leave.²¹ It is important to note that not all recent legislative activity regarding paid sick leave has supported access to this benefit. Specifically, 24 states, including Ohio, since 2011, have passed a paid leave preemption law prohibiting localities from enacting a paid sick leave mandate.²²

Gaps in the Literature and Purpose

While individual published studies include the methods and measurements used to assess paid sick leave, the literature lacks a collective examination of how this vital concept is measured in published research. To fill this gap, the current investigation aims to catalog some frequently cited measures of paid sick leave in the literature. Insights from this investigation are valuable and will allow researchers to engage more efficiently in paid sick leave research by identifying the ideal dataset to answer specific questions of importance to society. These findings can also be used to improve the measurement of paid sick leave in future data collection efforts. Refining how we measure paid sick leave will allow researchers to answer more precise questions consistent with the priority health outcomes stated in the State Health Improvement Plan 2020-2022.²³ Examples of such questions are “What are the specific number of paid sick days that are needed to achieve a reduction in infant mortality?” or “Do employees who are allowed to use their paid sick leave benefits for preventive health care (not just for injury or illness) have lower rates of heart disease?” Refining the measurement of paid sick leave is particularly valuable as these findings can directly inform policy in this active paid sick leave policy-making environment. Indeed, findings from this research will help to build a path toward answering specific questions that were the subject of a 2023 bipartisan bicameral Congressional working group request for information about “what types of [paid] leave should a potential federal program cover, at what length, and why?”²⁴

METHODS

A purposive list of measures used to study paid sick leave in the United States was derived from a 2021 systematic review by Lamsal and colleagues and a 2023 systematic review by Vander Weerdt and colleagues.^{25,26} These are the most recent systematic reviews identified in the literature that contain published US studies focused on paid sick leave as a predictor variable. Da-

taset with at least 2 studies in either systematic review were included in the present analysis; an additional publicly available dataset was also included.

In their systematic review, Vander Weerdt and colleagues identified the data sources for the paid leave variable included in each of the 43 studies they reviewed. The most frequent data source identified in the review by Vander Weerdt and colleagues was the Medical Expenditure Panel Survey (MEPS; 6 studies),^{13,27-31} followed by the National Health Interview Survey (NHIS; 4 studies),^{6,8,11,32-34} the Centers for Disease Control and Prevention (CDC; 3 studies),³⁵⁻³⁷ and 2 studies each from the American Time Use Survey (ATUS),^{38,39} Bureau of Labor Statistics (BLS),^{40,41} National Core Indicators (NCI),^{42,43} and The Shift Project.^{44,45} Of the 12 papers included in the systematic review by Lamsal and colleagues, the most common dataset used was the NHIS (7 papers),^{6,8,33,46-49} followed by the MEPS (3 papers)^{48,50,51} and the National H1N1 Flu Survey (NHFS; 2 papers).⁵¹⁻⁵³ While the National Longitudinal Survey of Youth (NLSY) had only a single paper in the review by Lamsal and colleagues, it was included in the current examination due to its unique measurement of paid sick leave.⁵⁴ An exception to our stated inclusion criteria is merited since the NLSY is a compelling option for future paid sick leave research, given it is nationally representative, has ongoing data collection, provides panel data that allows for longitudinal analysis and is publicly available. The NLSY has also measured the number of paid sick leave days in 2 distinct ways, enriching this discussion. Collectively, 9 datasets that include a paid sick leave variable were identified for inclusion in this review.

Findings

Medical Expenditure Panel Survey (MEPS)

The US Department of Health and Human Services Agency for Healthcare Research and Quality has collected MEPS data since 1996.⁵⁵ The MEPS includes data on the cost and utilization of health care services and health insurance in the United States. The most recent data collected in 2022 included 21 747 respondents from 10 034 families.⁵⁶ The household component of the survey included a nationally representative subsample of households in the NHIS sample in the previous year. While the survey is generally cross-sectional, the paid sick leave variable is collected in the household component survey on 5 occasions over 24 months.⁵⁵ One dichotomous question assesses paid sick leave status, “Does a current main job offer paid sick leave?” Responses include yes, no, do not know, and refused. The MEPS has been used to evaluate paid sick leave in relation to job flexibility,⁵⁷ absenteeism, health,⁵⁸ use of health care services,²⁷ and welfare benefits.⁵⁹ The MEPS does not collect data about how many days of paid sick leave respondents have access to nor how they use their leave.

National Health Interview Survey (NHIS)

The data available via the National Health Interview Survey are collected by the CDC. This cross-sectional survey has been



collected monthly since 1957, with an update to the questionnaire in 2019.⁶⁰ Geographically clustered sampling techniques are utilized to select a nationally representative sample. The average annual sample size is 85 000 respondents, representing 35 000 households, with an adult and up to 1 child respondent from each household. The NHIS includes 1 categorical question about paid sick leave, “Do you have paid sick leave at this main job?” Available responses are yes, no, refused, or do not know. The NHIS data are available free of charge online. Impactful papers have used the NHIS to evaluate paid sick leave in relation to cancer screenings⁴⁹ and other health care screenings,⁸ health care utilization by adults⁴⁶ and children,⁶¹ injuries at work,^{61,62} and prompt access to medical care when needed.⁶ The categorical measurement of paid sick leave limits the conclusions drawn in these studies as no information is collected via NHIS regarding how many paid sick days employees can access.

Centers for Disease Control and Prevention (CDC)

At first glance, it appears the CDC measures paid sick leave since papers that use CDC data include paid sick leave as a variable. However, upon closer examination, it is apparent that the CDC does not measure or collect data on paid sick leave benefits or usage.⁶³ Instead, researchers utilize the CDC for health-related variables, such as influenza spread^{35,36} and mortality statistics.³⁷ They then combine this information with other data to examine the availability of sick leave. For example, Pichler and colleagues³⁶ and Wolf and colleagues³⁷ measure paid sick leave as an independent variable using records of public law to identify and compare geographic areas with and without a paid sick leave mandate.

American Time Use Survey (ATUS)

The American Time Use Survey is a cross-sectional annual survey of respondents who completed 8 rounds of current population survey interviews. The US Department of Labor, Women’s Division sponsors the survey⁶⁴ while the US Census Bureau conducts it. The module on benefits was collected in 2011, 2017-2018, 2024 and will likely be conducted in 2025. The survey is unique in that it asks questions about which family members the respondent can take paid leave to attend to, “Can you take paid leave for your own illness or medical care and/or the illness or medical care of a family member?” The survey lists many reasons why a person may potentially take paid leave, such as for caregiving, birth/adoption, or personal/vacation time. The survey also quantifies leave-taking by asking, “In the past 7 days, how many hours of leave have you taken?” “Did you use paid leave for any time you took off from work in the past 7 days?” “Did you use paid leave for all of this time off or just some of it?” The survey quantifies the amount of leave that a respondent has taken in the last 7 days and ties that quantitative data to the reason for the leave (ie, paid sick time) via this question, “Thinking about your longest period of leave off in the last 7 days, what was the main reason you had to take off from work?” By pairing these questions, it is possible to infer the number of hours a respondent took paid leave to care for themselves or a

family member in the 7 days before the survey. The ATUS also collected data on access to unpaid leave. Past research using the ATUS has explored paid sick leave in relation to presenteeism,⁶⁵ absenteeism,³⁸ and childcare.⁶⁶ The ATUS provides some of the most detailed data on paid sick leave access; however, it has not been collected on a consistent annual basis.

Bureau of Labor Statistics (BLS) National Compensation Survey (NCS)

The US Bureau of Labor Statistics fields a monthly survey collected by the US Department of Labor.⁶⁷ Multistage probability-based sampling is conducted to achieve a representative civilian noninstitutionalized population. The National Compensation Survey gathers information from private and governmental employers on the wages and benefits of American workers, including paid leave. Employers are asked about benefits provided to specific sampled workers based on occupational code, including “paid (sick) days at 100%,” “unpaid days,” “sick leave plan days paid as needed,” and “sick leave plan max days per year.” They are also asked the “number of days for waiting period” to access the leave and whether employees can access “unlimited days.”^{68,69} In March 2022, a total of 17 750 establishments were surveyed.⁷⁰ The BLS data are commonly used in published research to establish the percentage of the US population with access to paid sick leave. Prior research using BLS data has also been used to evaluate paid sick leave in relation to occupational injuries⁴⁰ and the labor market impacts of sick leave mandates.⁴¹ A significant strength of this data collection is that the survey asks about the number of paid sick days an employee can access by industry.

National Core Indicators (NCI)

The National Core Indicators survey is an initiative sponsored jointly by the National Association of State Directors of Developmental Disabilities Services, the Human Services Research Institute, and various state developmental disabilities authorities. Weighting is used to increase the cross-sectional survey’s representativeness. The respondents are professionals who provide support to adults with developmental disabilities. Paid sick leave is measured in 2 ways in this survey.⁷¹ A “pooled” paid time off variable collectively measures sick, vacation, and personal days. A second variable measures only paid sick time. The specific paid sick leave questions are not publicly available as they are copyrighted. Past paid sick leave research that has utilized NCI has examined topics such as worker retention.⁴³ Lack of access to the specific questions that measure paid sick leave reduces researchers’ ability to critique these measures.

The Shift Project

The Shift Project is a cross-sectional private survey which uses nonprobability sampling to collect data from food and service industry workers via Instagram and Facebook advertisements.⁷² The data are subject to stratification weighting and are not publicly available. The measurement instrument is available upon



request. The survey also collects information about child health, length of employment, state (and locality) of employment, resignations, income, receipt of welfare benefits, income, savings, vaccination status, and workplace culture. Questions asked to measure paid sick leave include, "Please look at the following list of benefits that employers sometimes make available to their employees. Which of the benefits on this list can you receive as part of your job at [EMPLOYER NAME]? Please mark all that apply." "Paid sick days" is an answer choice. The survey also includes questions about working while sick, the reasons for working while sick such as "I did not have paid sick leave" and "I wanted to save my sick days," retaliation for leave-taking, paid family medical leave, and how a shift is covered when a worker calls off work. There are separate questions about paid leave related to a "serious" medical condition that typically falls under the umbrella of paid family medical leave policy rather than paid sick leave ("How many weeks of leave did you take from your job at [EMPLOYER NAME] to recover from your serious health condition or illness?"). Past research has utilized Shift Project data to examine paid sick leave access in relation to gender,⁷³ presenteeism,⁴⁵ and work-life conflict.⁴⁴ The Shift Project contains perhaps the most detailed measurement of employee use of paid sick leave. The major limitation of the Shift Project data is that they are not publicly available.

The National Longitudinal Survey of Youth (NLSY97)

The National Longitudinal Survey of Youth 97 is a survey of paneled respondents representing the US population aged 12 to 16 years in 1980 when the survey was first deployed. Since then, 21 rounds of data have been collected by the US Bureau of Labor Statistics, with 6748 respondents in the most recent data collection.⁷⁴ Paid sick leave has been measured differently at various points in time. For example, from 2000-2011, respondents were asked, "How many days of paid sick or personal leave [are/were] you entitled to per year?" However, the survey was modified in 2013, 2015, and 2017 to ask, "How many total days of paid sick, vaca-

tion, or personal leave [are/were] you entitled to each year?" A notable strength of this survey is that it employs a higher level of measurement by asking the question in a way that renders paid sick leave as a quantitative variable for analysis. The measurement change in 2013, 2015, and 2017, while retaining the number of days, is disadvantageous because it does not allow data consumers to parcel out the unique relationship between paid sick leave independent of vacation and personal time. A single study has utilized this dataset to analyze the number of paid sick days needed to increase the use of preventive health care services.⁵⁴

National H1N1 Flu Survey (NHFS)

The National H1N1 Flu Survey (NHFS) was a nationally representative, cross-sectional data collection effort by the National Center for Immunization and Respiratory Diseases, CDC, and National Center for Health Statistics.⁷⁵ This one-time survey was fielded alongside the annual National Immunization Survey and focused on flu vaccination rates among children and adults in 2010 during the H1N1 flu epidemic. A socioeconomic status module was fielded that year to assess barriers to immunization. Questions about wages and benefits, including paid sick leave, were added. The question included in the survey asks, "Workers sometimes receive benefits in addition to wages. Whether you receive them or not, tell me if you are eligible to receive sick leave with full pay. If the respondent receives paid time off (PTO) that can be used for sick time off, vacation, or another purpose, code yes." The survey also asked a follow-up question, "In addition to using sick days for your illness, can you use your paid sick days for a sick child or family member?" Past research has utilized the NHFS to examine paid sick leave in relation to flu vaccination⁵² and utilizing sick time to care for an influenza-like illness.^{30,53} Strengths include the large sample size (a total of 45 599 adults and 11 240 children were surveyed), the data are available for public use, and the survey clarifies if paid sick leave can be used for the worker, child, or family member. The limitation of this dataset is that the

Table 1. Summary of Dataset Characteristics

Survey	Nationally representative?	Design	Level of measurement of paid sick leave	Data publicly available?
Medical Expenditure Panel Survey (MEPS)	Yes	Cross-sectional with longitudinal components over 2 years	Nominal	Yes
National Health Interview Survey (NHIS)	Yes	Cross-sectional	Nominal	Yes
Centers for Disease Control and Prevention (CDC)	Yes	Cross-sectional	N/A	Yes
American Time Use Survey (ATUS)	Yes	Cross-sectional	Nominal and Numeric	Yes
Bureau of Labor Statistics (BLS)	Yes	Cross-sectional	Nominal and Numeric	Yes
National Compensation Survey (NCS)				
National Core Indicators (NCI)	No, weighting is used to increase representativeness	Cross-sectional	Nominal	No
Shift Project	No, weighting is used to increase representativeness	Cross-sectional	Nominal and Numeric	No
National Longitudinal Survey of Youth (NLSY97)	Yes	Longitudinal	Numeric (2000-2011) Nominal (2013-2017)	Yes
National H1N1 Flu Survey (NHFS)	Yes	Cross-sectional	Nominal	Yes



sick leave variable was collected only in 2010 and was not subsequently added to the National Immunization Survey core questionnaire.

Discussion

Information from this study enlightens the past, current, and future research landscape surrounding paid sick leave. The methodology used to measure paid sick leave in existing surveys is influenced by many factors. For example, a survey's question design is carefully considered to optimize response rates; fewer questions can improve the response rate. Similarly, the wording of questions is crucial, as questions asked in a way that requires more details may lead to respondents indicating uncertainty and answering that they "do not know" which could lead to an increase in missing data. Furthermore, survey length is a significant factor, as longer surveys result in higher costs related to data collection.

How Much Paid Leave is Permitted?

Within the 18 states that have legislated a paid sick leave mandate, variations in policy exist that are worth examining.²¹ Notably, the entitlement of eligible employees to a specific number of paid sick days varies across states, ranging from 3 to 8 days, with an average of 5.8 days.²¹ Yet, most research on paid sick leave examines paid sick leave as a nominal variable, comparing the absence or presence of paid sick leave to health, economic, and work-related outcome variables. Only 1 study was found that analyzed the number of paid sick days needed to observe a change in an outcome variable. In the identified study,⁵⁴ 10 days of paid sick leave was needed to observe increased odds of obtaining 5 separate preventive health screenings. This type of research, scrutinizing the specific number of days needed to observe crucial societal outcomes, is indispensable for informing future policy considerations. However, this research can only be undertaken if available data collection initiatives measure paid sick leave at an ordinal or ratio level of measurement. A minor yet impactful modification involves rephrasing survey questions to inquire about the number of paid sick days accessible annually.

Who Paid Sick Days Can Be Used For?

Gathering data about who paid sick leaves can be used to care for is necessary. Among the 18 states with a paid sick leave mandate, the majority allow its utilization for personal health reasons and to attend to the health needs of a spouse, child, or parent. However, exceptions exist, such as in Connecticut, where paid sick leave for caring for a parent is not permitted.²¹ In data collection efforts, it is beneficial to include specific questions to inquire if a respondent's paid sick time may be used to provide health-related care to family members to gain insights into which relationships should be included in future paid sick leave policies. In Ohio, some public education employees have access to paid sick time as defined in Chapter 3319 of the Ohio Revised Code.⁷⁶ This legislative code

specifies that paid sick leave can be used to manage the personal health or the health of immediate family members.

Acceptable Purpose for Leave

It is beneficial for surveys to ask respondents the specific purposes for which paid sick days can be taken. In some states, eligible workers are granted the option to use paid sick days for various purposes, including acute illness, injury, preventive health care visits, and situations related to domestic or sexual violence or unexpected closures of a school or day care. A specific question that measures the acceptable purpose for paid sick leave is suggested to facilitate a comprehensive evaluation of the potential value of these provisions. This question could inquire, "For what purpose(s) are you allowed to use paid sick leave with response choices of "illness," "injury," preventive health care," "sexual/domestic violence," and "unexpected school/day care closure." Including such detailed inquiry can provide a more nuanced understanding of the allowable use of paid sick leave. This will allow researchers to tie the possible uses of paid leave to various public health outcomes. For example, do employees who are permitted to use paid sick time to manage situations related to domestic violence experience a lower hospitalization or mortality rate? If the rate is lower, this could inform future policy.

Noticing, measuring, and assessing differences in paid sick leave policies may be important in promoting public health. For example, in Ohio, public education employees have access to paid sick leave as defined in Chapter 3319 of the Ohio Revised Code and may use paid sick leave for purposes related to illness, injury, pregnancy, contagious illness, and death (in the immediate family). Of note, preventive health care and well-child visits are absent from this list of allowable uses.

Strengths and Limitations

Strengths of this investigation include identifying a research question with important implications for informing an active public health policy debate, utilizing 2 recently published systematic reviews to select studies for inclusion, and including a variety of private and publicly available data sources in this review. The scope of this study did not include an examination of the reliability and validity of these measures, which is a limitation. A further limitation is that we could not access the specific question used to measure paid sick leave in the NCI.

PUBLIC HEALTH IMPLICATIONS

Research has consistently shown employees' and their families' financial, physical, and emotional well-being improves with access to paid sick leave. To help future research determine the ideal number of paid sick days needed to achieve desired public health outcomes, we must refine how we measure paid sick leave.

High-quality, nationally representative data are essential for researchers and community stakeholders to comprehensively evaluate the relationship between paid sick leave and its impact on



public health outcomes. This review encompassed 9 datasets measuring paid sick leave. The analysis of these datasets revealed that many publicly available data only provide a nominal measure of paid sick leave, limiting the depth of insights that can be gained from research findings. Refining the measurement of paid sick leave, such as inquiring about the number of days of paid sick leave available to workers annually, could inform policy and, by extension, public health. Nominal measurement of paid sick leave hinders our ability to draw precise conclusions about the number of paid sick days needed to improve health. Similarly, data should be collected that specifies who paid sick leave can be used for and for what specific purposes. Overall, future efforts to create or revise datasets should prioritize gathering more comprehensive information about a respondent's access and usage of paid sick leave. This will enable more nuanced and informed public health policy decisions in Ohio.

CONFLICTS OF INTEREST

No conflicts of interest to declare.

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AUTHOR CONTRIBUTION

Both authors contributed equally to all facets of this publication.

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