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Unstable, unpredictable, and insufficient: Work scheduling in the service sector in New England

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Contents

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Abstract

The labor of workers in the retail and food service sector – employed at grocery stores, fast food and casual dining restaurants, in hardware and electronics, in retail and working in warehouses, delivery, and fulfillment – is now, in the COVID-19 pandemic, recognized as "essential." Yet, these frontline workers have long contended with difficult jobs under precarious conditions. In this report, I take a close look at working conditions in the service sector in New England before the onset of the COVID pandemic. I analyze reports of job quality collected by The Shift Project, which surveyed 2,200 hourly workers employed at 105 of the largest service sector employers in New England. These data permit a detailed breakdown of the often unstable and unpredictable work schedules faced by these workers. I describe the scope of exposure to variable schedules, short advance notice, and just-in-time scheduling practices and show how this variability and unpredictability go along with limited schedule control and often insufficient workers. Women, workers of color, and especially women of color are disproportionately concentrated in the service sector. In New England, these workers are also more likely to be scheduled for fewer hours than they would like. Exposure to these scheduling practices is also negatively associated with worker outcomes. Survey results show that workers with more unstable and unpredictable schedules are significantly less satisfied with their schedules, less satisfied with their jobs overall, and much more likely to intend to find a new job.

Key Findings

- The majority of service sector workers employed at large firms in New England have a variable or rotating schedule. Short notice of schedules, last-minute shift cancellations, and last-minute changes to work schedules are common and are rarely compensated.
- Beyond this instability and unpredictability, workers in New England cope with insufficient work hours and schedules that afford them very little control.
- New England service-sector workers experience similar levels of schedule instability, lack of control, and involuntary part-time work as workers do outside of New England.
- White women, men of color, and especially women of color face significantly higher rates of involuntarily part-time employment, compared to Non-Hispanic white male workers.
- Workers exposed to greater schedule instability and to less schedule control are significantly less satisfied with their work schedules and with their jobs overall and are nearly twice as likely to plan to look for a new job as workers with stable and predictable schedules.
- Prior research shows that exposure to unstable and unpredictable schedules is strongly negatively associated with workers' household economic security, health, and well-being and with greater childcare instability for working parents.

Introduction

The COVID-19 pandemic has thrown the difficult and often dangerous working conditions of in-person workers into sharp relief. Perhaps most prominently, workers in the retail and food service sector have contended with insufficient PPE and a lack of paid sick leave (Schneider and Harknett, 2020a; Schneider and Harknett, 2020b). But workers in the service sector have long contended with jobs that are highly precarious. The policy and public discourse often boils these problems of job quality down to low wages, and wages in the service sector are indeed low. However, workers contend with a broad set of challenges at work that go well beyond wages.

Prior research on precarious work conceptualizes two material dimensions of job quality. Wages and fringe benefits, such as health insurance and retirement savings, feature most prominently in academic research and policy debates (Kalleberg, 2011). In this domain, there is consistent evidence of growing precarity and polarization (Kalleberg, 2018), as the minimum wage has declined in real value (Bárány 2016) and there has been little income growth for the bottom 50% of households over the prior decades (Duncan and Murnane, 2011). At the same time, access to quality employer-provided health insurance and retirement savings has declined, but especially so for lower-wage workers.

Job quality is also defined by a temporal dimension that captures the material conditions of work with respect to paid time off, such as paid sick leave or paid family and medical leave, as well as work scheduling (Kalleberg, 2011). Prior academic research has focused on the experience of non-standard work schedules, such as regular night or weekend shifts (Presser, 1999), as well as lack of schedule control and flexibility among white collar workers (Galinsky, Sakai, and Wigton 2011).

However, over the past decade, scholars have begun to focus attention on another set of work scheduling practices that appear common in the service-sector, including in retail, food service, hardware, as well as in industries now designated as essential in the COVID-19 pandemic, such as grocery, delivery and fulfillment, and healthcare (Rho et al., 2020). In particular, many workers in the service sector face work schedules that are unstable and unpredictable, which change from day to day and week to week, often with little advance notice (Lambert et al., 2014). These workers appear to experience a kind of "routine unpredictability" in which schedules are reliably unstable (Clawson and Gerstel, 2015). This volatility plays out in on-call shifts, last-minute changes to schedule timing, and shift cancellations. Far from desirable schedule flexibility, these practices represent instability for workers, who have little control over their schedules (Clawson and Gerstel, 2015). These practices also occur against a backdrop of insufficient work hours, which leaves many workers involuntarily part-time at their jobs (Lambert, 2008).

While businesses appear to adopt this constellation of scheduling practices in an effort to reduce costs by keeping labor costs as lean as possible (Lambert, 2008), there are hints in prior research that these practices may also carry significant costs. For workers, unstable and unpredictable schedules are associated with worse mental health (Schneider and Harknett, 2019) and lower quality sleep (Harknett et al., 2020; Williams et al., 2018) as well as increased risk of material hardship (Schneider and Harknett, 2020c). The more that firms expose workers to unstable and unpredictable schedules, the more turnover these firms experience (Choper et al., 2019) and interventions that increased schedule predictability also appear to have increased sales (Williams et al., 2018)

In this brief, I describe the conditions of work scheduling in the retail and food service sectors for workers in large firms in New England over the period 2017 – 2020. Women and workers of color are disproportionately represented in these sectors (i.e., DuMonthier et al., 2017; Rho et al., 2020) and prior research has also found evidence of significant gender and racial/ethnic inequalities in scheduling within the sector nationally (Storer et al., 2020). I investigate if such inequalities are apparent in New England specifically and I examine the association between schedule instability, worker satisfaction, and turnover intentions.

New England represents an interesting case for exploration. While no state in New-England has directly regulated these unstable and unpredictable work scheduling practices, all but New Hampshire have implemented other progressive labor laws, such as paid sick time or a higher minimum wage. A number of states also have older, "reporting time" laws on the books (NWLC, 2015). It is possible that this overall legal environment might have spillover effects on schedules (Edelman, 1990). Conversely, it is

possible that in response to laws that require more paid leave and higher wages, employers make more use of unstable and unpredictable work schedules as a kind of "compensating differential" (Rosen, 1986).

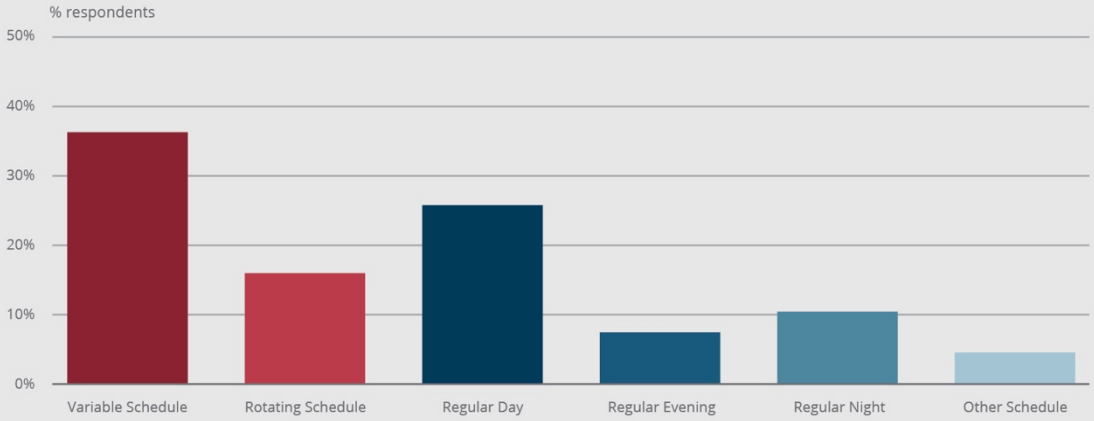
In this analysis I draw on data from The Shift Project. The Shift Project has collected survey data from hourly service sector workers employed at large retail and food establishments since the fall of 2016. This brief focuses on a subsample of 2,200 hourly service sector workers in New England employed at 105 of the largest service-sector firms who were surveyed between September of 2017 and May of 2020. The targeted firms are drawn from the sub-sectors of grocery, retail (including hardware, electronics, apparel, home goods, and hobby), big box, pharmacy, food service (including fast food and casual dining), and delivery and fulfillment. Surveyed workers include those working in customer-facing positions, as well as those in warehousing and driving roles. The sample includes front-line workers now considered "essential" during COVID-19, such as those in grocery, delivery, and pharmacy (Rho et al., 2020), as well as those working in person and often exposed to significant risk in food service, retail, and big box stores, despite not being classified as "essential" workers (Schneider and Harknett, 2020).

The Shift Project recruits survey respondents using online Facebook and Instagram advertisements, targeted to workers employed at large retail and food service employers. Those who responded to the Shift survey invitation were automatically routed to a survey landing page where they were asked to consent to participate in the study, and then they began the online self-administered survey using the Qualtrics platform. As an incentive, those who completed the survey and provided contact information were entered into a lottery for an Apple iPad. The survey included modules on job characteristics, work schedules, demographics, economic stability, health, parenting, and child outcomes.

Unstable and Unpredictable Schedules in New England

Workers employed at large firms in the retail and food service sectors in New England contend with work schedules that are far from regular 9-5 shifts. In fact, just a quarter of such workers report having a regular day shift (Figure1). But, for many workers, the alternative is not a regular night (10%) or evening shift (7%), but rather a schedule that is variable, which changes from day to day or week to week (36%) or that is rotating (16%). In this respect, workers in New England resemble those in the rest of the nation, where 35% have a variable schedule and 20% a rotating schedule. Layered onto this variability are "clopening" shifts, in which an employee works a shift that closes an establishment followed less than ten hours later by a shift that opens the establishment. Such shifts are associated with worse sleep quality and psychological distress (Schneider and Harknett, 2019). In New England, as in the rest of the country, 44% of workers reported at least one such "clopening" shift in the last month.

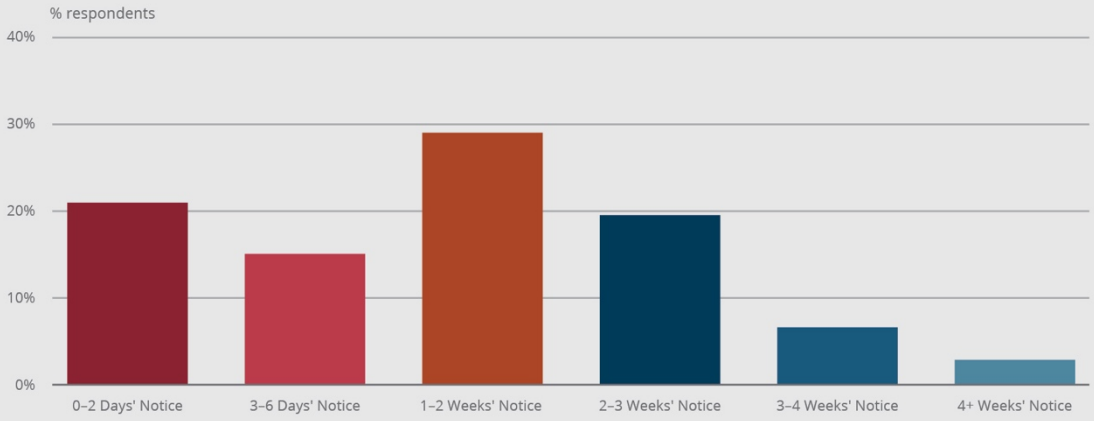
Figure 1 | New England Service Sector Workers' Schedules



Note: Share of workers by schedule type (mutually exclusive) and with at least one "clopening" shift in the last month (not mutually exclusive with schedule type). Data are multiply imputed, estimates are unadjusted, weighted by race/ethnicity, gender, age, education, state, and industry.
Source: Author's calculations from Shift Project data.

Work schedules are not only often variable, they are also generally set with little advance notice. Two thirds of workers receive their schedules with less than two weeks' advance notice (Figure 2). In fact, 21% of workers report less than 72 hours' notice and 17% report just 3-6 days' notice. Just 4% of workers get their schedules at least a month in advance. Here, too, advance notice in New England looks very similar to the rest of the country, where 36% of workers receive less than one weeks' notice, two-thirds receive less than two weeks' notice, and just 5% receive at least a month of notice.

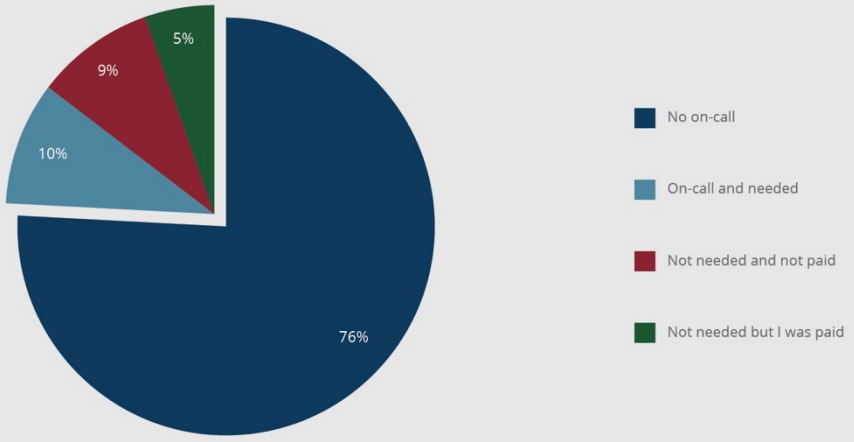
Figure 2 | Amount of Advance Notice of Work Schedules for New England Service Sector Workers



Note: Share of workers by amount of advance notice. Data are multiply imputed, estimates are unadjusted, weighted by race/ethnicity, gender, age, education, state, and industry.
Source: Author's calculations from Shift Project data.

For many workers, the schedule isn't even adhered to once it comes. A quarter of workers in New England, and nationally, reported that they worked on call at least once in the prior month, meaning they were required to be available to work, but not necessarily called in (Figure 3). Indeed, only forty percent of these workers reported that they ended up being called in to work the shift. Another third reported that they were not needed and were not paid for the hours spent on call. The remainder were not called in to work but were paid for at least some of the hours that they were on call. These patterns are essentially the same in the rest of the nation.

Figure 3 | Percentage of New England Service Sector Workers Exposed to On-Call Shifts

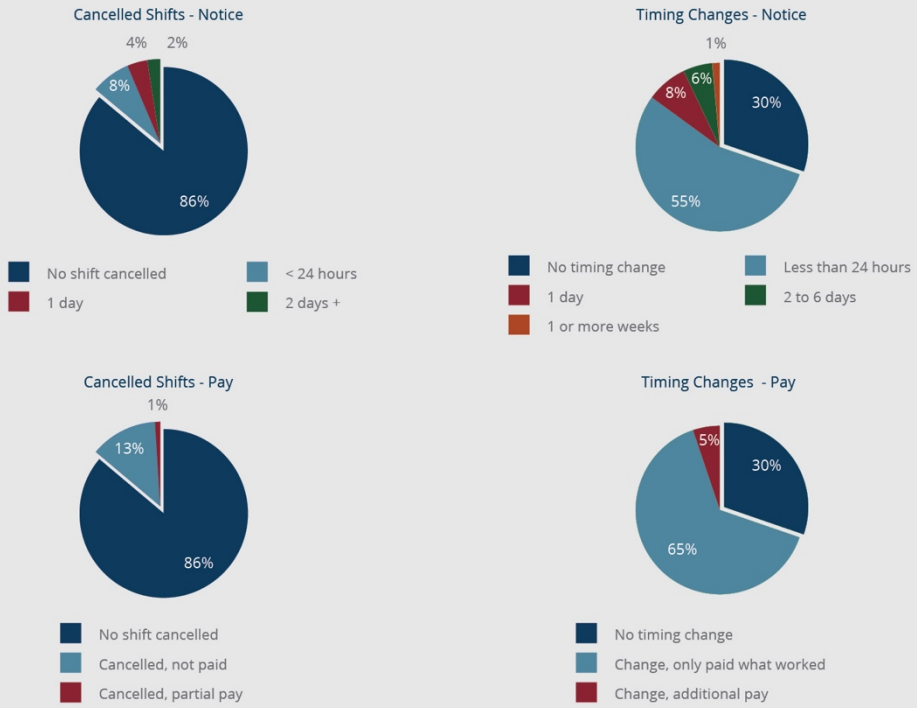


Note: Share of workers by exposure to on-call shifts in last month. Data are multiply imputed, estimates are unadjusted, weighted by race/ethnicity, gender, age, education, state, and industry.
Source: Author's calculations from Shift Project data.

Even when a schedule is published, that is no guarantee that it won't change. Many employers use "just-in-time" scheduling to tailor worker schedules to customer traffic in near real-time. One result is that fourteen percent of workers reported having at least one scheduled shift canceled in the prior month (Figure 4), somewhat less than the 17% of workers outside of New England who reported a cancellation. These cancellations happened with very little notice – less than 24 hours' notice in 54% of cases and less than 48 hours' notice in 82% of cases. A somewhat larger share of workers outside of New England (61%) received less than 24 hours' notice, but that share receiving at least 48 hours was similar. When shifts were canceled at the last minute, workers were very rarely compensated, with just 7% of workers in New England and elsewhere in the US reporting receiving at least half of their expected pay for the canceled shift.

Besides canceling shifts, changing the timing of scheduled shifts was even more common, with 70% of workers reporting at least one timing change in the last month. Here too, these changes happened with very little warning. Seventy-eight percent of changes occurred within 24 hours of the shift and another 11% happened with just one day of notice. Further, workers only rarely received compensation for these last-minute changes – in just 7% of cases. We see almost exactly the same patterns for workers outside of New England.

Figure 4 | Exposure to Just-in-Time Work Scheduling Among New England Service Sector Workers



Note: Share of workers by exposure to cancelled shifts and schedule timing changes, by amount of notice (top) and amount of pay (bottom) in last month. Data are multiply imputed, estimates are unadjusted, weighted by race/ethnicity, gender, age, education, state, and industry.
Source: Author's calculations from Shift Project data.

Together, these practices add up to significant work-hour volatility. When we compare the week in the prior month in which workers reported clocking the most hours against the week in the prior month when they worked the fewest hours, we find a mean swing of 13 hours or a 38% change in the number of hours worked. Outside of New England, volatility was quite similar, with somewhat smaller mean percent variation in work hours (35%).

A fixed schedule with a rigid number of hours that cannot be changed represents a kind of schedule inflexibility that can heighten work-life conflict. Even so, the variability in the work schedules of New England service-sector workers is hardly desirable, at least from the perspective of workers. Instead, as shown in Figure 5, workers have little to no control over their work schedules – 44% report that their starting and finishing times are decided by their employer without their input and another 37% report that their starting and finishing times are decided mostly by their employer, which makes 8 in 10 in all – the same share as outside of New England. Further, two-thirds of workers report having to maintain "open availability," the availability to work whenever needed by their employer. As shown in Figure 5, when asked directly if they would like a more predictable work schedule, 71% of New England service sector workers either strongly agreed or agreed. Outside of New England, we find very similar patterns, with 68% reporting the need to maintain "open availability" and 75% expressing a desire for more schedule predictability.

Figure 5 | Schedule Control and Involuntary Part-Time Work Among New England Service Sector Workers

Note: Share of workers by amount of advance notice. Data are multiply imputed, estimates are unadjusted, weighted by race/ethnicity, gender, age, education, state, and industry.
Source: Author's calculations from Shift Project data.

This schedule unpredictability, instability, and lack of control occurs alongside insufficient work hours for many workers. The median worker in the Shift Project sample in New England works 33 hours a week, and more than half of workers (55%) report that they strongly agree or agree with the statement that they would like more work hours at their service-sector job. When we put these two pieces of information together and examine the share of workers who usually get fewer than 35 hours a week and would like more hours, we find that one in three workers at large service sector firms in New England are involuntarily part time, the same share as outside of New England.

Racial/Ethnic and Gender Gaps in Work Schedules in New England

Women, and women of color in particular, are over-represented in food and retail (DuMonthier et al., 2017; Rho et al., 2020). Nationally, workers of color and especially women of color, in the service sector face more unstable and unpredictable work schedules and are more likely to be involuntarily part-time (Storer et al., 2020; Lambert et al., 2014; Ruetschlin and Asanta-Muhammad, 2015).

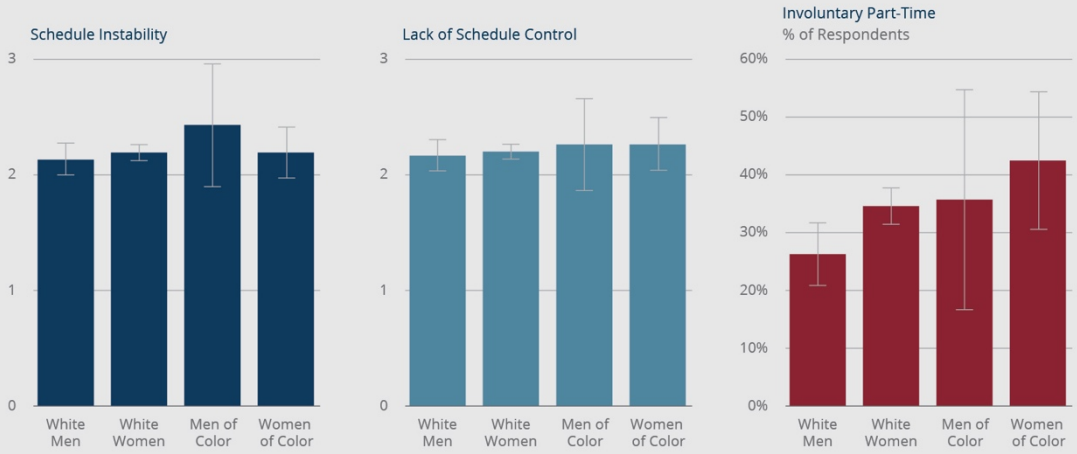
Are such racial, ethnic, and gender inequalities in work schedules among service sector workers present in New England? Figures 6a and 6b show the results from a set of analyses that gauge the size of intersectional inequalities in three dimensions of work scheduling among New England service-sector workers. These estimates size gaps in schedule instability, lack of schedule control, and involuntary part-time work between white men, white women, men of color, and women of color. Table 1, below, summarizes the construction of these three dependent variables.

Table 1 | Components of Scheduling Measures

<table>
<tr><th>Schedule Instability
Sum of:</th><th>Schedule Control
Sum of:</th><th>Involuntary Part-Time</th></tr>
<tr><td>Less than two weeks' notice</td><td rowspan="3">Employer only or employer with worker input determined schedule starting and stopping times</td><td rowspan="4">Fewer than 35 usual work hours at main job and strongly agree or agree that would like more hours at main job</td></tr>
<tr><td>Worked at least 1 on-call shift in prior month</td></tr>
<tr><td>Had at least 1 shift canceled in prior month</td></tr>
<tr><td>Had at least 1 timing change to schedule in prior month</td><td>Must keep schedule open and available to work</td></tr>
<tr><td>Worked at least 1 "clopening" shift in prior month</td><td></td><td></td></tr>
</table>

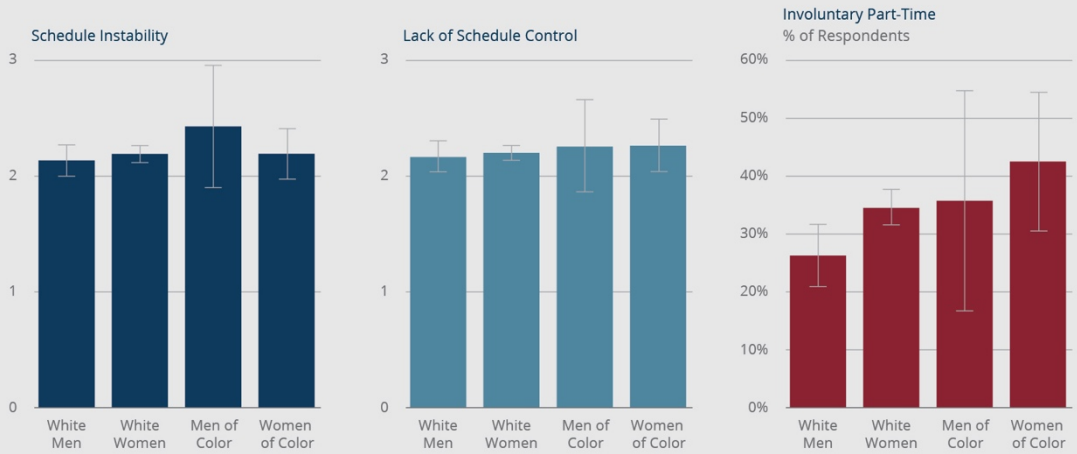
Figure 6a plots the bivariate differences in scheduling by race/ethnicity and gender. Figure 6b reproduces these gaps, but after adjusting for a set of demographic characteristics that include age, educational attainment, marital status, and school enrollment.

Figure 6a | Racial/Ethnic and Gender Inequality in Work Schedules Among New England Service-Sector Workers, Unadjusted.



Note: Predicted scheduling exposures (95% CIs) by race/ethnicity and gender. Workers of color include Black, Hispanic, Asian, API, and those of more than one race. Unadjusted differences by race/ethnicity gender. Data are multiply imputed and weighted by race/ethnicity, gender, age, education, state, and industry.
Source: Author's calculations from Shift Project data.

Figure 6b | Racial/Ethnic and Gender Inequality in Work Schedules Among New England Service-Sector Workers, with Demographic Adjustment



Note: Predicted scheduling exposures (95% CIs) by race/ethnicity and gender. Workers of color include Black, Hispanic, Asian, API, and those of more than one race. Predicted values from OLS regression of race/ethnicity gender on scheduling variable, controlling for age, marital status, parental status, educational attainment, and school enrollment. Data are multiply imputed and weighted by race/ethnicity, gender, age, education, state, and industry.
Source: Author's calculations from Shift Project data.

On average, workers are exposed to 2.2 sources of schedule instability across the practices of short advance notice, on-call shifts, canceled shifts, changes to schedule timing, and "clopening" shifts. While the gaps are somewhat larger in the unadjusted models, we see in Figure 6b that white men are exposed to 2.1 such practices on average. Exposure is about 8% higher, at 2.3 practices, among men of color, a

notable gap but not a statistically significant one. When we disaggregate and separately estimate gender and racial/ethnic inequalities in scheduling, we also find no evidence of statistically significant differences in instability, nor are these differences significant in the unadjusted model.

There is little evidence of intersectional inequality in schedule control, with white men, white women, men of color, and women of color working in the service sector in New England all reporting similar levels of control over the starting and stopping times and whether they were required to have open availability in their schedules. As with schedule instability, these gaps are somewhat larger in the unadjusted model (Fig. 6a), but also not significant. In supplemental analysis, when we disaggregate and separately examine gender and racial/ethnic gaps in schedule control (not shown in figures), we find that non-Hispanic workers who do not identify as only white or Black are exposed to significantly more schedule instability.

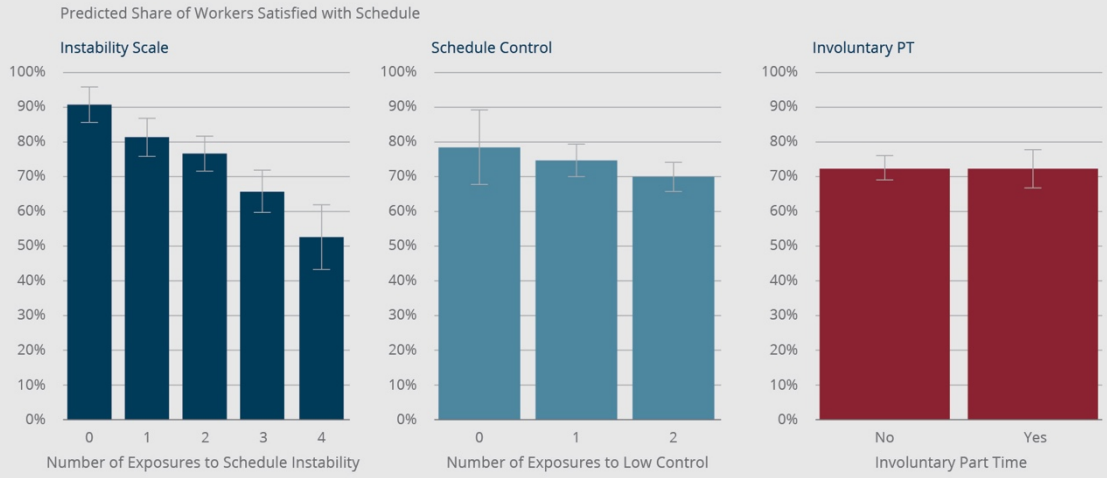
Overall, 33% of New England service sector workers report involuntary part-time status at their main job. But there are stark racial/ethnic and gender inequalities in not getting sufficient work hours. These gaps are similar in both the unadjusted (Fig. 6a) and adjusted models (Fig. 6b). Where 27% of white men report being involuntary part time, the share is significantly higher among white women at 35% and among men of color, also at 35%. But, women of color have the highest rates of involuntary part-time work, at 39%. Disaggregating and estimating separate gaps by gender and by race/ethnicity, we find statistically significant gender gaps, with women 8 percentage points more likely to be involuntarily part-time.

Precarious Schedules and Worker Outcomes in New England

Such unstable and unpredictable work schedules may negatively affect workers. While it is difficult to definitively rule out the possibility that dissatisfied workers are given more unstable schedules or that unobserved factors might drive both unstable scheduling assignments and worker outcomes, the estimates below show how clearly unstable and unpredictable schedules and reduced worker satisfaction go hand-in-hand.

For service sector workers in New England, work schedule instability and unpredictability are strongly associated with schedule dissatisfaction. Where 90% of workers with stable and predictable schedules reported being very or somewhat satisfied with their work schedules, satisfaction fell to 60% among the 12% of workers with four or more exposures to work schedule instability and unpredictability (Figure 7). A lack of schedule control is similarly related to work schedules. While 90% of workers who had input into their schedules and who did not need to keep their schedules open and available were satisfied, that share dropped to 75% among those who lacked such control. In contrast, involuntary part-time work was not a significant predictor of work schedule satisfaction.

Figure 7 | Work Scheduling Practices and Worker Schedule Satisfaction

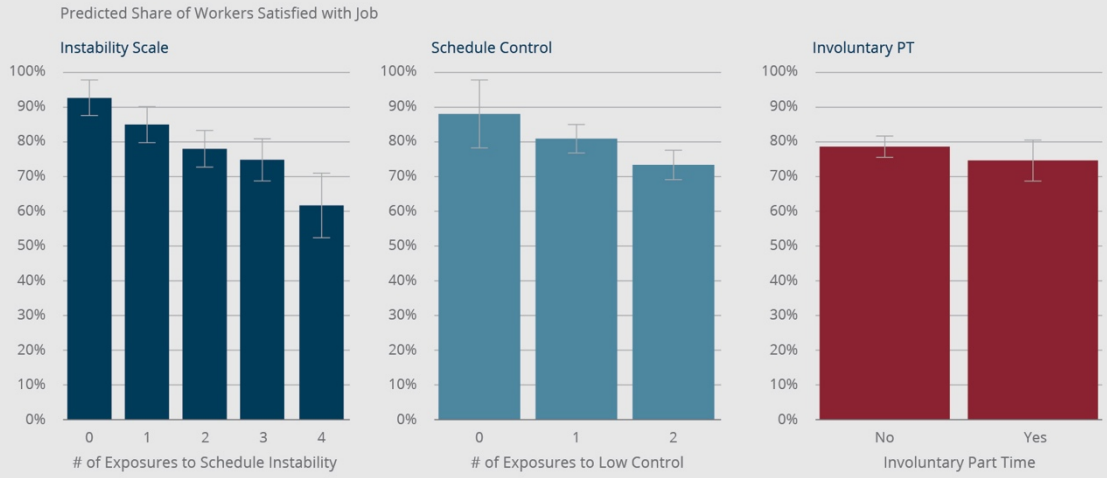


Note: Predicted values (95% CIs) from OLS regressions of worker schedule satisfaction on (l) schedule instability scale, (m) schedule control scale, (r) involuntary part-time, controlling for age, marital status, parental status, educational attainment, and school enrollment as well as union coverage, hourly wage, job tenure, and managerial status in addition to state, year, and month fixed-effects. Data are multiply imputed and weighted by race/ethnicity, gender, age, education, state, and industry.
Source: Author's calculations from Shift Project data.

The dissatisfaction among workers engendered by unstable and unpredictable schedules was not limited to discontent with their work schedules. Workers who had more unstable and unpredictable schedules were significantly less satisfied with their jobs overall. 94% of workers who had stable and predictable schedules were at least somewhat satisfied with their jobs (Figure 8). But, among workers with the most unstable and unpredictable schedules, 40% reported feeling “not too satisfied” or “not at all satisfied.” Lacking schedule control is also associated with lower satisfaction, with workers who lacked control 14 percentage points less likely to report being satisfied with their jobs compared with those who had significant control. But, as with schedule dissatisfaction, there is not a significant relationship between involuntary part-time work and overall job satisfaction among this sample of New England workers.

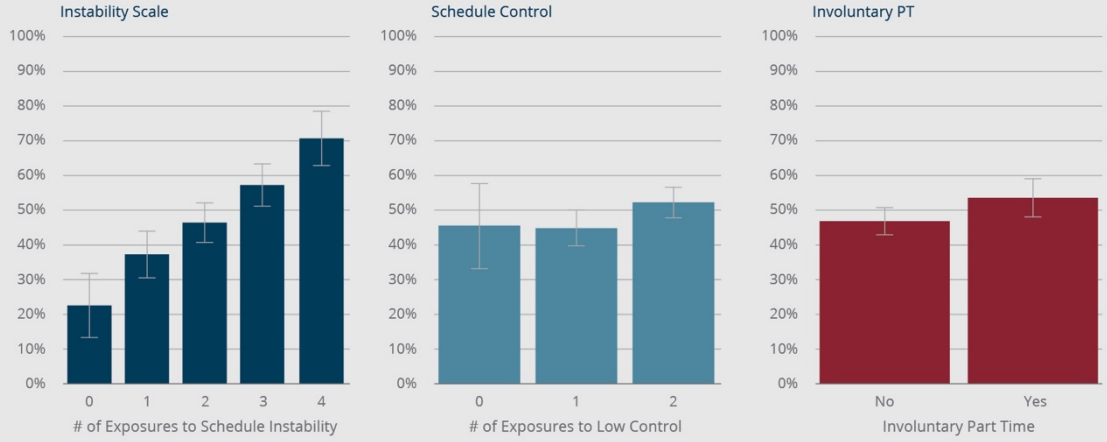
New England service-sector workers with more unstable and unpredictable schedules and those who lack control are significantly less satisfied with their schedules and with their jobs overall. It is little surprise, then, that these workers are also significantly more likely to intend to find a new job within the next three months. Here, the disparities are dramatic. While just 29% of workers with stable and predictable schedules reported that they were very or somewhat likely to look for a new job, more than twice as many – 70% - of workers with the most unstable and unpredictable schedules planned to try to change jobs (Figure 9). Greater schedule control only somewhat dampened the intention to seek a new job, reducing the share from 52% among workers with little control to 46% among those with the most control, a non-significant difference. Here again, involuntary part-time hours did not significantly predict turnover intention.

Figure 8 | Work Scheduling Practices and Worker Job Satisfaction



Note: Predicted values (95% CIs) from OLS regressions of worker job satisfaction on (l) schedule instability scale, (m) schedule control scale, (r) involuntary part-time, controlling for age, marital status, parental status, educational attainment, and school enrollment as well as union coverage, hourly wage, job tenure, and managerial status in addition to state, year, and month fixed-effects. Data are multiply imputed and weighted by race/ethnicity, gender, age, education, state, and industry.
Source: Author's calculations from Shift Project data.

Figure 9 | Work Scheduling Practices and Worker Turnover Intention



Note: Predicted values (95% CIs) from OLS regressions of worker turnover intention on (l) schedule instability scale, (m) schedule control scale, (r) involuntary part-time, controlling for age, marital status, parental status, educational attainment, and school enrollment as well as union coverage, hourly wage, job tenure, and managerial status in addition to state, year, and month fixed-effects. Data are multiply imputed and weighted by race/ethnicity, gender, age, education, state, and industry.
Source: Author's calculations from Shift Project data.

Conclusion

In this brief, I describe the contours and fissures of work scheduling practices and the association between such practices and worker outcomes at large service-sector firms in New England. Hourly workers employed at these firms in Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont face pervasive work schedule unpredictability and instability, with the majority navigating a variable or rotating schedule that is often set just days before it is to begin. Even once published,

schedules are subject to last-minute changes that are rarely compensated. These practices do not represent desirable schedule flexibility. Instead, workers report having little control over the schedules and hope for more schedule stability and predictability. These practices also occur alongside insufficient work hours for many workers. Unstable schedules, low schedule control, and insufficient hours work hand-in-hand – low wage workers who do not get sufficient hours face an economic imperative to take on hours whenever offered – at variable times and often at the last minute. The insufficiency of work hours is especially pronounced for female workers and workers of color, though I find less evidence of racial/ethnic and gender inequality in schedule instability and schedule control.

Exposure to these scheduling practices, especially schedule instability and unpredictability, is associated with worse worker outcomes. Workers with more unstable schedules are less satisfied with their schedules, but also with their jobs overall. These workers are also much more likely to plan to exit, to find a new job within the next three months. Lower satisfaction and higher turnover intention are bad for workers, but these outcomes are also bad for firms by exposing the often-hidden costs of scheduling practices in the service sector for firms' bottom lines.

The regulatory environment in New England makes it an interesting case for exploration. Policymakers in Connecticut, Maine, Massachusetts, Rhode Island, and Vermont have legislated minimum wages that exceed the federal standard and policymakers in Connecticut, Massachusetts, Rhode Island and Vermont have also mandated paid sick leave. New Hampshire stands alone among New England states in not taking such actions.

On the one hand, we might expect that the broad adoption of state-level paid sick and minimum wage laws might foster more stable schedules. On the other hand, faced with increased marginal labor costs from these mandates, employers might embrace unstable and unpredictable scheduling practices to reduce cost. In fact, we find little evidence of either dynamic. Work scheduling practices in New England look very similar to those experienced by workers in the rest of the United States. The state data profiles appended to this report show the scope of this challenge in each state – Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont.

The fact that service sector work schedules in New England look very similar to the rest of the country despite having markedly different policies on mandated paid sick leave suggests that adopting these paid sick leave policies may not spillover onto worker schedule, or that these effects, if present, may be quite small. A pressing need then remains for policy that regulates work scheduling practices with the goal of reducing workers' exposure to schedule instability.

Since 2015, a number of cities and one state have passed laws to regulate unstable and unpredictable work scheduling practices. Following the passage of the first-in-the-nation Predictable Scheduling ordinance in San Francisco, Emeryville, CA; Seattle, WA; New York, NY; Philadelphia, PA; and Chicago, IL all passed similar laws to regulate work scheduling. Though somewhat variable in the exact provisions, all of these laws required large employers in the retail and food service industries to provide workers with at least two weeks' notice of their work schedules and to compensate workers with predictability pay should they make changes to work schedules within the two-week window. These ordinances also contained provisions specifically regulating on-call and "clopening" shifts. In addition to these municipal ordinances, a similar law was enacted in the state of Oregon. In other localities, including Connecticut, efforts to pass similar laws have fallen short.

To date, the evidence of the effectiveness of these laws is limited. One qualitative study of the Oregon law found evidence of compliance in terms of increases in advance notice and (Loustaunau, et al., 2020). One year after implementation of the Seattle law, Schneider and Harknett (2019) find evidence

of significant increases in the share of workers receiving at least two weeks' advance notice of their work schedules.

These efforts to "raise the floor" on job quality have the potential to significantly improve working conditions for service-sector workers. Alongside similar laws that mandate higher wages, paid sick, and paid family and medical leave, these measures have the potential to broadly improve job quality as well. However, this progress has been undertaken at the local or state level, leading to a patchwork of legislation that generally provides for better job quality for workers employed in more progressive jurisdictions.

This sub-national approach may become less palatable to state and local legislators in the face of the COVID-19 recession and serious pressure on local labor markets. However, it does provide a template for laws that could be enacted to similar ends at the federal level. The Schedules that Work Act, legislation that has previously been introduced in both the Senate and the House and includes Sen. Warren (D-MA) and Rep. DeLauro (D-CT) as co-sponsors, would provide for a similar set of protections against unstable and unpredictable schedules for all workers that those in San Francisco, Seattle, New York, and other jurisdictions have recently obtained.

About the Author

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Methodological Appendix

The Shift Project has collected survey data from hourly service sector workers employed at large retail and food establishments since the fall of 2016. This brief focuses on a subsample of 2,200 hourly service sector workers in New England employed at 105 of the largest service-sector firms who were interviewed between September of 2017 and May of 2020.

The Shift Project recruits survey respondents using online Facebook and Instagram advertisements, targeted to workers employed at large retail and food service employers. Those who responded to the Shift survey invitation were automatically routed to a survey landing page where they were asked to consent to participate in the study, and then they began the online self-administered survey using the Qualtrics platform. As an incentive, those who completed the survey and provided contact information were entered into a lottery for an Apple iPad. The survey included modules on job characteristics, work schedules, demographics, economic stability, health, parenting, and child outcomes. To screen out invalid survey responses, we used an attention filter (a question that instructed respondents to select a particular response category to verify the accuracy of their responses) as well as a speed filter (discarding data for surveys that were completed too hastily).

We multiply impute the data for non-response. In the file that we analyze in the main results, we condition the sample on respondents who completed the survey but who may have item non-response. This yields an analysis sample of 2,234 respondents. In the state data profiles, we also include respondents who attrited from the survey before completion. This yields an analysis sample of 4,594 workers, distributed as follows across states: 886 (CT), 505 (ME), 2,254 (MA), 470 (NH), 352 (RI), 127 (VT).

The survey recruitment approach yields a non-probability sample of workers, which may differ from the broader population of service sector workers. Therefore, the estimates in this brief may differ somewhat from the broader population of workers. To mitigate this potential bias, we have applied weights that adjust our sample to reflect the universe of service sector workers in each New England state. These weights are constructed in two stages.

First, we construct survey weights to adjust the demographic characteristics of the Shift survey sample to match the demographic characteristics of New England service-sector workers in the American Community Survey (ACS) for the years 2008-2017. We align the ACS sample with the Shift sample by selecting workers in the ACS who are employed in the same occupations and industries as the Shift sample.

Second, to ensure that our sample accurately reflects the distribution of employment types among large retail and food-service employers, we use data from the Reference USA database of U.S. establishments. The RefUSA database contains a detailed listing of all retail and food establishments nationally. RefUSA contains the size of the workforce for each establishment, which we aggregate up to the industry level for each New England state. Then, using the aggregated RefUSA employer data, we weight our Shift survey sample to match the distribution of workers by industry.

In our analysis of job quality, we estimate weighted (using the combined demographic and industry size weights) unadjusted descriptive statistics. In our analysis of racial/ethnic and gender inequality in work schedules, we present predicted levels from weighted regression models that adjust for educational attainment, school enrollment, age, marital status, and having children. In our analysis of the association between work schedules and worker outcomes, we present predicted levels from weighted regression models that adjust for race/ethnicity and gender, educational attainment, school enrollment, age, marital

status, having children, union membership, job tenure, being a manager, and hourly wage as well as state, month and year fixed-effects.

For a detailed discussion of The Shift Project data collection, methodology, and data validation, see: Schneider, D. and K. Harknett. 2019. “What’s to Like? Facebook as a Tool for Survey Data Collection.” *Sociological Methods & Research*. https://doi.org/10.1177/0049124119882477

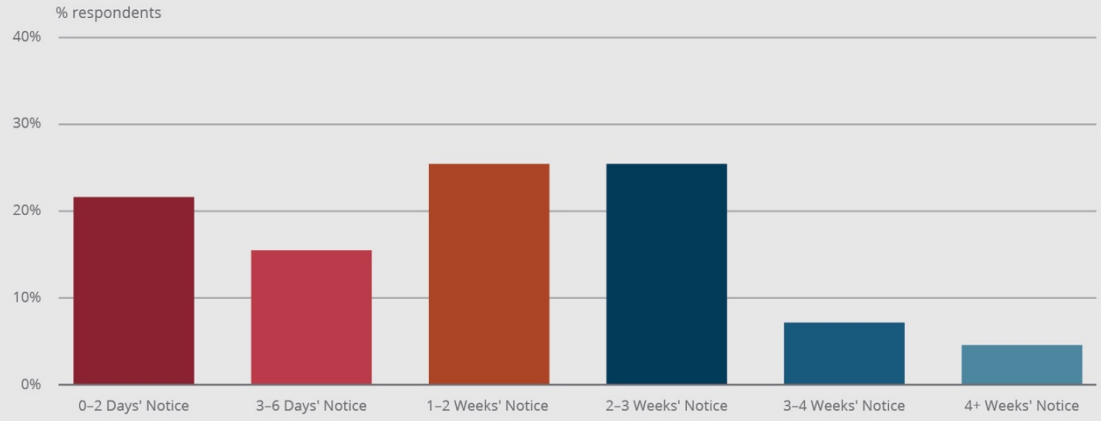
STATE DATA PROFILE:

WORK SCHEDULING IN THE SERVICE SECTOR IN CONNECTICUT

Figure CT.1 | Connecticut Service Sector Workers' Schedules

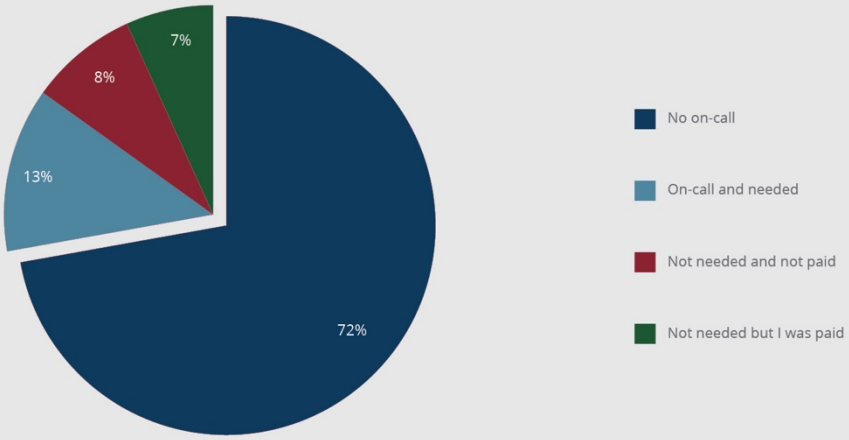
Note: Share of workers by schedule type (mutually exclusive) and with at least one "clopening" shift in the last month (not mutually exclusive with schedule type). Data are multiply imputed, estimates are unadjusted, weighted by race/ethnicity, gender, age, education, state, and industry.
Source: Author's calculations from Shift Project data.

Figure CT.2 | Amount of Advance Notice of Work Schedules for Connecticut Service Sector Workers



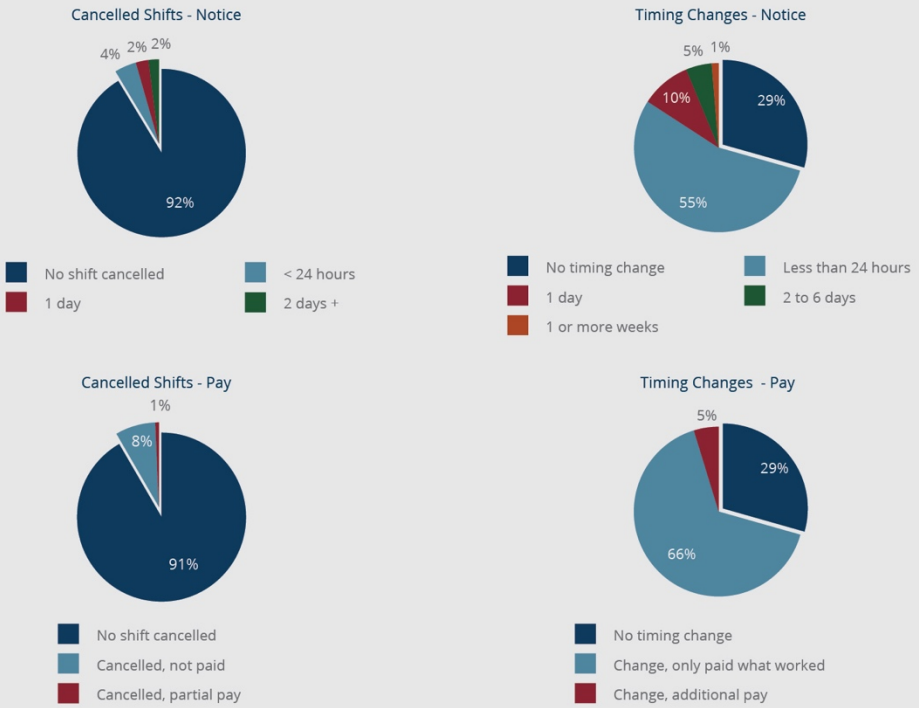
Note: Share of workers by amount of advance notice. Data are multiply imputed, estimates are unadjusted, weighted by race/ethnicity, gender, age, education, state, and industry.
Source: Author's calculations from Shift Project data.

Figure CT.3 | On-Call Schedules among Connecticut Service Sector Workers



Note: Share of workers by exposure to on-call shifts in last month. Data are multiply imputed, estimates are unadjusted, weighted by race/ethnicity, gender, age, education, state, and industry.
Source: Author's calculations from Shift Project data.

Figure CT.4 | Exposure to Just-in-Time Work Scheduling Among Connecticut Service Sector Workers



Note: Share of workers by exposure to cancelled shifts and schedule timing changes, by amount of notice (top) and amount of pay (bottom) in last month. Data are multiply imputed, estimates are unadjusted, weighted by race/ethnicity, gender, age, education, state, and industry.
Source: Author's calculations from Shift Project data.

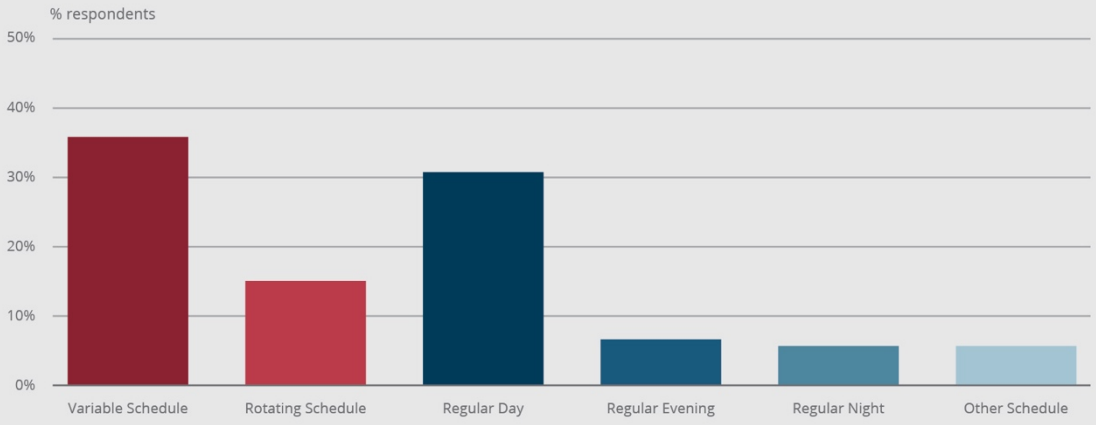
Figure CT.5 | Schedule Control and Involuntary Part-Time Work Among Connecticut Service Sector Workers

Note: Share of workers by degree of schedule control and involuntary part-time. Data are multiply imputed, estimates are unadjusted, weighted by race/ethnicity, gender, age, education, state, and industry.
Source: Author's calculations from Shift Project data.

STATE DATA PROFILE:

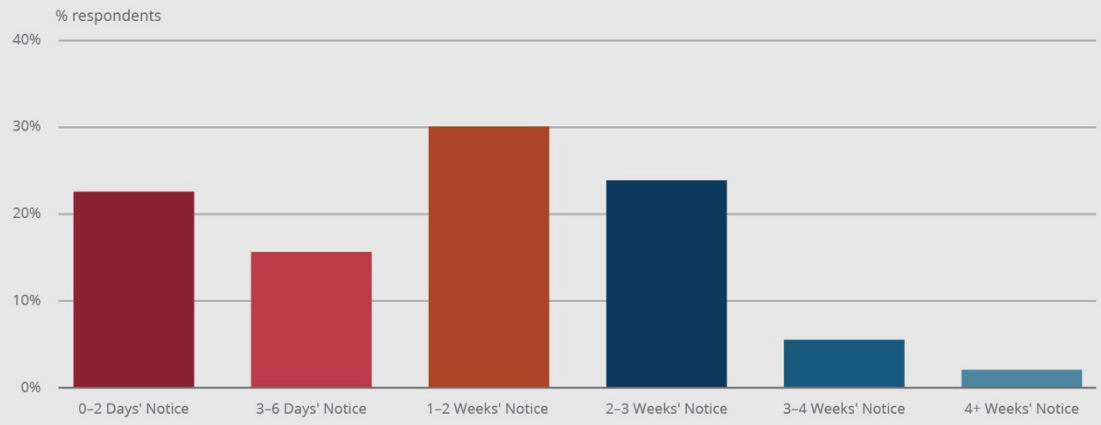
WORK SCHEDULING IN THE SERVICE SECTOR IN MAINE

Figure ME.1 | Maine Service Sector Workers' Schedules



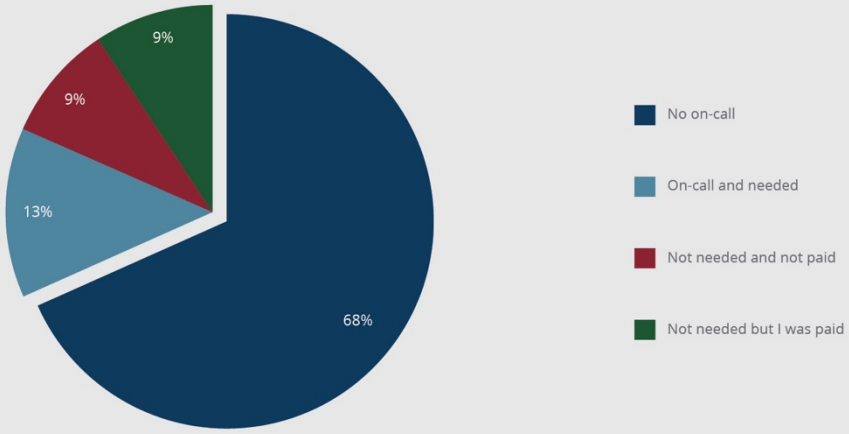
Note: Share of workers by schedule type (mutually exclusive) and with at least one "clopening" shift in the last month (not mutually exclusive with schedule type). Data are multiply imputed, estimates are unadjusted, weighted by race/ethnicity, gender, age, education, state, and industry.
Source: Author's calculations from Shift Project data.

Figure ME.2 | Amount of Advance Notice of Work Schedules for Maine Service Sector Workers



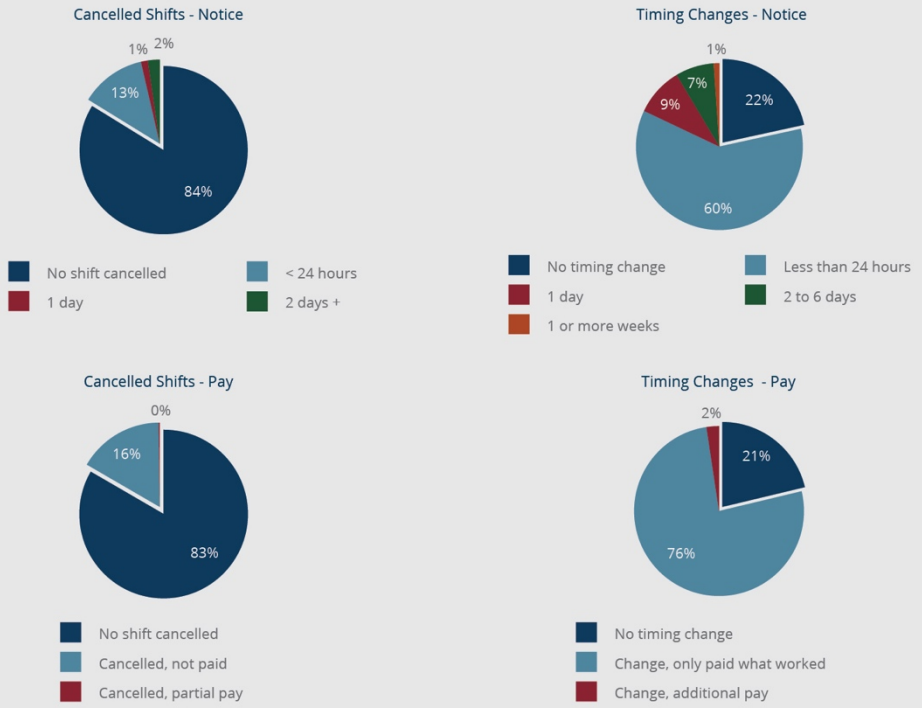
Note: Share of workers by amount of advance notice. Data are multiply imputed, estimates are unadjusted, weighted by race/ethnicity, gender, age, education, state, and industry.
Source: Author's calculations from Shift Project data.

Figure ME.3 | On-Call Schedules among Maine Service Sector Workers



Note: Share of workers by exposure to on-call shifts in last month. Data are multiply imputed, estimates are unadjusted, weighted by race/ethnicity, gender, age, education, state, and industry.
Source: Author's calculations from Shift Project data.

Figure ME.4 | Exposure to Just-in-Time Work Scheduling Among Maine Service Sector Workers



Note: Share of workers by exposure to cancelled shifts and schedule timing changes, by amount of notice (top) and amount of pay (bottom) in last month. Data are multiply imputed, estimates are unadjusted, weighted by race/ethnicity, gender, age, education, state, and industry.
Source: Author's calculations from Shift Project data.

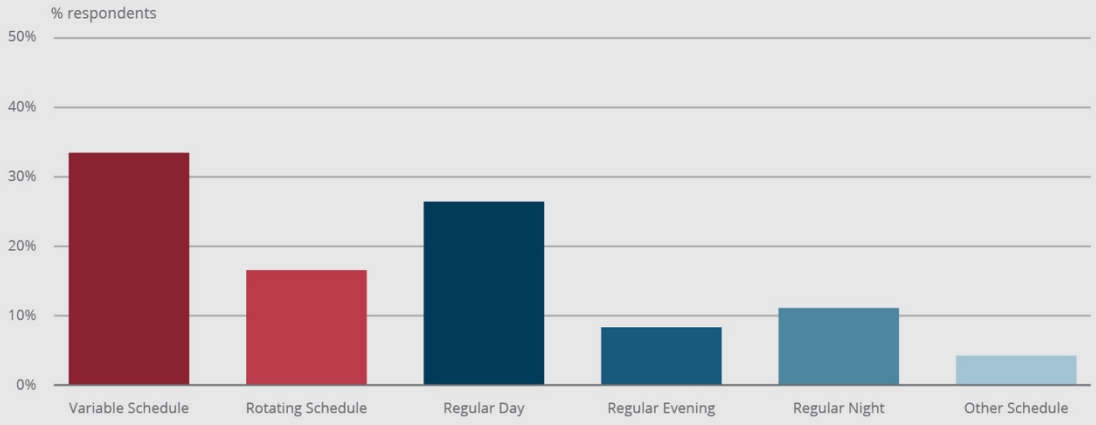
Figure ME.5 | Schedule Control and Involuntary Part-Time Work Among Maine Service Sector Workers

Note: Share of workers by degree of schedule control and involuntary part-time. Data are multiply imputed, estimates are unadjusted, weighted by race/ethnicity, gender, age, education, state, and industry.
Source: Author's calculations from Shift Project data.

STATE DATA PROFILE:

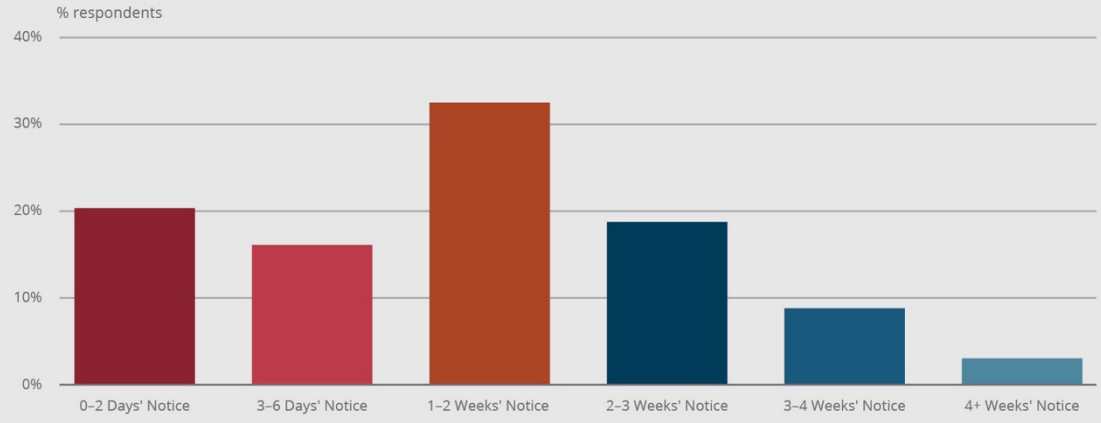
WORK SCHEDULING IN THE SERVICE SECTOR IN MASSACHUSETTS

Figure MA.1 | Massachusetts Service Sector Workers' Schedules



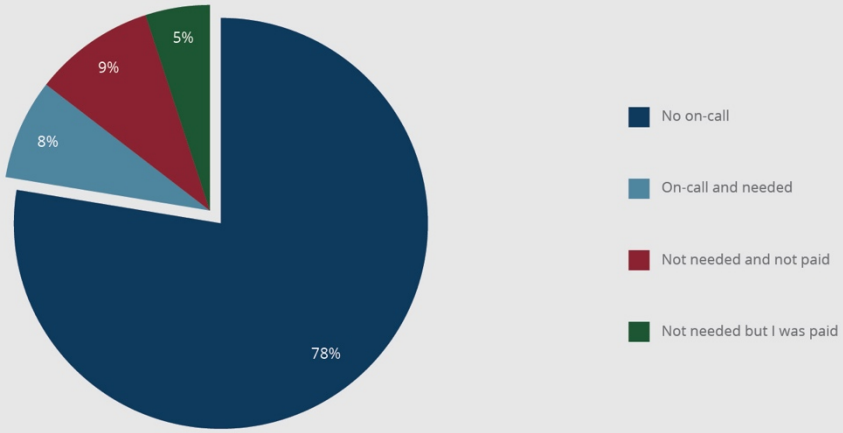
Note: Share of workers by schedule type (mutually exclusive) and with at least one "clopening" shift in the last month (not mutually exclusive with schedule type). Data are multiply imputed, estimates are unadjusted, weighted by race/ethnicity, gender, age, education, state, and industry.
Source: Author's calculations from Shift Project data.

Figure MA.2 | Amount of Advance Notice of Work Schedules for Massachusetts Service Sector Workers



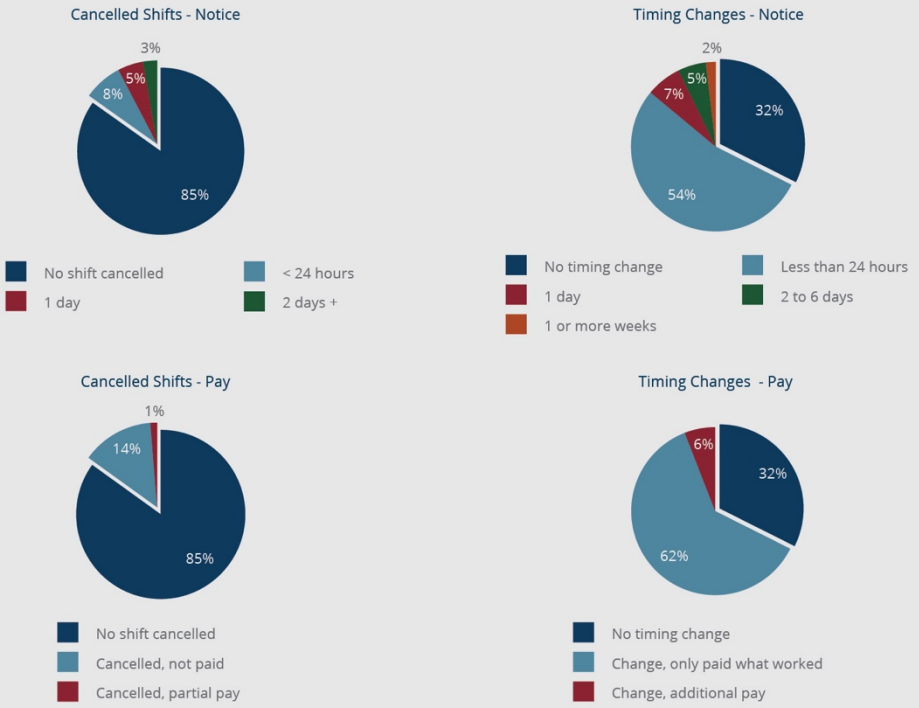
Note: Share of workers by amount of advance notice. Data are multiply imputed, estimates are unadjusted, weighted by race/ethnicity, gender, age, education, state, and industry.
Source: Author's calculations from Shift Project data.

Figure MA.3 | On-Call Schedules among Massachusetts Service Sector Workers



Note: Share of workers by exposure to on-call shifts in last month. Data are multiply imputed, estimates are unadjusted, weighted by race/ethnicity, gender, age, education, state, and industry.
Source: Author's calculations from Shift Project data.

Figure MA.4 | Exposure to Just-in-Time Work Scheduling Among Massachusetts Service Sector Workers



Note: Share of workers by exposure to cancelled shifts and schedule timing changes, by amount of notice (top) and amount of pay (bottom) in last month. Data are multiply imputed, estimates are unadjusted, weighted by race/ethnicity, gender, age, education, state, and industry.
Source: Author's calculations from Shift Project data.

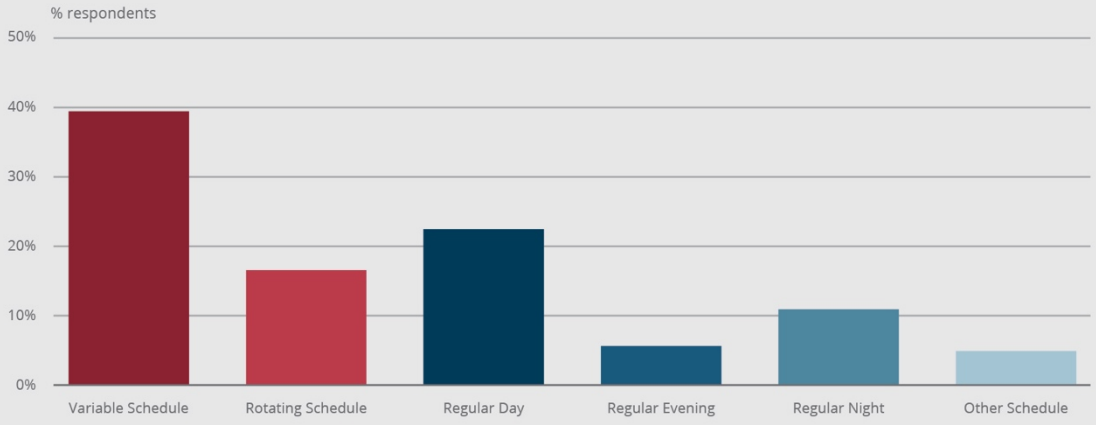
Figure MA.5 | Schedule Control and Involuntary Part-Time Work Among Massachusetts Service Sector Workers

Note: Share of workers by degree of schedule control and involuntary part-time. Data are multiply imputed, estimates are unadjusted, weighted by race/ethnicity, gender, age, education, state, and industry.
Source: Author's calculations from Shift Project data.

STATE DATA PROFILE:

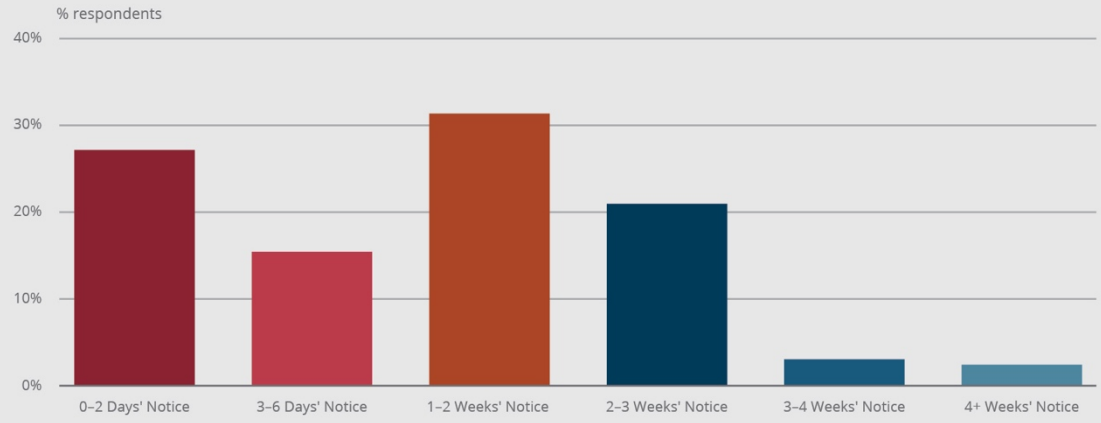
WORK SCHEDULING IN THE SERVICE SECTOR IN NEW HAMPSHIRE

Figure NH.1 | New Hampshire Service Sector Workers' Schedules



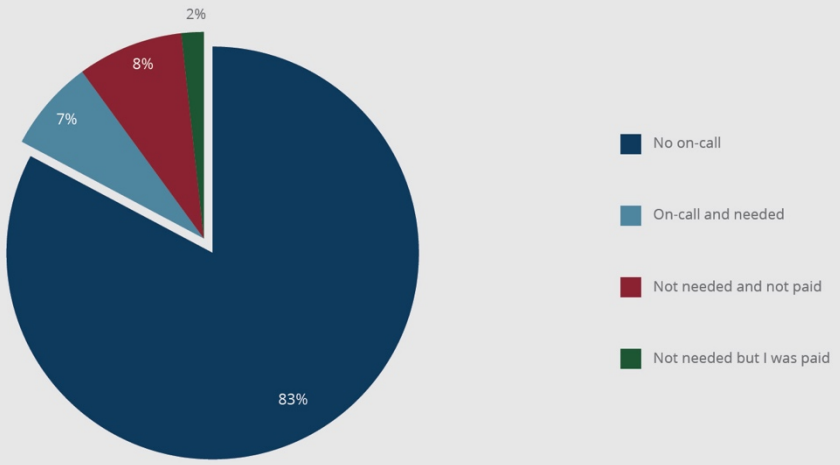
Note: Share of workers by schedule type (mutually exclusive) and with at least one "clopening" shift in the last month (not mutually exclusive with schedule type). Data are multiply imputed, estimates are unadjusted, weighted by race/ethnicity, gender, age, education, state, and industry.
Source: Author's calculations from Shift Project data.

Figure NH.2 | Amount of Advance Notice of Work Schedules for New Hampshire Service Sector Workers



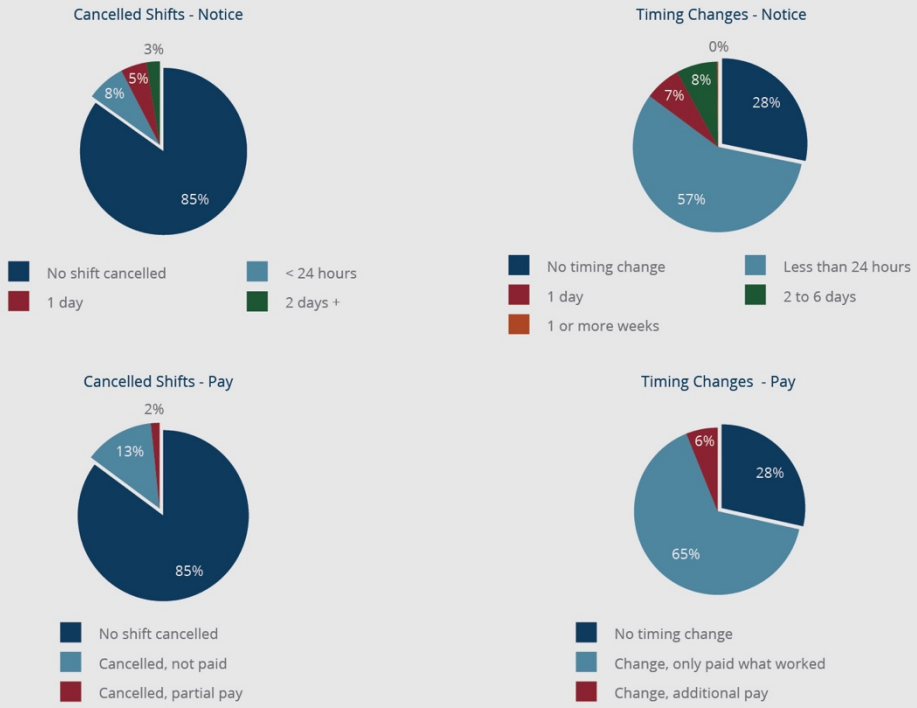
Note: Share of workers by amount of advance notice. Data are multiply imputed, estimates are unadjusted, weighted by race/ethnicity, gender, age, education, state, and industry.
Source: Author's calculations from Shift Project data.

Figure NH.3 | On-Call Schedules among New Hampshire Service Sector Workers



Note: Share of workers by exposure to on-call shifts in last month. Data are multiply imputed, estimates are unadjusted, weighted by race/ethnicity, gender, age, education, state, and industry.
Source: Author's calculations from Shift Project data.

Figure NH.4 | Exposure to Just-in-Time Work Scheduling Among New Hampshire Service Sector Workers



Note: Share of workers by exposure to cancelled shifts and schedule timing changes, by amount of notice (top) and amount of pay (bottom) in last month. Data are multiply imputed, estimates are unadjusted, weighted by race/ethnicity, gender, age, education, state, and industry.
Source: Author's calculations from Shift Project data.

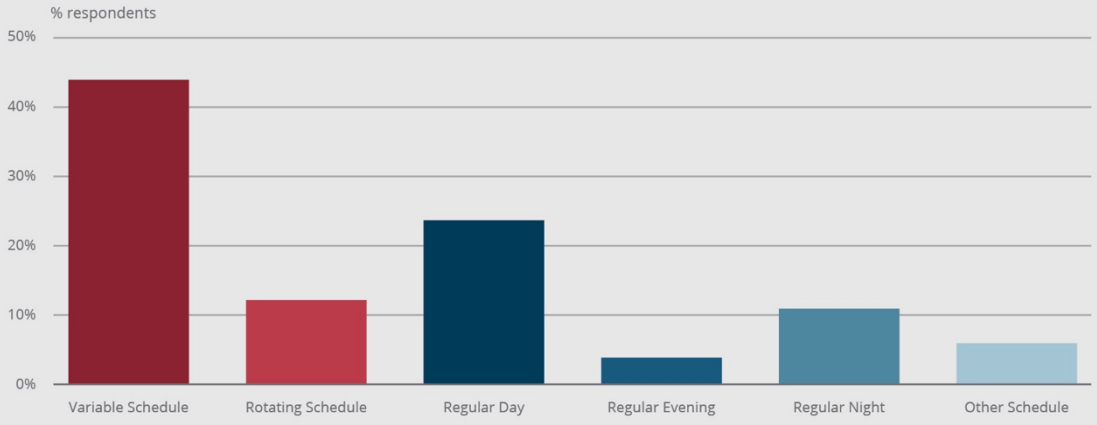
Figure NH.5 | Schedule Control and Involuntary Part-Time Work Among New Hampshire Service Sector Workers

Note: Share of workers by degree of schedule control and involuntary part-time. Data are multiply imputed, estimates are unadjusted, weighted by race/ethnicity, gender, age, education, state, and industry.
Source: Author's calculations from Shift Project data.

STATE DATA PROFILE:

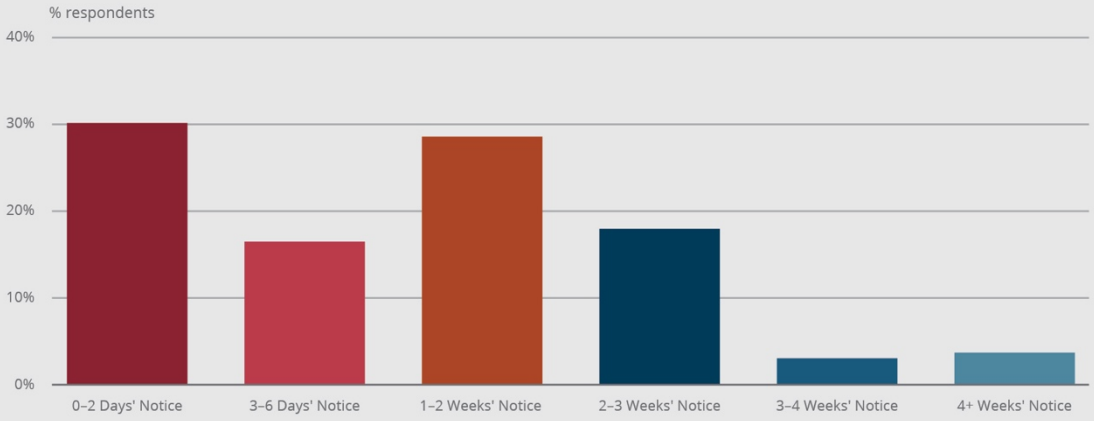
WORK SCHEDULING IN THE SERVICE SECTOR IN RHODE ISLAND

Figure RI.1 | Rhode Island Service Sector Workers' Schedules



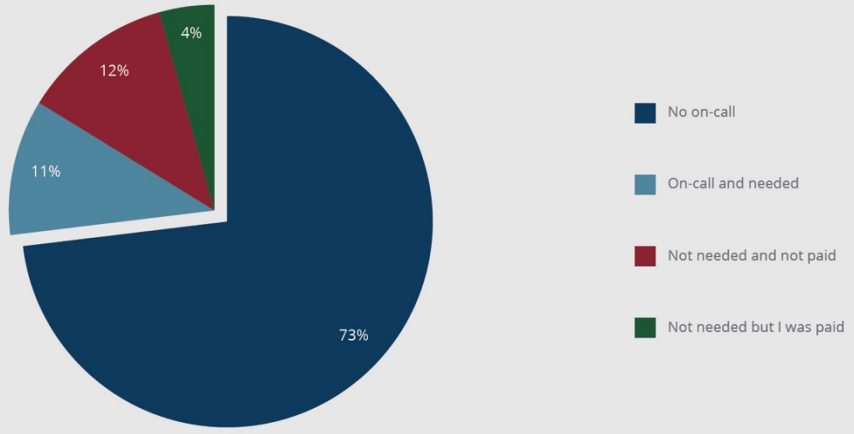
Note: Share of workers by schedule type (mutually exclusive) and with at least one "clopening" shift in the last month (not mutually exclusive with schedule type). Data are multiply imputed, estimates are unadjusted, weighted by race/ethnicity, gender, age, education, state, and industry.
Source: Author's calculations from Shift Project data.

Figure RI.2 | Amount of Advance Notice of Work Schedules for Rhode Island Service Sector Workers



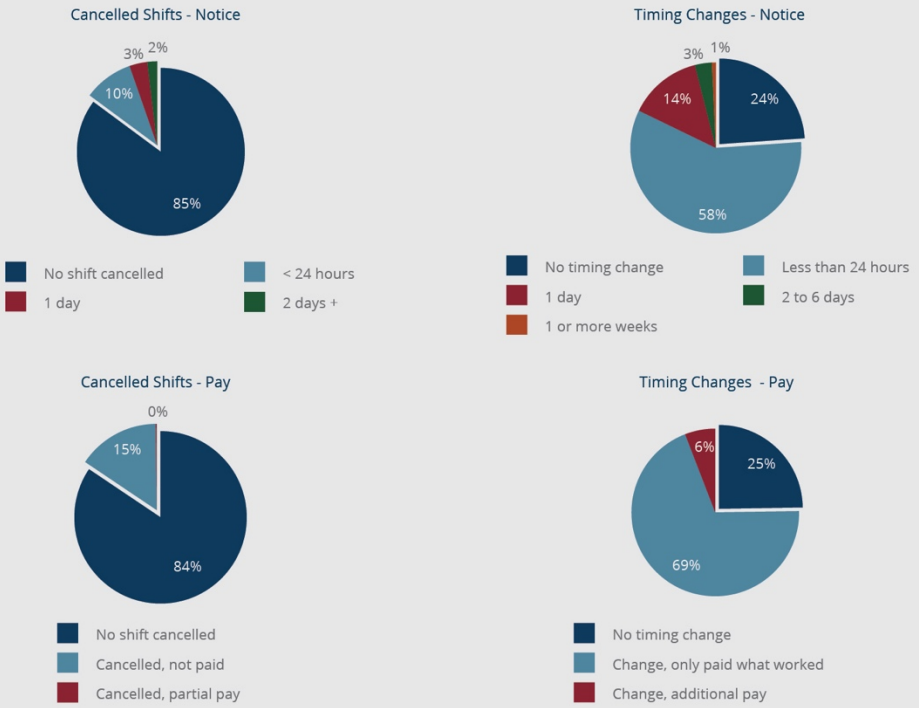
Note: Share of workers by amount of advance notice. Data are multiply imputed, estimates are unadjusted, weighted by race/ethnicity, gender, age, education, state, and industry.
Source: Author's calculations from Shift Project data.

Figure RI.3 | On-Call Schedules among Rhode Island Service Sector Workers



Note: Share of workers by exposure to on-call shifts in last month. Data are multiply imputed, estimates are unadjusted, weighted by race/ethnicity, gender, age, education, state, and industry.
Source: Author's calculations from Shift Project data.

Figure RI.4 | Exposure to Just-in-Time Work Scheduling Among Rhode Island Service Sector Workers



Note: Share of workers by exposure to cancelled shifts and schedule timing changes, by amount of notice (top) and amount of pay (bottom) in last month. Data are multiply imputed, estimates are unadjusted, weighted by race/ethnicity, gender, age, education, state, and industry.
Source: Author's calculations from Shift Project data.

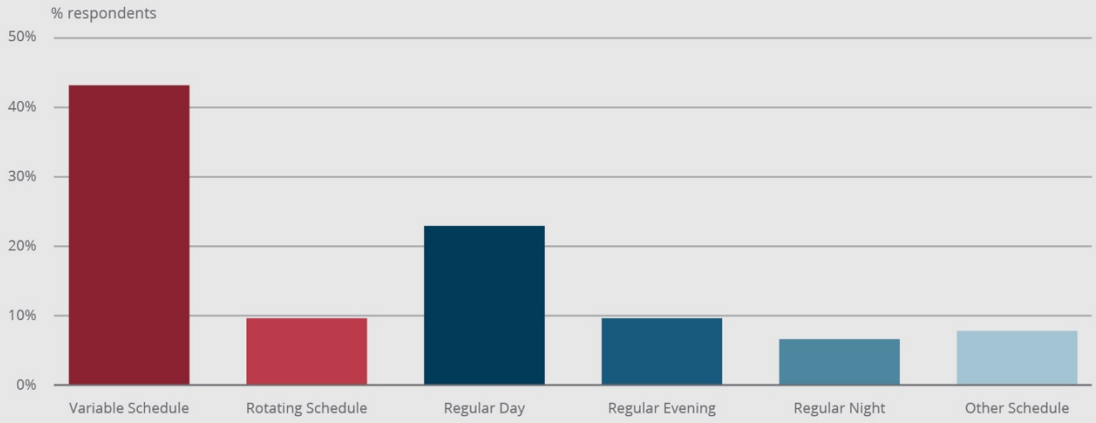
Figure RI.5 | Schedule Control and Involuntary Part-Time Work Among Rhode Island Service Sector Workers

Note: Share of workers by degree of schedule control and involuntary part-time. Data are multiply imputed, estimates are unadjusted, weighted by race/ethnicity, gender, age, education, state, and industry.
Source: Author's calculations from Shift Project data.

STATE DATA PROFILE:

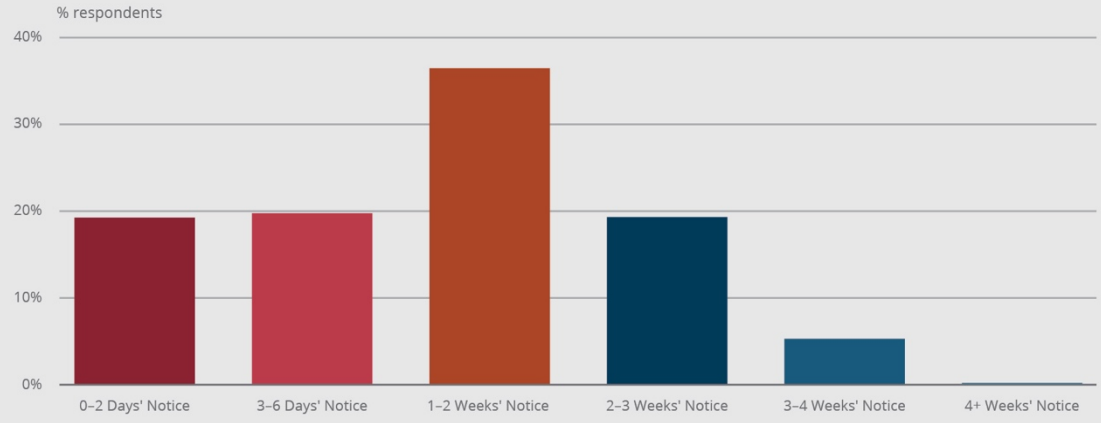
WORK SCHEDULING IN THE SERVICE SECTOR IN VERMONT

Figure VT.1 | Vermont Service Sector Workers' Schedules



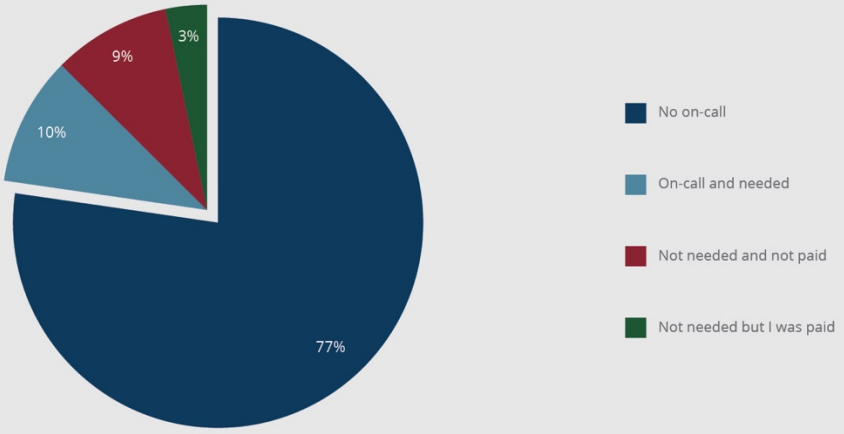
Note: Share of workers by schedule type (mutually exclusive) and with at least one "clopening" shift in the last month (not mutually exclusive with schedule type). Data are multiply imputed, estimates are unadjusted, weighted by race/ethnicity, gender, age, education, state, and industry.
Source: Author's calculations from Shift Project data.

Figure VT.2 | Amount of Advance Notice of Work Schedules for Vermont Service Sector Workers



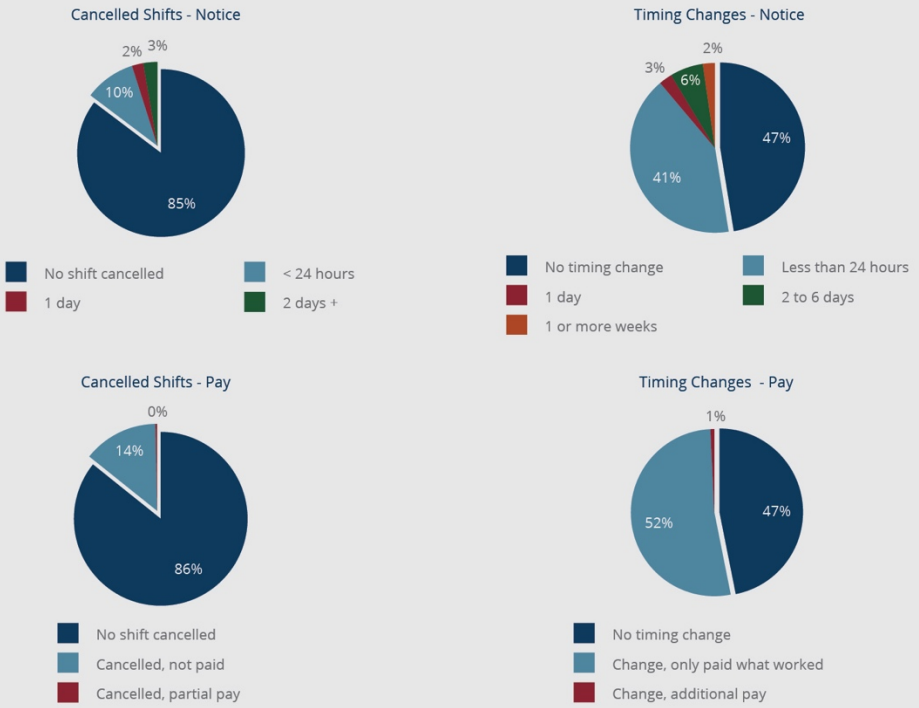
Note: Share of workers by amount of advance notice. Data are multiply imputed, estimates are unadjusted, weighted by race/ethnicity, gender, age, education, state, and industry.
Source: Author's calculations from Shift Project data.

Figure VT.3 | On-Call Schedules among Vermont Service Sector Workers



Note: Share of workers by exposure to on-call shifts in last month. Data are multiply imputed, estimates are unadjusted, weighted by race/ethnicity, gender, age, education, state, and industry.
Source: Author's calculations from Shift Project data.

Figure VT.4 | Exposure to Just-in-Time Work Scheduling Among Vermont Service Sector Workers



Note: Share of workers by exposure to cancelled shifts and schedule timing changes, by amount of notice (top) and amount of pay (bottom) in last month. Data are multiply imputed, estimates are unadjusted, weighted by race/ethnicity, gender, age, education, state, and industry.
Source: Author's calculations from Shift Project data.

Figure VT.5 | Schedule Control and Involuntary Part-Time Work Among Vermont Service Sector Workers

Note: Share of workers by degree of schedule control and involuntary part-time. Data are multiply imputed, estimates are unadjusted, weighted by race/ethnicity, gender, age, education, state, and industry.
Source: Author's calculations from Shift Project data.

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