

# Exploring the Results of the Ontario Home Care Minimum Wage Change

Aperçu des résultats liés au changement du salaire  
minimum concernant les soins à domicile en Ontario



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## Abstract

*Background:* In 2014, Ontario increased its “minimum wage” for personal support workers (PSWs) in publicly funded home care.

*Objective:* The objective of this article is to determine the short-term results of this policy for home care PSWs’ wages, hours and job stability.

*Methods:* This study uses descriptive graphs and ordinary least squares and unconditional quantile regressions, using PSWs across Canada as comparison groups.

*Results:* Pre-policy nominal wages for Ontario home care PSWs stagnated, whereas real wages declined. The policy increased home care PSWs’ wages without noticeably affecting hours or job stability. However, wages were already increasing for low-wage home care workers in the rest of Canada.

*Conclusions:* Ontario exercises monopsony power in the home care market and, before the wage increase, kept nominal wages stable compared to rising real and nominal wages in the rest of Canada. This PSW-specific wage increase did not represent a drastic change relative to market conditions.

## Résumé

*Contexte :* En 2014, l'Ontario a augmenté le « salaire minimum » des préposés aux services de soutien à la personne (PSSP) dans les soins à domicile financés par les deniers publics.

*Objectif :* L'objectif de cet article est de dégager les résultats à court terme de cette politique sur le salaire, l'horaire et la stabilité d'emploi chez les PSSP.

*Méthode :* Cette étude fait appel aux graphiques descriptifs ainsi qu'aux méthodes des moindres carrés ordinaires et de la régression quantile non conditionnelle, en utilisant des PSSP de partout au Canada comme groupe témoin.

*Résultats :* Avant la mise en œuvre de la politique, les salaires nominaux des PSSP des soins à domicile en Ontario stagnaient, tandis que les salaires réels affichaient un déclin. La politique a permis d'accroître les salaires sans affecter de façon notable les horaires ou la stabilité d'emploi. Cependant, dans le reste du Canada, les salaires des travailleurs des soins à domicile à faible salaire commençaient déjà à augmenter.

*Conclusion :* L'Ontario exerce un pouvoir monopsonistique sur le marché des soins à domicile et, avant l'augmentation des salaires, maintenait une stabilité des salaires nominaux, comparativement à l'accroissement des salaires réels et nominaux dans le reste du Canada. Cet accroissement propre aux PSSP ne représente pas un changement catégorique comparativement aux conditions présentes sur le marché.

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## Introduction

Personal support workers (PSWs) are unregulated healthcare and social service providers who provide clients with supportive care such as dressing and eating. They work in environments such as long-term care (LTC) and hospitals and supply 70%–80% of paid home care services in Ontario, Canada (Denton et al. 2018). As such, they are central to both the Ontario Government's healthcare strategy and many individuals' care plans. Keefe et al. (2011), Lilly (2008) and Zagrodny and Saks (2017) noted that PSWs in home care usually earn lower wages than PSWs in hospitals or LTC. In 2014, as part of an attempt to “attract and retain the best PSWs” in home care, Ontario announced it would increase the minimum wage for PSWs in publicly funded home care from \$12.50 per hour to \$16.50 per hour in three stages over three years (MOHLTC 2015). This policy was developed without clearly defining “home care PSWs” or indicating which home care PSWs would be eligible for the increased wages. Furthermore, in January 2018, Ontario increased its general minimum wage

from \$11.60 per hour to \$14.00 per hour, which, by improving workers' outside options, likely attenuated the potential effects of this home care-specific wage increase on attraction and retention.

We investigate the short-term effects of this policy on Ontario home care PSWs' (the affected groups') wages, weekly hours of work and job turnover/tenure (the number of consecutive months in the same job). We use non-home care PSWs in Ontario (e.g., PSWs who work in LTC or hospitals) and PSWs in the rest of Canada as comparison groups. We first present time-series plots and describe wage trends across the income distribution, and then analyze the policy's heterogeneous effects on wages, hours and turnover using ordinary least squares (OLS) and unconditional quantile regression (UQR) with a difference-in-differences (DID) model. Our findings suggest that this policy increased home care PSWs' nominal and real wages without significantly affecting hours of work or job turnover. However, we find that wages for most home care PSWs in the rest of Canada were already rising relative to the affected group before the policy was implemented. If, prior to the 2014 policy change – which is itself evidence of monopsony – the Ontario Government had not been exerting monopsony power in the home care labour market through the letting of contracts, increased demand for home care workers would likely have similarly increased Ontario wages without government intervention. This article has implications for home care human resource planning and the effectiveness of targeted wage interventions.

## PSWs and the Ontario Home Care Minimum Wage

Descriptive statistics from the Canadian Labour Force Survey (LFS), presented in Table 1, compare home care and non-home care PSWs in Ontario and the rest of Canada. Notably, compared to all PSWs in the rest of Canada and non-home care PSWs in Ontario, home care PSWs in Ontario are less likely to be full-time, public sector or unionized workers, and more likely to work in establishments with greater than 500 employees. Also, PSWs in Ontario are more likely to have community college degrees.

The Ontario Government finances public home care services through managed competition contracting. It is the dominant payer for home care in Ontario. In comparison, home care PSWs have little bargaining power, meaning the government holds monopsony power in this market. Ontario uses competitive bidding to award contracts to large home care agencies (Abelson et al. 2004). Those agencies are then responsible for hiring staff, including PSWs, and delivering services. A PSW working for an agency may work some publicly funded hours and some privately funded hours. Furthermore, some PSWs are hired directly by clients and their families.

Ontario established a \$12.50 minimum wage for publicly funded PSWs in 2006.<sup>1</sup> We know of no PSW-specific minimum wages in provinces other than Ontario, and it reflects Ontario's distinctive approach to managed care in this sector. There was no change to this minimum until 2014, when the Ontario Government announced the policy under

TABLE 1. Descriptive statistics for PSWs, 2007–2018

	Home care PSW, Ontario	Non-home care PSW, Ontario	Home care PSW, Rest of Canada	Non-home care PSW, Rest of Canada
Female (%)	93	88	90	85
Immigrant (%)	38	36	23	28
Age (mean)	45	43	45	43
Urban (%)	86	85	73	79
Community college degree (%)	57	56	34	35
Bachelor's degree (%)	10	11	9	10
Mainly full-time (%)	60	67	65	74
Union or collective agreement coverage (%)	37	71	45	74
Public employer (%)	6	38	27	57
Workplace has 500+ employees (%)	54	42	41	52

Authors' calculations. Statistics Canada's Labour Force Survey, 2007–2018. Survey weights were used.

study. It would subsidize a wage increase of \$4.00 in three stages over three years for publicly funded home care PSWs, both raising the minimum wage from \$12.50 to \$16.50 per hour and similarly increasing the wages of other home care PSWs who were already making more than \$12.50 by \$4.00. The government was hoping to “attract and retain the best PSWs in the home and community care sector” (MOHLTC 2015). Previous research has found that increased wages are sometimes associated with decreased job turnover, though the strength of this relationship and the mechanism through which it operates remain disputed.<sup>2</sup> Local context, including the nature of the wage increase and the state of the labour market, all affect the relationship.

The eligibility criteria for the Ontario PSW wage increase were complicated and ambiguous. The increase only applied to PSWs working publicly funded hours at publicly funded agencies. It did not apply to home care PSWs working privately funded hours at the same agencies or to PSWs hired directly by home care clients. Further, it did not apply to PSWs in other sectors, most of whom already had higher wages. Home care PSWs were only eligible to receive the increased wage for hours spent performing specifically defined “personal support services”, effectively, hours spent looking into “the whites of the client’s eyes” (Grant and Church 2015). During a home care PSW’s workday, they might prepare food for their client, help the client take medication and change bedsheets. However, actions such as preparing food were not eligible (Grant and Church 2015). Therefore, some publicly funded home care PSWs’ work hours continued to be reimbursed at the lower rate, and privately funded PSW hours were not directly affected. We therefore expect the median wage to increase by less than \$4.00 per hour.

The implementation process faced several challenges. Initially, there was no limit to the wage increases. A PSW earning \$12.50 and a PSW earning \$19.50 were both eligible to receive the first wage increase. In the first year, 27 (out of approximately 500) agencies refused to increase their home care PSWs' wages, citing concerns of overpayment relative to non-PSW staff (Church 2015). At least one large employer "cut what it [paid] in mileage and travel time" (Grant and Church 2015). Furthermore, in the first year, Ontario spent \$77.8 million subsidizing the increase instead of the projected \$50 million (Church 2015). To address some of these concerns, the government introduced a \$19.00 per hour cap in the second- and third-stage increases. In the end, each implementation stage was delayed by two to four months and lump sum back-payments were made. We, therefore, do not expect to see immediate wage changes in the empirical analysis.

### Data and Sample Selection

Statistics Canada's 1997–2018 LFS accessed at the Research Data Centre at McMaster University is analyzed. The entire time frame is presented in time-series plots, but because of the structural change associated with Ontario's introduction of the PSW-specific minimum wage in 2006, we focus on 2007–2018 in the regression analyses.<sup>3</sup> Two occupational groupings are identified in the data: home care and non-home care PSWs. Most non-home care PSWs are employed in LTC or hospitals. Two geographies are central to the analysis: Ontario and the rest of Canada. However, in the regressions, we disaggregate the rest of Canada and control for each province individually (the territories are not included in the sample). The affected/treated group is Ontario home care PSWs, and we use non-home care Ontario PSWs, and both categories of PSWs in the rest of Canada, as comparison groups. Details of the sample selection are in Appendix 1 (available online at [longwoods.com/content/26288](http://longwoods.com/content/26288)).

### Methods

We analyze the effects of the policy on four dependent variables: nominal wages, real wages, hours of work and job tenure (a proxy for worker turnover). Real wages are inflation-adjusted using the provincial or national consumer price index (CPI), with January 2019 as the base for the main results, as indicated in table and figure notes. (There are no meaningful differences between results using either CPI.) Hours of work are measured as actual hours worked in the respondent's main job in the previous week. Tenure is measured as the number of consecutive months that a worker has been with their current main employer.

We first create time-series plots of each dependent variable at the 25th, 50th and 75th percentiles to examine unconditional changes from 1997 to 2018. Then we run DID regressions for all four dependent variables from 2007 to 2018. We define five policy stages in Table 2.

TABLE 2. Policy stages

Stage	Event	Effective date	Time range
Stage 0, S0	Pre-policy		January 2007–April 2014
Stage 1, S1	First \$1.50 increase (from \$12.50 to \$14.00 per hour)	April 29, 2014 (retroactive to April 1, 2014) <sup>6</sup>	May 2014–July 2015
Stage 2, S2	Second \$1.50 increase (from \$14.00 to \$15.50)	August 1, 2015 (retroactive to April 1, 2015)	August 2015–June 2016
Stage 3, S3	Final \$1.00 increase (from \$15.50 to \$16.50)	July 1, 2016 (retroactive to April 1, 2016)	July 2016–December 2017
Stage 4, S4	Ontario raises general minimum wage to \$14.00	January 1, 2018	January 2018–October 2018

We estimate a difference in differences (DID) model (Figure 1) where  $Y$  is one of hourly wage, tenure or actual hours of work in the reference week.  $Aff$ , short for *affected*, is an indicator variable that equals 1 if the individual is a home care PSW in Ontario. ( $S_1$  through  $S_4$ )<sup>\*</sup> *Affected* are interaction terms between the Affected indicator and the policy stages.  $X_c$  is a vector of control variables that include month and year fixed effects, variables for gender, immigrant status, education level, urban/rural residence, public/private employment, firm size, a third-order polynomial in age and, where relevant, province.<sup>4</sup> The  $\beta$ s on these interaction terms are often interpreted causally; however, this is only valid if the dependent variables exhibit a conditional common trend across the affected and comparison groups (Smith and Sweetman 2016). Based on a series of placebo tests that interacted pre-intervention time trends with the treatment group, we do not believe that the common trend assumption is satisfied in our case. This accords with the Ontario labour market being more monopsonistic than other provinces. We, therefore, do not interpret these coefficients as causal effects. Instead, these represent the change in the affected group’s outcome variables relative to the reference group. All regressions are weighted to give population estimates.

FIGURE 1. DID model

$$Y = \beta_0 + \beta_1 S_1 + \beta_2 S_2 + \beta_3 S_3 + \beta_4 S_4 + \beta_5 Aff + \beta_6 (S_1 * Aff) + \beta_7 (S_2 * Aff) + \beta_8 (S_3 * Aff) + \beta_9 (S_4 * Aff) + \beta_c X_c + \epsilon \quad (1)$$

We run a separate DID regression with each comparison group, using both OLS and UQR (UQR, specifically re-centered influence function regression or RIFReg; Firpo et al. 2009). OLS coefficients represent average marginal effects for a hypothetical PSW with mean characteristics. However, we are interested in documenting potential heterogeneity in policy effects across the wage, hours of work and tenure distributions. The impact of this policy might be quite different for high-earning PSWs (e.g., 80th percentile of wages) than for the “mean” PSW as estimated by OLS. UQR calculates the marginal effect of the policy change at various quantiles of the distribution of the unconditional dependant variable (e.g., wages). UQR coefficient estimates should be interpreted locally to the relevant

unconditional quantile, but otherwise can be interpreted as in OLS.<sup>5</sup> We did not find any important differences across quantiles for hours of work or job tenure, so to save space, we present UQR results for wages and OLS results for hours of work and tenure.

In DID analyses with one affected group and few comparison groups, inference with analytical cluster-robust standard errors will likely fail (MacKinnon 2019). To address this, we provide wild cluster bootstrapped  $p$  values for OLS DID regressions and pairs bootstrapped standard errors for UQR DID regressions (both with 999 replications). In the OLS DID regressions, the unrestricted and restricted wild cluster bootstrap  $p$  values are similar. As discussed in the article by MacKinnon and Webb (2018), this provides evidence that the inferences drawn from these values are not wildly misleading.

## Results

### *Hourly wages – before and after*

Figure 2 presents time-series plots of the affected group's wages at the 75th (top line), 50th (middle) and 25th (bottom) percentiles from 1997 to 2018. Panel A shows nominal wages and Panel B shows real wages. The three solid vertical lines indicate the three stages of the 2014 Ontario home care wage policy. The dashed vertical lines represent the 2006 home care minimum wage and the 2018 general minimum wage changes.

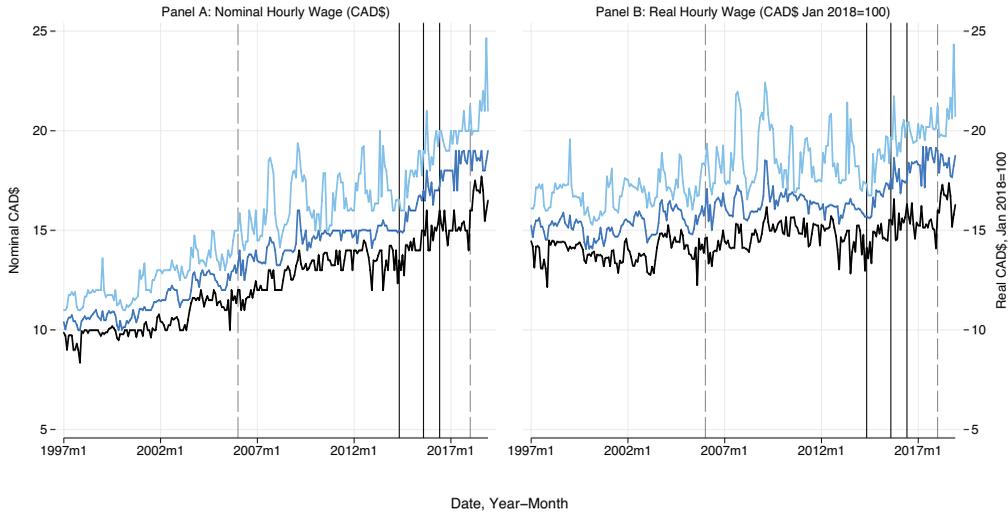
PSWs' wages in Ontario were stagnant in nominal terms and decreasing in real terms in the five years before Stage 1, especially for workers at the 25th and 50th percentiles. During Stage 1, we see that nominal and real wages increased sharply for all PSWs. In Stages 2 and 3, wages continued to increase at the median and 75th percentile. However, the lower paid 25th percentile of the workforce showed little or no reaction until Ontario increased the general minimum wage in 2018, so income inequality among home care PSWs increased. Low-wage PSWs appear to work more non-eligible publicly or privately funded hours, and/or our sample may include some low-wage non-home care workers. After the final (Stage 3) wage increase, nominal wages at the 50th percentile increased to just above the new \$16.50 per hour PSW minimum wage and nominal wages at the 75th percentile rose to just above the \$19.00 per hour cap.

### *Hourly wages – relative to comparison groups*

Figure 3 builds on Panel B of Figure 2. It plots real hourly wages for the affected group (thick solid line) and each of the comparison groups (thin and dashed lines) for the 25th (upper), 50th (middle) and 75th (bottom) percentiles of each.

Across all three panels, home care PSWs earn less on average than non-home care PSWs. Comparing real wages for the affected PSWs in Ontario and the two non-home care PSW groups across all three panels, it appears that affected PSWs' real wages did increase relative to non-home care PSWs' during Stages 1 to 3. This relative increase is more pronounced at the 50th and 75th percentiles. Real wages for non-home care PSWs stayed flat

**FIGURE 2.** Monthly averages of nominal and real (national CPI-adjusted, January 2018 = 100) hourly wages for home care PSWs in Ontario (affected group) from 1997 to 2018, at the 25th, 50th and 75th percentiles



Note: Solid vertical lines indicate the start of policy Stages 1, 2 and 3 (wage increases for home care PSWs in Ontario). The dashed vertical lines represent the 2006 PSW minimum wage change and the 2018 general minimum wage increase. We attempted to de-seasonalize these time series; however, we found that there is no significant seasonality (in a regression of hourly wages on months).  
 Source: Authors' calculations from the LFS

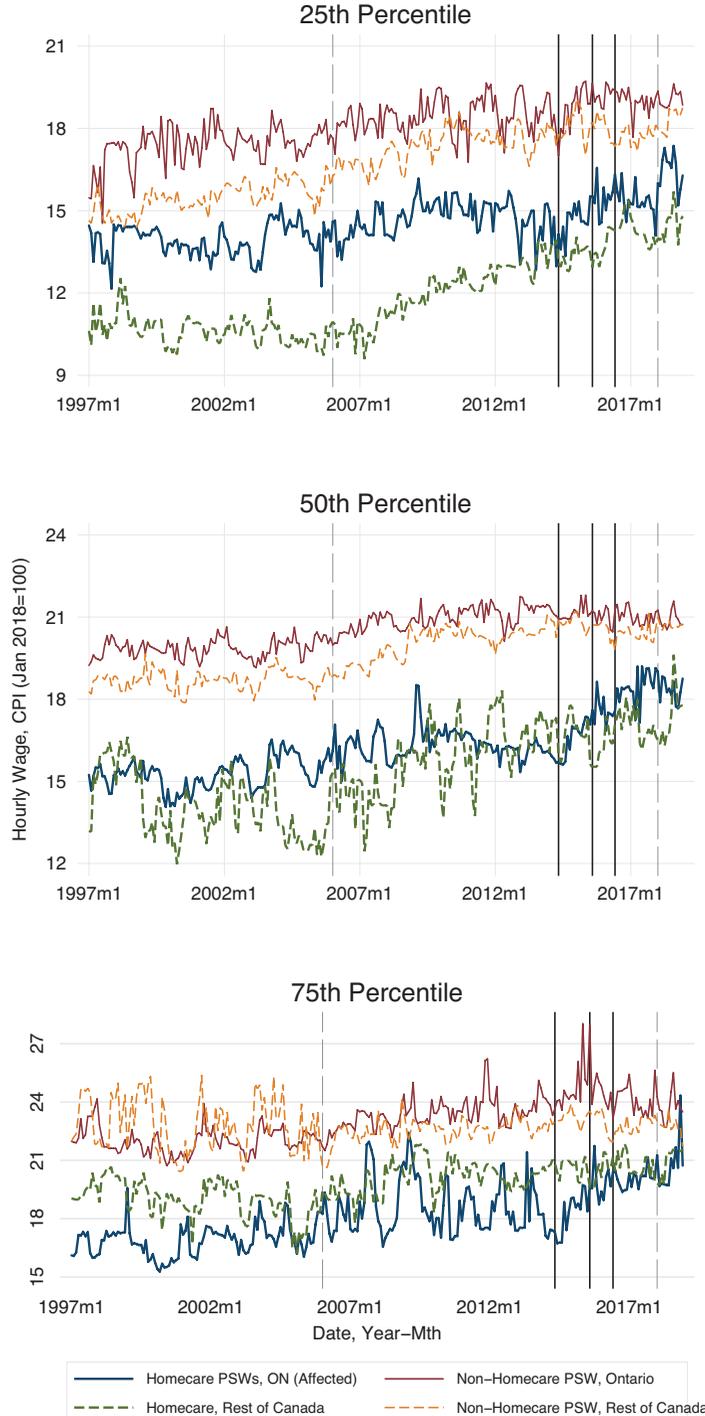
or decreased slightly after 2014. It appears there were no large policy spillovers to non-home care PSW wages in Ontario.

We next look at each panel in Figure 3 to compare the affected group to home care PSWs in the rest of Canada. Interestingly, comparing across the three panels, there is a smaller wage gap from the 25th to the 75th percentile of the home care wage distribution in Ontario than in the rest of Canada. We see that low-wage home care workers were historically paid more in Ontario than in the rest of Canada, but high-wage home care PSWs were historically paid less in Ontario. If institutions face a constraint on the total wage bill, this could mean that because Ontario agencies paid more at the 25th percentile, they must pay less at the 75th percentile. Agencies can adjust along other margins to meet budget constraints, but PSWs make up a large percentage of total costs, so high-paid workers will be affected by low-paid workers receiving a higher wage if the total wage bill is approximately equal.

In the bottom panel, we see that, for both home care groups, real wages at the 75th percentile remained flat in the decade before the 2014 policy change. However, from Stages 1 to 3, the affected Ontario group experienced a relative increase in wages. At the 50th and 25th percentiles, that pattern is, however, quite different before 2014; home care workers

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**FIGURE 3.** Monthly averages of real (national CPI-adjusted, January 2018 = 100) hourly wages for home care PSWs in Ontario and comparison groups from 1997 to 2018, at the 25th, 50th and 75th percentiles



Solid vertical lines indicate the start of policy Stages 1, 2 and 3 (wage increases for home care PSWs in Ontario). The dotted grey lines represent the 2006 PSW minimum wage change and the 2018 general minimum wage increase.

Source: Authors' calculations from the LFS

outside of Ontario saw real wages increase markedly, whereas these were flat or decreasing in Ontario. During Stages 1–3, at the 50th percentile, the affected group experienced a relative increase in wages, whereas at the 25th percentile, they did not. The pre-policy upward trend in wages for home care workers in the rest of Canada at the 25th and 50th percentiles accords with an aging Canadian population demanding more home care services. Differences across regions may also reflect local labour supply, perhaps driven by different immigration rates, and the local opportunity costs faced by PSWs considering employment in other occupations. Whereas wages for home care workers in the rest of Canada were rising, Ontario PSWs' wages, though initially high, seemed to have been frozen in the half decade before 2014.

*Hourly wages – plots of difference-in-differences unconditional quantile regression coefficients*

Figure 4 is a graphical representation of UQR coefficients on the interaction terms in the above equation for real hourly wages from 2007 to 2018. Each row of Figure 4 represents a different comparison group, as labelled on the left-most y-axes, with (i) non-home care PSWs in Ontario in the top row, (ii) non-home care in the rest of Canada in the middle and (iii) home care in the rest of Canada on the bottom. From left to right, each column plots policy Stages 1 through 4 (coefficients  $\beta_6$  through  $\beta_9$ ), with Stage 0 as the comparator. Each individual plot depicts eight estimates, at the 10th through the 80th percentiles of earnings, for a single policy stage and comparison group. To save space, discussion and the regression output are presented in Appendix 2, available at [longwoods.com/content/26288](http://longwoods.com/content/26288).

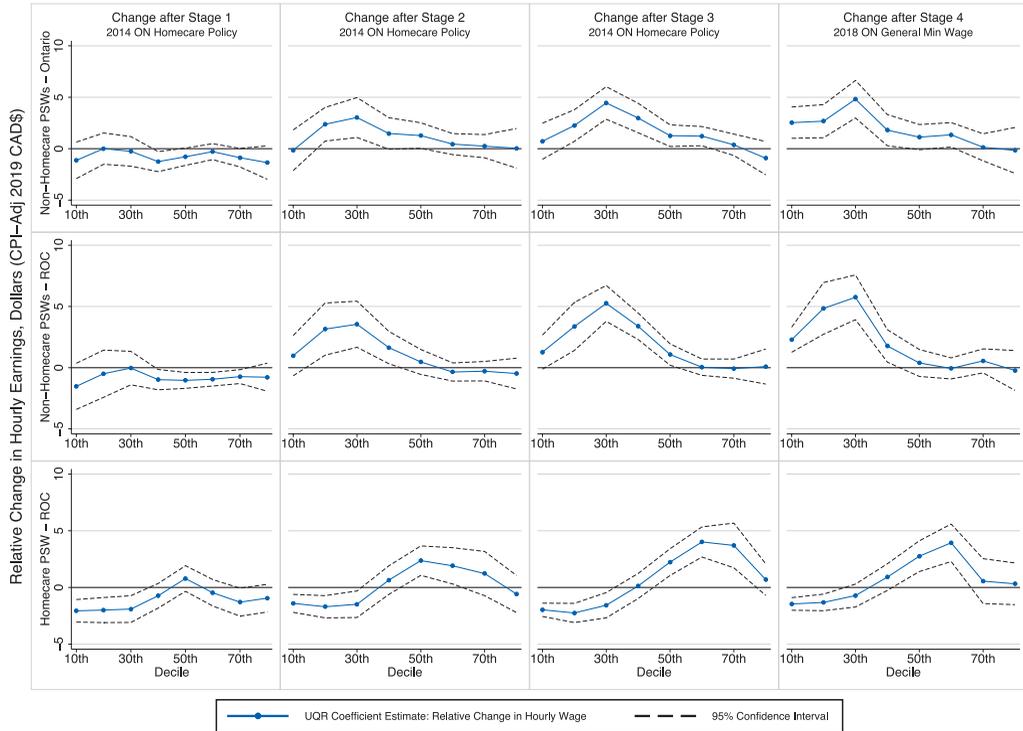
For DID, UQR coefficients are calculated relative to the relevant unconditional quantile of the joint distribution of the dependent variable for the affected and comparison groups. For example, if “wage” is the dependent variable and we estimate an UQR at the 20th percentile, a coefficient of 2.376 on the  $S2^*$ Affected variable implies that during the second stage of the policy, the wages of individuals in the affected group at the 20th percentile of the joint wage distribution increased by an estimated \$2.38 more than the wages of similar PSWs in the comparison group. The impact of this policy might be quite different for PSWs at different quantiles of the wage distribution or for the “mean” PSW as estimated by OLS.

The DID model displays well-controlled conditional changes. However, we could not find support for a common trend between the affected and comparison groups – the required identifying assumption for the DID coefficients to be interpreted as causal impacts. This is likely because of Ontario-specific policies, including the PSW-specific minimum wage introduced in 2006, so these coefficients should not be interpreted as providing estimates of causal impacts (Smith and Sweetman 2016). Nevertheless, we argue that given the structure of the Ontario home care market, this policy had causal impacts for which we provide a sense of the direction if not unbiased estimates of the causal magnitudes.

Because each row of graphs in Figure 4 represents a different comparison group, each has a different joint distribution of wages. Especially, the top two rows show changes for home care PSWs in Ontario relative to non-home care PSWs. Home care PSWs earn less

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**FIGURE 4.** Quantile plots: Real hourly wages for Ontario healthcare PSWs relative to comparison groups



*Interaction terms from the DID UQRs for real hourly wages. These represent changes in the hourly wage in each policy stage for the affected PSWs in Ontario relative to each comparison group. The top row plots changes relative to non-home care PSWs in Ontario, the middle relative to non-home care PSWs in the rest of Canada and the bottom relative to home care PSWs in the rest of Canada. We plot points from the 10th to 80th percentiles to avoid the effects of the large skew above the 80th percentile. Real wages are inflation-adjusted using the provincial CPI with January 2018 as the base. Source: Authors' calculations from the LFS.*

than non-home care PSWs, and so, affected home care PSWs' wages are expected to be concentrated in the lower deciles of these joint wage distributions. In contrast, in the bottom row, the comparison group is home care PSWs in the rest of Canada. Ontario home care PSWs' wages are concentrated in the mid-to-high end of the national home care wage distribution. Therefore, in contrast to the upper rows, we expect changes to occur further up the wage distribution.

Consistent with expectations based on the comparison groups, we see changes from the 20th to 50th percentiles in the top two rows of Figure 4. After Stages 2–4, real wages for affected PSWs increased relative to those for non-home care PSWs. That is, wages for those in the affected group grew more quickly than wages for their analogues in the comparison groups. This matches the pattern in Figure 3. There are few affected PSWs with wages above the 50th percentile in these joint distributions, and maximums were imposed following Stage 2; there is consequently almost no statistically significant relative change at or above the 50th percentile. Also, we do not observe significant changes for low-wage-affected workers at the 10th percentile until the 2018 general minimum wage increase. Individuals in this

group typically report being paid at the provincial minimum wage rather than the Ontario home care minimum wage.

In contrast, the pattern in the bottom row reflects the fact that home care PSWs in the rest of Canada have lower wages than the comparators in the two upper panels, and that they experienced faster wage growth in the lower quantiles of the distribution. The effect of Ontario's policy is evident toward the middle of the joint wage distribution. In contrast, wages for affected PSWs from the 10th to 30th percentiles decreased relative to wages for home care workers in the rest of Canada. Consistent with Figure 3, wages at the low end of the home care distribution were growing much faster in the rest of Canada than in Ontario pre-policy, and these results show that conditional on other covariates, home care PSW wages at the low end of the distribution were not able to keep up with those in the rest of Canada even during the policy implementation. Wages for similar workers in the rest of Canada, though initially lower, rose more swiftly than for those in Ontario. This may have been because of differences in the rate of increase in the demand for their services due to population aging, local changes in potential PSWs' supply (perhaps by virtue of local immigration) or changes in the relative opportunity cost of employment in alternative occupations.

### *Hours of work and tenure*

We did not find any statistically significant coefficients for hours of work or tenure from either OLS or UQR – see Appendix 3 – so we present only OLS results (available online at [longwoods.com/content/26288](http://longwoods.com/content/26288)). This may be influenced by the high variance in hours and tenure, but any large coefficients would be statistically significant. If the policy had caused hours to decrease, that might have indicated negative employment effects. If it had caused tenure to decrease, that might have indicated either increased hiring or increased worker turnover.

### **Discussion**

The provincial government is the dominant payer for home care services in Ontario, and home care PSWs do not have strong collective bargaining power. Therefore, the home care PSW labour market can be characterized as monopsonistic. Ontario, through government contracts to large firms, seems to have used this monopsony power to effectively maintain nominal wages near its 2006 PSW-specific minimum wage, causing the real wage decline observed among home care PSWs in Ontario before the mandated 2014 increase. However, other than through the general minimum wage, the Ontario Government appears to have less influence in the lowest deciles of the PSW wage distribution.

We observe clear changes in home care PSWs' wages following Ontario's PSW-specific minimum wage increases and, as expected, we observe differential impacts across the wage distribution. Despite the common trend assumption of DID not being satisfied, the home

care market is sufficiently driven by government funding that this policy, and not external factors, is very reasonably what caused relative wages to increase at each policy stage. However, this argument applies only to the direction of the effect; the coefficients are not unbiased estimates of the magnitude of these impacts.

Compared to home care PSWs and the rest of Canada, Ontario's PSW minimum wage policy had no effect at the very top of the wage distribution (80th percentile and above). However, it did significantly increase wages for PSWs in Ontario in the middle and upper-middle of the distribution. In stark contrast, at the bottom of the wage distribution, without conditioning on other variables (Figure 3), the policy change in Ontario only seems to have increased the rate of wage growth in Ontario to match that in the rest of Canada. Moreover, once we control for observed differences across Ontario and the rest of Canada, the policy in Ontario was not even sufficient to make the rate of wage growth in the lower deciles in Ontario as steep as the growth elsewhere. All these changes occurred without a noticeable effect on hours of work or job tenure for home care PSWs in Ontario.

These results point to the importance of looking for policy effects across the wage distribution. It also suggests that demand and supply for PSWs in Ontario is evolving quite differently than in other provinces. On the demand side, this may be because of different rates of population aging or policies regarding seniors. On the supply side, there may be a relatively larger supply of potential PSWs in Ontario, perhaps because of differences in immigration or fewer alternative jobs for this skill group.

Our analysis is specific to this 2014 Ontario home care policy and thus may not translate to other jurisdictions where home care services are structured differently. For example, it would not be directly applicable to jurisdictions where these services are provided by a means other than managed competition.

## Conclusion

In the years prior to the 2014 policy, the government would have noticed increasing demand for low-wage home care workers, complaints from increasingly poorly paid workers and (perhaps) rising home care wages in the rest of the country. As such, it would have likely felt pressure to increase its existing minimum wage. This policy was simply a particular and public way for the Ontario Government to address increased demand and stagnant wages in a monopsony market. Whether this policy succeeded in improving retention and in attracting new workers to home care is unclear. It may have prevented impending "quits" from a disgruntled workforce but had no measurable effect on hours or tenure. Overall, the Ontario Government's policy seems to have formalized what less-controlled markets accomplished on their own in the rest of Canada.

## *Conflict of Interest*

The authors have no conflicts of interest to declare.

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### *Notes*

1. The general provincial minimum wage was \$7.75 in 2006 and \$11.00 in 2014 (ESDC 2018).
2. For an analysis of potential effects of wage increases on nurses, see Ahlburg and Mahoney (1996), Buchan and Black (2011), Condliffe and Link (2016), Ellenbecker et al. (2007), Gray et al. (1996) and Holmås (2002). For LTC workers' compensation and minimum wages, see Baughman and Smith (2012), Martin and Ramos-Gorand (2017), and Powers and Powers (2010). For an analysis of the UK's minimum wage laws in LTC homes, see Georgiadis (2006, 2012), Giupponi and Machin (2018), de Linde Leonard et al. (2014), Machin et al. (2003), Machin and Wilson (2004), and Metcalf (2004). For an analysis of wage changes for home care workers in Canada and the US, see Butler et al. (2014), Denton et al. (2006), Faul et al. (2010), Howes (2005), and Morris (2009).
3. We tested various start dates from 1997–2010 and did not find meaningful differences in the results.
4. We ran the regressions with and without year fixed effects and found no significant changes in the coefficients of interest.
5. UQR coefficients [i.e.,  $\partial Q_p(Y)/\partial X_i$ , where  $p$  indexes quantiles and  $i$  indexes observations] must be distinguished from traditional conditional quantile regression, which focuses on the quantiles of dependent variable conditional on covariates [i.e.,  $\partial Q_p(Y|X)/\partial X_i$ ]. An observation might be at very different locations in the unconditional and conditional wage distributions (e.g., a young female part-time worker's wage might be at a low wage quantile unconditionally, but compared to other young female part-time workers, her conditional wage quantile might be high).
6. Retroactive means that even though the first change was implemented on April 29, 2014, the affected home care PSWs received back pay to April 1, 2014.

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