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Overtime work among professional nurses during the COVID-19 pandemic

by Gisèle Carrière, Jungwee Park, Zechuan Deng and Dafna Kohen

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Overtime work among professional nurses during the COVID-19 pandemic

by **Gisèle Carrière, Jungwee Park, Zechuan Deng and Dafna Kohen**

The COVID-19 pandemic is expected to affect the workloads of health care workers (Government of Canada 2020), such as nurses, but the magnitude of such effects has not been quantified. Compiling data about nurses' working conditions is important because excessive workload and overtime hours have been linked to decreased well-being and have implications for the long-term health of workers and for health service delivery (Wilkins 2007; Tourangeau et al. 2010; Zeytinoglu et al. 2006). To shed light on this issue, this study compares nurses' overtime work hours^{1,2} before and after the onset of the COVID-19 pandemic.³

About one-quarter of nurses worked overtime in April and May 2020

Unlike the proportion of people working overtime in other occupations, which declined, the proportion of nurses working overtime remained constant from 2019 to 2020 in April and May. About 26% of all people employed in professional nursing occupations worked overtime.

For those in professional occupations other than nursing,⁴ the proportion working overtime dropped significantly to about 20% in 2020, from 28% in 2019.

These differences by occupation reflect increased demand for nursing work, while many other occupations experienced reduced workload because of COVID-19 (Deng et al. 2020). Increased demand for some occupations, such as in health care, may have increased the need for overtime hours, while this may not have been the case for other occupations.

Nurses who worked overtime worked up to five more hours per week in April and May 2020 than in 2019

Nurses who worked overtime significantly increased their hours in April and May 2020, compared with 2019. Nurses' weekly overtime hours increased from 6.6 hours in April 2019 to 9.7 hours in April 2020 and from 5.8 hours in May 2019 to 10.3 hours in May 2020.

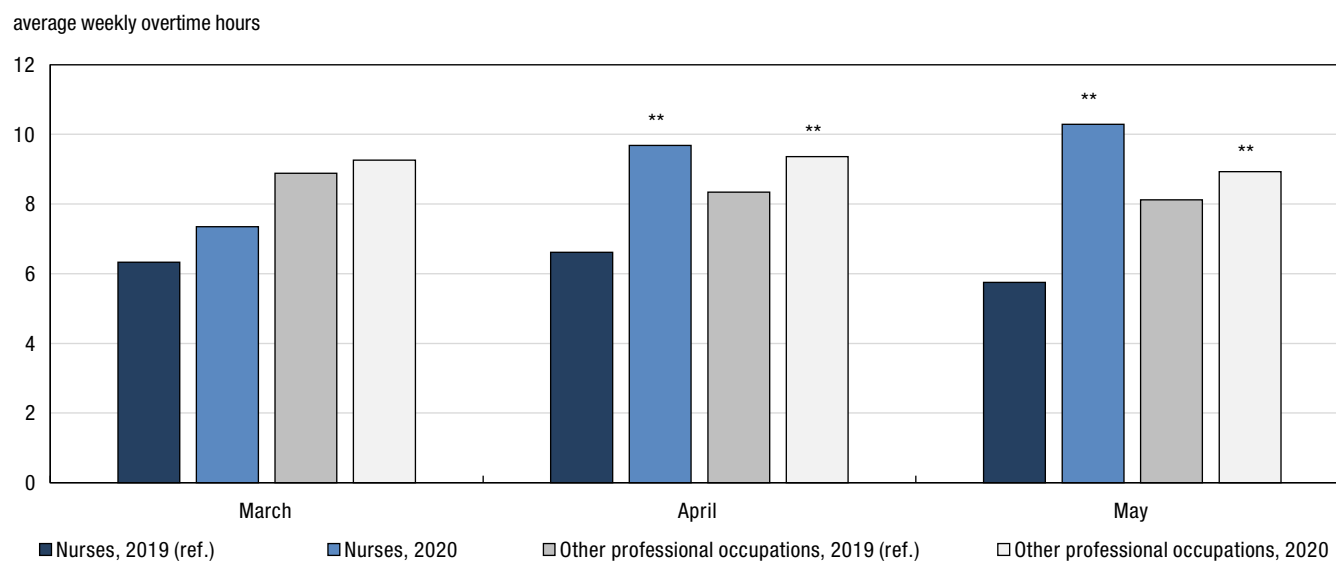
1. Professional occupations in nursing include nursing co-ordinators and supervisors, registered nurses, registered psychiatric nurses, and graduate nurses, coded according to the National Occupation Classification (NOC) 2016, Version 1.0. The NOC code that was used is (30).
2. Since January 1997, extra hours are collected for the Labour Force Survey only from employees, through two questions about the number of paid overtime hours worked in the reference week and the number of extra hours worked without pay.
3. The approximately 432,000 regulated nurses in Canada (Canadian Institute for Health Information 2019) make up about half of Canada's health care workforce, are often involved in front-line care and represent a critical part of health service provision. Based on the 2016 Census, professional nurses in Canada are primarily women (91.7%). One-third (31.5%) of them are younger than 35, half are aged 35 to 54 (48.5%), and one-fifth are aged 55 or older.
4. Professional workers in occupations other than nursing include the following National Occupational Classification (NOC) codes for people in occupations in Group A, since these usually require university-level education: 111, 112, 211 to 217, 311 to 314, 401 to 403, 411 to 416 and 511 to 513. More information about [NOC 2016](#), Version 1.0, is available.





Chart 1

Average weekly overtime hours of overtime workers in professional occupations in nursing and other occupations, for selected months of the COVID-19 pandemic in 2020 relative to 2019, Canada



** significantly different from reference category ($p < 0.01$)

Notes: "Ref." is reference points from the same month in 2019. "Other professional occupations" represent professional occupations usually requiring a university education.

Source: Statistics Canada, Table 14-10-0308-01, Employees working overtime (weekly) by occupation, monthly, unadjusted for seasonality.

Other professional workers who worked overtime increased their weekly overtime hours to a much lesser extent. These other workers' weekly overtime hours for April and May 2019 were 8.3 and 8.1, respectively, compared with 9.4 and 8.9, respectively, in 2020.

These significant changes to average weekly overtime hours from 2019 to 2020 among nurses working overtime were consistent with changes to total actual hours worked for all nurses (i.e., working overtime or not) from 2019 to 2020 (data available upon request).

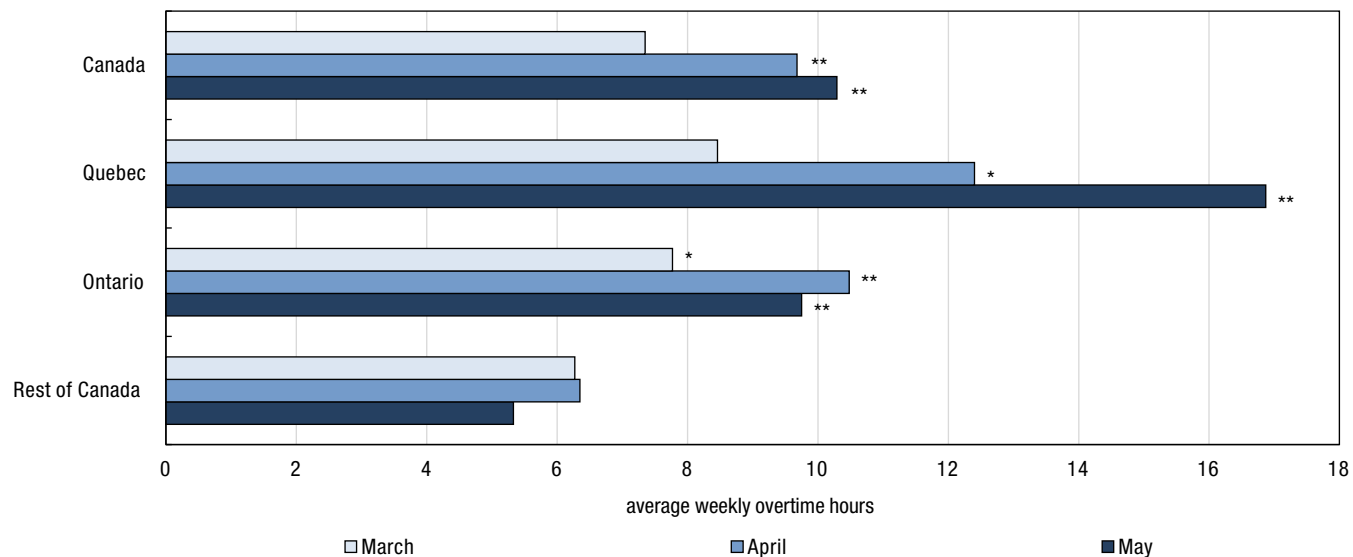
Responses of provincial and federal governments to the pandemic included increasing health care capacity through postponement of non-urgent scheduled surgeries. Hospitals and health care facilities reoriented their priorities to intake only urgent and emergency procedures in 2020 (Government of Canada 2020). While this means the health care system in 2020 was operating differently compared to the same reported months in 2019, it also suggests that these reported increases to nurses' overtime hours during the pandemic may be conservative estimates and that the increases to overtime could have been even greater had those responses not been implemented.

Increases in nurses' average weekly overtime hours from 2019 to 2020 depended on the province. Average overtime hours increased in Quebec and Ontario but not in the rest of Canada. In Quebec, average overtime hours increased significantly from 6.2 hours in May 2019 to 16.9 in May 2020. In Ontario, nurses' average overtime hours increased significantly from 4.7 hours in May 2019 to 9.8 in May 2020. These two provinces had the largest increases in the number of COVID-19 cases in April and May.



Chart 2

Average weekly overtime hours of overtime workers in professional occupations in nursing, by area, 2020



* significantly higher than reference category ($p < 0.05$)

** significantly higher than reference category ($p < 0.01$)

Source: Statistics Canada, Table 14-10-0308-01, Employees working overtime (weekly) by occupation, monthly, unadjusted for seasonality.

Overtime hours doubled for the oldest age groups

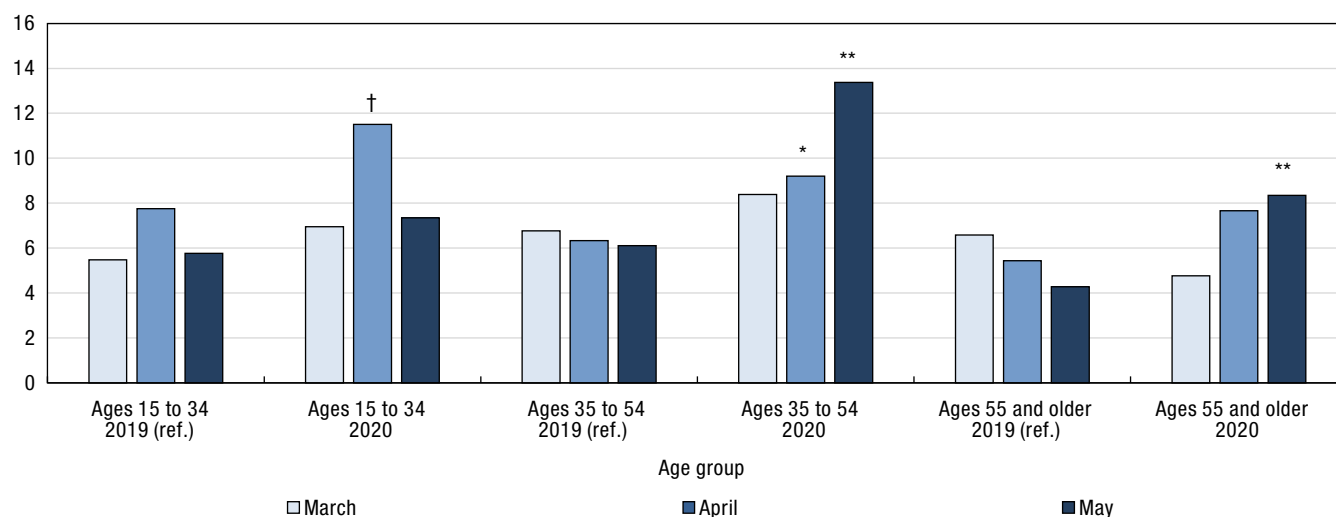
Among nurses working overtime, average weekly overtime hours doubled from May 2019 to May 2020 for those aged 35 to 54. Overtime hours also doubled over the same period (from 4.3 hours to 8.3) for those aged 55 and older. This may reflect the use of more experienced nurses to manage emerging case complexities related to COVID-19 or a strategy to reintegrate retired nurses into the workforce to meet demand (Government of Manitoba 2020; Registered Nurses' Association of Ontario 2020; Vogel 2020). Such practices have been described elsewhere in strategies for pandemic planning (Abir et al. 2020).



Chart 3

Average weekly overtime hours of overtime workers in professional occupations in nursing, by age group, for selected months of the COVID-19 pandemic in 2020 relative to 2019, Canada

average weekly overtime hours



* significantly different from reference category ($p < 0.05$)

** significantly different from reference category ($p < 0.01$)

† significantly different from reference category ($p < 0.10$)

Note: "Ref." is reference points from the same month in 2019.

Source: Statistics Canada, Table 14-10-0308-01, Employees working overtime (weekly) by occupation, monthly, unadjusted for seasonality.

Work characteristics have implications for well-being

Work characteristics, including overtime work, have been linked to health. In Canada, findings from national data suggest associations between nurses' work demands and health outcomes. Results from the Canadian Community Health Survey⁵ showed that even though job satisfaction did not differ between nurses and other workers and job insecurity was lower for nurses, almost half of nurses (48.5%) reported high work stress. They also reported high levels of psychological demands and physical exertion. These outcomes were significantly different from those for other workers, and this pattern has persisted over time (Bourgeault et al. forthcoming).

Limitations

Labour Force Survey results for the territories were excluded for jurisdictional analyses. Specific reasons for patients' accessing nurses' care (e.g. diagnosis, confirmation of COVID-19 infection) are not available from these data. Licensed practical nurses are not included in the NOC code used to define professional occupations in nursing. The specific scope of nursing practice (e.g., nurse practitioner, community nurse) and facility type (e.g., long-term care facility, hospital) could not be comprehensively distinguished for this analysis. Therefore, presented results may not be generalizable to every type of nursing work or care facility.

5. In addition to other referenced publications, the Canadian Community Health Survey (CCHS) was used. This study used the 2017/2018 and 2012 CCHS. The CCHS is a cross-sectional survey that collects information related to health status, health care utilization and health determinants for the Canadian population. It surveys a large sample of respondents and is designed to provide reliable estimates at the health region level. The CCHS covers 98% of the Canadian household population aged 12 and older (aged 15 and older for 2012). It excludes members of the Canadian Forces and residents of correctional institutions, Indian reserves, other Indigenous settlements, and some remote areas. For further information about the CCHS, see [3226](#) and [5015](#).



Conclusion

These findings underscore some of the increased work demands placed on nurses during the COVID-19 pandemic. The prevalence of overtime work and increased overtime hours, combined with findings that highlight associations between work factors and significant impacts on well-being for nurses, warrant attention to manage the risk of health care demands over the short and long term. In addition, these need to be monitored and tracked over time.

Methodology

Data sources

Data from Statistics Canada's Labour Force Survey were used to report the prevalence of working overtime⁶ and average weekly overtime hours worked (paid and unpaid) for professional occupations in nursing.^{7,8}

Pre-pandemic national population-based data from the 2016 Census were used to profile nurses' demographics and, together with published evidence of health outcomes from Statistics Canada's national Canadian Community Health Survey⁹ and other referenced, published research on the work circumstances of nurses of different ages to draw out implications for the well-being of nurses of any changes reported here to work patterns based on the Labour Force Survey in 2020 and 2019.¹⁰

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 10. Demographic information on nurses from the [2016 Census](#) is from Statistics Canada's 25% sample microdata file for the household population. The census provides information on specific occupations based on NOC 2016.



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