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“My problems aren’t severe enough to seek help”: Stress levels and use of mental health supports by Canadian hospital employees during the COVID-19 pandemic

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ABSTRACT

Due to the unique set of stressors associated with the COVID-19 pandemic, healthcare workers in acute care settings may be facing elevated rates of mental health symptomatology. The purpose of this study was to assess levels of depression, anxiety, and stress in a sample of healthcare employees working in hospitals and their use of formal and informal mental health supports. Data was gathered over a three-week period in December 2020 as COVID cases began to rise sharply in Ontario, Canada. Results from an online survey of 650 healthcare employees suggested that overall levels of depression, anxiety, and stress were mild. However, a significant minority of participants reported severe or extremely severe levels of depression (14.4%), anxiety (21.8%), and stress (13.5%). Levels of distress were higher among women, younger participants, those who did not work directly with COVID+ patients, and those who were re-deployed. Use of formal mental health supports (e.g., Employee Assistance Plans, teletherapy) was very low (<10%), with the most frequently-reported reason for not using supports being “problems not severe enough to require this service”. Implications are considered for healthcare policy decisions as hospital systems attempt to address the mental health needs of their employees.

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The COVID-19 pandemic has had devastating impacts on the physical and emotional health of healthcare employees as they have struggled to manage the morbidity and mortality of this disease. However, early findings suggest that this population is disinclined to use formal mental health supports (eg. 1). Research on the impact and management of COVID-related mental health issues will be crucial to lay the empirical foundation for a coordinated health policy response by hospital administrators to address distress, dysfunction, and attrition among healthcare employees. The purpose of this study was to assess mental health symptomatology as well as use of mental health supports in healthcare employees working in acute care settings during the second wave of the COVID-19 pandemic in Ontario.

Stressors specific to the COVID-19 pandemic include high rates of illness [1] and deaths among healthcare workers [2]; exhaustion, burnout, concerns about personal safety, family infection, patient mortality [2–5]; community stigma [6]; lack of Personal Protective Equipment (PPE), organizational preparedness[7]; experiences of moral injury [8]; and feelings of powerlessness to help pa-

tients [9]. A meta-analysis of 50 studies on the mental and physical health impacts of COVID-19 identified high levels of stress (33% of the sample), anxiety (24%), psychological distress (41%), traumatic symptoms (13%), poor sleep quality (43%), and insomnia (37%) in healthcare workers [10]. The intensity and nature of these impacts appear to differ between groups of healthcare workers, with nurses and female healthcare workers being disproportionately affected [11,12].

To date, there has been little data available on mental health symptoms and support use specific to Canadian healthcare professionals. A few surveys of healthcare workers [13] and nurses [14] conducted during the first wave of the pandemic found high levels of depressive, anxious, and traumatic symptoms. Interviews conducted in May and June of 2020 by our team with nurses working in Canadian acute care hospitals suggested that, although participants reported high levels of stress and other mental health symptomatology (e.g., depression, anxiety, trauma, sleep/eating disturbances, increased alcohol use), few expressed interest in formal mental health supports (Authors, under review).

Research on help-seeking by healthcare workers outside of Canada during the COVID-19 pandemic has demonstrated low usage of formal supports (e.g., telephone hotlines) but high usage of informal supports (e.g., family and friends) [1,2,9,15]. The COVID-

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Table 1
Participant demographics and job details (N = 650).

Demographics	Frequency or Mean
Gender	
Male	83 (12.8%)
Female	539 (82.9%)
Did not report	25 (3.8%)
Ethnic background	
North American	143 (22%)
North American Aboriginal	27 (4.2%)
European	302 (46.5%)
Latin, Central, South American	20 (3.1%)
Asian	38 (5.8%)
Did not report	101 (15.5%)
Job classification	
Registered Nurse	273 (51.1%)
Physicians	26 (4.9%)
Clerical	84 (15.7%)
Allied Professionals	92 (17.2%)
Skilled Trades	5 (0.8%)
Management	54 (10.1%)
Did not report or other	116 (17.8%)
Redeployed during pandemic	
Yes	91 (14%)
No	532 (81.8%)
Prefer not to say	8 (1.3%)
Missing	19 (2.9%)

Note. For ethnicity, frequencies (and percentages) are reported only for categories with more than 7 individuals, as per the research ethics board at the University of Windsor.

19 pandemic has the potential to exacerbate a pre-existing reluctance to seek formal support among healthcare professionals [11]. Pre-pandemic barriers to seeking supports reported by this population have included lack of time, stigma, fear of professional consequences, and access issues [11,12].

1. Research questions

To our knowledge, no data has been gathered specific to Ontario on the levels of anxiety, depression, and stress or usage of formal mental health supports in employees working in acute healthcare settings as the second wave of COVID cases rose sharply. To address this issue, a cross-sectional correlational survey was administered with the following objectives:

- (1) To measure levels of stress, anxiety, and depression among healthcare workers and identify group differences based on demographics and/or job characteristics.
- (2) To assess use of formal and informal mental health supports, usefulness of supports, and reasons for non-use and to identify groups differences in support usage.

2. Methods

2.1. Participants

At the time the survey was administered, staff at a mid-sized urban Ontario acute care hospital included 4054 employees (87% female, $n = 3525$), and 350 physicians (no gender breakdown available). All staff members and physicians were invited to participate in the study. The current sample consists of 650 respondents (response rate of 16%): registered nurses (33%), Registered Practical Nurses (9%), clerical (9%), allied health professionals (12%), radiation therapists (1%), and managers (7%). The majority of the sample (82.9%) self identified as female (see Table 1). Participants' average age was 39.57 years and mean years working in healthcare was 14.01.

Table 2
DASS subscale clinical cut-off scores.

Clinical classifications	Depression	Anxiety	Stress
Normal	0–9	0–7	0–14
Mild	10–13	8–9	15–18
Moderate	14–20	10–14	19–25
Severe	21–27	15–19	26–33
Extremely Severe	28+	20+	34+

2.2. Instrument

Mental health symptomology. Participants completed the 21-item Depression, Anxiety and Stress Scales (DASS) [16]. The decision to focus on depression, anxiety, and stress was based on qualitative findings described above (Authors, under review). The factor structure of this measure has been demonstrated in previous studies and results show good correlations with other validated measures including the Beck Depression Inventory and Beck Anxiety Inventory [16]. Responses on the DASS were scored on a 4-point Likert scale ranging from 0 (*did not apply to me at all*) to 3 (*very much or most of the time*). Examples of items on this measure include, “I found it difficult to work up the initiative to do things” and “I found it difficult to relax”. Total scores and sub-scale scores were determined by summing relevant items and then multiplying the final sum by two (the DASS-21 represents the short-form of the full scale) [17]. Sub-scale scores range from “mild” to “extremely severe” (see Table 2). Cronbach alphas for the DASS in this sample were acceptable: Depression ($\alpha = 0.88$), Anxiety ($\alpha = 0.77$), and Stress ($\alpha = 0.86$).

Mental health support programs. Participants were provided with a list of local, provincial, and federal mental health support programs with examples and descriptions of the services. The resources included COVID-specific teletherapy initiatives, the hospital's Employee Assistance Program (EAP), in-person counselling/therapy (other than the EAP), online self-help, formal support groups, informal peer groups, and other forms of coping (e.g., hobbies, exercise). Participants were asked if they had used each support; if they had, they were asked how frequently they used it (i.e., several times a week, weekly, several times a month, monthly, less than once a month) and how helpful it was on a 5-point Likert scale ranging from 1 (*not effective at all*) to 5 (*extremely effective*). If participants did not endorse using the support, they were asked to indicate the main reasons for non-use. Examples of response options included “did not know this was available”, “not enough time/not convenient”, and “problems not severe enough to require this service” (see Table 3). The list of supports was developed based on consultation with local community mental health organizations and clinical psychologists (i.e., subject matter experts) as well as an environmental scan of the current supports available.

Demographics. Participants were asked to report their gender, age, and ethnic background, as well as questions about the nature of their work at the hospital (patient contact and proximity to COVID patients), job classification (e.g., registered nurse, physician, manager), and number of years in healthcare (see Table 1).

2.3. Procedure

Following Research Ethics Board (REB# 20–234) clearance at the hospital and the researchers' university, recruitment emails were distributed to all staff and physicians by the hospital IT department to participants with hospital email addresses. The recruitment email included a link to an online survey (hosted on Qualtrics®), which took approximately 10 minutes to complete. Two additional reminder emails were sent at intervals of 7–10 days

Table 3
Program support use, effectiveness, and reasons for non-use.

Program type	% use and frequency of use	If used, how helpful	Top reasons for non-use
COVID-specific teletherapy	1.4%, 62.5% used it less than once a month	62.5% found it moderately or extremely effective	Problems not severe enough (46.0%) Did not know it was available (25.1%) Not enough time/not convenient (11.3%)
Local, provincial or national helplines	1.6%, 55.5% used monthly or less than once a month	55.5% found it slightly to moderately effective	Problems not severe enough (54.2%) Did not know it was available (16.0%) Not enough time/no convenient (11.1%)
Hospital Employee Assistance Program	8.8% used it, 58.8% used it less than once a month	52.9% found it moderately or very effective	Problems not severe enough (58.0%) Not enough time/not convenient (10.6%) Other (9.1%)
In-person therapy	6.6%, 52.6% used it monthly or less than once a month	57.9% found it to be moderately or very effective	Problems not severe enough to require this service (55.9%) Not enough time/not convenient (17.0%) Other (10.4%)
Online self-help	5.9%, 55.9% used it monthly or less than once a month	67.7% found it slightly effective or moderately effective	Problems not severe enough to require this service (50.7%) Did not know this was available (25.0%) Not enough time/ not convenient (8.5%)
Formal support groups	0.5%, 66.7% used it less than once a month	100% found it very effective	Problems not severe enough to require this service (51.8%) Did not know this was available (19.8%) Not a good fit for my problems (10.0%)
Informal peer support	77.0%, 58.0% used this several times a week	71.6% found this moderately effective or very effective	Problems not severe enough to require this service (49.6%) Other (14.6%) Concerns about stigma (13.0%)
Other coping (e.g., exercise, hobbies)	87.7%, 72.7% used this several times a week	65.6% found this moderately effective or very effective	Not enough time/ not convenient (41.3%) Not a good fit for my problems (22.2%) Other (15.9%)

Note. Participants could endorse multiple forms of support so overall numbers do not add up to 100%.

after the study opened. All participants were given a \$5 Tim Horton's card as compensation for their participation.

The survey was available between November 30 and December 19 of 2020, which coincided with the second wave of COVID-19 cases in Ontario. At that time, COVID patients represented approximately 50% of cases in the Intensive Care Unit at this hospital; staff shortages at this time were common and non-urgent surgeries had been canceled to accommodate the surge of COVID-related admissions [18].

3. Results

3.1. Data screening

Missing data for the demographics questions was less than 5% for all variables except for ethnicity (15% did not respond). Missing data on the DASS scales ranged from 10.3% for the depression subscale to 11.4% for the stress subscale. Across all items the percent missing was 12.8%. A Little's MCAR test confirmed that the data was missing completely at random [$\chi^2(7, N = 650) = 4.471, p = 0.724$], illustrating no conditional dependencies between missing values on one variable and means on another variable. The small amount of missing data in the sample was therefore random and did not introduce any estimation bias into the inferential analyses.

According to the Human Resources department, our sample distribution of gender (83% female) accurately reflected the gender breakdown of employees at this hospital (86.5% female). The sample proportions by job classification closely approximated the job classification proportions for the organization as whole, with small underrepresentation of physicians [7.9% v. 4.1%, $z = 13.51, p < .001$] and general service employees [13.6% v. 3.8%, $z = 34.6, p < .001$]. All other job classifications differed by no more than 1.7% between

the organization and the sample. The hospital does not collect data on employees' ethnic origins, and so it was impossible to make comparisons on ethnic bases.

All continuous variables were screened for assumptions of univariate normality, outliers, and distributional range. Visual inspection of histograms indicated a positively-skewed distribution for depression and anxiety with a moderate positive skew for stress and the DASS total score. Q-Q plots confirmed these deviations from normality. Shapiro-Wilk tests of normality were significant ($ps < 0.001$) for all DASS subscales. With regards to outliers, there were nine cases on the DASS anxiety scale (scores ranged from 29 to 38), six on the depression scale (38–42), two on the stress scale (42), and six on the total scale score (99–118); the outliers on all these scales were comprised largely of the same set of individuals. Because of the large sample size and the descriptive nature of the study, outliers were not removed from the sample.

3.2. Demographic predictors of anxiety, depression, and stress

Gender and Ethnicity. Independent samples *t*-tests were used to assess gender differences in stress, anxiety, and depression scores as well as the overall DASS score. Analyses were limited to individuals self-identifying as either male or female as there too few participants reporting other gender identities to yield interpretable findings. There were no significant gender differences for depression, stress, or the DASS total score; however, women did report significantly higher anxiety relative to men (see appendix A, p. 1). Limited diversity prevented inferential analyses on these variables, but descriptively, participants identifying as "European/North American-other" showed the highest level of stress, anxiety, and depression relative to the other ethnic groups (see appendix A, p. 1).

Age and years in healthcare. To examine the associations between age and years in healthcare, Pearson's zero-order correlation were computed. Age was negatively associated with depression ($r = -0.18$, $p < .0001$), anxiety ($r = -0.26$, $p < .0001$), stress ($r = 0.18$, $p < .0001$), and total score ($r = -0.23$, $p < .0001$). Years in healthcare and DASS scores for all subscales were also negatively correlated, r s range from -0.20 to -0.27 (all p s < 0.0001).

Patient contact, redeployment, and stress. To investigate the association between patient contact and levels of stress, a one-way ANOVA was conducted with patient contact as the independent variable (patient contact [COVID], patient contact [non-COVID] and non-patient contact) and the DASS subscales as the respective dependent variables. There were significant differences for stress. Post hoc tests indicated that those with patient contact in COVID units had significantly lower stress relative to the other two groups. No main effects were found for any other DASS variables (see appendix A, p. 2). Significant differences between being redeployed versus not were found on all DASS subscales, and in the total score (see appendix A, p. 2). Those who were redeployed had higher scores on depression, stress, and anxiety as well as total scale score.

Job classification and stress. To explore the relationship between job type and DASS subscale scores, job classifications were grouped into six categories: *nursing, physicians, clerical/general service, allied health professions, skilled trades, and management*. Prior to conducting these analyses, a chi-square analyses indicated that there were significant gender differences in job classification in which men were more likely to be physicians ($n = 16$, 61%) than women ($n = 10$, 39%). All other job classifications had a much higher percentage of women than men, with the exception of "senior management", in which gender distribution was approximately equal. However, the relationship between job classification and DASS subscales was independent of gender and ethnicity.

One-way ANOVAs were then conducted with job classification as the IV and DASS subscales as the respective DVs. There were significant differences for the DASS total score, anxiety, and stress but not for depression (see appendix A, p. 3). Post-hoc analyses were conducted to explore group differences using a Sidak-Bonferroni correction for familywise error [19]. Nurses, clerical staff, allied health professionals, and managers showed the highest level of distress across all DASS subscales, with physicians and skilled trade professionals showing relatively low levels of distress (see appendix A, p. 4–5). There were no significant differences between job classifications for the use of formal supports [χ^2 (12, $N = 631$) = 3.38, $p = .992$; $\phi = 0.073$]. There was, however, a significant difference in the use of informal supports [χ^2 (24, $N = 575$) = 36.57, $p = .048$; $\phi = 0.252$], with 14% of general service employees reporting that they did not use informal sources of support compared to the rest of the employee categories (0–4.5% also reported no use of formal services).

Support use by level of distress. Logistic regression models examined the relationship between distress levels on the DASS and support use. Support use was coded as a binary variable where 1=use of any formal supports (e.g., EAP, teletherapy, formal support groups) and 0=no use of these formal supports. We used the normed DASS cut-off scores for the independent variables because they provide a clearer interpretation of results. A hierarchical approach entering gender and job type as control variables was used. In the second step we entered the DASS categories for Depression, Anxiety, and Stress. The three DASS subscales were assessed in three separate models due to the level of multicollinearity across the three subscales. Because all variables in the model were categorical, effects are interpreted relative to a reference group (female and RNs were the reference categories for gender and job type respectively). For the DASS subscales, the "normal" classification was used as the reference group in all cases. Neither of the control vari-

ables were significantly related to the use of formal sources of support.

Use of any formal support was quite low, with only 20% of the sample using at least one formal support; however, 96% of the sample reported using at least one informal source of support (see Table 3). The most common reason that participants provided for not using formal supports was (1) their problems/challenges were not severe enough followed by (2) not enough time. Different patterns were observed in formal support use relative to DASS subscale scores (see appendix A, p. 6). In the case of stress categories, there was a linear increase in the likelihood of using a formal source of support as stress increased relative to the normal category, from 1.8 times for those individuals in the mild stress category to 4.18 times for the extremely severe category. A similar pattern was observed for anxiety; in this case, only the severe category (2.3x) and extremely severe (2.7x) were more likely to use formal supports. Depression followed a nonlinear pattern: those in the moderate (1.99x) and severe (1.96x) were more likely to use formal supports but those in the extremely severe category showed no differences from the normal category.

Contingency tables were used to follow up on these logistic regressions to gain more insight into the relationship between support use and levels of distress as indexed by the DASS categories. These follow-up analyses indicated that relatively large percentages of individuals in the severe and extremely severe categories were not using formal supports. For the DASS stress subscale, the majority in the severe (68%, $n = 40$) and extremely severe categories (63%, $n = 12$) reported not using formal supports. The same held true for the Anxiety (70%, $n = 45$ for severe; 67%, $n = 42$ of extremely severe) and Depression subscales (72%, $n = 34$ of severe; 73%, $n = 27$ of extremely severe).

4. Discussion

4.1. Stress in healthcare workers

Overall, mean levels of depression, anxiety and stress in this sample fell in the mild range, although many participants reported severe or extremely severe levels of depression (14.4%), anxiety (21.8%), and stress (13.5%). This suggests that the typical response to challenges associated with the COVID-19 pandemic has been resilience, which corroborates the findings of Chew et al. [20] but contrasts sharply with other investigations showing high levels of distress among healthcare workers globally [3,21,22] and in other Canadian provinces [14]. These dissimilarities could be due to differences in sample composition, workplace setting, choice of measurement instrument, and timing of data collection as well as the intensity of local outbreaks and responses by employers, public health units, and levels of government.

Women reported higher levels of anxiety, and age was negatively correlated with depression, anxiety, and stress subscale scores. The finding of higher levels of anxiety among female healthcare workers is consistent with other investigations [12,23]; to our knowledge, other investigations have not considered the possible impact of age on distress levels. Given the correlation between age and years working in healthcare, younger participants might have been showing higher levels of distress due to their lack of prior experience or training related to pandemics. Younger participants may also have had different life stressors contributing to their distress and impairment (e.g., younger children, financial precariousness) or may simply have been more comfortable reporting distress.

Participants who described their work as involving patient contact in COVID units reported lower levels of stress compared to those with patient contact in non-COVID units or no patient contact. This finding could be interpreted as a form of anticipatory

anxiety, which was also expressed by participants in our earlier qualitative investigation (Authors, under review). Employees working outside COVID units may also have experienced vicarious traumatization [24]. Healthcare workers on COVID units may also have been allocated better or more PPE, thus mitigating their levels of distress about contracting the virus themselves, a stressor identified in other studies [2,4,25].

Those who were redeployed during the pandemic reported higher total and subscale scores on the DASS. Again, this is unsurprising relative to the results from interviews conducted by our team in the spring: nurses who were redeployed reported unique stressors including loss of social support from their “work or unit families”, unfamiliarity with setup and practices in redeployed units, and, sometimes, having to return to a unit where they did not wish to work. Nurses, clerical staff, allied health professionals, and managers reported the highest scores across all DASS subscales while physicians and skilled trade professionals reported lower levels of distress. This finding supports results from other investigations [11] while also extending research to other professional groups in healthcare settings.

5. Support use among healthcare workers

Use of any type of formal support was very low for every support type assessed; however, endorsement of informal supports was very high. Linear relationships were observed between levels of stress and anxiety and use of formal supports. However, depression scores demonstrated a non-linear relationship, where those reporting moderate or severe levels were more likely to seek formal support but those reporting extremely severe levels were no more likely to seek support than those in the “normal” category. This finding is consistent with underengagement of help-seeking in cases of severe depression as the debilitating nature of the depressive symptoms themselves represent a barrier to help-seeking. Across all categories of the DASS, participants reporting severe or extremely severe levels of stress, anxiety and depression (11%, 19% and 13%, respectively) showed low uptake of formal supports. This is a particularly important and crucial finding given that the most commonly given reason for not seeking out service was that participants did not believe their problems were severe enough to warrant formal supports.

Increasing formal support usage, among healthcare workers for those who need it, calls for a multimodal approach by hospital administrators and coordination amongst multiple departments both in and outside hospitals. Some participants were not aware that supports were available, suggesting that information about services should be shared more widely and through different platforms (e.g., emails, posters, direct communication by managers, hospital social media sites). In other cases, the availability of external support services was not convenient, especially for those who worked part-time or night shifts; this might require negotiations with partner organizations to make support available on weekends or in the evenings. A policy change to increase funding may be required for additional counselling sessions through the workplace EAP; anecdotally, many participants reported that the number of sessions offered was insufficient to address their concerns. Administrators would also be advised to facilitate and support informal support structures occurring within the hospital (e.g., peer support groups, debriefing with managers).

Many participants endorsed high levels of distress on the DASS but low uptake of formal supports and described their problems as “not severe.” This is concerning as these individuals may be more likely to develop mental health disorders and find over time that their social and occupational functioning are compromised. Interventions to reach this group may require a coordinated psychoeducation campaign on the signs, symptoms, and impacts of dis-

tress, as well as interventions designed to de-stigmatize mental health support use in this population [26] and to address myths and misinformation about these services. Hospital administrators are encouraged to partner with local mental health organizations and university counselling programs to create and deploy psychoeducation interventions.

Hospital administrators would also be advised to consider contributors to employee stress and resilience at a more systemic level rather than overemphasizing individual coping strategies, which may be poorly received (Authors, under review). Interventions might include increasing staffing levels, bringing in nursing students to serve as nursing aids, advocating for ongoing pandemic-related pay bonuses, facilitating time off for staff, creating calm spaces in the work environment, and offering small perks to employees where possible (e.g., free coffee, free parking, access to gym equipment) [27–29].

5.1. Limitations

Data was gathered through survey during one three-week period at one site, which limits generalizability of these findings to other healthcare workers in Canada. Differences in hospital management practices may limit generalizability of these findings sharply, even within the same province. It is not possible to make any attributions with regards to causality, for example, in the relationship between demographic group membership and distress levels. Certain ethnic groups appear to be underrepresented in the study sample although this may reflect underrepresentation in the population of healthcare workers. Unfortunately, we were not able to determine whether levels of stress, anxiety, and depression varied by participant ethnicity due to sample sizes; however, we note that many members of marginalized groups may have experienced greater distress during the pandemic [30]. Healthcare workers evincing high or very high levels of distress may have been less likely to participate, meaning that the true levels of distress in the population may be much higher. Finally, other kinds of mental health responses (e.g., traumatic symptoms, alcohol/substance use) were not measured in this investigation but might be relevant to investigate in future studies.

6. Conclusion

The results of this investigation can inform the coordination of response to the impact of the COVID-19 pandemic on healthcare providers. Levels of depression, anxiety, and stress most often fell into the “mild” category; however, a sizeable minority of participants endorsed severe or extremely severe distress. Formal support use was very low in this sample but the vast majority endorsed use of informal supports (e.g., hobbies, social support). These findings suggest that over-reliance on formal supports by healthcare managers, whether in the form of teletherapy, EAP or counselling, are unlikely to provide the breadth and depth of support that is required for healthcare workers during a pandemic. These findings point to several possibilities for intervention by healthcare management, such as psychoeducation about signs and symptoms of distress as well as possible impacts on functioning and de-stigmatization of mental health concerns among healthcare employees. Healthcare workers who may have increased need of support include younger employees, those who were redeployed during the pandemic, and those who were not exposed to COVID+ patients. Hospital management would be encouraged to develop, modify, and/or bolster existing programs that target non-frontline hospital employees.

Declaration of Competing Interest

The authors have no conflict of interest to declare.

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Supplementary materials

Supplementary material associated with this article can be found, in the online version, at doi:[10.1016/j.healthpol.2022.01.002](https://doi.org/10.1016/j.healthpol.2022.01.002).

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