A PROVINCIAL STUDY OF NURSES' COVID-19 EXPERIENCES AND PSYCHOLOGICAL HEALTH AND SAFETY IN BRITISH COLUMBIA, CANADA

FINAL REPORT

THE UNIVERSITY OF BRITISH COLUMBIA

BC NURSES' UNION
Standing up for health care

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This research project was funded by the BC Nurses' Union. The research provides valuable insights into the conditions of nurses' work environments and the state of their psychological health and safety and the quality and safety of their care delivery during the COVID-19 pandemic.

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TABLE OF CONTENTS

LIST OF TABLES

Community Care

Long-term Care

LIST OF FIGURES

Executive Summary

Overall Nurses

Acute Care, Direct Care Providers

Community Care

Long-term Care

Executive Summary

Results of the Follow-up Provincial Survey

OVERALL KEY FINDINGS FOR ACTIVE NURSES (N=3676)

This report summarizes findings from a COVID-19 follow-up survey to the psychological health and safety survey study conducted between October and December 2019. The follow-up survey took place between June and July 2020 and included questions from the previous survey and new questions on the COVID-19 pandemic and nurses' work experiences. The executive summary presents results on key variables, such as psychological health and safety, followed by results aggregated by work sector: acute care, community care and long-term care sectors. This section is on Active Nurses (N=3676), nurses who self-reported as actively working at the time of the study, regardless of sector. Demographic comparisons between the study sample and Canadian Institute for Health Information (CIHI)[1] data on the BC nursing workforce showed our sample was representative of provincial nurses with respect to age, gender, professional designation and employment status. Table 1 contains some key findings from the COVID-specific questions. Highlighted cells illustrate findings of potential worry based on percentages of approximately 40% or over.

Table 1. Key findings from COVID-specific questions

Finding	**Follow-up % (N=3676)**
COVID-19 within the workplace	
Weekly or more frequent direct contact with COVID-19 patients	21
Told to work despite possible or confirmed exposure to COVID-19	24
Experienced symptoms similar to COVID-19	31
Tested for COVID-19	25
Somewhat to extremely concerned about contracting COVID-19 at work	80
Somewhat to extremely concerned about bringing COVID-19 home	86
Inadequate staffing	52
Inadequate/no training to work safely with COVID	34
Disagree that PPE is high quality	49
Disagree that there is sufficient PPE access to perform work safely	42
Time since last N95 fit test ≥ 2 years or never	20
Not confident in organizational handling of pandemic	25
Not confident in manager's handling of pandemic	28
Not supported by organization during COVID	18
Daily or multiple times a day changes to COVID-19 related protocols and policies	27
Transparency on organizational pandemic decisions rated as poor or failing	41
Relationships with colleagues worsened during COVID-19 pandemic	24
Relationships with manager worsened	31
Relationships with rest of team worsened	23

[1] Canadian Institute for Health Information. *Nursing in Canada, 2019: A Lens on Supply and Workforce.* Ottawa, ON: CIHI; 2020.

Table 2 compares findings from the original survey and the follow-up survey when applicable. Pink highlighting is used to show worsening findings and green is used to show improving findings.

Areas of worsening included higher levels of poor mental health (anxiety, depression, emotional exhaustion) and general negative treatment in the workplace; and lower quality of nursing care.

Areas of improvement included a decrease in nurses who scored high in depersonalization, decreases in nurses who rated patient safety in their workplace poorly, and decreases in nurses who would not recommend their workplace to friends and colleagues. The prevalence of workplace violence decreased across all types of direct exposure (e.g., physical assault, threat of assault) and indirect exposure (i.e., witnessing workplace violence without being involved). There was also improvement in the prevalence of most negative experiences as a result of exposure to workplace violence, with affirmative response proportions dropping for absenteeism, presenteeism, and physical injury.

Suicide ideation was a new question in the follow-up survey. Nurse responses were compared to national suicide statistics from the Public Health Agency of Canada[2] (See Table 3). Our nurse sample had prevalence rates two to three times higher than the national average for: lifetime suicidal thoughts, plans, and attempts; past year suicidal thoughts.

[2] Public Health Agency of Canada. (2020, July 17). Suicide in Canada: Key Statistics. https://www.canada.ca/en/public-health/services/publications/healthy-living/suicide-canada-key-statistics-infographic.html

Table 2. Key findings on psychological health and safety and quality and safe care provision among follow up survey respondents and baseline survey respondents (when applicable)

Finding	Original % (N=5034)	Follow-up % (N=3676)
Nurse outcomes		
Meets or exceeds cutoff for PTSD measure	48	47
Moderate to severe anxiety	28	38
Moderate to severe depression	31	41
High emotional exhaustion	56	60
High depersonalization	30	27
Low personal accomplishment	32	33
Alcohol and substance use (over the past six months)		
Drinks alcohol once a week or more		44
Smokes once a week or more		12
Used illegal substances in the past six months		2
Psychological safety at work		
Experienced discrimination	11	15
Experienced bullying or harassment	23	24
Experienced unfair treatment due to mental illness	2	3
Quality and safety of care		
Poor or fair general quality of nursing care	11	14
Poor or fair quality of nursing care last shift	14	15
Failing or poor rating of patient safety	20	14
Would not recommend to friends for care	23	20
Would not recommend to colleagues for work	35	29
Quality, safety, and workload		
Patient incidents involving respondent (% for responses noting 'monthly' frequency or higher)		
Complaints from patients and/or their families		41
Urinary tract infection		23
Pneumonia		20
Nursing tasks necessary but left undone last shift (% for 'Yes' responses)		
Develop or update nursing care plans/pathways		40
Comfort/talk with patients		38
Educating patients and family		26
Non-nursing tasks performed last shift (% for 'Yes' responses)		
Clerical duties		71
Obtaining supplies and equipment		66
Housekeeping duties		60
Prevalence of various types of workplace violence (% who reported some level of experience)		
Physical assault	66.0	52.7
Threat of assault	78.0	67.9
Emotional abuse	82.6	73.9
Verbal sexual harassment	54.5	46.7
Sexual assault	11.2	7.9
Witnessed workplace violence without being involved (% who responded yes)		
Witnessed workplace violence	72.1	61.0
Employer measures taken to prevent workplace violence		

Not at all/Slight	43.3	49.1
Experiences as a result of exposure to workplace violence		
Absenteeism	43.5	38.0
Presenteeism	62.1	51.4
Medication	35.8	41.3
Insomnia	72.2	71.7
Physical Injury	34.5	33.2
Professional Care/Treatment	36.6	36.5

Table 3. Comparisons of suicide and suicidal ideation findings between national statistics and follow-up survey results

Suicide and suicidal ideation	**2020 National % (Public Health Agency of Canada)**	**Follow-up % (N=3676)**
Lifetime		
Has thought about committing suicide	11.8	30
Has made plans for committing suicide	4.0	12
Has attempted suicide	3.1	6
Past 12 months		
Has thought about committing suicide	2.5	8
Has made plans for committing suicide		3
Has attempted suicide		<1

KEY FINDINGS FOR ACUTE CARE NURSES (N=2092)

The majority of our sample (57%) was actively working nurses in the acute care sector (N=2092). A number of key findings from the new COVID-19-related questions are shown in Table 4. A comparison of key findings remeasured between the two surveys for acute care sector nurse respondents is shown in Table 5, as well as findings from conceptually relevant items added in the follow-up survey.

Table 4. Follow-up survey key findings for acute care direct care providers

Finding	**Follow-up % (N=2092)**
COVID-19 within the workplace	
Weekly or more frequent direct contact with COVID-19 patients	28
Told to work despite possible or confirmed exposure to COVID-19	28
Experienced symptoms similar to COVID-19	32
Tested for COVID-19	24
Somewhat to extremely concerned about contracting COVID-19 at work	83
Somewhat to extremely concerned about bringing COVID-19 home	89
Inadequate staffing	49
Inadequate/no training to work safely with COVID	34
Disagree that PPE is high quality	53
Disagree that there is sufficient PPE access to perform work safely	44
Time since last N95 fit test ≥ 2 years or never	10
Not confident in organizational handling of pandemic	26
Not confident in manager's handling of pandemic	27
Not supported by organization during COVID	18
Daily or multiple times a day changes to COVID-19 related protocols and policies	32
Transparency on organizational pandemic decisions rated as poor or failing	43
Relationships with colleagues worsened during COVID-19 pandemic	21
Relationships with manager worsened	28
Relationships with rest of team worsened	20

Areas of worsening included a higher proportion of nurse respondents that reported higher levels of poor mental health (anxiety, depression, emotional exhaustion), higher levels of general negative treatment in the workplace, and lower quality of general nursing care. Respondents' perception of employer measures to prevent workplace violence also worsened, and the proportion of nurses who had experienced medication use a result of exposure to workplace violence increased.

Areas of improvement identified between surveys included a decrease in nurses who scored high in depersonalization, decreases in nurses who rated patient safety in their workplace poorly, and decreases in nurses who would not recommend their workplace to friends and colleagues. The prevalence of direct and witnessed indirect workplace violence diminished. There was also improvement in the prevalence of most negative experiences as a result of exposure to workplace

violence, with affirmative response proportions dropping for absenteeism, presenteeism, insomnia, and physical injury.

Table 5. Key findings on psychological health and safety and quality and safe care provision among direct care acute nurses who responded to the follow up survey and their peers who responded to the baseline survey (when applicable)

Finding	Original % (N=3301)	Follow-up % (N=2092)
Nurse outcomes		
Meets or exceeds cutoff for PTSD measure	49	50
Moderate to severe anxiety	28	40
Moderate to severe depression	31	42
High emotional exhaustion	57	60
High depersonalization	34	32
Low personal accomplishment	34	35
Suicide and suicidal ideation		
Lifetime		
Has thought about committing suicide		31
Has made plans for committing suicide		11
Has attempted suicide		5
Past 12 months		
Has thought about committing suicide		8
Has made plans for committing suicide		2
Has attempted suicide		<1
Alcohol and substance use (over the past six months)		
Drinks alcohol once a week or more		44
Smokes once a week or more		12
Used illegal substances in the past six months		2
Psychological safety at work		
Experienced discrimination	11	16
Experienced bullying or harassment	23	26
Experienced unfair treatment due to mental illness	2	2
Quality and safety of care		
Poor or fair general quality of nursing care	12	14
Poor or fair quality of nursing care last shift	14	15
Failing or poor rating of patient safety	22	16
Would not recommend to friends for care	23	19
Would not recommend to colleagues for work	37	29
Quality, safety, and workload		
Patient incidents involving respondent (% for responses noting ‘monthly’ frequency or higher)		
Complaints from patients and/or their families		39
Pneumonia		25
Urinary tract infection		21
Nursing tasks necessary but left undone last shift (% for ‘Yes’ responses)		
Develop or update nursing care plans/pathways		41

Comfort/talk with patients		40
Oral hygiene		29
Non-nursing tasks performed last shift (% for 'Yes' responses)		
Clerical duties		74
Obtaining supplies and equipment		74
Housekeeping duties		68
Prevalence of various types of workplace violence (% who reported some level of experience)		
Physical assault	74	64
Threat of assault	83	75
Emotional abuse	86	79
Verbal sexual harassment	59	55
Sexual assault	13	10
Witnessed workplace violence without being involved (% who responded yes)		
Witnessed workplace violence	77	68
Employer measures taken to prevent workplace violence		
Not at all/Slight	47	54
Experiences as a result of exposure to workplace violence		
Absenteeism	44	40
Presenteeism	63	51
Medication	36	41
Insomnia	74	72
Physical Injury	37	35
Professional Care/Treatment	35	36

KEY FINDINGS FOR COMMUNITY CARE NURSES (N=870)

For this section, nurse respondents who reported themselves as actively working and working in the community care sector were included (24% of the entire sample). A number of key findings from the new COVID-19-related questions for this sector are shown in Table 6. The comparison of key findings between the two surveys for community care sector nurse respondents is shown in Table 7, as well as findings from conceptually relevant items added in the follow-up survey.

Table 6. Follow-up survey key findings for community care nurse respondents

Finding	**Follow-up % (N=870)**
COVID-19 within the workplace	
Weekly or more frequent direct contact with COVID-19 patients	11
Told to work despite possible or confirmed exposure to COVID-19	18
Experienced symptoms similar to COVID-19	32
Tested for COVID-19	26
Somewhat to extremely concerned about contracting COVID-19 at work	77
Somewhat to extremely concerned about bringing COVID-19 home	82
Inadequate staffing	56
Inadequate/no training to work safely with COVID	35
Disagree that PPE is high quality	43
Disagree that there is sufficient PPE access to perform work safely	39
Time since last N95 fit test ≥ 2 years or never	38
Not confident in organizational handling of pandemic	26
Not confident in manager's handling of pandemic	31
Not supported by organization during COVID	19
Daily or multiple times a day changes to COVID-19 related protocols and policies	20
Transparency on organizational pandemic decisions rated as poor or failing	41
Relationships with colleagues worsened during COVID-19 pandemic	31
Relationships with manager worsened	35
Relationships with rest of team worsened	28

Areas of worsening included more respondents reporting higher levels of poor mental health (PTSD, anxiety, depression, emotional exhaustion, personal accomplishment), more unfair treatment due to mental illness in the workplace, and lower quality of general and last shift nursing care. Respondents' perception of employer measures to prevent workplace violence also worsened, and the proportion of nurses who had experienced medication use and physical injury as a result of exposure to workplace violence increased.

Areas of improvement included decreases in the proportion of nurses who would not recommend their workplace to friends and colleagues, and decreases in the prevalence of direct and witnessed indirect workplace violence. There was also reduction in the prevalence of most negative experiences as a result of exposure to workplace violence, for absenteeism, presenteeism, and professional care/treatment.

Table 7. Key findings on psychological health and safety and quality and safe care provision among community nurses who responded to the follow up survey and their peers who responded to the baseline survey (when applicable)

Finding	**Original % (N=3301)**	**Follow-up % (N=870)**
Nurse outcomes		
Meets or exceeds cutoff for PTSD measure	44	46
Moderate to severe anxiety	29	37
Moderate to severe depression	30	43
High emotional exhaustion	51	62
High depersonalization	21	22
Low personal accomplishment	25	27
Suicide and suicidal ideation		
Lifetime		
Has thought about committing suicide		31
Has made plans for committing suicide		12
Has attempted suicide		7
Past 12 months		
Has thought about committing suicide		9
Has made plans for committing suicide		3
Has attempted suicide		<1
Alcohol and substance use (over the past six months)		
Drinks alcohol once a week or more		49
Smokes once a week or more		13
Used illegal substances in the past six months		2
Psychological safety at work		
Experienced discrimination	20	19
Experienced bullying or harassment	10	11
Experienced unfair treatment due to mental illness	2	4
Quality and safety of care		
Poor or fair general quality of nursing care	8	12
Poor or fair quality of nursing care last shift	10	14
Failing or poor rating of patient safety	11	11
Would not recommend to friends for care	20	17
Would not recommend to colleagues for work	31	29
Quality, safety, and workload		
Patient incidents involving respondent (% for responses noting ‘monthly’ frequency or higher)		
Complaints from patients and/or their families		38
Urinary tract infection		17
Patient falls with injury		16
Nursing tasks necessary but left undone last shift (% for ‘Yes’ responses)		
Develop or update nursing care plans/pathways		35
Comfort/talk with patients		30
Adequately document nursing care		26
Non-nursing tasks performed last shift (% for ‘Yes’ responses)		

Clerical duties		69
Obtaining supplies and equipment		51
Housekeeping duties		50
Prevalence of various types of workplace violence (% who reported some level of experience)		
Physical assault	29	18
Threat of assault	59	45
Emotional abuse	72	61
Verbal sexual harassment	40	31
Sexual assault	4	2
Witnessed workplace violence without being involved (% who responded yes)		
Witnessed workplace violence	52	39
Employer measures taken to prevent workplace violence		
Not at all/Slight	33	42
Experiences as a result of exposure to workplace violence		
Absenteeism	41	34
Presenteeism	60	52
Medication	35	42
Insomnia	71	71
Physical Injury	23	25
Professional Care/Treatment	42	39

KEY FINDINGS FOR LONG-TERM CARE NURSES (N=483)

This section examines the subset of nurse respondents who reported themselves as actively working and their nursing sector as long-term care (13% of the entire sample). A number of key findings from the new COVID-19-related questions for this sector are shown in Table 8. The comparison of key findings remeasured between the two surveys is shown in Table 9, as well as findings from conceptually relevant items added in the follow-up survey.

Table 8. Follow-up survey key findings for long-term care nurse respondents

Finding	**Follow-up % (N=483)**
COVID-19 within the workplace	
Weekly or more frequent direct contact with COVID-19 patients	14
Told to work despite possible or confirmed exposure to COVID-19	22
Experienced symptoms similar to COVID-19	29
Tested for COVID-19	27
Somewhat to extremely concerned about contracting COVID-19 at work	80
Somewhat to extremely concerned about bringing COVID-19 home	87
Inadequate staffing	63
Inadequate/no training to work safely with COVID	37
Disagree that PPE is high quality	50
Disagree that there is sufficient PPE access to perform work safely	43
Time since last N95 fit test ≥ 2 years or never	40
Not confident in organizational handling of pandemic	26
Not confident in manager's handling of pandemic	30
Not supported by organization during COVID	19
Daily or multiple times a day changes to COVID-19 related protocols and policies	18
Transparency on organizational pandemic decisions rated as poor or failing	39
Relationships with colleagues worsened during COVID-19 pandemic	27
Relationships with manager worsened	35
Relationships with rest of team worsened	29

Areas of worsening included more respondents reporting higher levels of poor mental health (anxiety, depression, and emotional exhaustion); lower quality of general and last shift nursing care; and less respondents who would recommend their workplace to friends for care. Respondents' perception of employer measures to prevent workplace violence worsened. The prevalence of medication, insomnia, and physical injury as a result of exposure to workplace violence also increased.

Areas of improvement included a decrease in the proportion of nurses with high depersonalization. There was also reduction in prevalence of workplace violence, and of absenteeism and presenteeism as a result of exposure to workplace violence.

Table 9. Key findings on psychological health and safety and quality and safe care provision among long-term care nurses who responded to the follow up survey and their peers who responded to the baseline survey (when applicable)

Finding	Original % (N=446)	Follow-up % (N=483)
Nurse outcomes		
Meets or exceeds cutoff for PTSD measure	42	41
Moderate to severe anxiety	26	32
Moderate to severe depression	32	36
High emotional exhaustion	54	57
High depersonalization	26	21
Low personal accomplishment	34	35
Suicide and suicidal ideation		
Lifetime		
Has thought about committing suicide		26
Has made plans for committing suicide		11
Has attempted suicide		4
Past 12 months		
Has thought about committing suicide		7
Has made plans for committing suicide		3
Has attempted suicide		1
Alcohol and substance use (over the past six months)		
Drinks alcohol once a week or more		34
Smokes once a week or more		15
Used illegal substances in the past six months		1
Psychological safety at work		
Experienced discrimination	26	27
Experienced bullying or harassment	17	16
Experienced unfair treatment due to mental illness	3	2
Quality and safety of care		
Poor or fair general quality of nursing care	12	20
Poor or fair quality of nursing care last shift	14	18
Failing or poor rating of patient safety	17	16
Would not recommend to friends for care	29	31
Would not recommend to colleagues for work	33	32
Quality, safety, and workload		
Patient incidents involving respondent (% for responses noting ‘monthly’ frequency or higher)		
Complaints from patients and/or their families		56
Urinary tract infection		44
Patient falls with injury		41
Nursing tasks necessary but left undone last shift (% for ‘Yes’ responses)		
Comfort/talk with patients		51
Develop or update nursing care plans/pathways		49
Adequately document nursing care		31
Non-nursing tasks performed last shift (% for ‘Yes’ responses)		
Clerical duties		69
Obtaining supplies and equipment		51

Housekeeping duties		50
Prevalence of various types of workplace violence (% who reported some level of experience)		
Physical assault	85	74
Threat of assault	85	81
Emotional abuse	84	80
Verbal sexual harassment	56	48
Sexual assault	17	11
Witnessed workplace violence without being involved (% who responded yes)		
Witnessed workplace violence	78	70
Employer measures taken to prevent workplace violence		
Not at all/Slight	39	47
Experiences as a result of exposure to workplace violence		
Absenteeism	45	37
Presenteeism	62	53
Medication	40	45
Insomnia	67	72
Physical Injury	38	42
Professional Care/Treatment	39	40

COMPARISON OF SURVEY RESULTS ACROSS SECTORS

For quick reference, Figure 1 displays a comparison of proportions for responses to most of the COVID-19 questions across the three sectors (acute, community, long-term). Critical items that were rated the most poorly (approximately 50% or more rated poorly overall) across all sectors include concern over contracting COVID-19 at work, bringing COVID-19 home, staffing adequacy and access to high-quality and sufficient supply of PPE.

Figure 1. BC nurses' reports of COVID-19 measures in their workplace across healthcare sector

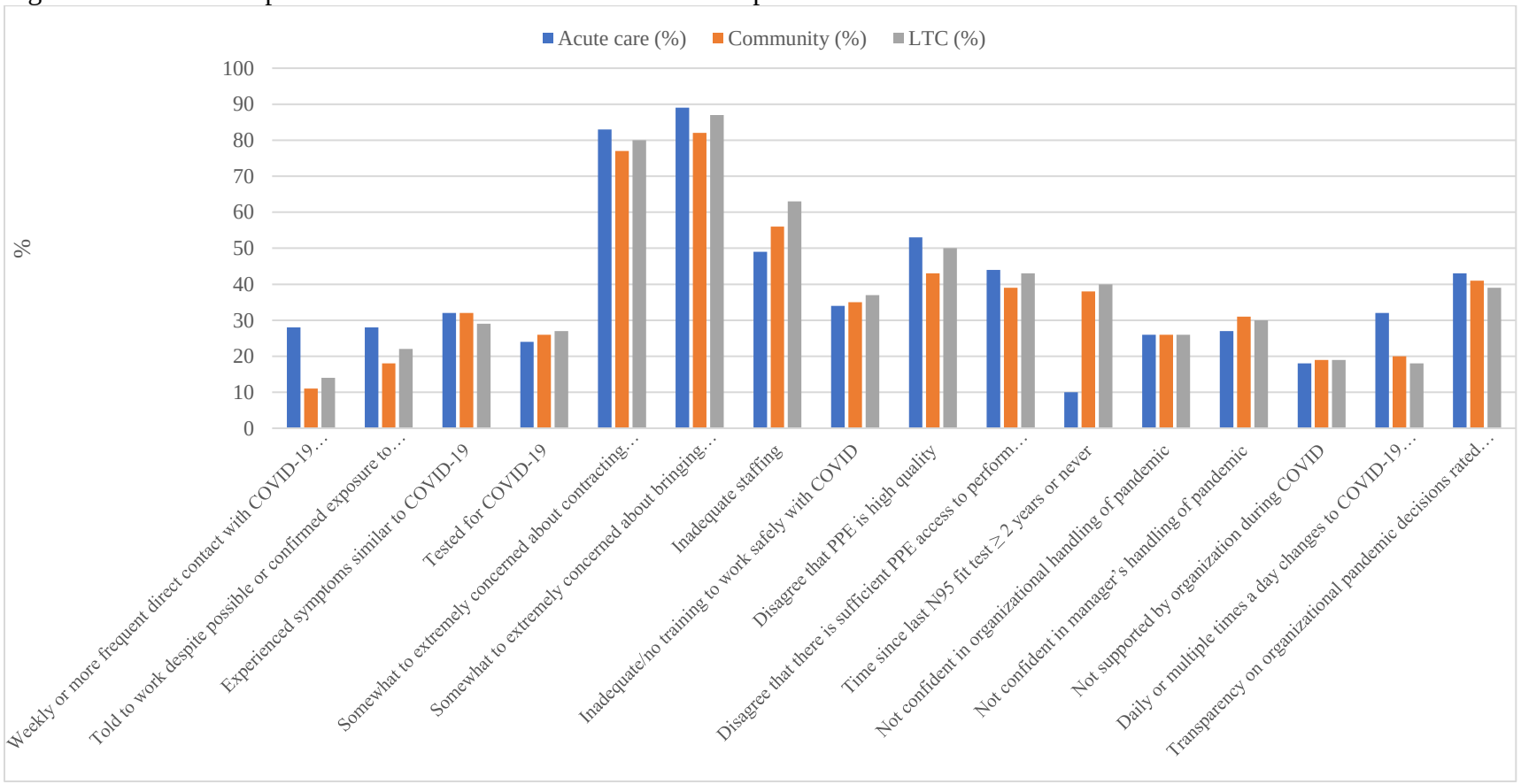


Figure 2 compares respondents' reports of mental health for both timepoints (Time 1, original survey; Time 2, follow-up survey) across healthcare sectors. Mental health was examined using measures for PTSD, anxiety, depression, and burnout (EE, emotional exhaustion; DP, depersonalization; PA, personal accomplishment). Prominent negative changes for all sectors can be seen for the proportion of respondents who reported moderate to severe anxiety, depression, and high emotional exhaustion.

Figure 2. BC nurses' reports of mental health before (Time 1) and after (Time 2) COVID-19 across healthcare sectors

BACKGROUND

About six months before COVID-19 became a global pandemic, a group of health services researchers from the University of British Columbia, School of Nursing (Havaei and MacPhee), in collaboration with the British Columbia Nurses' Union (BCNU) conducted a province-wide survey study of nurses to explore their state of psychological health and safety and their ability to provide quality and safe patient care. The survey results suggested there was high prevalence of post-traumatic stress disorder (PTSD), anxiety, depression, and burnout among the provincial nursing workforce (Havaei et al., 2020). When COVID-19 became a pandemic in March 2020, the nursing workforce was at the forefront of the fight against COVID-19, mostly to ensure the safety of their patients and the general public. However, due to shortcomings in their workplaces including, but not limited to, lack of personal protective equipment (PPE), nurses were at an increased risk of exposure to COVID-19 and/or its associated challenges. Thus, studying the impact of the pandemic on the nursing workforce is an urgent undertaking. This report will (1) describe the effectiveness of COVID-19 measures in nurses' work environments and (2) identify the state of nurses' psychological health and safety and their ability to provide quality and safe patient care during COVID-19. The survey results will be presented for the entire sample (provincial) as well as across healthcare sector: acute care, community care and long-term care nurses.

METHOD

This study used an exploratory cross-sectional survey design. The BCNU Communications department created messages with visuals that were distributed to members including postcards and through social media (i.e., BCNU Facebook, BCNU Twitter account and BCNU Instagram account). The same visuals and messages were used for all forms of social media. A weblink to Qualtrics was sent out through BCNU e-news to all BCNU nurse members. To increase response rate, there were periodic email reminders and the survey stayed open for two to three weeks. Additionally, there was a random draw for 10 pre-paid $100 visa cards 2 weeks after the close of the survey. Overall, a total of 4,523 nurses participated in this follow-up study, representing about a 10% response rate. The results are shown for all actively working nurses (N=3676), and then aggregated by healthcare sector: acute care, community care, and long-term care. The descriptive statistics used to analyze and present the data in this report were generated using the Statistical Package for Social Sciences (SPSS) and the R programming language.

MEASUREMENT

Table 10 shows the study variables examined in the follow-up survey.

Table 10. Study variables

Demographics	COVID-19 measures in the workplace	Psychological health and safety	Quality and safe care delivery
Individual characteristics: - Completion of baseline survey - Age - Gender - Designation - Education - Nursing experience - Minority group *Workplace characteristics*: - Nursing sector - Role - Direct patient care - Health authority - Workplace geography - Nursing area - Employment status	*COVID-19 experience*: - Contact frequency - Personal experiences - Concern - Confidence - Staffing adequacy - PPE (e.g. quality, sufficiency, fit test) - Training adequacy - Organizational factors - Relationship changes	*Health and wellbeing*: - PTSD (Twigg et al., 2008) - Anxiety (Spitzer et al., 2006) - Depression (Kroenke et al., 2001) - Burnout (Maslach et al., 1996) *Substance use*: - Alcohol - Smoking - Illegal substances *Suicide (life and last year)* - Ideation - Planning - Attempt *Workplace violence*: Types and sources (Hesketh et al., 2003) *Guarding Minds at Work supplementary questions*: - Bullying/harassment - Discrimination - Unfair treatment due to mental health	*Workplace incidents during COVID-19 involving patients, e.g.* - Complaints - Pneumonia - Patient falls/injury - Wrong medication *Nursing tasks necessary but undone* *Non-nursing tasks performed last shift* *Quality of care*: - Quality and safe patient care (Sermeus et al., 2011) - Patient safety grade - Recommend workplace as good place to work - Recommend workplace as good place for care

FINDINGS: OVERALL SAMPLE

DEMOGRAPHIC PROFILE OF OVERALL NURSE RESPONDENTS

This section provides an overview of survey findings for all actively working nurse respondents (N=3676). Approximately 24% of respondents reported completing the 2019 baseline survey. For the overall sample, the mean respondent age was 42.6 years (SD = 11.7). The majority of respondents were female (93%), RNs (74%), direct care providers (86%), and working full-time (86%). Approximately 45% had an undergraduate degree, and 76% had more than five years of nursing experience. About 63% worked in the acute care sector. Table 11 provides a profile of nurse respondents by baseline survey completion, age, gender, professional designation, education, nursing experience, and identification with BCNU equity-seeking caucuses. Table 12 provides demographic characteristics relevant to the respondents' primary workplace, such as their nursing sector, nursing role, health authority, and nursing practice area.

Demographic comparisons made between this provincial sample and Canadian Institute for Health Information (CIHI) data[3] on BC workforce nurses show that the study sample is representative of provincial nurses with respect to age, gender, professional designation and employment status (see Table 13).

Table 11. Demographic characteristics of overall nurse respondents

Characteristics	**N**	**%**
Completed baseline survey		
Yes	876	23.9
No	1198	32.6
I don't remember/I don't know	1598	43.5
Age		
Under 25	134	3.7
25 to 34	957	26.3
35 to 44	974	26.7
45 to 54	874	24
55 and above	703	19.3
Gender		
Female	3418	93
Male	238	6.5
Prefer to describe	18	0.5
Professional Designation		
RN	2735	74.4
RPN	200	5.4
LPN	714	19.4
Dually registered (RN/RPN)	15	0.4
Student nurse	12	0.3
Education		
Diploma/Certificate	1232	33.6
Undergraduate degree	1657	45.2

[3] Canadian Institute for Health Information. *Nursing in Canada, 2019: A Lens on Supply and Workforce.* Ottawa, ON: CIHI; 2020.

Graduate degree	724	19.7
Other	54	1.5
Overall nursing experience		
5 years or less	889	24.3
6 to 10 years	729	19.9
11 to 15 years	646	17.7
16 to 20 years	364	9.9
21 years or more	1032	28.2
Identification with BCNU equity-seeking caucuses (respondents may identify with multiple caucuses simultaneously)		
Indigenous Leadership Circle	181	5.2
LGBTQ	206	6
Mosaic of Colour	474	13.7
Workers with Disabilities	198	5.8

Table 12. Demographic characteristics relevant to respondents' primary workplace

Primary workplace	**N**	**%**
Nursing sector		
Acute care	2319	63.2
Community care	870	23.7
Long-term care	483	13.2
Primary nursing role		
Direct care provider	3161	86
Nurse leader	393	10.7
Educator	122	3.3
Provides direct patient/client care		
Yes	3483	94.9
No	187	5.1
Health authority		
Fraser Health	874	23.8
Vancouver Coastal Health	833	22.7
Vancouver Island Health	705	19.2
Interior Health	593	16.1
Northern Health	243	6.6
Provincial Health Services	214	5.8
Providence Health	146	4
First Nations Health	5	0.1
Workplace geography		
Urban	2324	63.6
Suburban	727	19.9
Rural	605	16.5
Nursing practice area		
Ambulatory care	143	3.9
Community mental health	144	3.9
Emergency	274	7.5
Home and community care	351	9.6
Indigenous health	9	0.2

Intensive care	226	6.2
Long-term care	437	11.9
Medical/surgical	863	23.5
Mental health or psychiatry	221	6
Obstetrics	136	3.7
Oncology	61	1.7
OR/PACU	204	5.6
Palliative	82	2.2
Pediatrics	56	1.5
Public health	170	4.6
Rehabilitation	36	1
Other, please specify	200	5.4
Mixed (A combination of other areas)	59	1.6
Employment status		
Full-time	2255	61.4
Part-time	1052	28.6
Casual	368	10

Table 13. Comparison of demographic breakdown between overall actively working nurse sample and CIHI data on BC nurses in workforce

Characteristic	**Actively working nurses from follow-up study**			**Provincial nursing workforce based on CIHI**		
	RN	RPN	LPN	RN	RPN	LPN
Proportion of workforce	74%	5%	19%	70%	5%	23%
Average age	42.4	44.6	42.8	43.6	44.0	41.3
Gender - female	94%	92%	92%	91%	79%	90%
Employment status						
Full time	61%	72%	62%	56%	67%	52%
Part time	30%	22%	27%	28%	19%	27%
Casual	10%	7%	11%	16%	15%	22%
Rural/remote	16%	11%	23%	6%	4%	8%

Note: Cell pairs with differences of 10% of less are highlighted in green.

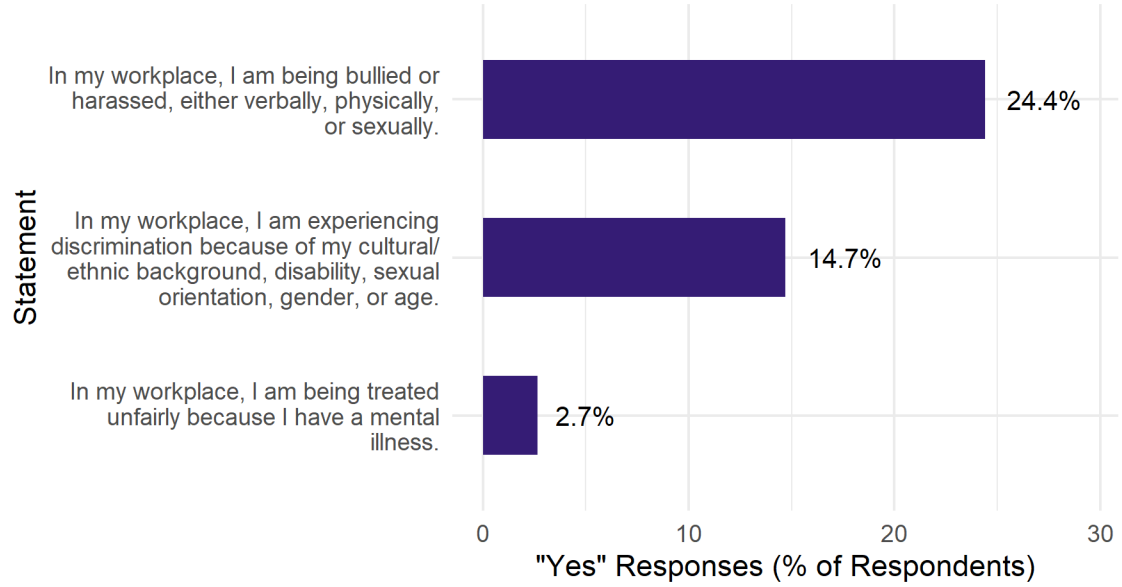
OVERALL WORKPLACE FACTORS

As part of this survey, respondents were queried about their experiences in the primary workplace through question sets spanning a variety of topics. The topics explored include general negative treatment in the workplace, COVID-19, and workplace violence.

WORKPLACE DISCRIMINATION, BULLYING/HARASSMENT, AND UNFAIR TREATMENT DUE TO MENTAL HEALTH

The first set of questions examining general negative treatment in the workplace were sourced from the Guarding Minds at Work assessment tool. The questions were comprised of three statements describing workplace bullying and harassment, discrimination, and unfair treatment due to mental illness, to which respondents indicated whether or not they had had such experiences over the last six months. Figure 3 presents the affirmative response proportion for each.

Figure 3. Proportion of responses reporting various workplace experiences



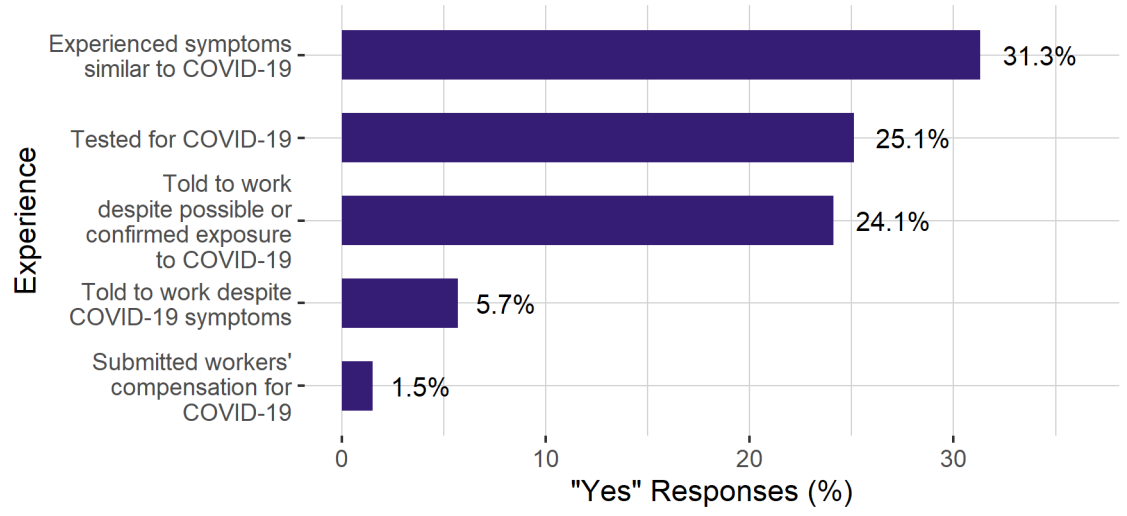
COVID-19 WITHIN THE WORKPLACE

The next set of questions were focussed on nurse experiences of the COVID-19 pandemic in the primary workplace. Respondents were asked to respond to the questions thinking about their workplace experiences **since the start of the COVID-19 pandemic in March 2020**. Respondents answered Yes/No prompts about personal COVID-19 experiences, and Likert-type items about subtopics including frequency of contact with COVID-19 patients, adequacy of staffing, sufficiency/quality of personal protective equipment (PPE), changes in workplace relationships, etc. Table 14 presents a comprehensive overview of response proportions for all COVID-19 questions.

Frequency of direct contact with COVID-19 patients: Respondents were asked how frequently they have had direct contact with suspected or confirmed COVID-19 patients, with response options ranging along a 7-point Likert scale from "Never" to "Almost every day". Approximately 63% of respondents reported their frequency of contact as "Never" or "A few times", while 21% reported their frequency of contact as "Once a week" or greater.

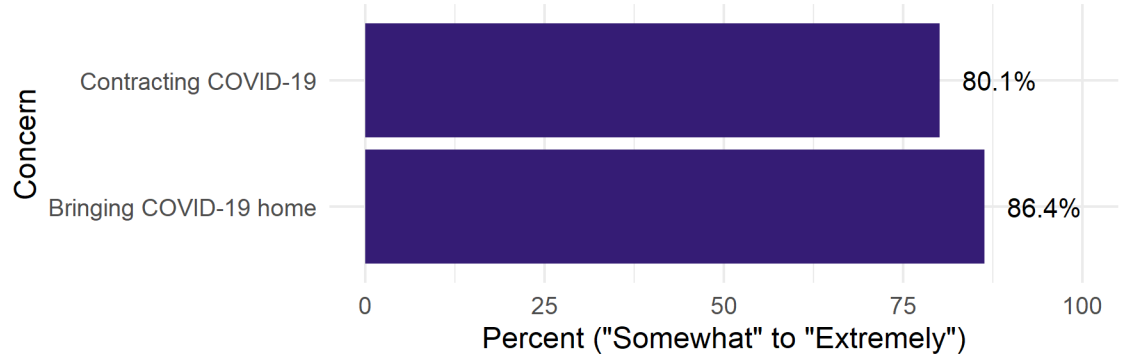
Personal COVID-19 experiences: Respondents were asked whether or not they had experienced any of five COVID listed experiences. The response proportions to each experience are shown in Figure 4.

Figure 4. Proportion of "Yes" responses to personal experiences related to COVID-19



Concern about COVID-19: Respondents reported their level of concern "about contracting COVID-19 at [their] workplace" and "about bringing COVID-19 home to those with whom [they] live and/or family/friends" along a 5-point Likert scale, ranging from "Extremely concerned" to "Not at all concerned". The response proportion for 'Somewhat' to 'Extremely' concerned responses are shown in Figure 5.

Figure 5. Proportion of 'Somewhat concerned' to 'Extremely concerned' responses for COVID-19 concerns

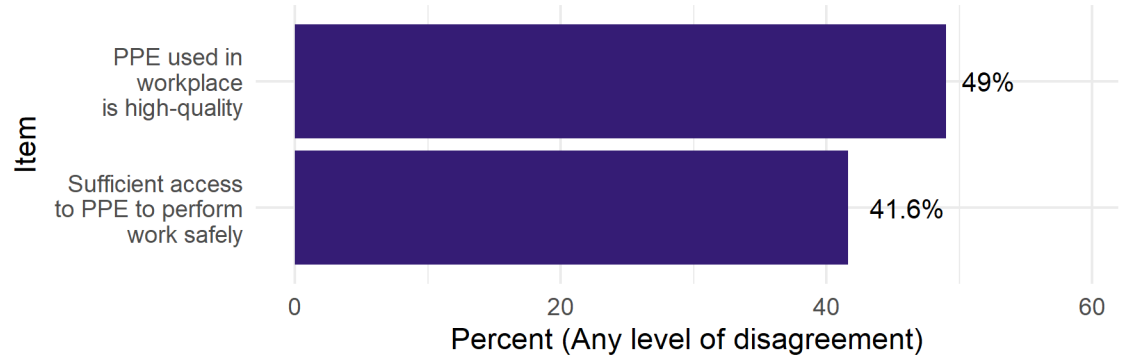


Adequacy of nurse staffing: Respondents rated the adequacy of nurse staffing in their primary workplace during COVID-19 along a 6-point Likert scale, ranging from "Extremely inadequate" to "Extremely adequate". More than half (52%) rated staffing as inadequate.

Personal Protective Equipment (PPE): Respondents were asked about their workplace experiences with PPE during the pandemic, including their endorsement of the statements "I have had sufficient access to PPE to perform my work safely" and "The PPE used in my workplace is high-quality"; the length of time since they were fit tested for an N95 respirator; and how likely they were to exercise their right to refuse unsafe work if denied appropriate PPE.

As detailed in Figure 6, 49% disagreed that the PPE used in their workplace is high-quality, and 42% disagreed that they have had sufficient access to PPE to perform their work safely. About 20% reported that they had either never been fit tested for an N95, or that it had been two or more years since their last fit test. Approximately 71% responded that they were likely or very likely to exercise their right to refuse unsafe work if denied appropriate PPE.

Figure 6. Disagreement response proportions for PPE quality and access to PPE during COVID-19 pandemic



Confidence in own ability to assess PPE requirements and personal risk: Respondents reported their confidence in their ability to adequately assess their PPE requirements and personal risk.

The majority were confident in their ability, with 58% responding “confident” or “very confident” towards assessment of PPE requirements, and 59% responding “confident” or “very confident” towards assessment of their personal risk.

Adequacy of training: Respondents rated the adequacy of their training to work safely with COVID-19 along a 4-point Likert scale ranging from “Extremely inadequate” to “Extremely adequate”, or indicated that they had never received such training. Approximately 30% found their training to be inadequate, while 4% indicated that they had never received training.

Organizational factors: With the duration of the COVID-19 pandemic in mind, respondents rated their confidence in their organization’s/manager’s handling of the pandemic, the extent to which they were supported by their organization, the average frequency of protocol and policy change, and transparency of organizational decisions related to COVID-19.

- The majority of respondents (72%) reported that the average frequency of COVID-19 protocol and policy changes was weekly or higher. More than a quarter (27%) reported daily or higher.
- Approximately 41% rated the transparency of organizational decisions related to COVID-19 as poor or failing.
- More than a quarter (28%) responded that they were not confident in their manager’s handling of the pandemic.
- A quarter (25%) responded that they were not confident (‘not at all confident’, ‘not confident’) in organizational handling of the pandemic.
- Approximately 18% responded that they were not supported by their organization during the pandemic, with 34% responding that they were only ‘slightly supported’.

Changes to workplace relationships: Respondents were asked how their workplace relationships with their nursing colleagues, manager, and the rest of healthcare team (e.g. medicine, allied health) had changed during COVID-19. As shown in Figure 7, 31% reported worsening relationships with managers, 24% reported worsening relationships with colleagues, and 23% reported worsening relationships with the rest of the healthcare team.

Figure 7. Response proportions for changes in workplace relationships during COVID-19 pandemic

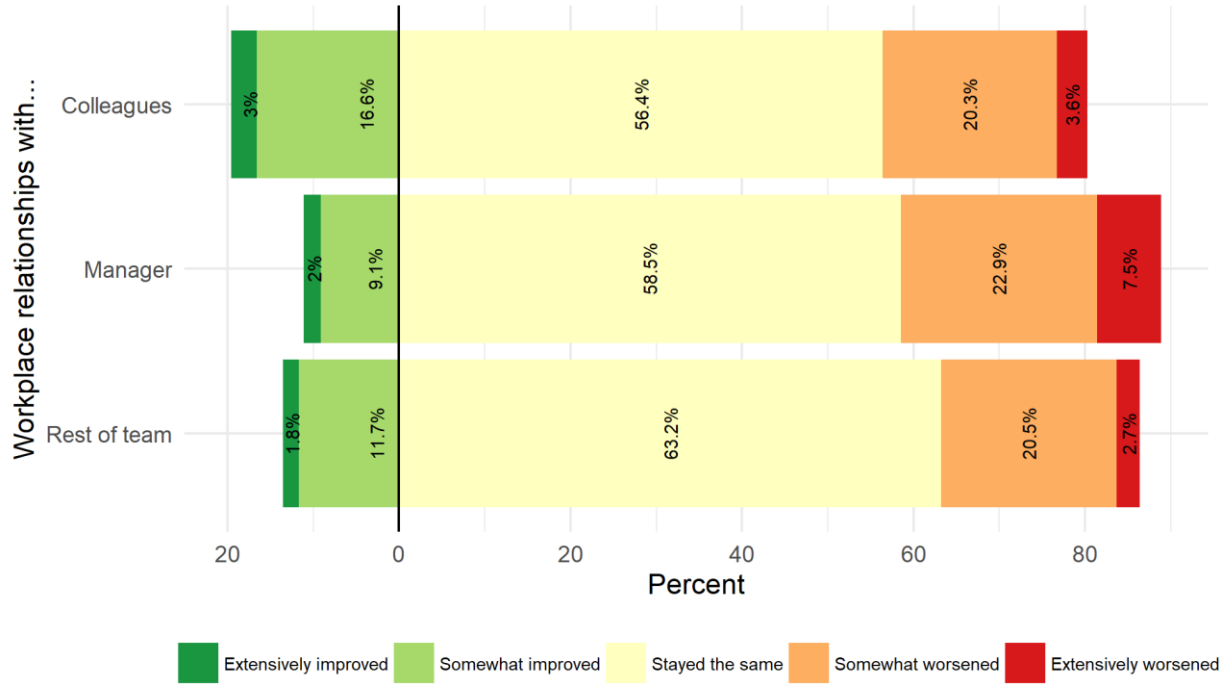


Table 14. Response proportions for all COVID-19 variables

Frequency	Never	A few times	Once a month	A few times a month	Once a week	A few times a week	Almost every day	N
Frequency of direct contact with suspected or confirmed COVID-19 patients	27.3	35.7	3.1	12.5	3.7	9.4	8.2	3587

Personal experiences	Yes	No	N
Told to work despite possible or confirmed exposure to COVID-19	24.1	75.9	3571
Experienced symptoms similar to COVID-19	31.3	68.7	3577
Told to work despite COVID-19 symptoms	5.7	94.3	3556
Tested for COVID-19	25.1	74.9	3579
Submitted workers' compensation for COVID-19	1.5	98.5	3549

Concern	Extremely concerned	Very concerned	Somewhat concerned	Slightly concerned	Not at all concerned	N
Concern about contracting COVID-19 at workplace	21.9	27.3	30.9	15.5	4.3	3597
Concern about bringing COVID-19 home	39.4	28.2	18.8	10	3.6	3597

Adequacy	Extremely inadequate	Moderately inadequate	Slightly inadequate	Slightly adequate	Moderately adequate	Extremely adequate	N
Adequacy of nurse staffing	10.8	23.7	17.4	10.5	26.5	11.2	3597

	Never received such training	Extremely inadequate	Somewhat inadequate	Somewhat adequate	Extremely adequate	N
Adequacy of training to work safely with COVID	4.2	8.3	21.4	49.3	16.9	3526

PPE	Strongly disagree	Disagree	Somewhat disagree	Somewhat agree	Agree	Strongly agree	N
Sufficient access to PPE necessary to perform work	11.2	14.7	15.7	20.6	27.1	10.7	3574
High quality PPE are used in workplace	13.4	18.4	17.2	22.7	21.9	6.5	3569

	Within last month	Within last 6 months	Within last year	1-2 years ago	2-5 years ago	5+ years ago	Never been fit tested	N
Time since last fit test for N95 mask	8.1	30.4	23	18.2	10.7	5	4.6	3575

	Very unlikely	Unlikely	Likely	Very likely	N
If denied appropriate PPE, how likely to exercise right to refuse unsafe work	6.5	22.2	34.5	36.7	3563

Confidence	Not at all confident	Not confident	Slightly confident	Somewhat confident	Confident	Very confident	N

Confidence in own ability to assess PPE requirements	1.7	6.6	12.1	21.6	40.7	17.4	3576
Confidence in own ability to assess personal risk	0.7	4.1	12.1	24.4	42.6	16.1	3574
Confidence in organization's handling of COVID-19 pandemic	8.5	16.4	21.3	27.5	21.6	4.7	3527
Confidence in manager's handling of COVID-19 pandemic	10.9	16.7	19.1	23.1	22.8	7.5	3522

Organizational support	**Not at all supported**	**Not supported**	**Slightly supported**	**Moderately supported**	**Extremely supported**	**N**
Extent of support from workplace organization during COVID-19 pandemic	5.4	12.8	34	35.8	12	3523

Policy and protocol	**Never**	**A few times**	**Once a month**	**A few times a month**	**Once a week**	**A few times a week**	**Every day**	**Multiple times a day**	**N**
Average frequency of changes to COVID-19 related protocols and policies in workplace	0.4	9.1	1.6	17	13.6	31.2	16.8	10.3	3527

Changes to workplace relationships during COVID-19 pandemic	**Extensively worsened**	**Somewhat worsened**	**Stayed the same**	**Somewhat improved**	**Extensively improved**	**N**
Nursing colleagues	3.6	20.3	56.4	16.6	3	3524
Manager	7.5	22.9	58.5	9.1	2	3526
Rest of the healthcare team	2.7	20.5	63.2	11.7	1.8	3523

Transparency	**Failing**	**Poor**	**Fair**	**Good**	**Excellent**	**N**
Transparency of organizational decisions related to COVID-19	13.1	28.3	36.3	19	3.4	3522

NURSE OUTCOMES

MENTAL HEALTH AND WELLBEING

Several established tools were included in the survey to assess respondents' psychological ill-being, with screening tools for post-traumatic stress disorder (PTSD), generalized anxiety disorder, major depressive disorder, and emotional exhaustion/burnout. Summary information for the data is displayed in Table 15. Category proportions, as defined by cutoff values, are shown in Table 16.

PTSD: Post-traumatic stress disorder was assessed using the Posttraumatic Stress Symptoms-14 (PTSS-14) instrument, a measure consisting of 14 items reflecting feelings over the last two weeks, such as "The need to withdraw from others", "Frequent mood swings" and "muscular tension". Respondents rated how frequently they experienced each feeling along a 7-point Likert scale, ranging from 1 = Never, to 7 = Always. Total scores of 45 or higher were categorized as positive for PTSD.

A little less than half of respondents (47%) scored within the 'positive' range for PTSD.

Anxiety: Generalized anxiety disorder was assessed using the Generalized Anxiety Disorder-7 (GAD7) instrument, which consists of seven items describing negative feelings within the last two weeks, such as "Feeling nervous, anxious or on edge" and "Trouble relaxing". Responses were given along a 4-point Likert scale, ranging from 0 = Not at all, to 3 = Nearly every day. Sum scores were categorized as: 0-4 = no anxiety, 5-9 = mild, 10-14 = moderate, 15-21 = severe.

Approximately 73% of respondents scored within some level of anxiety, with 18% within the severe anxiety range.

Depression: The Patient Health Questionnaire-9 (PHQ-9) consists of nine items reflecting perceptions such as poor appetite, anhedonia, and depressive mood. Respondents rated how often they were bothered by each perception within the last two weeks, along a 4-point Likert scale, ranging from 0 = Not at all, to 3 = Nearly every day. Sum scores were categorized as 0-4 = no depression, 5-9 = mild, 10-14 = moderate, 15-19 = moderately severe, and 20-27 = severe depression.

Approximately 72% of respondents were categorized at some level of depression.

Burnout: To assess nurse burnout, this survey used the Maslow Burnout Inventory - Human Services Survey, which includes three subscales of Emotional Exhaustion, Depersonalization, and Personal Accomplishment. Items in the scale include statements such as: for Emotional Exhaustion (9 items), "I feel emotionally drained from my work" and "I feel like I'm at the end of my rope"; for Depersonalization (5 items), "I worry that this job is hardening me emotionally"; for Personal Accomplishment (8 statements), "I feel very energetic". Respondents rated the frequency of each feeling along a 7-point Likert scale of increasing frequency, ranging from 0 = Never, 1 = A few times a year or less; to 5 = A few times a week, 6 = Every day. Subscale sum scores were categorized by cutoff scores: for emotional exhaustion, 0-16 = low,

17-26 = moderate, ≥ 27 = high; for depersonalization 0-6 = low, 7-12 = moderate, ≥ 13 = high; for personal accomplishment, 0-31 = low, 32-38 = moderate, ≥ 39 = high.

Approximately 60% of respondents indicated high emotional exhaustion, 27% indicated high depersonalization, and 33% indicated low personal accomplishment.

Table 15. Descriptive statistics for nurse outcome measures

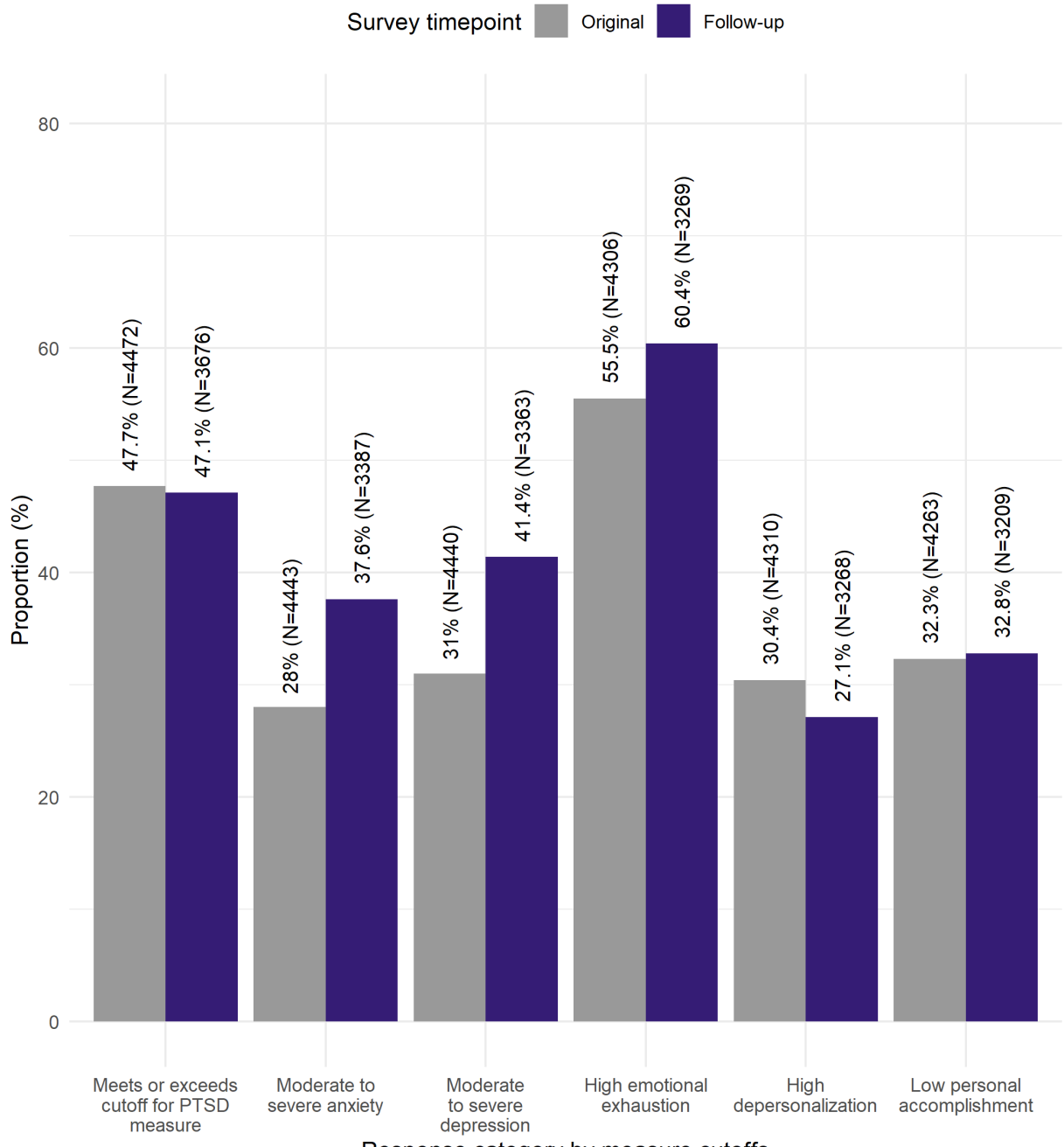
Measure	N	Mean	SD	Min	Max
Posttraumatic Stress Symptoms-14 (PTSS-14)[1]	3369	46.68	19.37	14	98
Generalized Anxiety Disorder-7 (GAD-7)[1]	3387	8.53	5.8	0	21
Patient Health Questionnaire-9 (Depression; PHQ-9)[1]	3363	8.99	6.23	0	27
Maslach Burnout Inventory - Human Services Survey for Medical Personnel[2]					
Emotional Exhaustion (MBI-HSS (MP))	3269	30.05	13.23	0	54
Depersonalization (MBI-HSS (MP))	3268	8.48	6.96	0	30
Personal Accomplishment (MBI-HSS (MP))	3209	34.32	7.87	0	48
Note: [1]Items refer to the past two weeks. [2]Items refer to the past six months.					

Table 16. Proportions for nurse outcome categories, as defined by sum score cut-offs

Measure	% in category (by cutoffs)					N
PTSS-14	Below cutoff	Above cutoff				
	52.9	47.1				3676
GAD-7	No anxiety	Mild anxiety	Moderate anxiety	Severe anxiety		
	26.6	35.8	19.8	17.8		3387
PHQ-9	No depression	Mild depression	Moderate depression	Moderately severe depression	Severe depression	
	28.1	30.5	21.4	13.0	7.0	3363
MBI-HSS (MP)						
Emotional Exhaustion	Low EE	Moderate EE	High EE			3269
	18.4	21.2	60.4			
Depersonalization	Low DP	Moderate DP	High DP			3268
	48.0	24.8	27.1			
Personal Accomplishment	Low PA	Moderate PA	High PA			3209
	32.8	33.3	33.9			

To examine the changes between the original province-wide survey and this follow-up survey, the proportions of cutoff categories for remeasured mental health outcomes were examined. Figure 8 shows a comparison of proportions between the two surveys, for categories of potential concern such as “Above PTSD cutoff”, “Moderate to severe anxiety”, etc. Proportion increases from the original survey can be seen for anxiety, depression, and emotional exhaustion.

Figure 8. Comparison of proportions for potentially concerning mental health cutoff categories, between original survey and follow-up survey



SUICIDAL IDEATION

Questions about suicide and suicidal ideation were also included in the survey. Respondents were reminded that participation was completely voluntary for any part of the survey and of the confidentiality of the survey. Respondents were initially asked two questions: "In your lifetime, have you seriously thought about committing suicide?" and "In the past 12 months, have you seriously thought about committing suicide?". If affirmative responses were given to either question, the following questions were presented "… have you ever made a plan for committing suicide?" and "… have you ever attempted suicide?" for the corresponding timeframe.

Response frequencies and proportions are shown in Table 17. Approximately 30% of respondents reported having seriously thought about committing suicide in their lifetimes. Of that subgroup of respondents, 40% (11.8% overall) reported having made plans for committing suicide, and 19% (5.7% overall) reported having attempted suicide in their lifetime. For the past 12 months, 8% of respondents reported having seriously thought about committing suicide. When compared to the general Canadian population[4], the nursing workforce has a higher prevalence of lifetime suicidal thoughts (Nursing 29.9% vs. General 11.8%), lifetime suicidal planning (Nursing 12.0% vs. General 4.0%), lifetime suicide attempts (Nursing 5.7% vs. General 3.1%), and suicidal thoughts in the past year (Nursing 7.9% vs. General 2.5%).

Table 17. Response proportions for suicide ideation items

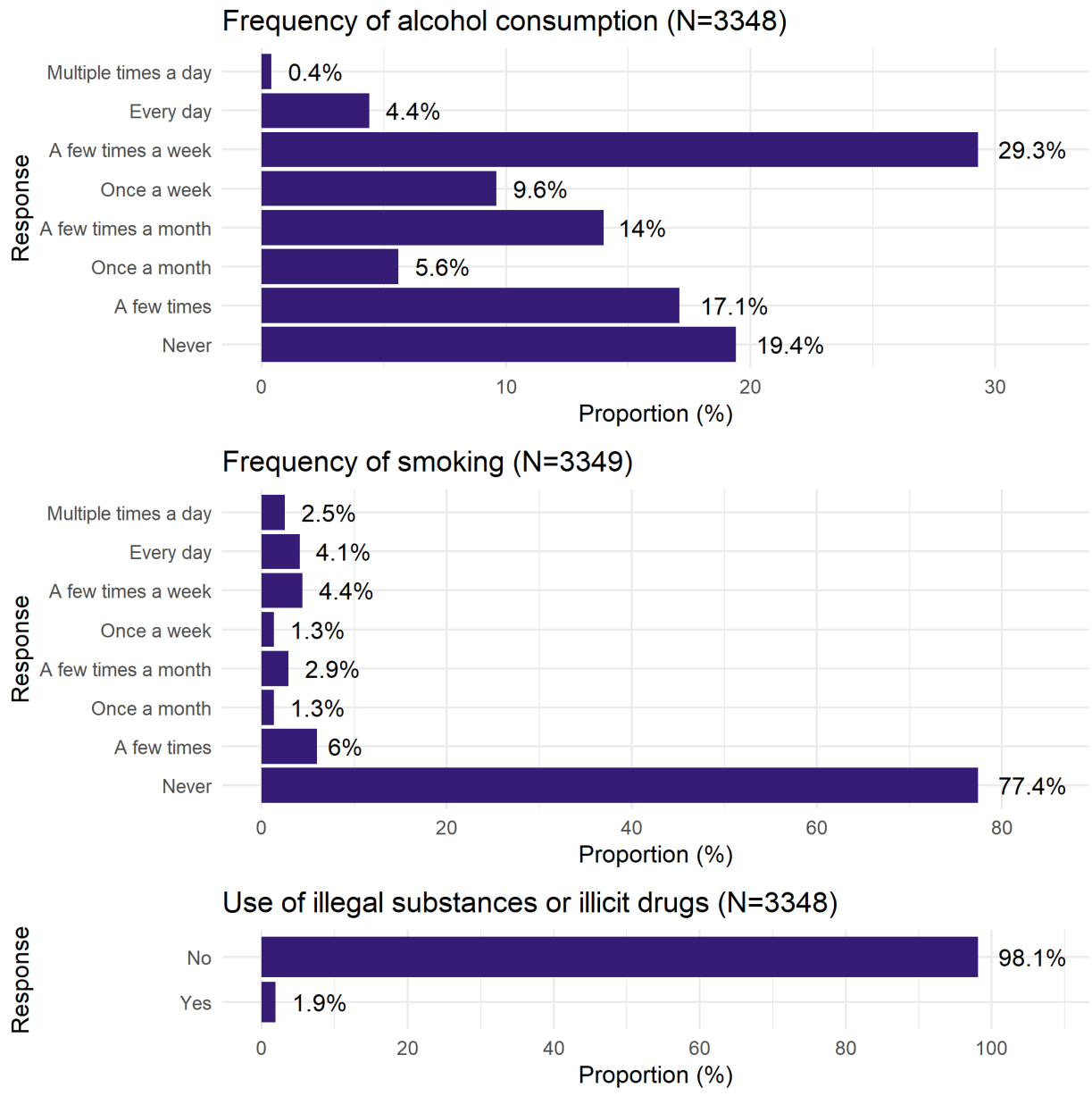
Item	Yes (%)	No (%)	N
In your lifetime…			
Have you ever seriously thought about committing suicide?	29.9	70.1	3323
Have you ever made a plan for committing suicide?	40.4	59.6	985
Have you ever attempted suicide?	19.1	80.9	987
In the past 12 months…			
Have you ever seriously thought about committing suicide?	7.9	92.1	3333
Have you ever made a plan for committing suicide?	33.1	66.9	263
Have you ever attempted suicide?	4.2	95.8	263
Note: Items "have you ever made a plan…" and "have you ever attempted…" were only displayed if respondent answered Yes to the corresponding "have you ever seriously thought…" item. Lines display the upper bound of subsample size for the latter two questions per group.			

[4] Public Health Agency of Canada. (2020, July 17). Suicide in Canada: Key Statistics. https://www.canada.ca/en/public-health/services/publications/healthy-living/suicide-canada-key-statistics-infographic.html

ALCOHOL AND SUBSTANCE USE

Respondents were also polled about their consumption habits for alcohol, smoking (e.g. cigarettes, marijuana, hookah), and illegal substances or illicit drugs (e.g. cocaine, opium) over the past six months. As shown in Figure 9, approximately 44% drank alcohol at least once a week. Comparatively, 12% smoked at least once a week. The overwhelming majority of respondents (98%) reported that they had not used illegal substances or illicit drugs over the past six months.

Figure 9. Proportions for alcohol consumption frequency, smoking frequency, and substance use



QUALITY, SAFETY, AND WORKLOAD

WORKPLACE INCIDENTS DURING COVID-19

Respondents were asked about the frequency of various patient incidents at their primary workplace during the COVID-19 pandemic. The question asked, “On average, how frequently has each of the following incidents occurred, involving you and your patient during COVID-19?”, with eight incidents listed. Responses were indicated on a seven-point scale, spanning “Never”, “Few times or less”, … “A few times a week”, “Almost every day”. The response proportions for the frequencies of patient incidents is displayed in Figure 10. The most common incidents were patient complaints, urinary tract infections, and pneumonia. Figure 11 displays the number of nurse respondents based on the number of patient incidents reported as occurring monthly or more frequently. Approximately 29% of nurses had two or more patient incidents occurring monthly or higher.

Figure 10. Response proportions for frequencies of patient incidents during COVID-19 “monthly” or more frequent, in descending order

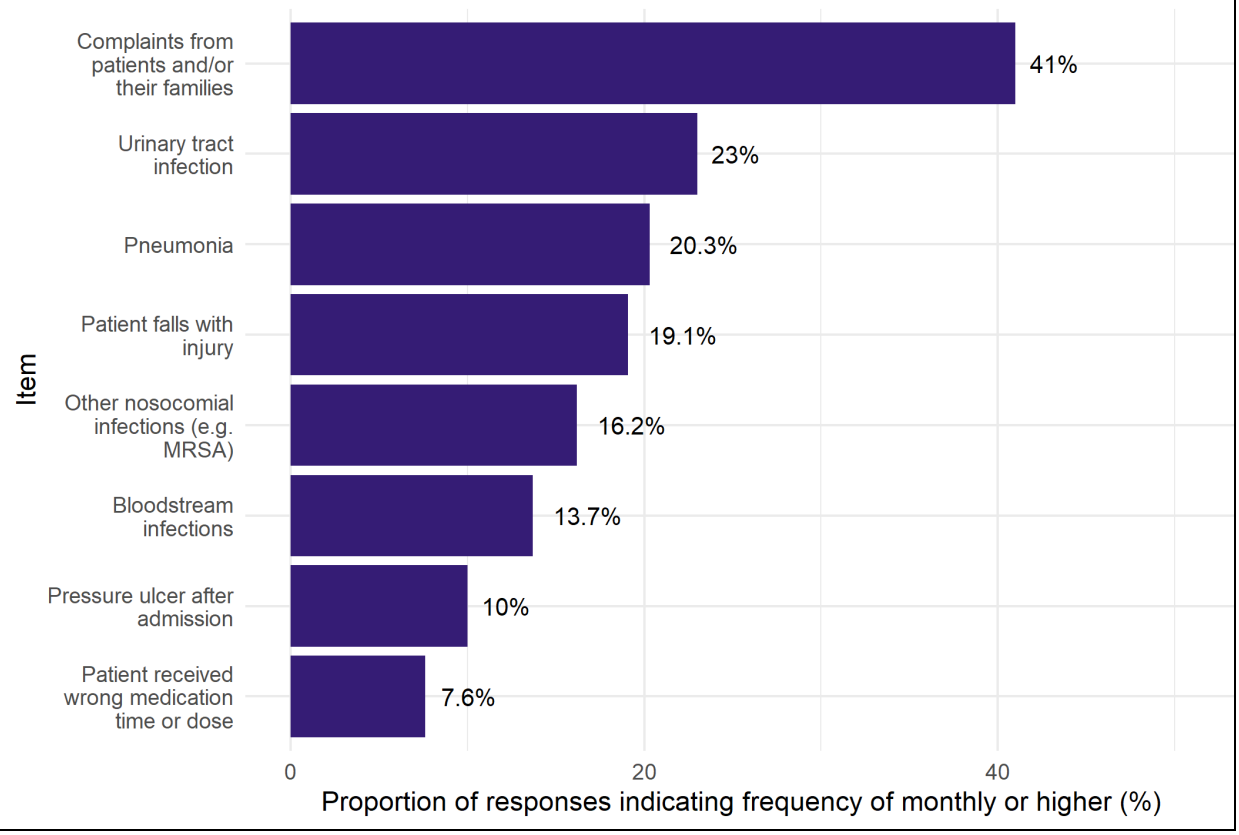
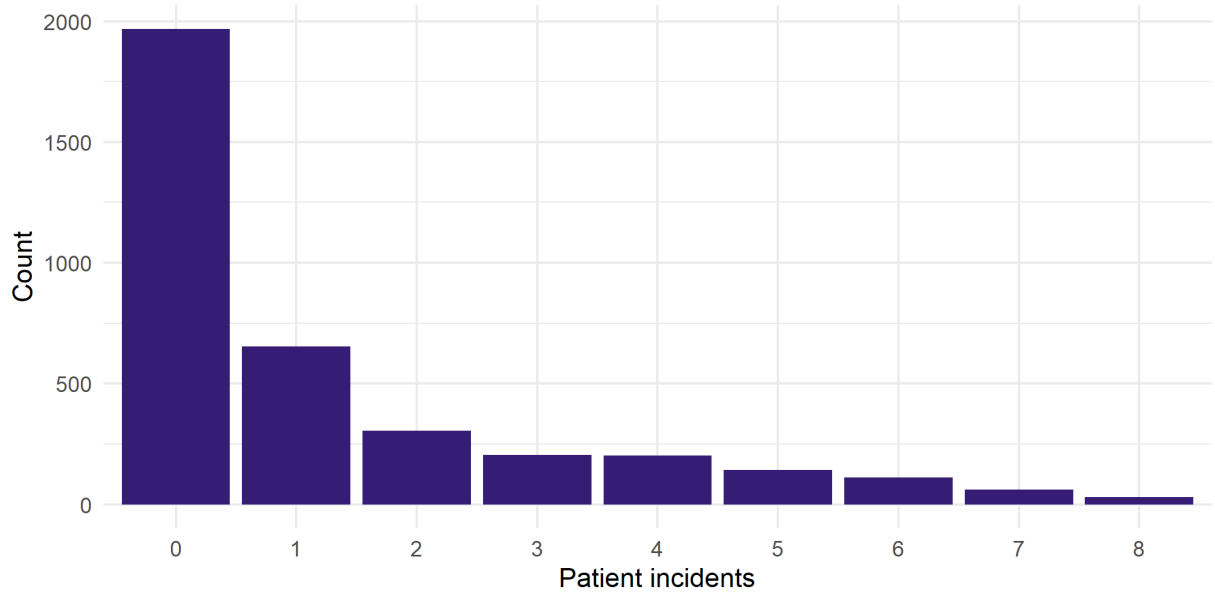


Figure 11. Nurse respondents grouped by number of patient incidents occurring monthly or more frequent (M=1.28, SD=1.9)



NURSING TASKS NECESSARY BUT LEFT UNDONE

Respondents were asked, “Which of the following nursing tasks were necessary but left undone during your last shift?” and could check all answers that applied. The nursing tasks presented as options, and their corresponding affirmative response proportions are shown in Figure 12. The most common necessary tasks left undone were “Develop or update nursing care plans/pathways” (40%), comfort/talk with patients (38%), and educating patients and family (26%).

The number of tasks left undone was also tallied by respondent. Figure 13 displays respondent count by number of tasks left undone. Approximately 10% had more than half (8+) of the listed tasks undone during the last shift.

Figure 12. Proportions for 'Yes' responses for nursing tasks necessary but left undone last shift

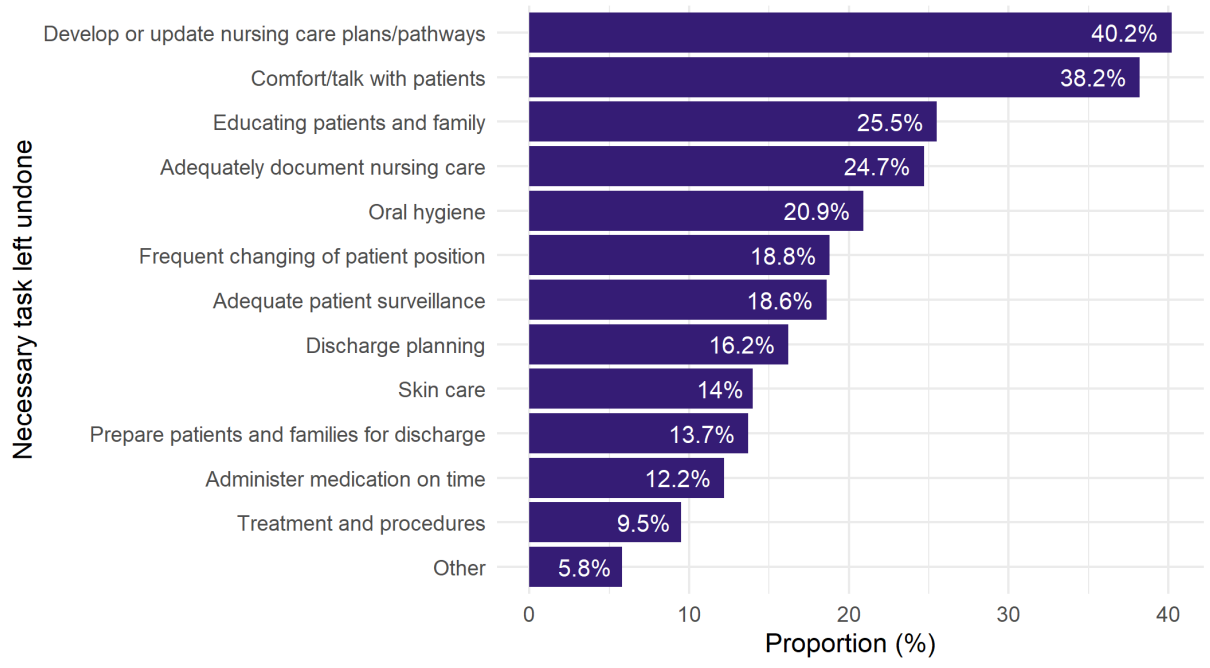
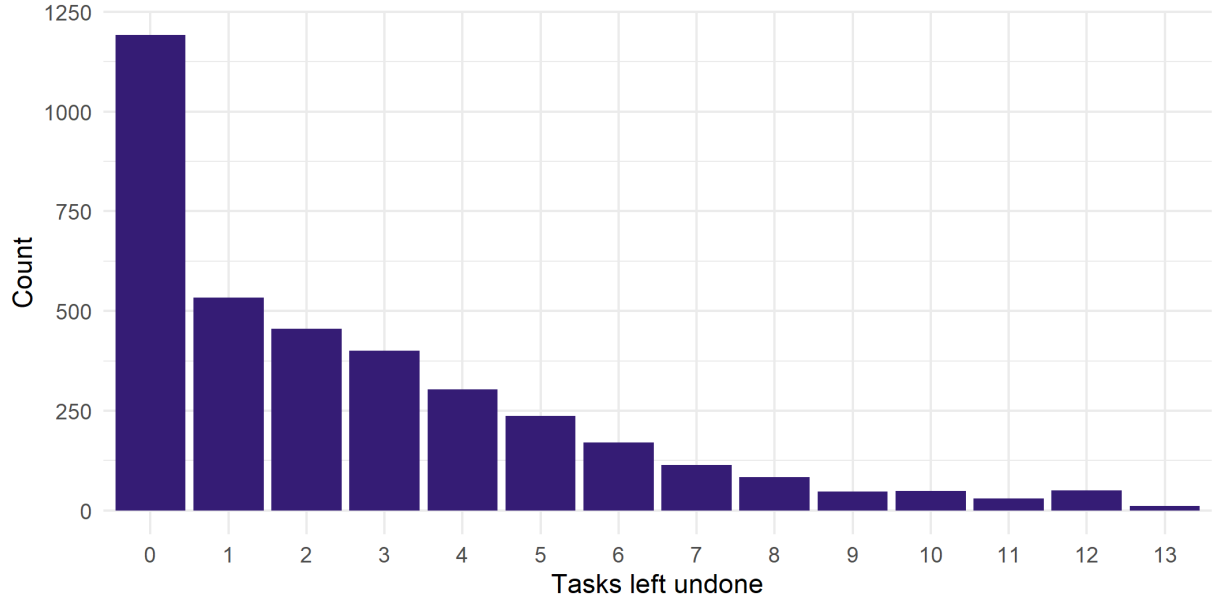


Figure 13. Nurse respondents grouped by number of reported tasks left undone (for number of tasks left undone, M=2.58, SD=2.88)



NON-NURSING TASKS

Respondents were also asked “Which of the following non-nursing tasks did you perform during your last shift”, and checked all applicable tasks from a short list. The proportion of “Yes” responses for each non-nursing task are shown in Figure 14. More than half of respondents reported performing clerical duties, obtaining supplies and equipment, and performing housekeeping duties during their last shift. The number of non-nursing tasks performed per respondent was also tallied, and is shown in Figure 15.

Figure 14. Proportion of 'Yes' responses for non-nursing tasks performed last shift

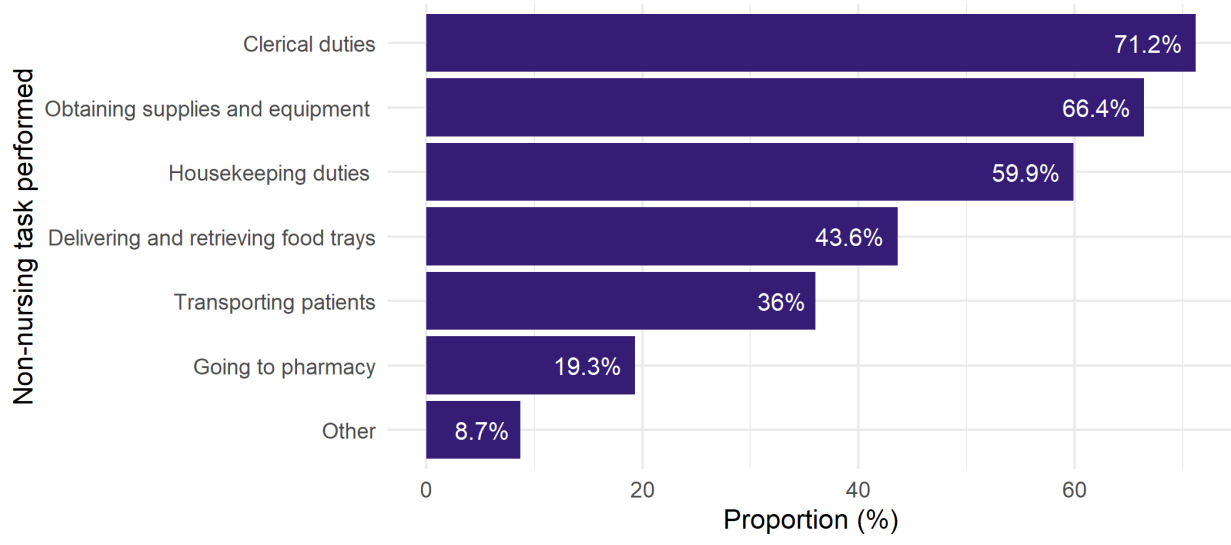
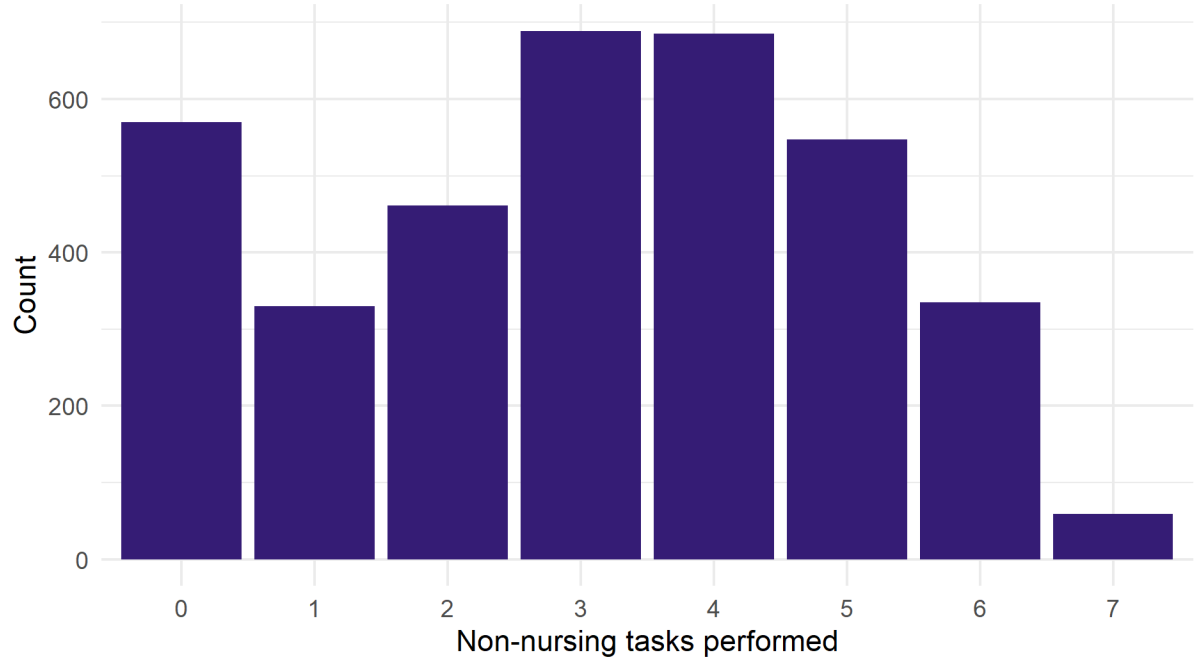


Figure 15. Nurse respondent count by number of non-nursing tasks performed (for non-nursing tasks performed last shift, M=3.05, SD=1.93)



OVERALL QUALITY AND SAFETY

Nurses were polled for their perceptions on quality of care and safety in their primary workplace, with questions asking about the quality of the nursing care they delivered, the overall patient safety, and the likelihood of recommending their primary workplace for care and as a workplace. The responses are tabulated by category in Table 18.

Respondents were confident in the quality of nursing care they delivered, with approximately 86% describing the general quality of nursing care they delivered as good or excellent, and 85% describing the quality of care they delivered on their last shift as good or excellent. Approximately 14% of nurses gave a negative overall grade for patient safety in their primary workplace, while 12% assigned a grade of Excellent.

For recommendations, 80% of respondents were likely to recommend their primary workplace to friends and family if they needed care. 71% were likely to recommend their primary workplace to a nurse colleague as a good place to work.

Table 18. Proportions for nurses' perceptions on overall quality and safety

Quality of care questions	Poor	Fair	Good	Excellent	N
In general, how would you describe the quality of nursing care you delivered to patients in your primary workplace?	1.0	13.2	53.3	32.5	3301
How would you describe the quality of nursing care you delivered to patients in your primary workplace on your last shift?	1.2	13.9	51.1	33.8	3288

Patient safety grade question	Failing	Poor	Acceptable	Very good	Excellent	N
Please give your primary workplace an overall grade on patient safety.	3.3	11.0	37.6	36.5	11.7	3297

Recommendation questions	Definitely no	Probably no	Probably yes	Definitely yes	N
Would you recommend your primary workplace to your friends and family if they needed care?	6.1	13.8	46.1	33.9	3288
Would you recommend your primary workplace to a nurse colleague as a good place to work?	7.9	21.2	45.1	25.8	3300

WORKPLACE VIOLENCE

FREQUENCY OF WORKPLACE VIOLENCE BY TYPE

The set of questions examining workplace violence asked about the frequencies of different types of workplace violence, querying respondents "**Over the last six months**, how frequently have you experienced each of the following types of violence in your primary workplace?" The five types presented were physical assault, threat of assault, emotional abuse, verbal sexual harassment, and sexual assault. For each type, respondents selected from seven options of increasing frequency, ranging from "Never" to "Every day."

The type of workplace violence with the highest proportion of experience was emotional abuse, with approximately 74% of respondents reporting some frequency of experience within the last six months. The type with the lowest proportion of experience was sexual assault, with approximately 8% of respondents reporting experiencing workplace sexual assault within the last six months. Table 19 presents proportions for experiential frequencies by type of workplace violence, while Table 20 summarizes the mean response by type.

Table 19. Frequencies of workplace violence frequency by type

Type of workplace violence	Frequency (%)							
	Never	A few times a year or less	Once a month	A few times a month	Once a week	A few times a week	Every day	N
Physical assault	47.3	26.5	7.5	10.8	2.8	3.9	1.2	3503
Threat of assault	32.1	28.7	9	14.5	4.7	7.4	3.6	3495
Emotional abuse	26.1	31.1	10.4	14.3	5.4	8.2	4.5	3491
Verbal sexual harassment	53.3	30.2	6.5	5	2.3	1.7	0.9	3497
Sexual assault	92.1	6.7	0.4	0.4	0.1	0.2	0.1	3483

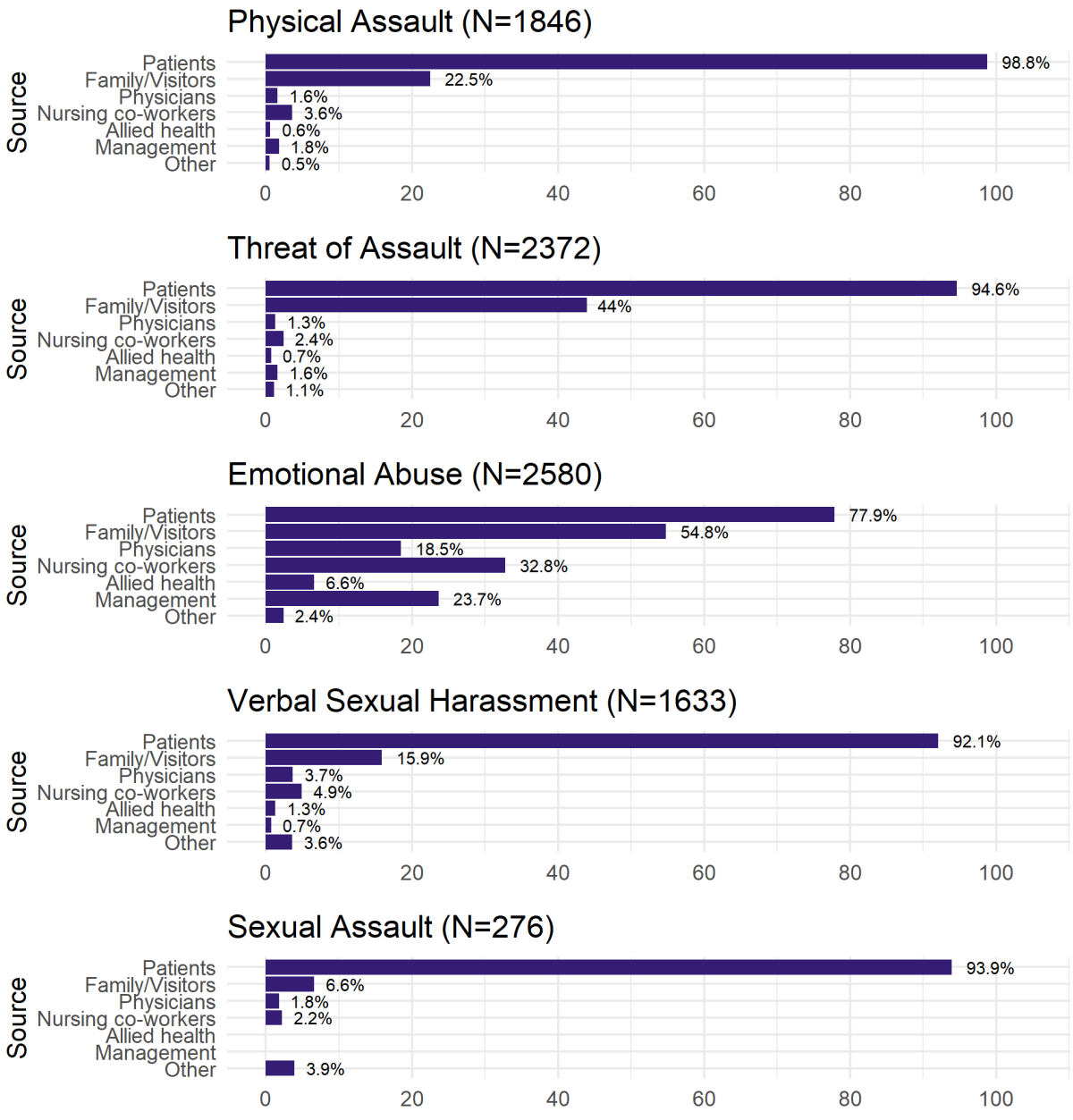
Table 20. Descriptive statistics for workplace violence by type

Type of workplace violence	N	Mean^	SD^	Min^	Max^
Physical assault	3503	1.12	1.46	0	6
Threat of assault	3495	1.68	1.75	0	6
Emotional abuse	3491	1.85	1.78	0	6
Verbal sexual harassment	3497	0.82	1.22	0	6
Sexual assault	3483	0.11	0.47	0	6
^ Note: Workplace violence frequency is coded numerically as follows: 0: *Never*, 1: *A few times a year or less* […] 5: *A few times a week*, 6: *Every day*					

SOURCES OF WORKPLACE VIOLENCE

Respondents who reported experiencing workplace violence were then asked a second set of questions about the sources of the workplace violence. For each reported type of violence (a response other than "Never"), the respondent was queried "Please indicate the source of workplace violence (check all that apply)" and presented seven options: patients, family/visitors, physicians, nursing co-workers, allied health, management, and other. Figure 16 displays the proportion of affirmative responses for each source, for each workplace violence type.

Figure 16. Sources of workplace violence by type

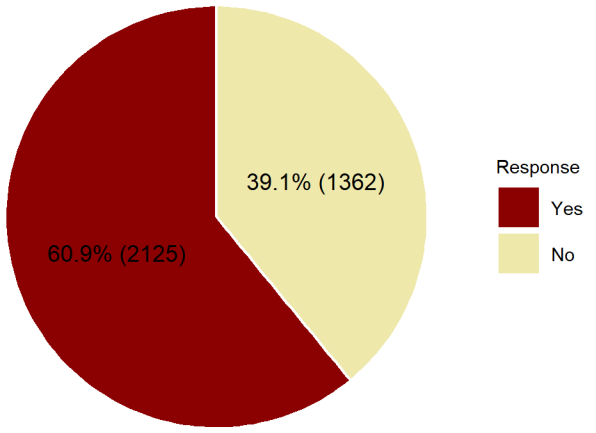


INDIRECT EXPERIENCES WITH WORKPLACE VIOLENCE

To examine nurses' indirect experiences with workplace violence, respondents were asked "Over the six months, have you ever witnessed any type of workplace violence without being directly involved?"

As shown in Figure 17, more than half of respondents reported witnessing workplace violence over the last six months.

Figure 17. Witnessed workplace violence without being directly involved, over the past six months

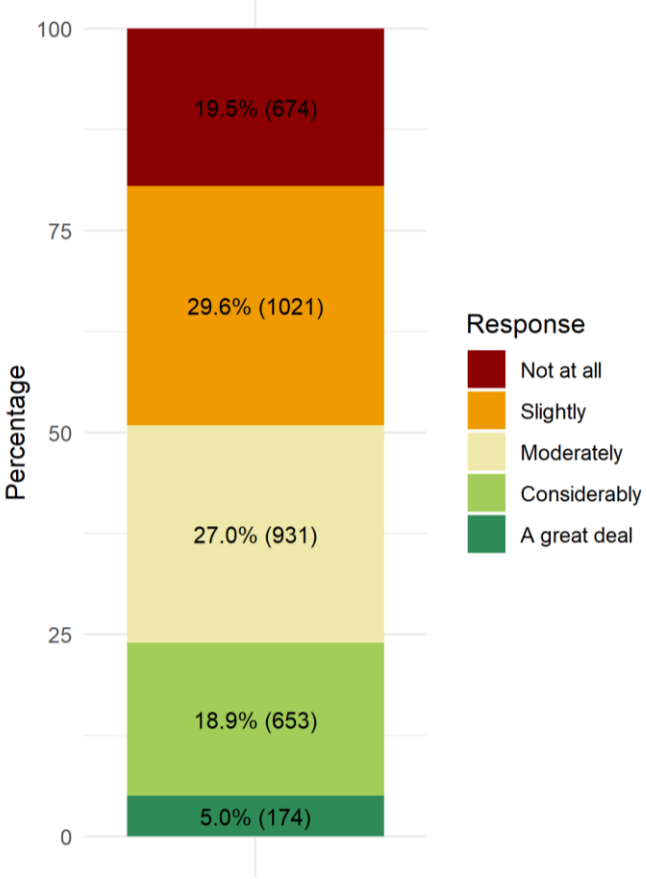


EMPLOYER EFFORTS TO PREVENT WORKPLACE VIOLENCE

Respondents were asked for their opinion on their employers' response to workplace violence in their primary workplace. The final question in the workplace violence section of the survey queried, "To what extent do you think your employer has taken appropriate measures to prevent violence in your primary workplace over the last six months?" The five available choices ranged from "Not at all" to "A great deal." The proportions of responses are displayed in Figure 18.

Approximately half (49%) rated their employers' efforts to prevent workplace violence as poor ("slightly", "Not at all").

Figure 18. Perceptions of extent of employer efforts to prevent workplace violence, over past six months



NURSE FACTORS

EXPERIENCES AS A RESULT OF WORKPLACE VIOLENCE EXPOSURE

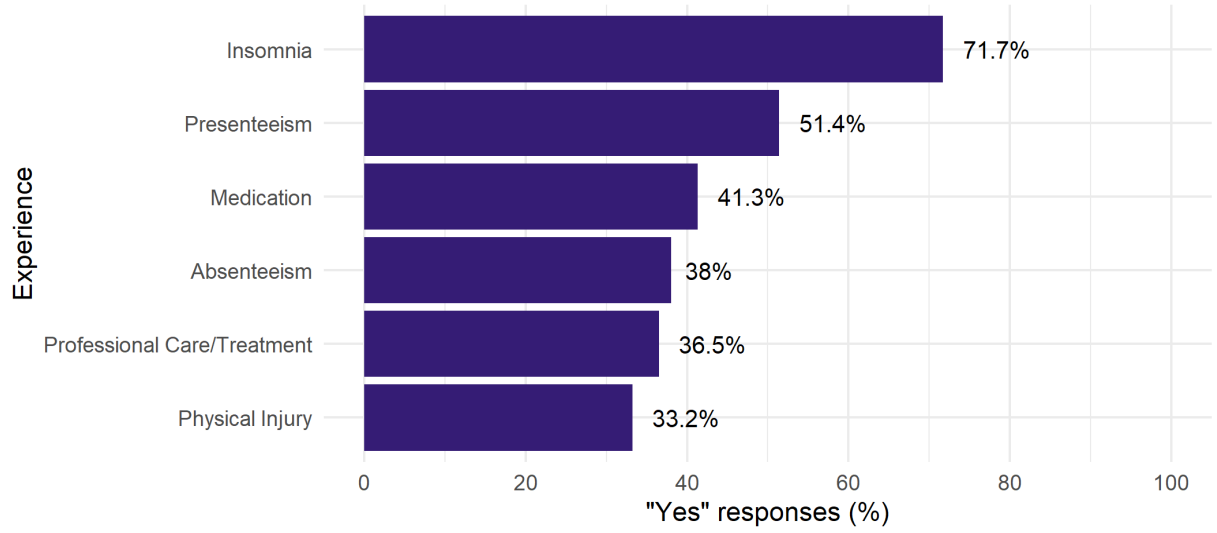
This survey included a number of question sets to assess respondents' perceptions of their physical and psychological health. The first series of questions followed up on nurses' exposure to workplace violence, asking respondents to select all applicable experiences in response to, "Have you had any of the following experiences as a result of exposure to workplace violence in your primary workplace over the last six months?" The six experiences listed were absenteeism ("Called in sick"), presenteeism ("Showed up to work despite feeling unwell"), medication ("used prescribed and/or over the counter medication, e.g., pain relievers, anti-anxiety medication"), insomnia ("difficulty falling asleep"), and professional care/treatment ("sought professional care/treatment, e.g. medical care, psychological care"). The results are presented in Table 21 and arranged in descending order in Figure 19.

At least one-third of respondents reported "Yes" for each of the six adverse experiences. The most common experiences were insomnia (72%), presenteeism (51%), and medication (41%).

Table 21. Proportions for experiences resulting from exposure to workplace violence, over the last six months

Experience	Yes (%)	No (%)	N
Absenteeism	38.0	62.0	2841
Presenteeism	51.4	48.6	2843
Medication	41.3	58.7	2840
Insomnia	71.7	28.3	2863
Physical Injury	33.2	66.8	2835
Professional Care/Treatment	36.5	63.5	2844

Figure 19. Experiences resulting from exposure to workplace violence, over the last six months



FINDINGS: ACUTE CARE SECTOR, DIRECT CARE PROVIDERS

DEMOGRAPHIC PROFILE OF ACUTE DIRECT CARE NURSE RESPONDENTS

This section provides an overview of survey findings related to direct care providers in the acute care sector (N=2092). Approximately 24% of respondents reported completing the 2019 baseline survey. The mean respondent age was 40.3 years (SD = 11.7). The majority of respondents were female (93%), RNs (80%), and working full-time (61%). Approximately 49% had an undergraduate degree, and 69% had more than five years of nursing experience. Table 22 provides a profile of respondents by baseline survey completion, age, gender, professional designation, education, nursing experience, and identification with BCNU equity-seeking caucuses. Table 23 provides demographic characteristics relevant to the respondents' primary workplace, such as their workplace geography, health authority, and nursing practice area.

Table 22. Demographic characteristics of acute care sector direct care providers

Characteristics	**N**	**%**
Completed baseline survey		
Yes	504	24.1
No	660	31.6
I don't remember/I don't know	927	44.3
Age		
Under 25	107	5.2
25 to 34	687	33.1
35 to 44	536	25.8
45 to 54	435	21
55 and above	309	14.9
Gender		
Female	1941	92.8
Male	141	6.7
Prefer to describe	9	0.4
Professional Designation		
RN	1678	80.2
RPN	60	2.9
LPN	340	16.3
Dually registered (RN/RPN)	6	0.3
Student nurse	8	0.4
Education		
Diploma/Certificate	630	30.2
Undergraduate degree	1032	49.4
Graduate degree	400	19.2
Other	26	1.2
Overall nursing experience		
5 years or less	645	31
6 to 10 years	432	20.7
11 to 15 years	361	17.3
16 to 20 years	177	8.5
21 years or more	467	22.4

Identification with BCNU equity-seeking caucuses (respondents may identify with multiple caucuses simultaneously)		
Indigenous Leadership Circle	104	5.2
LGBTQ	117	5.9
Mosaic of Colour	277	13.9
Workers with Disabilities	104	5.3

Table 23. Demographic characteristics relevant to respondents' primary workplace

Primary workplace	**N**	**%**
Health authority		
Fraser Health	527	25.2
Vancouver Coastal Health	426	20.4
Vancouver Island Health	424	20.3
Interior Health	323	15.4
Northern Health	139	6.6
Providence Health	119	5.7
Provincial Health Services	119	5.7
First Nations Health	2	0.1
Workplace geography		
Urban	1405	67.6
Suburban	387	18.6
Rural	286	13.8
Nursing practice area		
Ambulatory care	105	5
Community mental health	2	0.1
Emergency	250	12
Home and community care	3	0.1
Intensive care	207	9.9
Long-term care	2	0.1
Medical/surgical	797	38.2
Mental health or psychiatry	121	5.8
Obstetrics	124	5.9
Oncology	47	2.3
OR/PACU	182	8.7
Palliative	34	1.6
Pediatrics	51	2.4
Public health	1	0
Rehabilitation	29	1.4
Other, please specify	98	4.7
Mixed (a combination of other areas)	35	1.7
Employment status		
Full-time	1267	60.6
Part-time	576	27.5
Casual	248	11.9

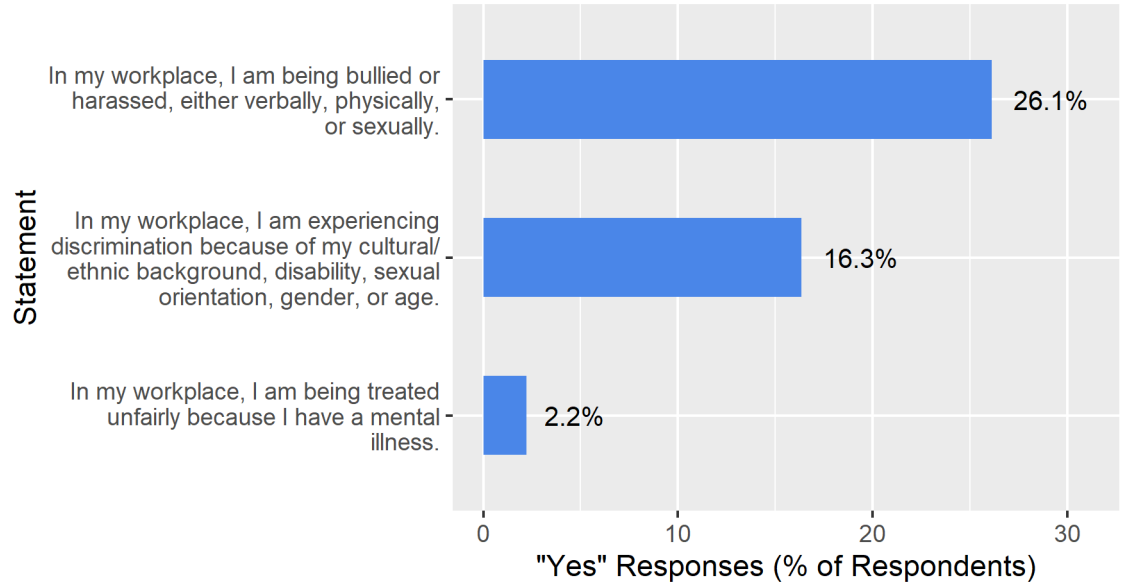
OVERALL WORKPLACE FACTORS

As part of this survey, respondents were queried about their experiences in the primary workplace through question sets spanning a variety of topics. The topics explored include general negative treatment in the workplace, COVID-19, and workplace violence.

WORKPLACE DISCRIMINATION, BULLYING/HARASSMENT, AND UNFAIR TREATMENT DUE TO MENTAL HEALTH

The first set of questions examining general negative treatment in the workplace were sourced from the Guarding Minds at Work assessment tool. The questions were comprised of three statements describing workplace bullying and harassment, discrimination, and unfair treatment due to mental illness, to which respondents indicated whether or not they had had such experiences over the last six months. Figure 20 presents the affirmative response proportion for each.

Figure 20. Proportion of responses reporting various workplace experiences



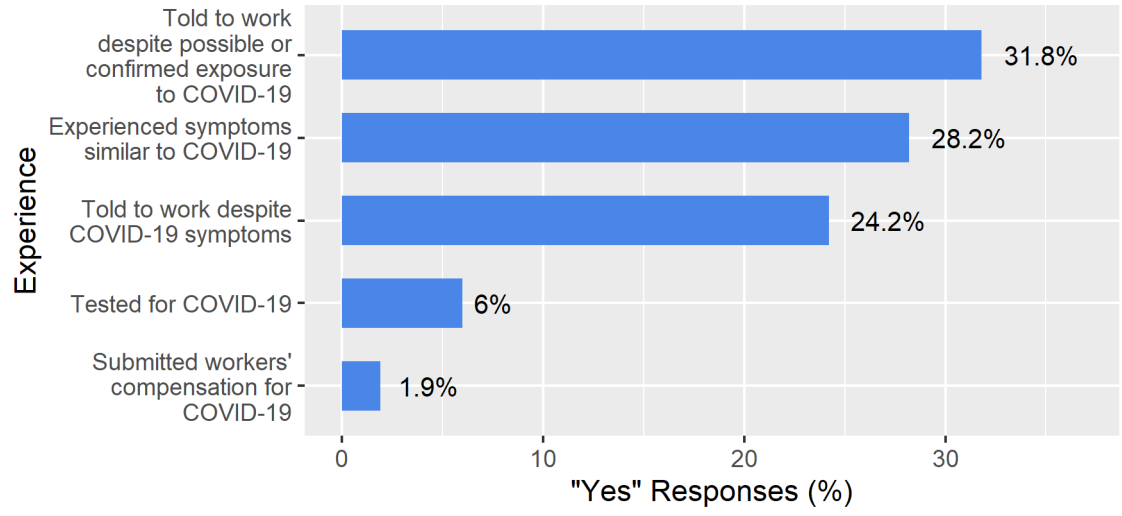
COVID-19 WITHIN THE WORKPLACE

The next set of questions were focussed on nurse experiences of the COVID-19 pandemic in the primary workplace. Respondents were asked to respond to the questions thinking about their workplace experiences **since the start of the COVID-19 pandemic in March 2020**. Respondents answered Yes/No prompts about personal COVID-19 experiences, and Likert-type items about subtopics including frequency of contact with COVID-19 patients, adequacy of staffing, sufficiency/quality of personal protective equipment (PPE), changes in workplace relationships, etc. Table 24 presents a comprehensive overview of response proportions for all COVID-19 questions.

Frequency of direct contact with COVID-19 patients: Respondents were asked how frequently they have had direct contact with suspected or confirmed COVID-19 patients, with response options ranging along a 7-point Likert scale from "Never" to "Almost every day". Approximately 54% of respondents reported their frequency of contact as "Never" or "A few times", while 28% reported their frequency of contact as "Once a week" or greater.

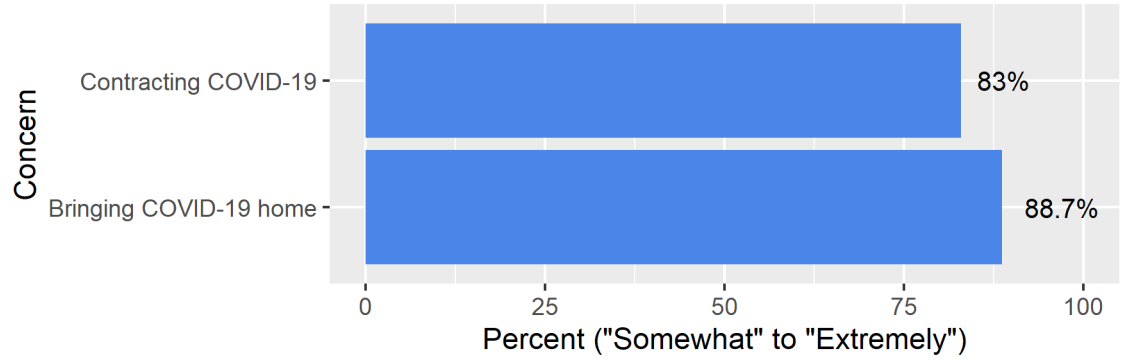
Personal COVID-19 experiences: Respondents were asked whether or not they had experienced any of five COVID listed experiences. The response proportions to each experience are shown in Figure 21.

Figure 21. Proportion of "Yes" responses to personal experiences related to COVID-19



Concern about COVID-19: Respondents reported their level of concern "about contracting COVID-19 at [their] workplace" and "about bringing COVID-19 home to those with whom [they] live and/or family/friends" along a 5-point Likert scale, ranging from "Extremely concerned" to "Not at all concerned". The response proportion for 'Somewhat' to 'Extremely' concerned responses are shown in Figure 22.

Figure 22. Proportion of 'Somewhat concerned' to 'Extremely concerned' responses for COVID-19 concerns

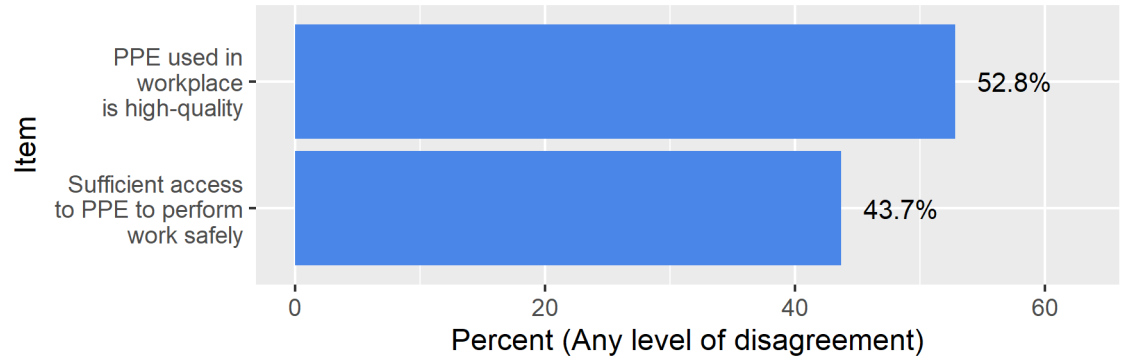


Adequacy of nurse staffing: Respondents rated the adequacy of nurse staffing in their primary workplace during COVID-19 along a 6-point Likert scale, ranging from “Extremely inadequate” to “Extremely adequate”. Almost half (49%) rated staffing as inadequate.

Personal Protective Equipment (PPE): Respondents were asked about their workplace experiences with PPE during the pandemic, including their endorsement of the statements “I have had sufficient access to PPE to perform my work safely” and “The PPE used in my workplace is high-quality”; the length of time since they were fit tested for an N95 respirator; and how likely they were to exercise their right to refuse unsafe work if denied appropriate PPE.

As detailed in Figure 23, 53% disagreed that the PPE used in their workplace is high-quality, and 44% disagreed that they have had sufficient access to PPE to perform their work safely. About 10% reported that they had either never been fit tested for an N95, or that it had been two or more years since their last fit test. Approximately 69% responded that they were likely or very likely to exercise their right to refuse unsafe work if denied appropriate PPE.

Figure 23. Disagreement response proportions for PPE quality and access to PPE during COVID-19 pandemic



Confidence in own ability to assess PPE requirements and personal risk: Respondents reported their confidence in their ability to adequately assess their PPE requirements and personal risk.

Approximately 56% responded “confident” or “very confident” towards assessment of PPE requirements, and 56% responded “confident” or “very confident” towards assessment of their personal risk.

Adequacy of training: Respondents rated the adequacy of their training to work safely with COVID-19 along a 4-point Likert scale ranging from “Extremely inadequate” to “Extremely adequate”, or indicated that they had never received such training. Approximately 31% found their training to be inadequate, while 3% indicated that they had never received training.

Organizational factors: With the duration of the COVID-19 pandemic in mind, respondents rated their confidence in their organization’s/manager’s handling of the pandemic, the extent to which they were supported by their organization, the average frequency of protocol and policy change, and transparency of organizational decisions related to COVID-19.

- The majority of respondents (76%) reported that the average frequency of COVID-19 protocol and policy changes was weekly or higher. Approximately 32% reported changes daily or multiple times a day.
- Approximately 43% rated the transparency of organizational decisions related to COVID-19 as poor or failing.
- More than a quarter (27%) responded that they were not confident in their manager’s handling of the pandemic.
- More than a quarter (26%) responded that they were not confident (‘not at all confident’, ‘not confident’) in organizational handling of the pandemic.
- Approximately 18% responded that they were not supported by their organization during the pandemic, while 35% responded that they were only ‘slightly supported’.

Changes to workplace relationships: Respondents were asked how their workplace relationships with their nursing colleagues, manager, and the rest of healthcare team (e.g. medicine, allied health) had changed during COVID-19. As shown in Figure 24, 28% reported worsening relationships with managers, 21% reported worsening relationships with colleagues, and 20% reported worsening relationships with the rest of the healthcare team.

Figure 24. Response proportions for changes in workplace relationships during COVID-19 pandemic

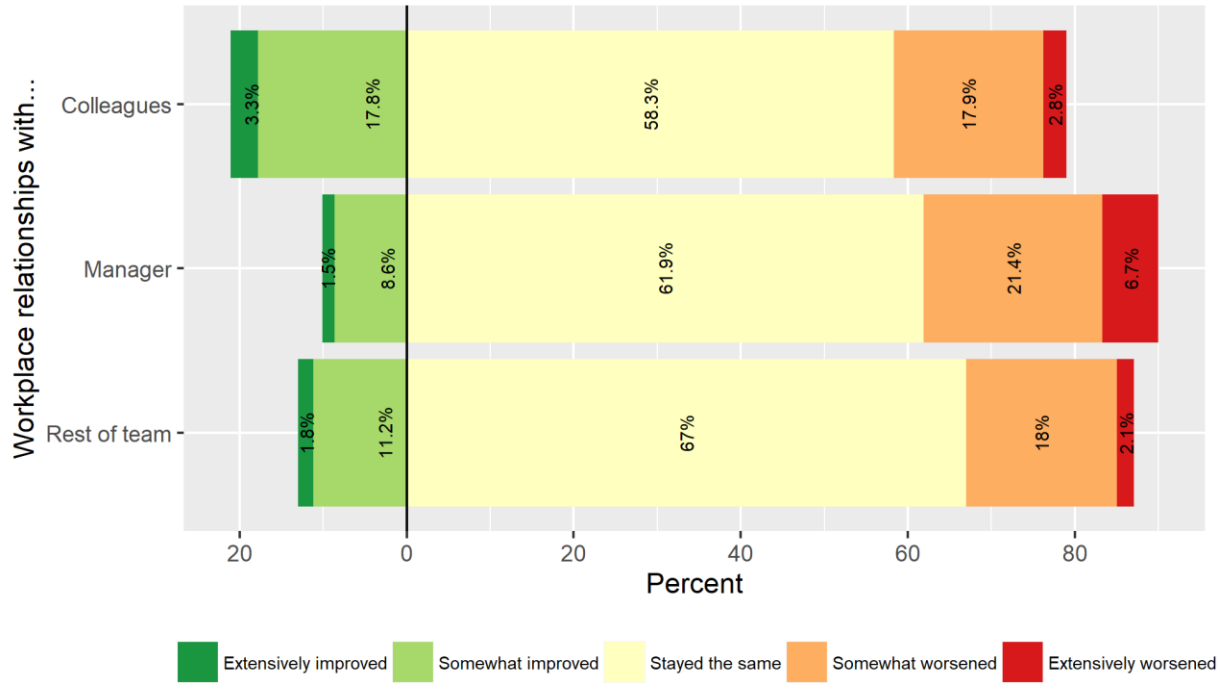


Table 24. Response proportions for all COVID-19 variables

Frequency	Never	A few times	Once a month	A few times a month	Once a week	A few times a week	Almost every day	N
Frequency of direct contact with suspected or confirmed COVID-19 patients	14.7	39	3.3	15.4	4.9	12.4	10.3	2039

Personal experiences	Yes	No	N
Told to work despite possible or confirmed exposure to COVID-19	28.2	71.8	2034
Experienced symptoms similar to COVID-19	31.8	68.2	2031
Told to work despite COVID-19 symptoms	6	94	2024
Tested for COVID-19	24.2	75.8	2033
Submitted workers' compensation for COVID-19	1.9	98.1	2021

Concern	Extremely concerned	Very concerned	Somewhat concerned	Slightly concerned	Not at all concerned	N
Concern about contracting COVID-19 at workplace	22	29.6	31.4	13.9	3.2	2044
Concern about bringing COVID-19 home	41.9	29.3	17.5	8.6	2.7	2045

Adequacy	Extremely inadequate	Moderately inadequate	Slightly inadequate	Slightly adequate	Moderately adequate	Extremely adequate	N
Adequacy of nurse staffing	9	22.2	18.1	11.4	26.7	12.5	2046

	Never received such training	Extremely inadequate	Somewhat inadequate	Somewhat adequate	Extremely adequate	N
Adequacy of training to work safely with COVID	2.9	7.8	23.2	50.4	15.7	1997

PPE	Strongly disagree	Disagree	Somewhat disagree	Somewhat agree	Agree	Strongly agree	N
Sufficient access to PPE necessary to perform work	11.8	16	15.9	21.3	26.2	8.9	2031
High quality PPE are used in workplace	14.5	20	18.3	22.9	19.3	5	2029

	Within last month	Within last 6 months	Within last year	1-2 years ago	2-5 years ago	5+ years ago	Never been fit tested	N
Time since last fit test for N95 mask	10.2	36.1	25.9	18.2	6.8	2	0.7	2031

	Very unlikely	Unlikely	Likely	Very likely	N
If denied appropriate PPE, how likely to exercise right to refuse unsafe work	6	24.6	33.9	35.4	2025

Confidence	Not at all confident	Not confident	Slightly confident	Somewhat confident	Confident	Very confident	N

Confidence in own ability to assess PPE requirements	1.4	7.2	12.7	23	40.8	14.9	2030
Confidence in own ability to assess personal risk	0.7	4.5	13.3	26	42.6	12.9	2029
Confidence in organization's handling of COVID-19 pandemic	8.1	17.5	21.7	27.4	21.1	4.2	1998
Confidence in manager's handling of COVID-19 pandemic	9.5	17.4	19.4	24.3	22.8	6.6	1993

Organizational support	**Not at all supported**	**Not supported**	**Slightly supported**	**Moderately supported**	**Extremely supported**	**N**
Extent of support from workplace organization during COVID-19 pandemic	5.2	13	35.3	36	10.7	1997

Policy and protocol	**Never**	**A few times**	**Once a month**	**A few times a month**	**Once a week**	**A few times a week**	**Every day**	**Multiple times a day**	**N**
Average frequency of changes to COVID-19 related protocols and policies in workplace	0.4	7.2	1.5	14.9	13.3	31.3	19.7	11.8	1999

Changes to workplace relationships during COVID-19 pandemic	**Extensively worsened**	**Somewhat worsened**	**Stayed the same**	**Somewhat improved**	**Extensively improved**	**N**
Nursing colleagues	2.8	17.9	58.3	17.8	3.3	1996
Manager	6.7	21.4	61.9	8.6	1.5	1996
Rest of the healthcare team	2.1	18	67	11.2	1.8	1998

Transparency	**Failing**	**Poor**	**Fair**	**Good**	**Excellent**	**N**
Transparency of organizational decisions related to COVID-19	12.8	29.7	37.2	17.6	2.7	1994

NURSE OUTCOMES

MENTAL HEALTH AND WELLBEING

Several established tools were included in the survey to assess respondents' psychological ill-being, with screening tools for post-traumatic stress disorder (PTSD), generalized anxiety disorder, major depressive disorder, and emotional exhaustion/burnout. Summary information for the data is displayed in Table 25. Category proportions, as defined by cutoff values, are shown in Table 26.

PTSD: Post-traumatic stress disorder was assessed using the Posttraumatic Stress Symptoms-14 (PTSS-14) instrument, a measure consisting of 14 items reflecting feelings over the last two weeks, such as "The need to withdraw from others", "Frequent mood swings" and "muscular tension". Respondents rated how frequently they experienced each feeling along a 7-point Likert scale, ranging from 1 = Never, to 7 = Always. Total scores of 45 or higher were categorized as positive for PTSD.

Approximately half of respondents (50%) scored within the 'positive' range for PTSD.

Anxiety: Generalized anxiety disorder was assessed using the Generalized Anxiety Disorder-7 (GAD7) instrument, which consists of seven items describing negative feelings within the last two weeks, such as "Feeling nervous, anxious or on edge" and "Trouble relaxing". Responses were given along a 4-point Likert scale, ranging from 0 = Not at all, to 3 = Nearly every day. Sum scores were categorized as: 0-4 = no anxiety, 5-9 = mild, 10-14 = moderate, 15-21 = severe.

Approximately 74% of respondents scored within some level of anxiety, with 40% within the moderate to severe anxiety range.

Depression: The Patient Health Questionnaire-9 (PHQ-9) consists of nine items reflecting perceptions such as poor appetite, anhedonia, and depressive mood. Respondents rated how often they were bothered by each perception within the last two weeks, along a 4-point Likert scale, ranging from 0 = Not at all, to 3 = Nearly every day. Sum scores were categorized as 0-4 = no depression, 5-9 = mild, 10-14 = moderate, 15-19 = moderately severe, and 20-27 = severe depression.

Approximately 72% of respondents were categorized at some level of depression, with 42% within the moderate to severe depression range.

Burnout: To assess nurse burnout, this survey used the Maslow Burnout Inventory - Human Services Survey, which includes three subscales of Emotional Exhaustion, Depersonalization, and Personal Accomplishment. Items in the scale include statements such as: for Emotional Exhaustion (9 items), "I feel emotionally drained from my work" and "I feel like I'm at the end of my rope"; for Depersonalization (5 items), "I worry that this job is hardening me emotionally"; for Personal Accomplishment (8 statements), "I feel very energetic". Respondents rated the frequency of each feeling along a 7-point Likert scale of increasing frequency, ranging from 0 = Never, 1 = A few times a year or less; to 5 = A few times a week, 6 = Every day. Subscale sum scores were categorized by cutoff scores: for emotional exhaustion, 0-16 = low,

17-26 = moderate, ≥ 27 = high; for depersonalization 0-6 = low, 7-12 = moderate, ≥ 13 = high; for personal accomplishment, 0-31 = low, 32-38 = moderate, ≥ 39 = high.

Approximately 60% of respondents indicated high emotional exhaustion, 32% indicated high depersonalization, and 35% indicated low personal accomplishment.

Table 25. Descriptive statistics for nurse outcome measures

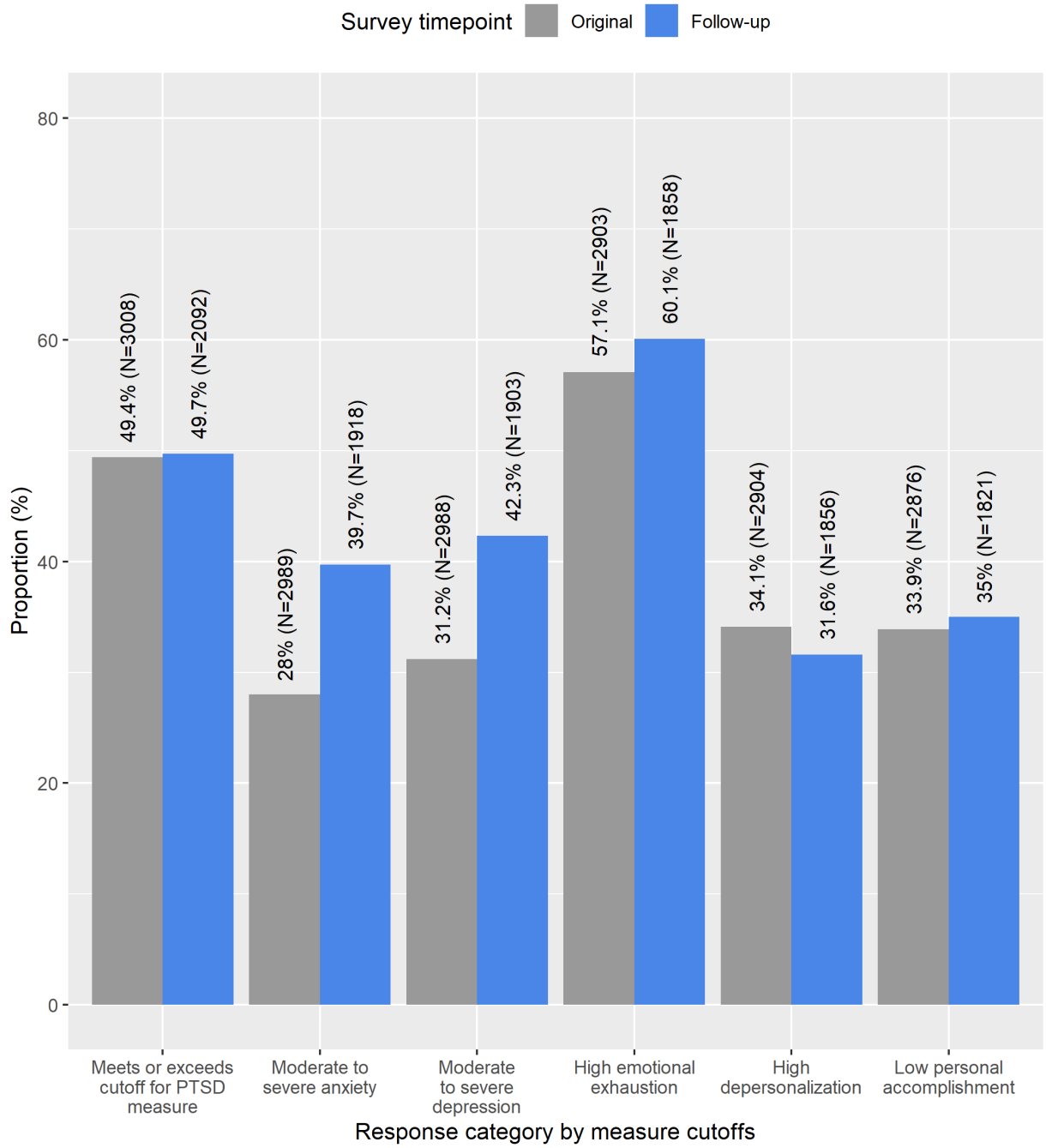
Measure	N	Mean	SD	Min	Max
Posttraumatic Stress Symptoms-14 (PTSS-14)[1]	1906	47.6	19.11	14	98
Generalized Anxiety Disorder-7 (GAD-7)[1]	1918	8.62	5.73	0	21
Patient Health Questionnaire-9 (Depression; PHQ-9)[1]	1903	8.99	6.11	0	27
Maslach Burnout Inventory - Human Services Survey for Medical Personnel[2]					
Emotional Exhaustion (MBI-HSS (MP))	1858	30.11	13.1	0	54
Depersonalization (MBI-HSS (MP))	1856	9.29	7.1	0	30
Personal Accomplishment (MBI-HSS (MP))	1821	33.88	7.86	0	48
Note: [1]Items refer to the past two weeks. [2]Items refer to the past six months.					

Table 26. Proportions for nurse outcome categories, as defined by sum score cut-offs

Measure	% in category (by cutoffs)					N
PTSS-14	Below cutoff	Above cutoff				
	50.3	49.7				2092
GAD-7	No anxiety	Mild anxiety	Moderate anxiety	Severe anxiety		
	25.9	34.5	22.1	17.6		1918
PHQ-9	No depression	Mild depression	Moderate depression	Moderately severe depression	Severe depression	
	27.7	29.8	22.6	13.6	6.1	1903
MBI-HSS (MP)						
Emotional Exhaustion	Low EE	Moderate EE	High EE			1858
	18.4	21.6	60.1			
Depersonalization	Low DP	Moderate DP	High DP			1856
	43.2	25.2	31.6			
Personal Accomplishment	Low PA	Moderate PA	High PA			1821
	35	33.8	31.2			

To examine the changes between the original province-wide survey and this follow-up survey, the proportions of cutoff categories for remeasured mental health outcomes were examined. Figure 25 shows a comparison of proportions between the two surveys, for categories of potential concern such as “Above PTSD cutoff”, “Moderate to severe anxiety”, etc. Proportion increases from the original survey can be seen for anxiety, depression, and emotional exhaustion.

Figure 25. Comparison of proportions for potentially concerning mental health cutoff categories, between original survey and follow-up survey



SUICIDAL IDEATION

Questions about suicide and suicidal ideation were also included in the survey. Respondents were reminded that participation was completely voluntary for any part of the survey and of the confidentiality of the survey. Respondents were initially asked two questions: "In your lifetime, have you seriously thought about committing suicide?" and "In the past 12 months, have you seriously thought about committing suicide?". If affirmative responses were given to either question, the following questions were presented "… have you ever made a plan for committing suicide?" and "… have you ever attempted suicide?" for the corresponding timeframe.

Response frequencies and proportions are shown in Table 27. Approximately 31% of respondents reported having seriously thought about committing suicide in their lifetimes. Of that subgroup of respondents, 40% (12.2% overall) reported having made plans for committing suicide, and 19% (5.8% overall) reported having attempted suicide in their lifetime.

For the past 12 months, 8% of respondents reported having seriously thought about committing suicide. Of that subgroup, 29% (2.2% overall) reported having made plans for committing suicide in the past year, and 3% (0.3% overall) reported having attempted suicide in the past year.

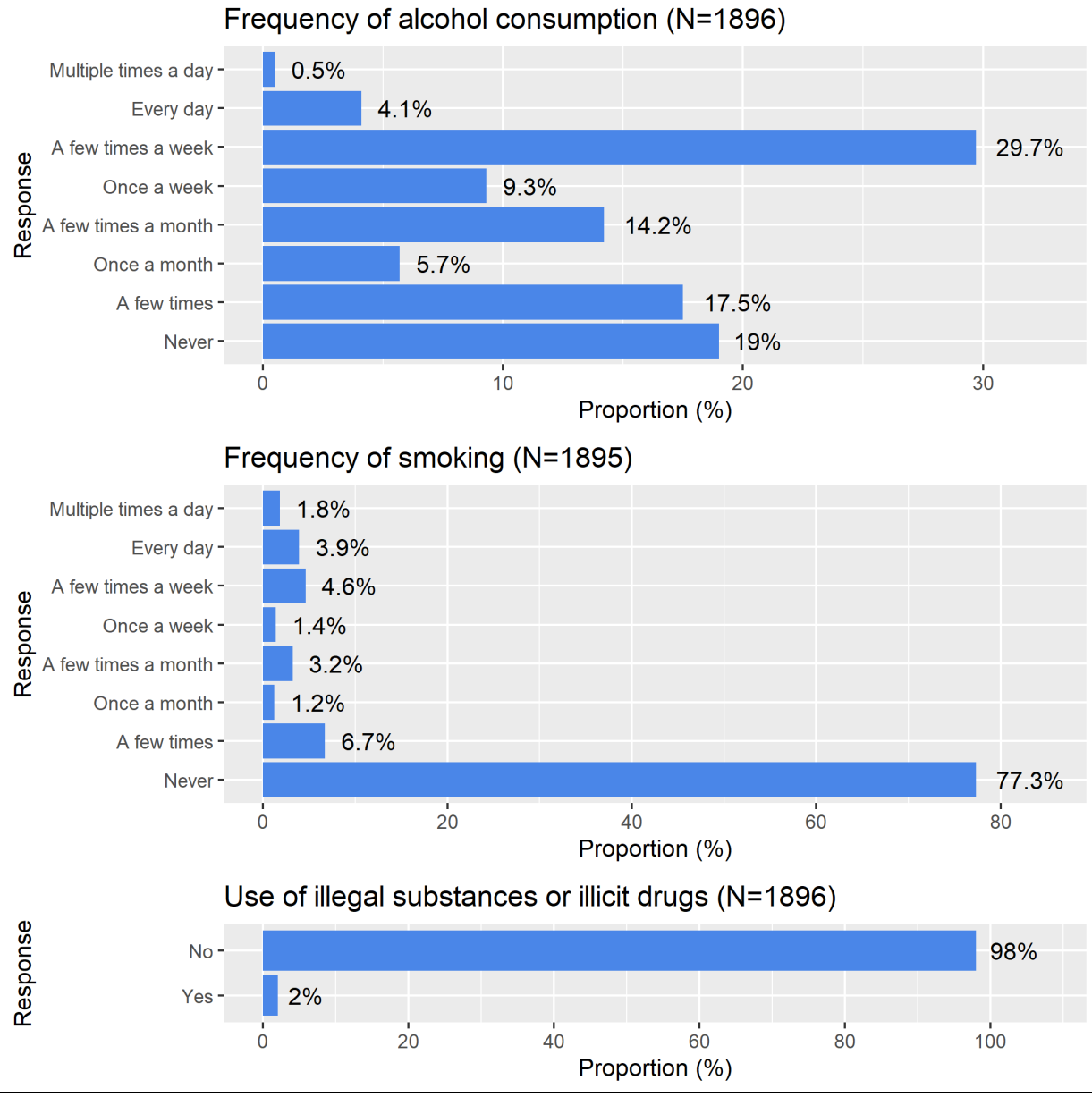
Table 27. Response proportions for suicide ideation items

Item	Yes (%)	No (%)	N
In your lifetime…			
Have you ever seriously thought about committing suicide?	30.9	69.1	1883
Have you ever made a plan for committing suicide?	39.9	60.1	576
Have you ever attempted suicide?	19	81	579
In the past 12 months…			
Have you ever seriously thought about committing suicide?	7.7	92.3	1890
Have you ever made a plan for committing suicide?	28.8	71.2	146
Have you ever attempted suicide?	3.4	96.6	146
Note: Items "have you ever made a plan…" and "have you ever attempted…" were only displayed if respondent answered Yes to the corresponding "have you ever seriously thought…" item. Lines display the upper bound of subsample size for the latter two questions per group.			

ALCOHOL AND SUBSTANCE USE

Respondents were also polled about their consumption habits for alcohol, smoking (e.g. cigarettes, marijuana, hookah), and illegal substances or illicit drugs (e.g. cocaine, opium) over the past six months. Approximately 44% drank alcohol at least once a week, while 12% smoked at least once a week. The overwhelming majority (98%) reported that they had not used illegal substances or illicit drugs over the past six months.

Figure 26. Proportions for alcohol consumption frequency, smoking frequency, and substance use



QUALITY, SAFETY, AND WORKLOAD

WORKPLACE INCIDENTS DURING COVID-19

Respondents were asked about the frequency of various patient incidents at their primary workplace during the COVID-19 pandemic. The question asked, “On average, how frequently has each of the following incidents occurred, involving you and your patient during COVID-19?”, with eight incidents listed. Responses were indicated on a seven-point scale, spanning “Never”, “Few times or less”, … “A few times a week”, “Almost every day”. The response proportions for the frequencies of patient incidents is displayed in Figure 27. The most common incidents were patient complaints, urinary tract infections, and pneumonia. Figure 28 displays the number of nurse respondents based on the number of patient incidents reported as occurring monthly or more frequently. Approximately 29% of acute care direct care providers had two or more patient incidents occurring monthly or more frequent.

Figure 27. Response proportions for frequencies of patient incidents during COVID-19 “monthly” or more frequent, in descending order

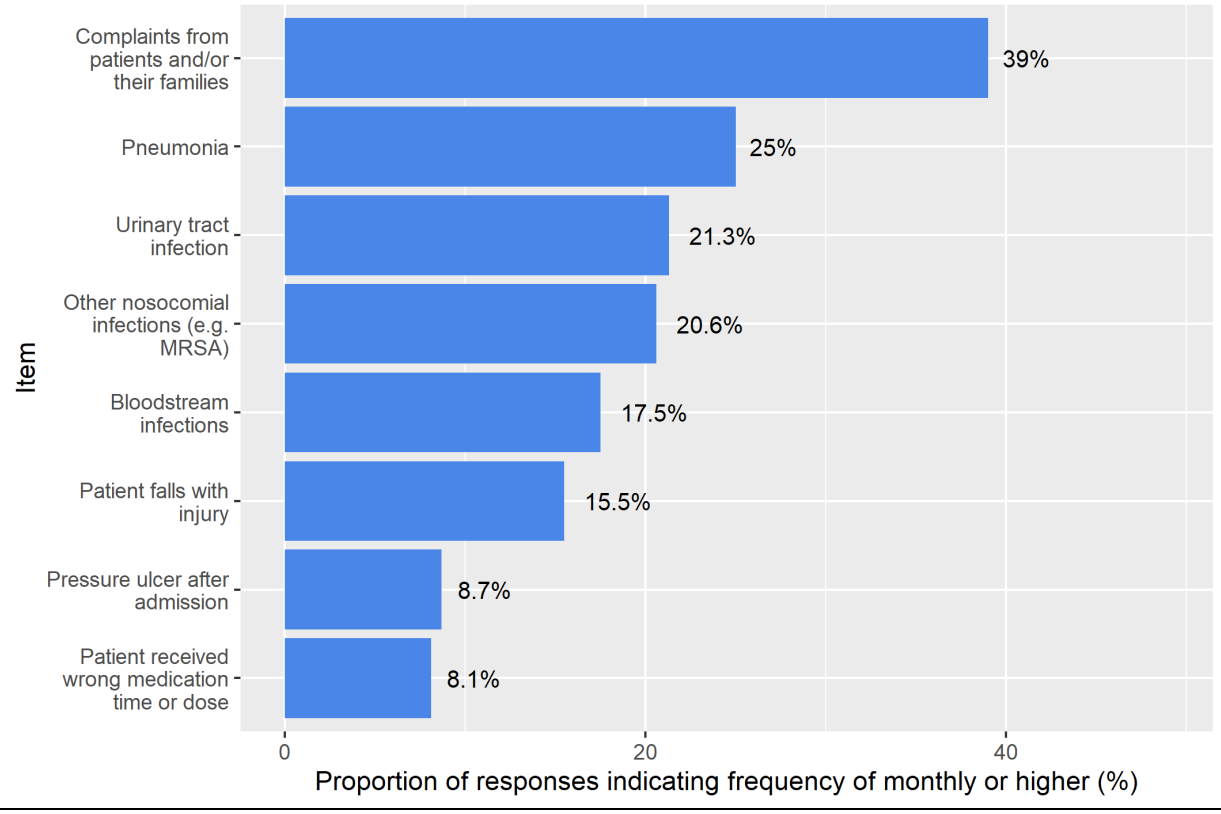
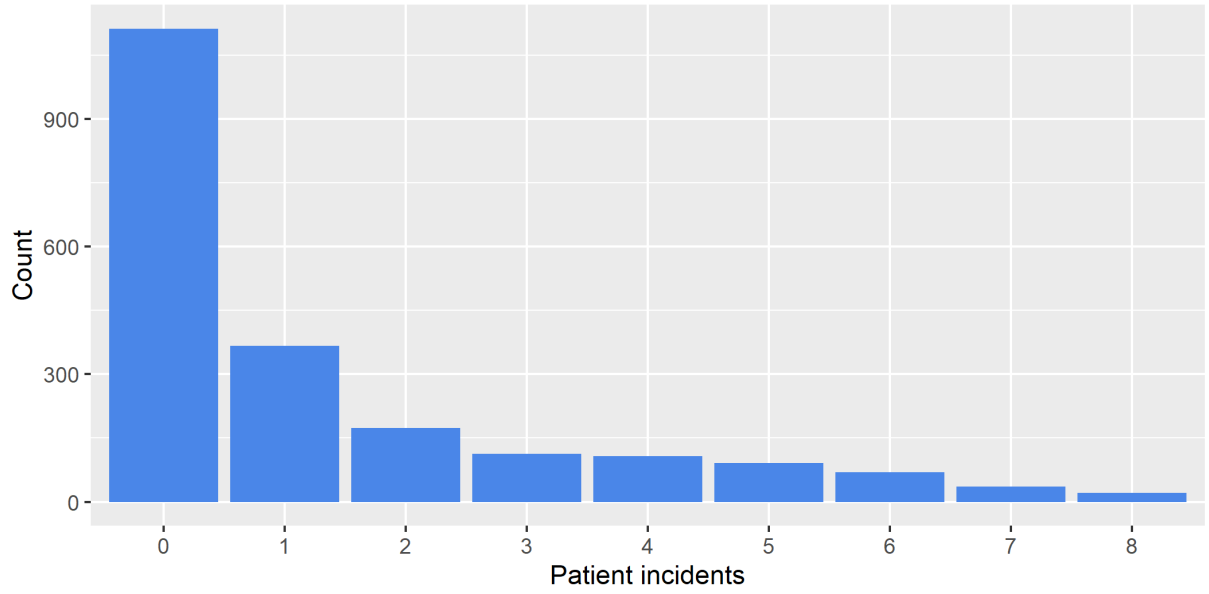


Figure 28. Nurse respondents grouped by number of patient incidents occurring monthly or more frequent (M=1.33, SD=1.96)



NURSING TASKS NECESSARY BUT LEFT UNDONE

Respondents were asked, “Which of the following nursing tasks were necessary but left undone during your last shift?” and could check all answers that applied. The nursing tasks presented as options, and their corresponding affirmative response proportions are shown in Figure 29. The most common necessary tasks left undone amongst acute care direct care providers were “Develop or update nursing care plans/pathways” (41%), comfort/talk with patients (40%), and oral hygiene (29%).

The number of tasks left undone was also tallied by respondent. Figure 30 displays respondent count by number of tasks left undone. Approximately 9% had more than half (8 or more) of the listed tasks undone during the last shift.

Figure 29. Proportions for 'Yes' responses for nursing tasks necessary but left undone last shift

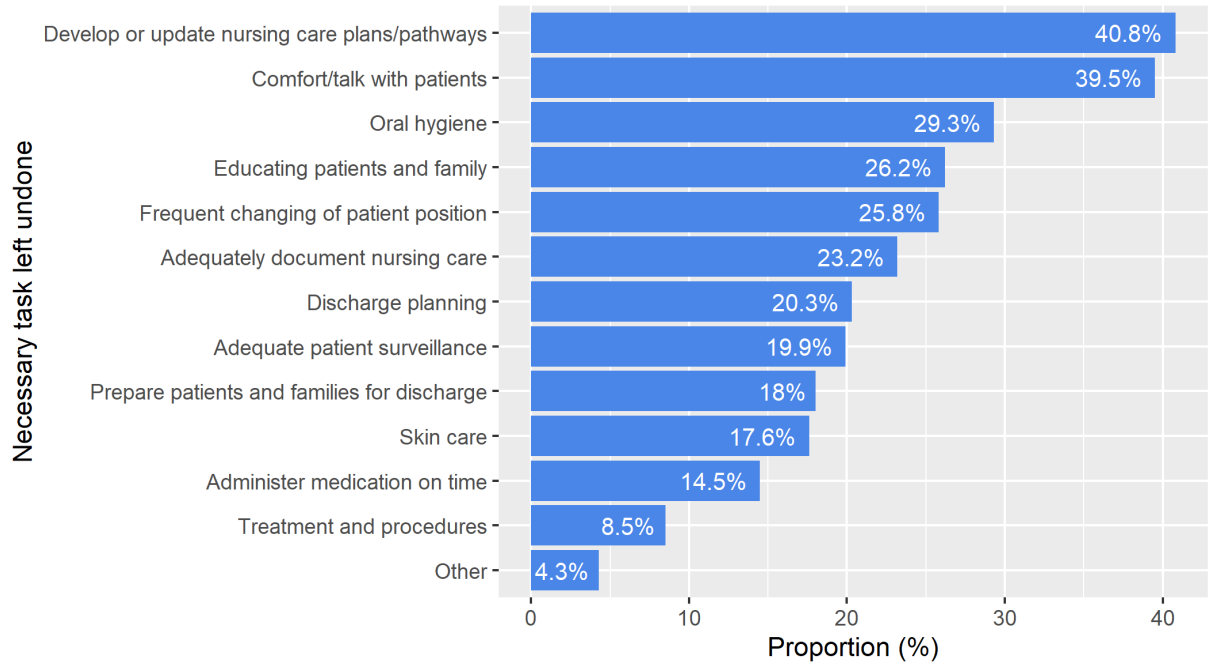
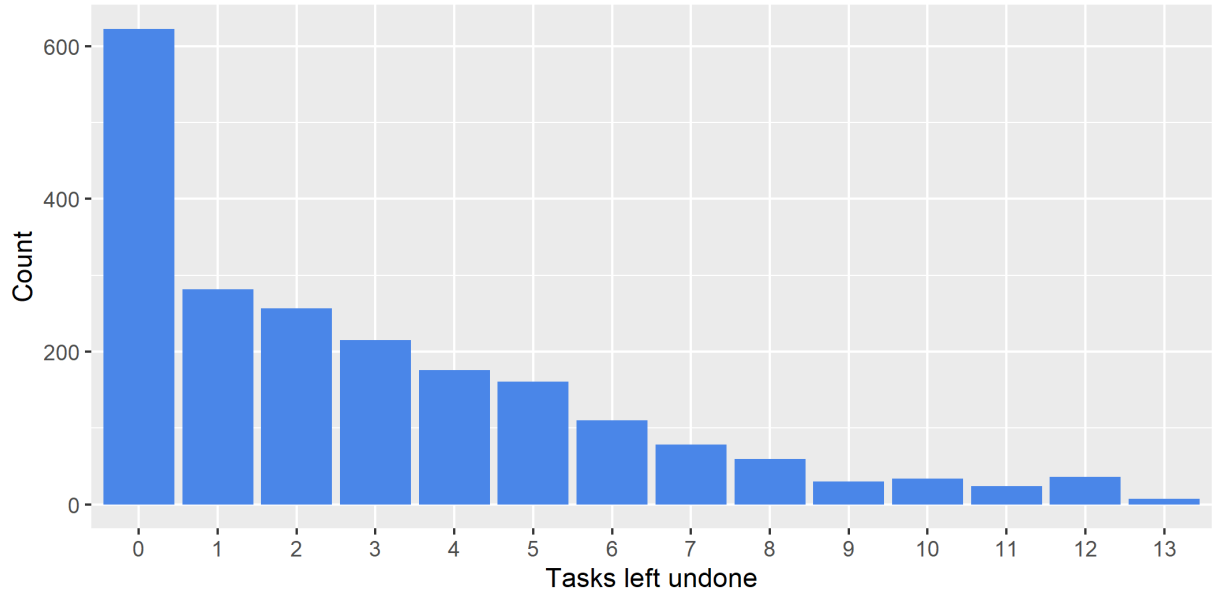


Figure 30. Nurse respondents grouped by number of reported tasks left undone (for number of tasks left undone, M=2.88, SD=3.05)



NON-NURSING TASKS

Respondents were also asked “Which of the following non-nursing tasks did you perform during your last shift”, and checked all applicable tasks from a short list. The proportion of “Yes” responses for each non-nursing task are shown in Figure 31. More than half of respondents reported performing clerical duties, obtaining supplies and equipment, performing housekeeping duties, and delivering and retrieving food trays during their last shift. The number of non-nursing tasks performed per respondent was also tallied, and is shown in Figure 32.

Figure 31. Proportion of 'Yes' responses for non-nursing tasks performed last shift

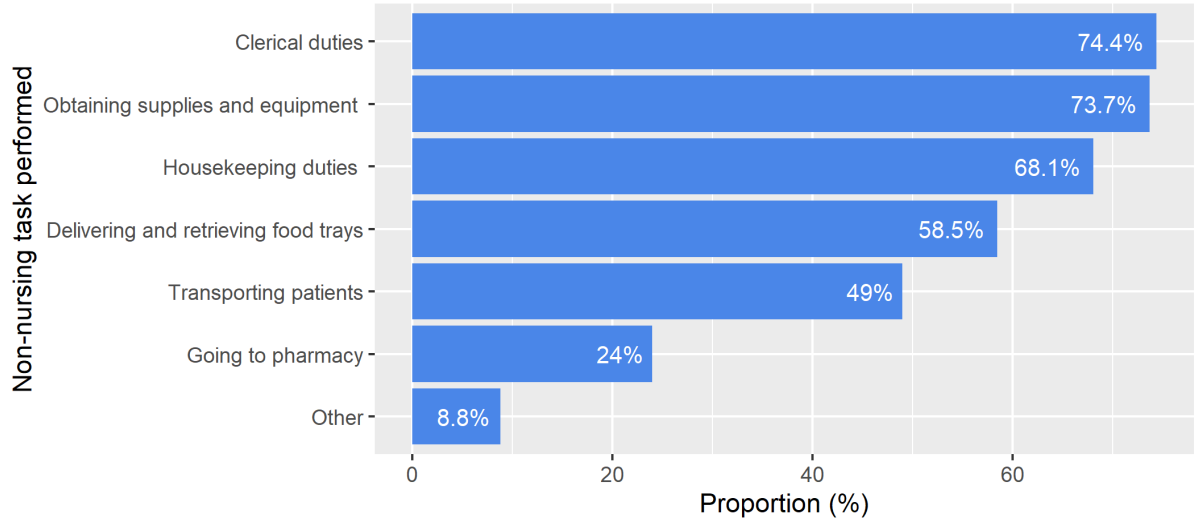
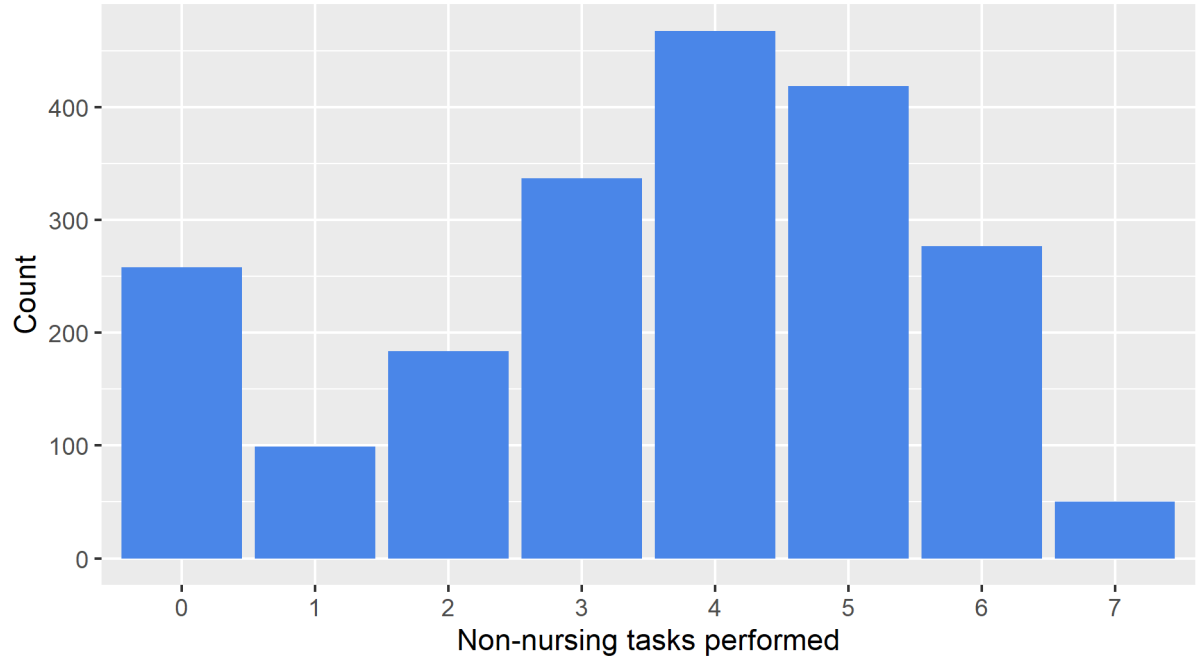


Figure 32. Nurse respondent count by number of non-nursing tasks performed (for non-nursing tasks performed last shift, M=3.56, SD=1.92)



OVERALL QUALITY AND SAFETY

Nurses were polled for their perceptions on quality of care and safety in their primary workplace, with questions asking about the quality of the nursing care they delivered, the overall patient safety, and the likelihood of recommending their primary workplace for care and as a workplace. The responses are tabulated by category in Table 28.

Acute care direct care providers were confident in the quality of nursing care they delivered, with approximately 86% describing the general quality of nursing care they delivered as good or excellent, and 85% describing the quality of care they delivered on their last shift as good or excellent. Approximately 16% of nurses gave a negative overall grade for patient safety in their primary workplace, while 11% assigned a grade of Excellent.

For recommendations, 81% of respondents were likely to recommend their primary workplace to friends and family if they needed care. 71% were likely to recommend their primary workplace to a nurse colleague as a good place to work.

Table 28. Proportions for nurses' perceptions on overall quality and safety

Quality of care questions	Poor	Fair	Good	Excellent	N
In general, how would you describe the quality of nursing care you delivered to patients in your primary workplace?	1.1	12.6	54.5	31.8	1879
How would you describe the quality of nursing care you delivered to patients in your primary workplace on your last shift?	1.2	13.6	51	34.2	1875

Patient safety grade question	Failing	Poor	Acceptable	Very good	Excellent	N
Please give your primary workplace an overall grade on patient safety.	3.4	12.1	39	34.6	10.9	1878

Recommendation questions	Definitely no	Probably no	Probably yes	Definitely yes	N
Would you recommend your primary workplace to your friends and family if they needed care?	5.4	13.6	47.9	33.1	1878
Would you recommend your primary workplace to a nurse colleague as a good place to work?	7.1	21.8	46.2	24.9	1878

WORKPLACE VIOLENCE

FREQUENCY OF WORKPLACE VIOLENCE BY TYPE

The set of questions examining workplace violence asked about the frequencies of different types of workplace violence, querying respondents "**Over the last six months**, how frequently have you experienced each of the following types of violence in your primary workplace?" The five types presented were physical assault, threat of assault, emotional abuse, verbal sexual harassment, and sexual assault. For each type, respondents selected from seven options of increasing frequency, ranging from "Never" to "Every day."

The type of workplace violence with the highest proportion of experience was emotional abuse, with approximately 79% of respondents reporting some frequency of experience within the last six months. The type with the lowest proportion of experience was sexual assault, with approximately 10% of respondents reporting experiencing workplace sexual assault within the last six months. Table 29 presents proportions for experiential frequencies by type of workplace violence, while Table 30 summarizes the mean response by type.

Table 29. Frequencies of workplace violence frequency by type

Type of workplace violence	Frequency (%)							
	Never	A few times a year or less	Once a month	A few times a month	Once a week	A few times a week	Every day	N
Physical assault	35.7	30.8	10.1	13.6	3.9	4.5	1.3	1981
Threat of assault	24.5	28.5	11	18.1	5.3	8.6	3.9	1976
Emotional abuse	21	31.1	11.9	15.9	6.1	9.2	4.9	1974
Verbal sexual harassment	45.3	35.3	7.9	5.9	2.6	2.1	0.9	1978
Sexual assault	90.1	8.7	0.5	0.5	0.2	0.1	0.1	1969

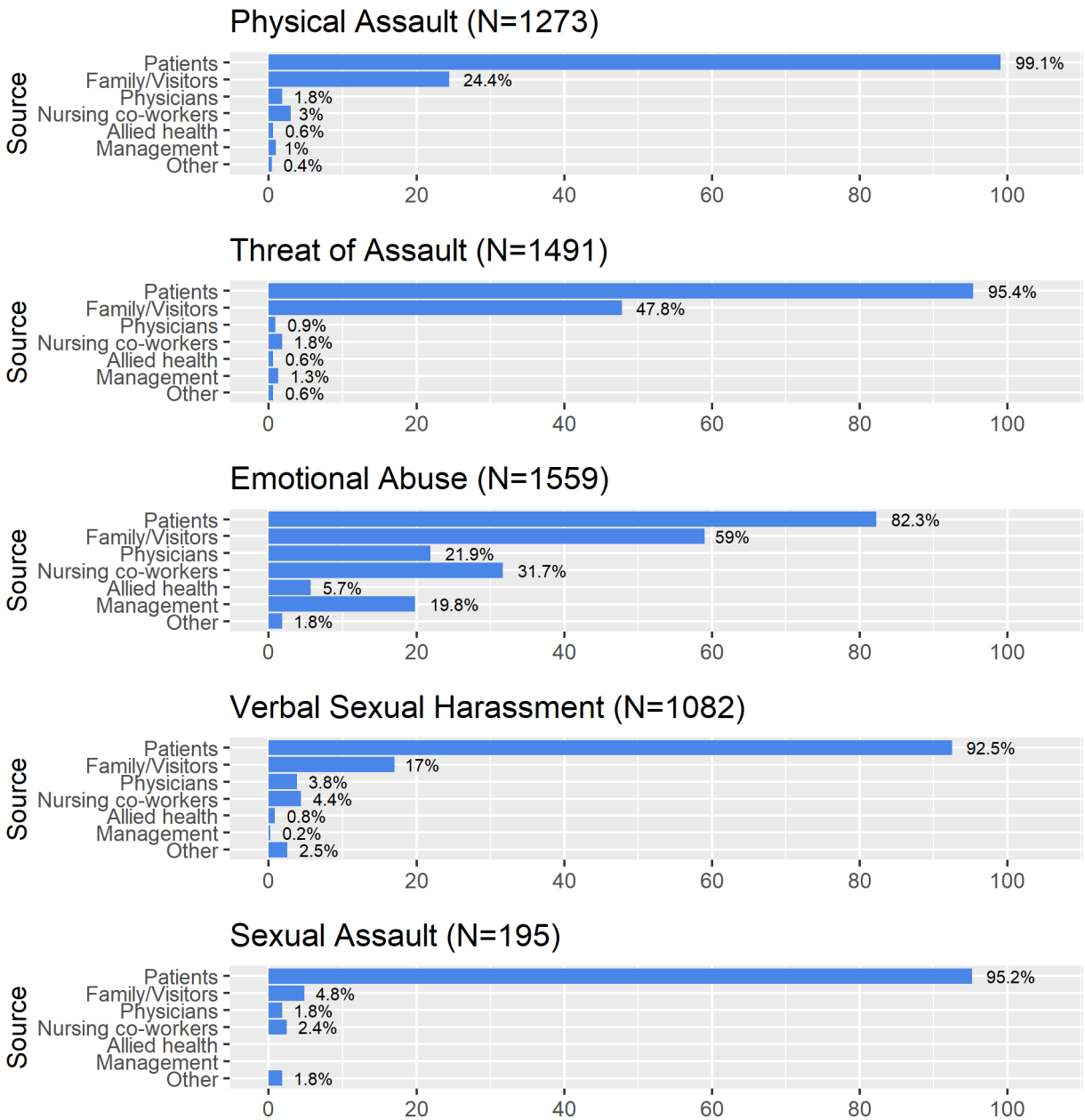
Table 30. Descriptive statistics for workplace violence by type

Type of workplace violence	N	Mean^	SD^	Min^	Max^
Physical assault	1981	1.38	1.5	0	6
Threat of assault	1976	1.93	1.75	0	6
Emotional abuse	1974	2.02	1.78	0	6
Verbal sexual harassment	1978	0.95	1.25	0	6
Sexual assault	1969	0.12	0.45	0	6
^ Note: Workplace violence frequency is coded numerically as follows: 0: *Never*, 1: *A few times a year or less* […] 5: *A few times a week*, 6: *Every day*					

SOURCES OF WORKPLACE VIOLENCE

Respondents who reported experiencing workplace violence were then asked a second set of questions about the sources of the workplace violence. For each reported type of violence (a response other than "Never"), the respondent was queried "Please indicate the source of workplace violence (check all that apply)" and presented seven options: patients, family/visitors, physicians, nursing co-workers, allied health, management, and other. Figure 33 displays the proportion of affirmative responses for each source, for each workplace violence type.

Figure 33. Sources of workplace violence by type

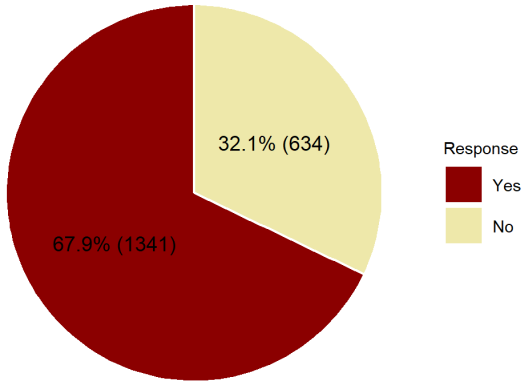


INDIRECT EXPERIENCES WITH WORKPLACE VIOLENCE

To examine nurses' indirect experiences with workplace violence, respondents were asked "Over the six months, have you ever witnessed any type of workplace violence without being directly involved?"

As shown in Figure 34, more than two-thirds of acute direct care providers reported witnessing workplace violence over the last six months.

Figure 34. Witnessed workplace violence without being directly involved, over the past six months

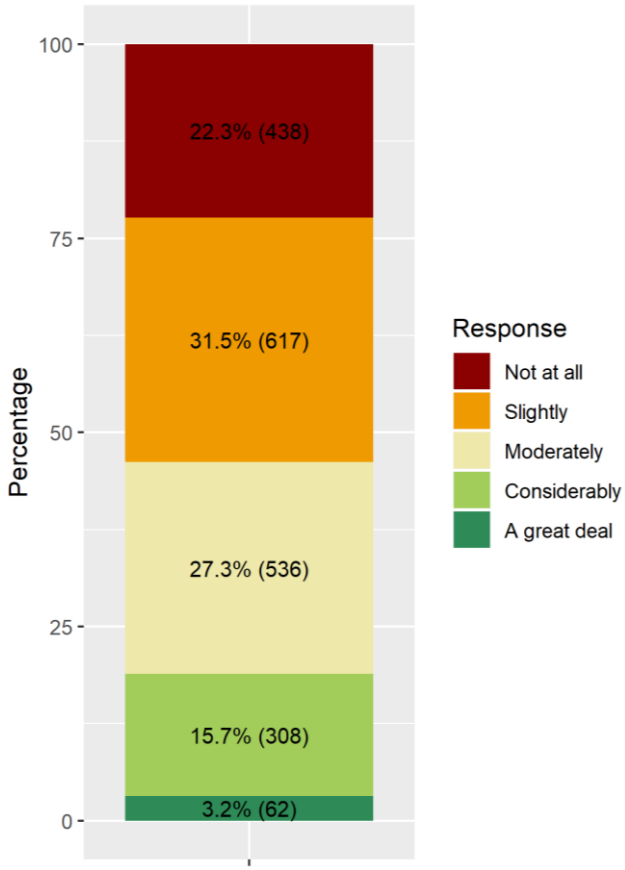


EMPLOYER EFFORTS TO PREVENT WORKPLACE VIOLENCE

Respondents were asked for their opinion on their employers' response to workplace violence in their primary workplace. The final question in the workplace violence section of the survey queried, "To what extent do you think your employer has taken appropriate measures to prevent violence in your primary workplace over the last six months?" The five available choices ranged from "Not at all" to "A great deal." The proportions of responses are displayed in Figure 35.

More than half (54%) rated their employers' efforts to prevent workplace violence as poor ("slightly", "Not at all").

Figure 35. Perceptions of extent of employer efforts to prevent workplace violence, over past six months



NURSE FACTORS

EXPERIENCES AS A RESULT OF WORKPLACE VIOLENCE EXPOSURE

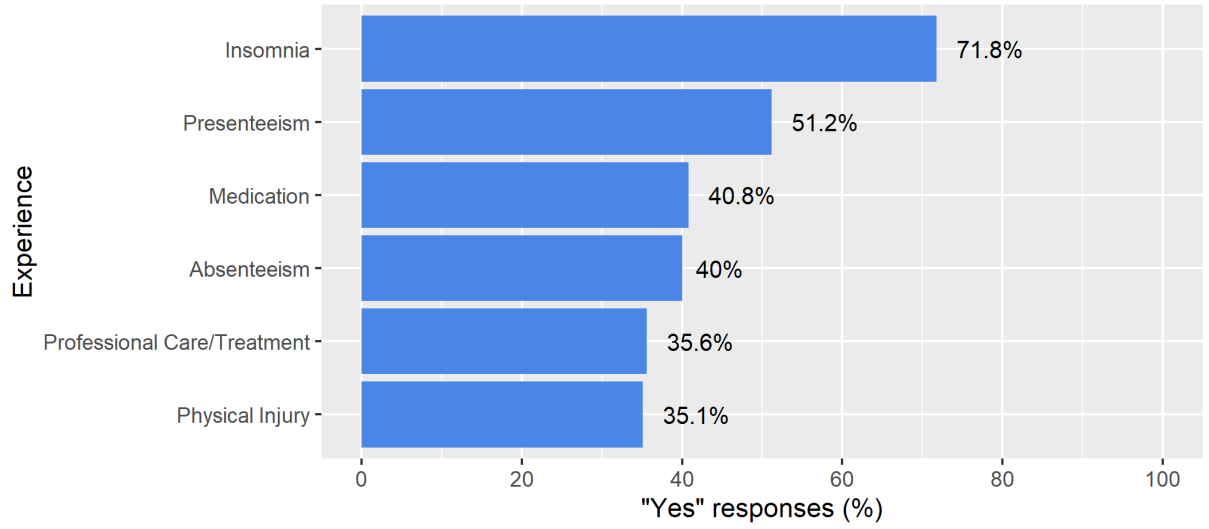
This survey included a number of question sets to assess respondents' perceptions of their physical and psychological health. The first series of questions followed up on nurses' exposure to workplace violence, asking respondents to select all applicable experiences in response to, "Have you had any of the following experiences as a result of exposure to workplace violence in your primary workplace over the last six months?" The six experiences listed were absenteeism ("Called in sick"), presenteeism ("Showed up to work despite feeling unwell"), medication ("used prescribed and/or over the counter medication, e.g., pain relievers, anti-anxiety medication"), insomnia ("difficulty falling asleep"), and professional care/treatment ("sought professional care/treatment, e.g. medical care, psychological care"). The results are presented in Table 31 and arranged in descending order in Figure 36.

At least one-third of respondents reported "Yes" for each of the six adverse experiences. The most common experiences were insomnia (72%), presenteeism (51%), and medication (41%).

Table 31. Proportions for experiences resulting from exposure to workplace violence, over the last six months

Experience	Yes (%)	No (%)	N
Absenteeism	38.0	62.0	2841
Presenteeism	51.4	48.6	2843
Medication	41.3	58.7	2840
Insomnia	71.7	28.3	2863
Physical Injury	33.2	66.8	2835
Professional Care/Treatment	36.5	63.5	2844

Figure 36. Experiences resulting from exposure to workplace violence, over the last six months



FINDINGS: COMMUNITY CARE SECTOR

DEMOGRAPHIC PROFILE OF COMMUNITY CARE NURSE RESPONDENTS

This section provides an overview of survey findings related to nurse respondents in the community care sector (N=870). Approximately 24% of respondents reported completing the 2019 baseline survey. The mean respondent age was 45.9 years (SD = 11.1). The majority of respondents were female (95%), RNs (73%), direct care providers (82%), and working full-time (61%). Approximately 49% had an undergraduate degree, and 84% had more than five years of nursing experience. Table 32 provides a profile of respondents by baseline survey completion, age, gender, professional designation, education, nursing experience, and identification with BCNU equity-seeking caucuses. Table 33 provides demographic characteristics relevant to the respondents' primary workplace, such as their workplace geography, health authority, and nursing practice area.

Table 32. Demographic characteristics of community-care sector nurse respondents

Characteristics	**N**	**%**
Completed baseline survey		
Yes	210	24.2
No	282	32.5
I don't remember/I don't know	376	43.3
Age		
Under 25	7	0.8
25 to 34	156	18.1
35 to 44	247	28.7
45 to 54	222	25.8
55 and above	230	26.7
Gender		
Female	823	94.7
Male	43	4.9
Prefer to describe	3	0.3
Professional Designation		
RN	638	73.3
RPN	113	13
LPN	110	12.6
Dually registered (RN/RPN)	8	0.9
Student nurse	1	0.1
Education		
Diploma/Certificate	267	30.8
Undergraduate degree	423	48.7
Graduate degree	170	19.6
Other	8	0.9
Overall nursing experience		
5 years or less	135	15.6
6 to 10 years	157	18.1
11 to 15 years	148	17.1
16 to 20 years	96	11.1
21 years or more	330	38.1

Identification with BCNU equity-seeking caucuses (respondents may identify with multiple caucuses simultaneously)		
Indigenous Leadership Circle	46	5.6
LGBTQ	56	7
Mosaic of Colour	92	11.5
Workers with Disabilities	52	6.5

Table 33. Demographic characteristics relevant to respondents' primary workplace

Primary workplace	**N**	**%**
Primary nursing role		
Direct care provider	710	81.6
Nurse leader	122	14
Educator	38	4.4
Provides direct patient/client care		
Yes	776	89.5
No	91	10.5
Health authority		
Vancouver Coastal Health	194	22.3
Fraser Health	193	22.2
Vancouver Island Health	174	20
Interior Health	146	16.8
Northern Health	62	7.1
Provincial Health Services	59	6.8
Providence Health	8	0.9
First Nations Health	3	0.3
Workplace geography		
Urban	490	56.4
Suburban	199	22.9
Rural	180	20.7
Nursing practice area		
Ambulatory care	28	3.2
Community mental health	141	16.2
Emergency	1	0.1
Home and community care	345	39.7
Indigenous health	8	0.9
Long-term care	12	1.4
Mental health or psychiatry	62	7.1
Obstetrics	1	0.1
Oncology	8	0.9
Palliative	24	2.8
Pediatrics	2	0.2
Public health	169	19.4
Rehabilitation	3	0.3
Other, please specify	62	7.1
Mixed (a combination of other areas)	4	0.5
Employment status		
Full-time	529	60.8

Part-time	269	30.9
Casual	72	8.3

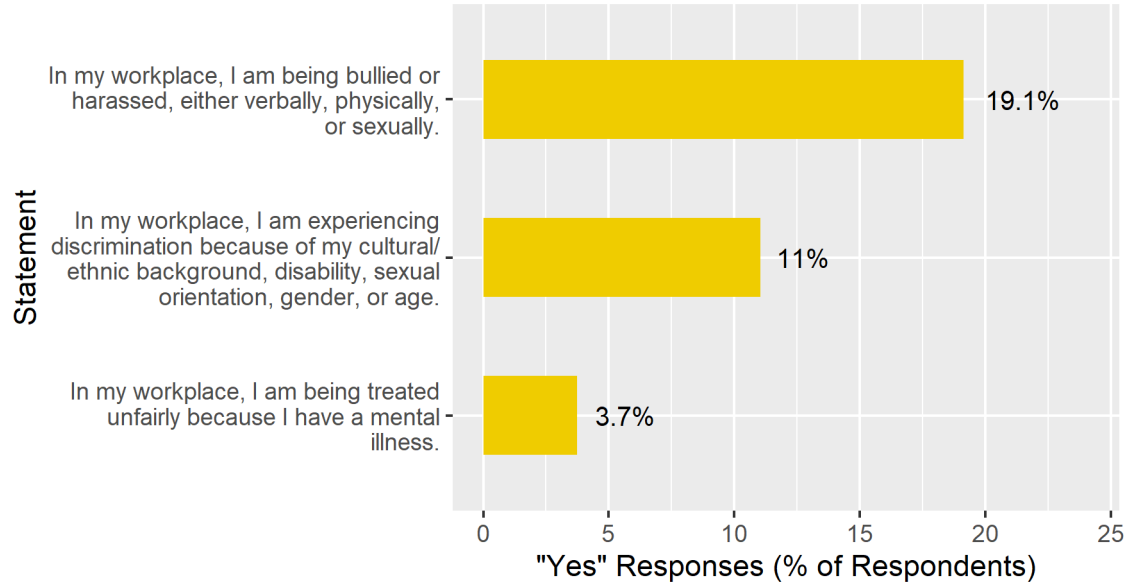
OVERALL WORKPLACE FACTORS

As part of this survey, respondents were queried about their experiences in the primary workplace through question sets spanning a variety of topics. The topics explored include general negative treatment in the workplace, COVID-19, and workplace violence.

WORKPLACE DISCRIMINATION, BULLYING/HARASSMENT, AND UNFAIR TREATMENT DUE TO MENTAL HEALTH

The first set of questions examining general negative treatment in the workplace were sourced from the Guarding Minds at Work assessment tool. The questions were comprised of three statements describing workplace bullying and harassment, discrimination, and unfair treatment due to mental illness, to which respondents indicated whether or not they had had such experiences over the last six months. Figure 37 presents the affirmative response proportion for each.

Figure 37. Proportion of responses reporting various workplace experiences



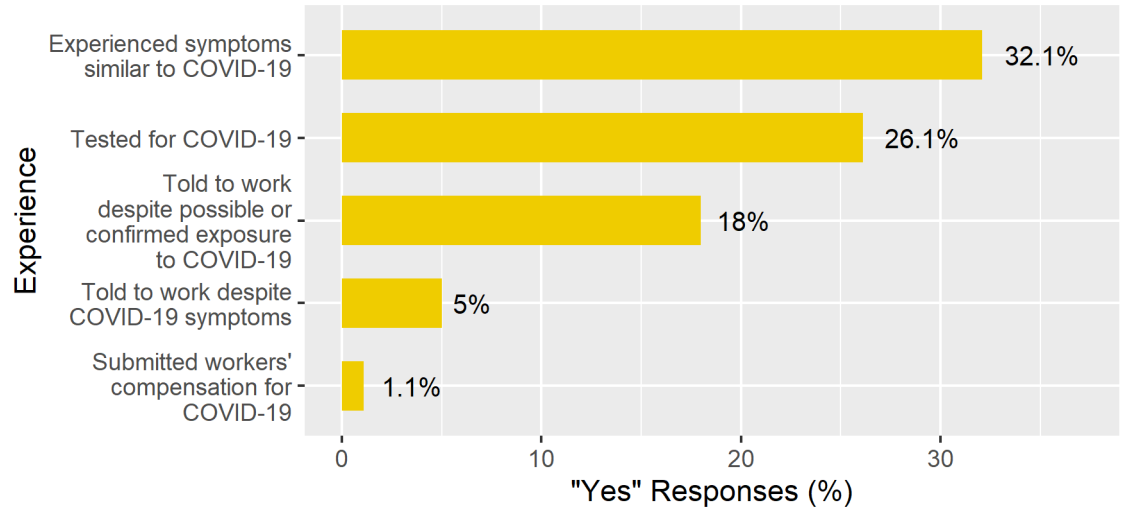
COVID-19 WITHIN THE WORKPLACE

The next set of questions were focussed on nurse experiences of the COVID-19 pandemic in the primary workplace. Respondents were asked to respond to the questions thinking about their workplace experiences **since the start of the COVID-19 pandemic in March 2020**. Respondents answered Yes/No prompts about personal COVID-19 experiences, and Likert-type items about subtopics including frequency of contact with COVID-19 patients, adequacy of staffing, sufficiency/quality of personal protective equipment (PPE), changes in workplace relationships, etc. Table 34 presents a comprehensive overview of response proportions for all COVID-19 questions.

Frequency of direct contact with COVID-19 patients: Respondents were asked how frequently they have had direct contact with suspected or confirmed COVID-19 patients, with response options ranging along a 7-point Likert scale from "Never" to "Almost every day". The majority of respondents (80%) reported their frequency of contact as "Never" or "A few times", while 11% reported their frequency of contact as "Once a week" or greater.

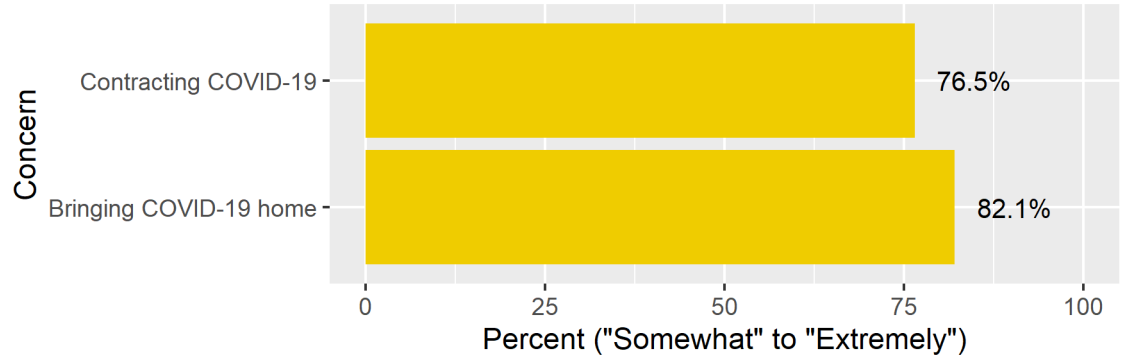
Personal COVID-19 experiences: Respondents were asked whether or not they had experienced any of five COVID listed experiences. The response proportions to each experience are shown in Figure 38.

Figure 38. Proportion of "Yes" responses to personal experiences related to COVID-19



Concern about COVID-19: Respondents reported their level of concern "about contracting COVID-19 at [their] workplace" and "about bringing COVID-19 home to those with whom [they] live and/or family/friends" along a 5-point Likert scale, ranging from "Extremely concerned" to "Not at all concerned". The response proportion for 'Somewhat' to 'Extremely' concerned responses are shown in Figure 39.

Figure 39. Proportion of 'Somewhat concerned' to 'Extremely concerned' responses for COVID-19 concerns

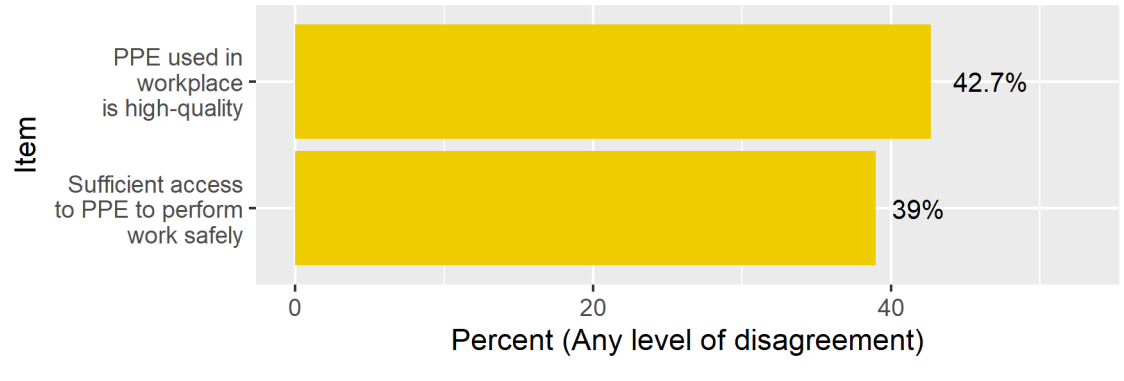


Adequacy of nurse staffing: Respondents rated the adequacy of nurse staffing in their primary workplace during COVID-19 along a 6-point Likert scale, ranging from "Extremely inadequate" to "Extremely adequate". More than half (56%) rated staffing as inadequate.

Personal Protective Equipment (PPE): Respondents were asked about their workplace experiences with PPE during the pandemic, including their endorsement of the statements "I have had sufficient access to PPE to perform my work safely" and "The PPE used in my workplace is high-quality"; the length of time since they were fit tested for an N95 respirator; and how likely they were to exercise their right to refuse unsafe work if denied appropriate PPE.

As detailed in Figure 40, 43% disagreed that the PPE used in their workplace is high-quality, and 39% disagreed that they have had sufficient access to PPE to perform their work safely. About 38% reported that they had either never been fit tested for an N95, or that it had been two or more years since their last fit test. Three-quarters (75%) responded that they were likely or very likely to exercise their right to refuse unsafe work if denied appropriate PPE.

Figure 40. Disagreement response proportions for PPE quality and access to PPE during COVID-19 pandemic



Confidence in own ability to assess PPE requirements and personal risk: Respondents reported their confidence in their ability to adequately assess their PPE requirements and personal risk.

Approximately 61% responded “confident” or “very confident” towards assessment of PPE requirements, and 62% responded “confident” or “very confident” towards assessment of their personal risk.

Adequacy of training: Respondents rated the adequacy of their training to work safely with COVID-19 along a 4-point Likert scale ranging from “Extremely inadequate” to “Extremely adequate”, or indicated that they had never received such training. Approximately 29% found their training to be inadequate, while 6% indicated that they had never received training.

Organizational factors: With the duration of the COVID-19 pandemic in mind, respondents rated their confidence in their organization’s/manager’s handling of the pandemic, the extent to which they were supported by their organization, the average frequency of protocol and policy change, and transparency of organizational decisions related to COVID-19.

- Two-thirds (67%) reported that the average frequency of COVID-19 protocol and policy changes was weekly or higher. Approximately 20% reported changes daily or multiple times a day.
- Approximately 41% rated the transparency of organizational decisions related to COVID-19 as poor or failing.
- Almost a third (31%) responded that they were not confident in their manager’s handling of the pandemic.
- Approximately a quarter (26%) responded that they were not confident (‘not at all confident’, ‘not confident’) in organizational handling of the pandemic.
- Approximately 19% responded that they were not supported by their organization during the pandemic, while 33% responded that they were only ‘slightly supported’.

Changes to workplace relationships: Respondents were asked how their workplace relationships with their nursing colleagues, manager, and the rest of healthcare team (e.g. medicine, allied health) had changed during COVID-19. As shown in Figure 41, 35% reported worsening relationships with managers, 31% reported worsening relationships with colleagues, and 28% reported worsening relationships with the rest of the healthcare team.

Figure 41. Response proportions for changes in workplace relationships during COVID-19 pandemic

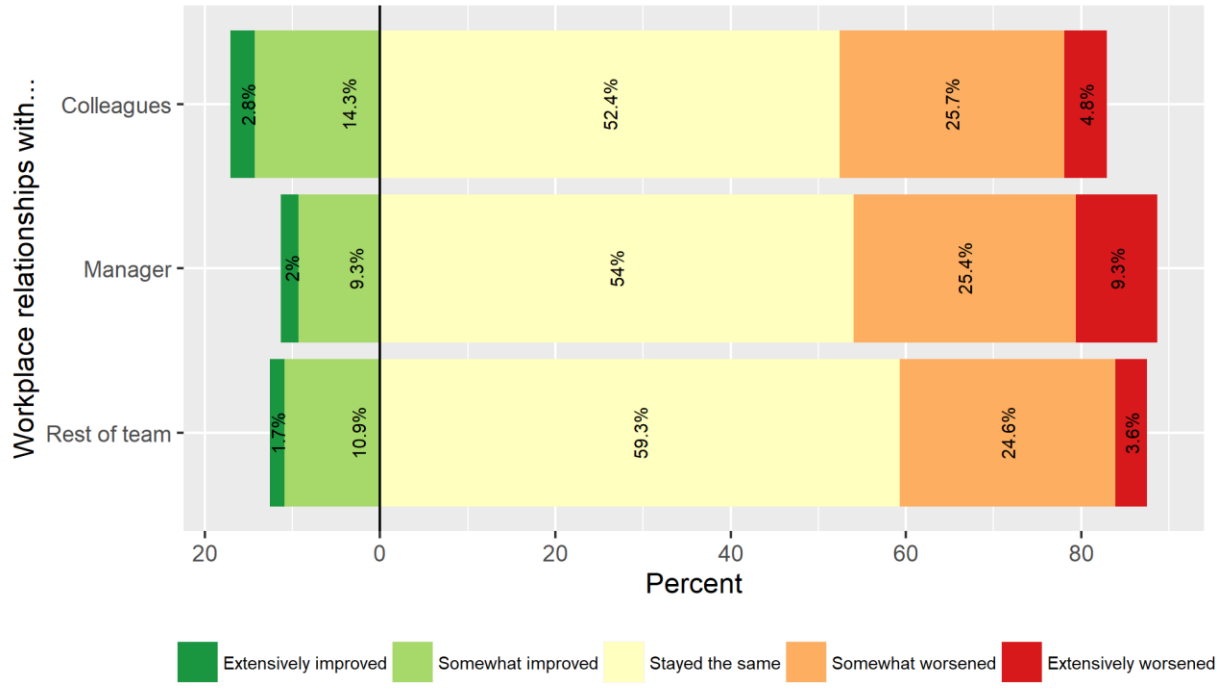


Table 34. Response proportions for all COVID-19 variables

Frequency	**Never**	**A few times**	**Once a month**	**A few times a month**	**Once a week**	**A few times a week**	**Almost every day**	**N**
Frequency of direct contact with suspected or confirmed COVID-19 patients	50.5	29.5	2.7	6.7	2.2	4.3	4.1	855

Personal experiences	**Yes**	**No**	**N**
Told to work despite possible or confirmed exposure to COVID-19	18	82	849
Experienced symptoms similar to COVID-19	32.1	67.9	854
Told to work despite COVID-19 symptoms	5	95	845
Tested for COVID-19	26.1	73.9	855
Submitted workers' compensation for COVID-19	1.1	98.9	844

Concern	**Extremely concerned**	**Very concerned**	**Somewhat concerned**	**Slightly concerned**	**Not at all concerned**	**N**
Concern about contracting COVID-19 at workplace	17.6	25.5	33.4	18.2	5.2	858
Concern about bringing COVID-19 home	31.9	28.4	21.8	13.3	4.5	858

Adequacy	**Extremely inadequate**	**Moderately inadequate**	**Slightly inadequate**	**Slightly adequate**	**Moderately adequate**	**Extremely adequate**	**N**
Adequacy of nurse staffing	14	25.6	15.9	8.8	25.6	10	859

	Never received such training	**Extremely inadequate**	**Somewhat inadequate**	**Somewhat adequate**	**Extremely adequate**	**N**
Adequacy of training to work safely with COVID	6.1	8.7	20	48.3	16.9	847

PPE	**Strongly disagree**	**Disagree**	**Somewhat disagree**	**Somewhat agree**	**Agree**	**Strongly agree**	**N**
Sufficient access to PPE necessary to perform work	10.8	11.9	16.3	18.5	29	13.5	854
High quality PPE are used in workplace	12.1	15.1	15.5	21.9	26.1	9.3	852

	Within last month	**Within last 6 months**	**Within last year**	**1-2 years ago**	**2-5 years ago**	**5+ years ago**	**Never been fit tested**	**N**
Time since last fit test for N95 mask	3.5	20.5	19.8	18.3	19.4	9.7	8.7	852

	Very unlikely	**Unlikely**	**Likely**	**Very likely**	**N**
If denied appropriate PPE, how likely to exercise right to refuse unsafe work	7.1	18.3	36.9	37.8	849

Confidence	**Not at all confident**	**Not confident**	**Slightly confident**	**Somewhat confident**	**Confident**	**Very confident**	**N**

Confidence in own ability to assess PPE requirements	1.9	5.6	11.1	20	40.5	20.8	854
Confidence in own ability to assess personal risk	0.6	3.4	12	22	43.7	18.3	853
Confidence in organization's handling of COVID-19 pandemic	9.1	16.5	21.3	27.8	20.5	4.7	848
Confidence in manager's handling of COVID-19 pandemic	13.4	17.1	20	19.9	21.9	7.8	846

Organizational support	**Not at all supported**	**Not supported**	**Slightly supported**	**Moderately supported**	**Extremely supported**	**N**
Extent of support from workplace organization during COVID-19 pandemic	5.9	13	33.1	35	13	844

Policy and protocol	**Never**	**A few times**	**Once a month**	**A few times a month**	**Once a week**	**A few times a week**	**Every day**	**Multiple times a day**	**N**
Average frequency of changes to COVID-19 related protocols and policies in workplace	0	12.3	2.2	18.8	14.7	31.6	12	8.4	845

Changes to workplace relationships during COVID-19 pandemic	**Extensively worsened**	**Somewhat worsened**	**Stayed the same**	**Somewhat improved**	**Extensively improved**	**N**
Nursing colleagues	4.8	25.7	52.4	14.3	2.8	846
Manager	9.3	25.4	54	9.3	2	848
Rest of the healthcare team	3.6	24.6	59.3	10.9	1.7	843

Transparency	**Failing**	**Poor**	**Fair**	**Good**	**Excellent**	**N**
Transparency of organizational decisions related to COVID-19	15.7	25.4	35.7	19.2	3.9	845

NURSE OUTCOMES

MENTAL HEALTH AND WELLBEING

Several established tools were included in the survey to assess respondents' psychological ill-being, with screening tools for post-traumatic stress disorder (PTSD), generalized anxiety disorder, major depressive disorder, and emotional exhaustion/burnout. Summary information for the data is displayed in Table 35. Category proportions, as defined by cutoff values, are shown in Table 36.

PTSD: Post-traumatic stress disorder was assessed using the Posttraumatic Stress Symptoms-14 (PTSS-14) instrument, a measure consisting of 14 items reflecting feelings over the last two weeks, such as "The need to withdraw from others", "Frequent mood swings" and "muscular tension". Respondents rated how frequently they experienced each feeling along a 7-point Likert scale, ranging from 1 = Never, to 7 = Always. Total scores of 45 or higher were categorized as positive for PTSD.

Approximately 46% of respondents scored within the 'positive' range for PTSD.

Anxiety: Generalized anxiety disorder was assessed using the Generalized Anxiety Disorder-7 (GAD7) instrument, which consists of seven items describing negative feelings within the last two weeks, such as "Feeling nervous, anxious or on edge" and "Trouble relaxing". Responses were given along a 4-point Likert scale, ranging from 0 = Not at all, to 3 = Nearly every day. Sum scores were categorized as: 0-4 = no anxiety, 5-9 = mild, 10-14 = moderate, 15-21 = severe.

Approximately 72% of respondents scored within some level of anxiety, with 37% within the moderate to severe anxiety range.

Depression: The Patient Health Questionnaire-9 (PHQ-9) consists of nine items reflecting perceptions such as poor appetite, anhedonia, and depressive mood. Respondents rated how often they were bothered by each perception within the last two weeks, along a 4-point Likert scale, ranging from 0 = Not at all, to 3 = Nearly every day. Sum scores were categorized as 0-4 = no depression, 5-9 = mild, 10-14 = moderate, 15-19 = moderately severe, and 20-27 = severe depression.

Almost three-quarters of respondents (74%) were categorized at some level of depression, with 43% within the moderate to severe depression range.

Burnout: To assess nurse burnout, this survey used the Maslow Burnout Inventory - Human Services Survey, which includes three subscales of Emotional Exhaustion, Depersonalization, and Personal Accomplishment. Items in the scale include statements such as: for Emotional Exhaustion (9 items), "I feel emotionally drained from my work" and "I feel like I'm at the end of my rope"; for Depersonalization (5 items), "I worry that this job is hardening me emotionally"; for Personal Accomplishment (8 statements), "I feel very energetic". Respondents rated the frequency of each feeling along a 7-point Likert scale of increasing frequency, ranging from 0 = Never, 1 = A few times a year or less; to 5 = A few times a week, 6 = Every day. Subscale sum scores were categorized by cutoff scores: for emotional exhaustion, 0-16 = low,

17-26 = moderate, ≥ 27 = high; for depersonalization 0-6 = low, 7-12 = moderate, ≥ 13 = high; for personal accomplishment, 0-31 = low, 32-38 = moderate, ≥ 39 = high.

Approximately 62% of respondents indicated high emotional exhaustion, 22% indicated high depersonalization, and 27% indicated low personal accomplishment.

Table 35. Descriptive statistics for nurse outcome measures

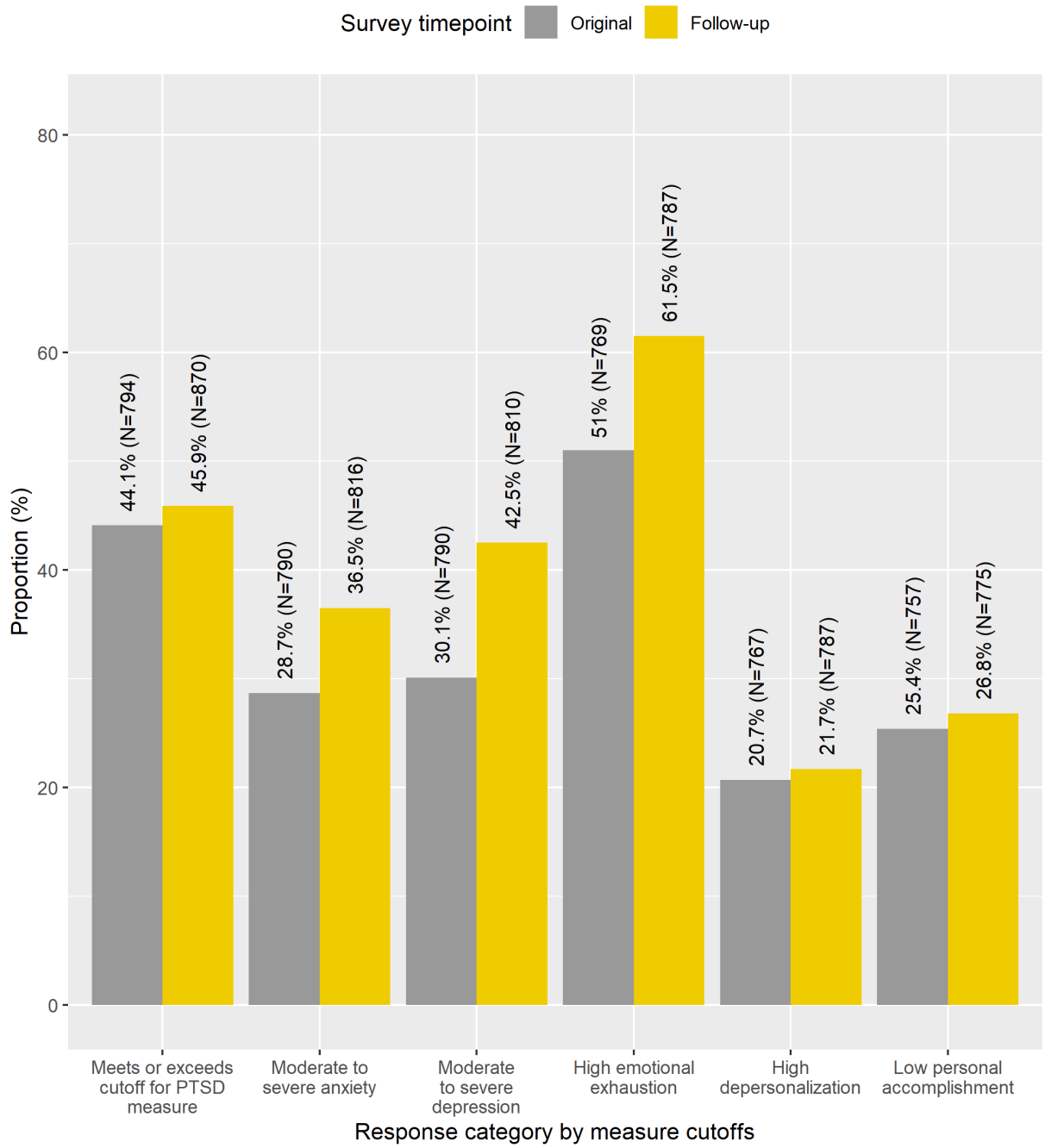
Measure	N	Mean	SD	Min	Max
Posttraumatic Stress Symptoms-14 (PTSS-14)[1]	813	46.05	19.35	14	98
Generalized Anxiety Disorder-7 (GAD-7)[1]	816	8.66	5.99	0	21
Patient Health Questionnaire-9 (Depression; PHQ-9)[1]	810	9.25	6.35	0	27
Maslach Burnout Inventory - Human Services Survey for Medical Personnel[2]					
Emotional Exhaustion (MBI-HSS (MP))	787	30.32	13.26	0	54
Depersonalization (MBI-HSS (MP))	787	7.33	6.77	0	30
Personal Accomplishment (MBI-HSS (MP))	775	35.47	7.54	5	48
Note: [1]Items refer to the past two weeks. [2]Items refer to the past six months.					

Table 36. Proportions for nurse outcome categories, as defined by sum score cut-offs

Measure	% in category (by cutoffs)					N
PTSS-14	Below cutoff	Above cutoff				
	54.1	45.9				870
GAD-7	No anxiety	Mild anxiety	Moderate anxiety	Severe anxiety		
	27.7	35.8	17	19.5		816
PHQ-9	No depression	Mild depression	Moderate depression	Moderately severe depression	Severe depression	
	26.3	31.2	21	13.6	7.9	810
MBI-HSS (MP)						
Emotional Exhaustion	Low EE	Moderate EE	High EE			787
	16.5	22	61.5			
Depersonalization	Low DP	Moderate DP	High DP			787
	55.1	23.1	21.7			
Personal Accomplishment	Low PA	Moderate PA	High PA			775
	26.8	33.7	39.5			

To examine the changes between the original province-wide survey and this follow-up survey, the proportions of cutoff categories for remeasured mental health outcomes were examined. Figure 42 shows a comparison of proportions between the two surveys, for categories of potential concern such as “Above PTSD cutoff”, “Moderate to severe anxiety”, etc. Proportion increases from the original survey can be seen for anxiety, depression, and emotional exhaustion.

Figure 42. Comparison of proportions for potentially concerning mental health cutoff categories, between original survey and follow-up survey



SUICIDAL IDEATION

Questions about suicide and suicidal ideation were also included in the survey. Respondents were reminded that participation was completely voluntary for any part of the survey and of the confidentiality of the survey. Respondents were initially asked two questions: "In your lifetime, have you seriously thought about committing suicide?" and "In the past 12 months, have you seriously thought about committing suicide?". If affirmative responses were given to either question, the following questions were presented "… have you ever made a plan for committing suicide?" and "… have you ever attempted suicide?" for the corresponding timeframe.

Response frequencies and proportions are shown in Table 37. Approximately 31% of respondents reported having seriously thought about committing suicide in their lifetimes. Of that subgroup of respondents, 41% (12.4% overall) reported having made plans for committing suicide, and 22% (6.6% overall) reported having attempted suicide in their lifetime.

For the past 12 months, 8% of respondents reported having seriously thought about committing suicide. Of that subgroup, 31% (2.7% overall) reported having made plans for committing suicide in the past year, and 3% (0.2% overall) reported having attempted suicide in the past year.

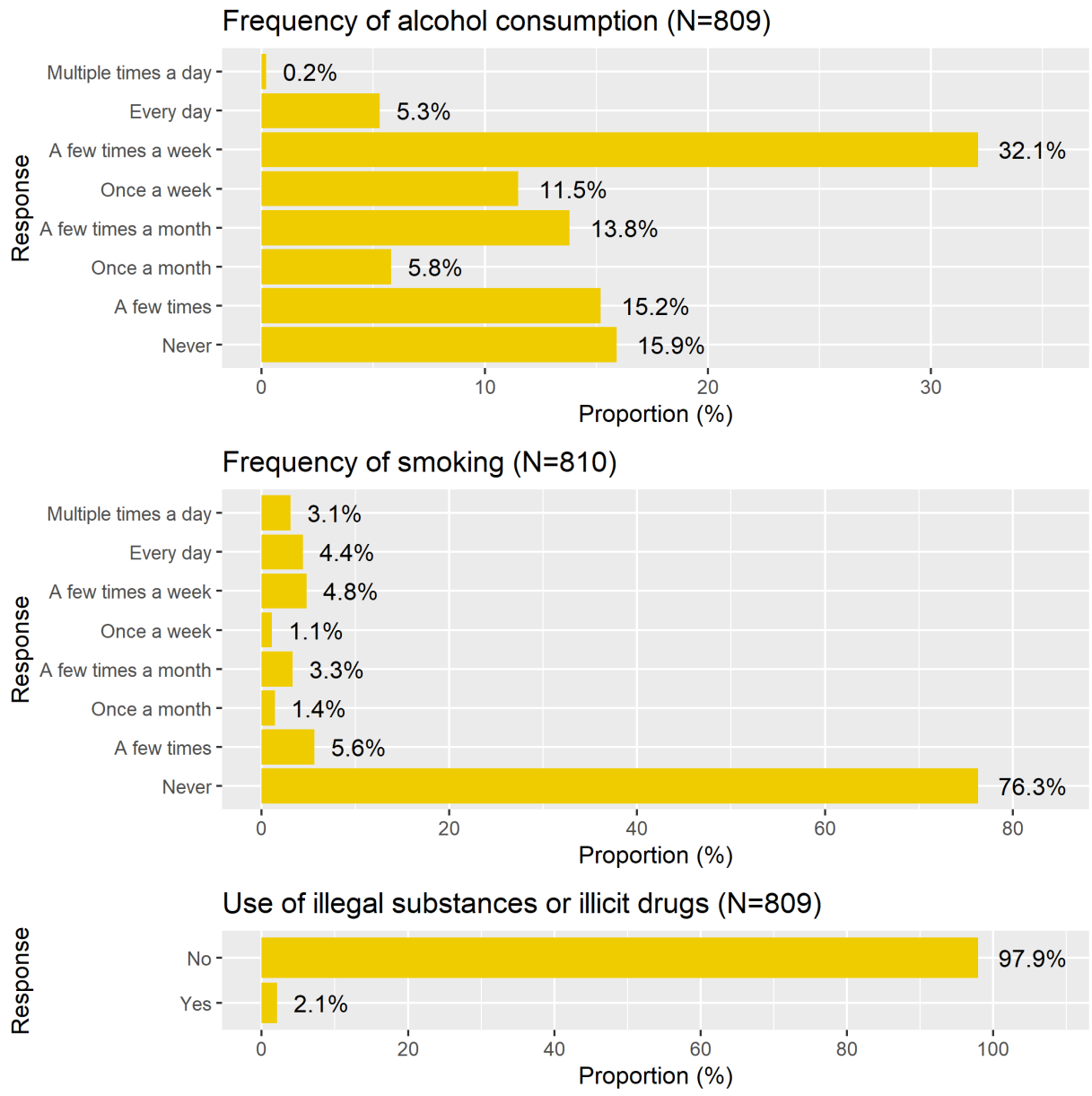
Table 37. Response proportions for suicide ideation items

Item	Yes (%)	No (%)	N
In your lifetime…			
Have you ever seriously thought about committing suicide?	30.6	69.4	798
Have you ever made a plan for committing suicide?	40.7	59.3	243
Have you ever attempted suicide?	21.8	78.2	243
In the past 12 months…			
Have you ever seriously thought about committing suicide?	8.9	91.1	802
Have you ever made a plan for committing suicide?	31	69	71
Have you ever attempted suicide?	2.8	97.2	71
Note: Items "have you ever made a plan…" and "have you ever attempted…" were only displayed if respondent answered Yes to the corresponding "have you ever seriously thought…" item. Lines display the upper bound of subsample size for the latter two questions per group.			

ALCOHOL AND SUBSTANCE USE

Respondents were also polled about their consumption habits for alcohol, smoking (e.g. cigarettes, marijuana, hookah), and illegal substances or illicit drugs (e.g. cocaine, opium) over the past six months, the results of which are displayed in Figure 43. Almost half of community care respondents (49%) drank alcohol at least once a week, while 13% smoked at least once a week. The overwhelming majority (98%) reported that they had not used illegal substances or illicit drugs.

Figure 43. Proportions for alcohol consumption frequency, smoking frequency, and substance use



QUALITY, SAFETY, AND WORKLOAD

WORKPLACE INCIDENTS DURING COVID-19

Respondents were asked about the frequency of various patient incidents at their primary workplace during the COVID-19 pandemic. The question asked, “On average, how frequently has each of the following incidents occurred, involving you and your patient during COVID-19?”, with eight incidents listed. Responses were indicated on a seven-point scale, spanning “Never”, “Few times or less”, … “A few times a week”, “Almost every day”. The response proportions for the frequencies of patient incidents is displayed in Figure 44. The most common incidents were patient complaints, urinary tract infections, and patient falls with injury. Figure 45 displays the number of nurse respondents based on the number of patient incidents reported as occurring monthly or more frequently. Approximately 20% had two or more patient incidents occurring monthly or more frequent.

Figure 44. Response proportions for frequencies of patient incidents during COVID-19 “monthly” or more frequent, in descending order

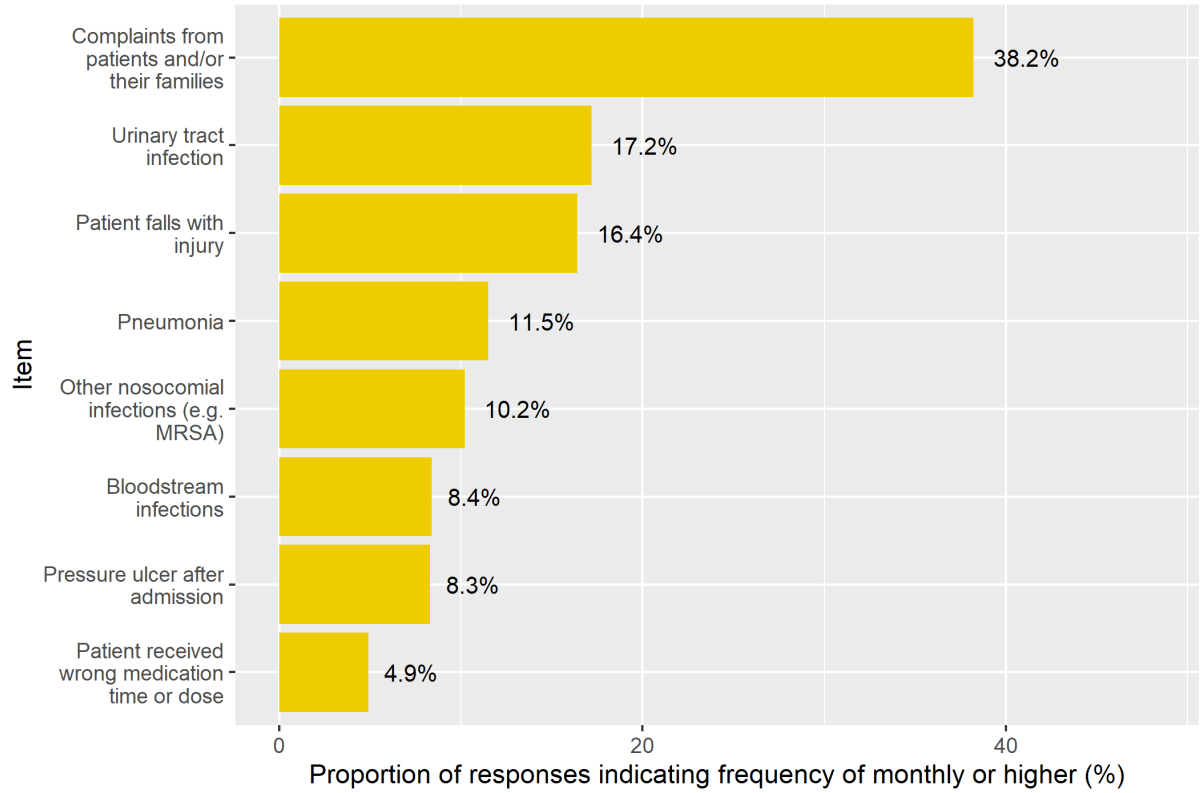
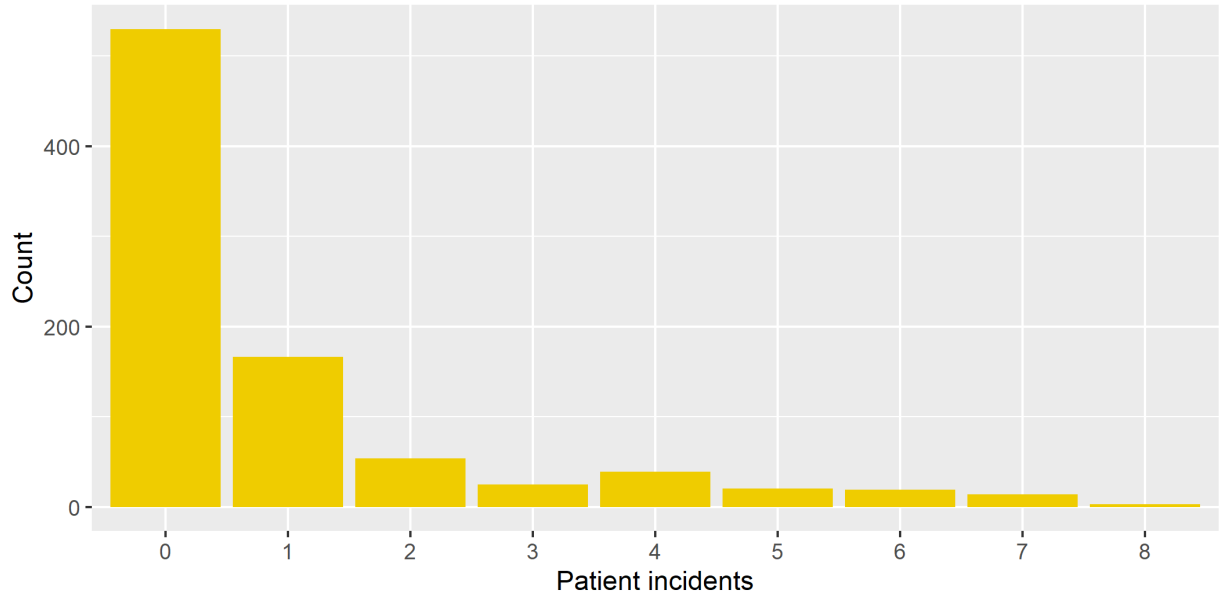


Figure 45. Nurse respondents grouped by number of patient incidents occurring monthly or more frequent (M=0.97, SD=1.69)



NURSING TASKS NECESSARY BUT LEFT UNDONE

Respondents were asked, “Which of the following nursing tasks were necessary but left undone during your last shift?” and could check all answers that applied. The nursing tasks presented as options, and their corresponding affirmative response proportions are shown in Figure 46. The most common necessary tasks left undone amongst community care nurses were developing or updating nursing care plans/pathways, comfort/talking with patients, and adequately documenting nursing care.

The number of tasks left undone was also tallied by respondent. Figure 47 displays respondent count by number of tasks left undone. Approximately 1.5% had more than half (8 or more) of the listed tasks undone during the last shift.

Figure 46. Proportions for 'Yes' responses for nursing tasks necessary but left undone last shift

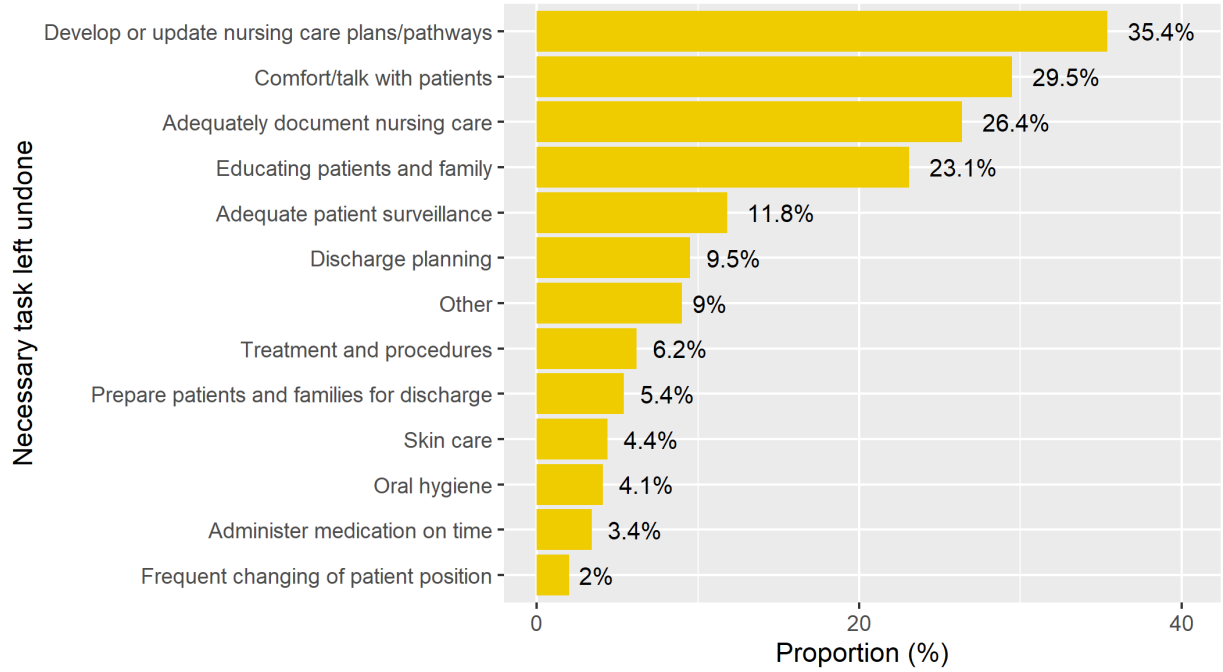
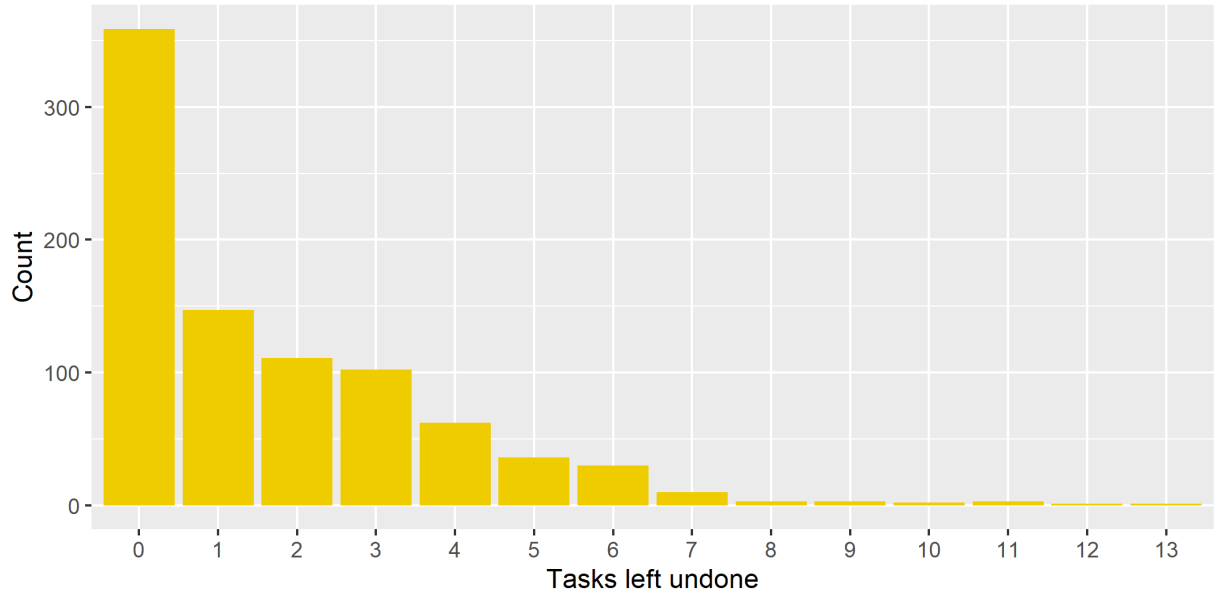


Figure 47. Nurse respondents grouped by number of reported tasks left undone (for number of tasks left undone, M=1.7, SD=2.08)



NON-NURSING TASKS

Respondents were also asked "Which of the following non-nursing tasks did you perform during your last shift", and checked all applicable tasks from a short list. The proportion of "Yes" responses for each non-nursing task are shown in Figure 48. More than two-thirds of community care nurses reported performing clerical duties, while approximately half reported obtaining supplies and equipment, and performing housekeeping duties. The number of non-nursing tasks performed per respondent was also tallied, and is shown in Figure 49.

Figure 48. Proportion of 'Yes' responses for non-nursing tasks performed last shift

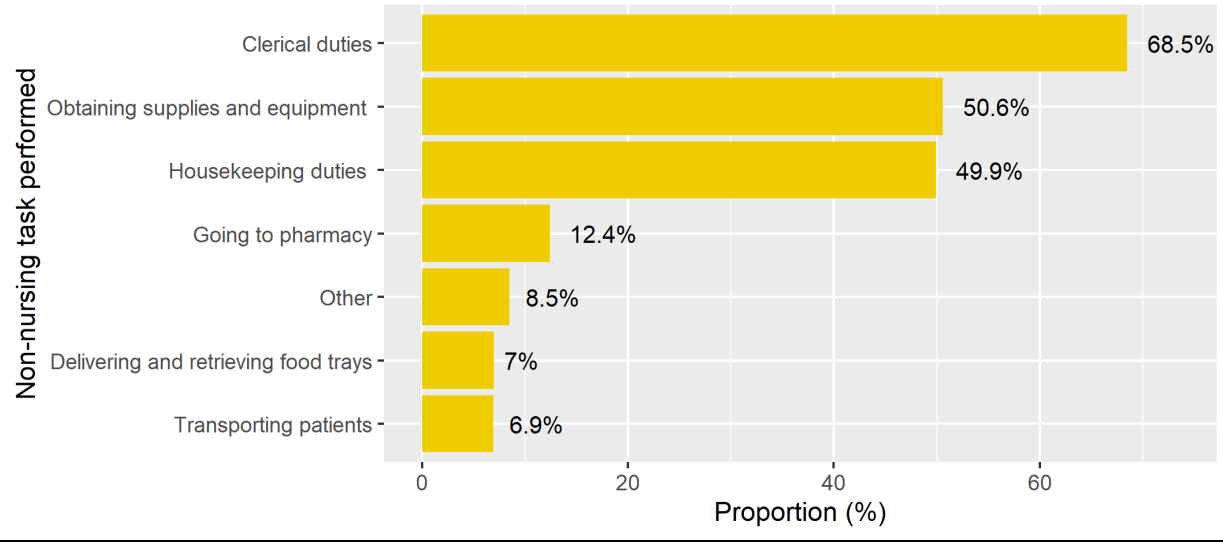
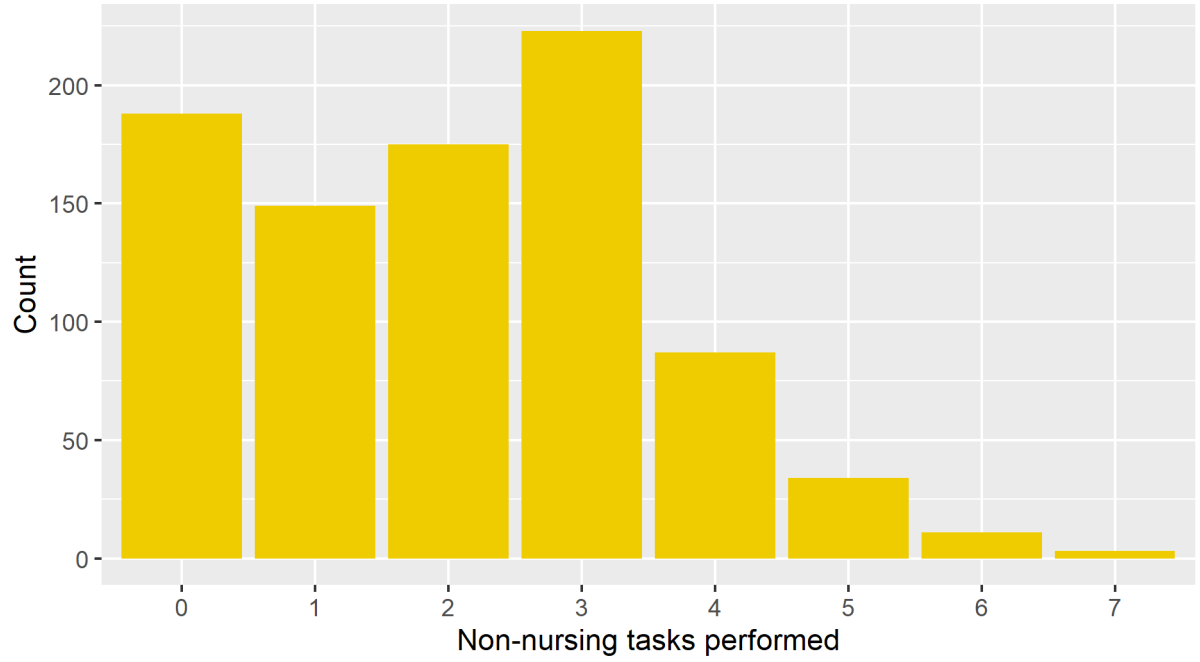


Figure 49. Nurse respondent count by number of non-nursing tasks performed (for non-nursing tasks performed last shift, M=2.04, SD=1.53)



OVERALL QUALITY AND SAFETY

Nurses were polled for their perceptions on quality of care and safety in their primary workplace, with questions asking about the quality of the nursing care they delivered, the overall patient safety, and the likelihood of recommending their primary workplace for care and as a workplace. The responses are tabulated by category in Table 38.

Approximately 88% of community care nurses described the general quality of nursing care they delivered as good or excellent, and 86% described the quality of care they delivered on their last shift as good or excellent. Approximately 11% gave a negative overall grade for patient safety in their primary workplace, while 15% provided a grade of Excellent.

For recommendations, 83% of respondents were likely to recommend their primary workplace to friends and family if they needed care; 72% were likely to recommend their primary workplace to a nurse colleague as a good place to work.

Table 38. Proportions for nurses' perceptions on overall quality and safety

Quality of care questions	**Poor**	**Fair**	**Good**	**Excellent**	**N**
In general, how would you describe the quality of nursing care you delivered to patients in your primary workplace?	0.6	11.6	52.3	35.5	792
How would you describe the quality of nursing care you delivered to patients in your primary workplace on your last shift?	0.6	13.2	50.4	35.8	788

Patient safety grade question	**Failing**	**Poor**	**Acceptable**	**Very good**	**Excellent**	**N**
Please give your primary workplace an overall grade on patient safety.	2.5	8.4	32.9	41.2	15	788

Recommendation questions	**Definitely no**	**Probably no**	**Probably yes**	**Definitely yes**	**N**
Would you recommend your primary workplace to your friends and family if they needed care?	6	11.3	44	38.7	781
Would you recommend your primary workplace to a nurse colleague as a good place to work?	10	18.6	43.6	27.9	792

WORKPLACE VIOLENCE

FREQUENCY OF WORKPLACE VIOLENCE BY TYPE

The set of questions examining workplace violence asked about the frequencies of different types of workplace violence, querying respondents "**Over the last six months**, how frequently have you experienced each of the following types of violence in your primary workplace?" The five types presented were physical assault, threat of assault, emotional abuse, verbal sexual harassment, and sexual assault. For each type, respondents selected from seven options of increasing frequency, ranging from "Never" to "Every day."

The type of workplace violence with the highest proportion of experience was emotional abuse, with approximately 61% of respondents reporting some frequency of experience within the last six months. The type with the lowest proportion of experience was sexual assault, with approximately 2% of respondents reporting experiencing workplace sexual assault. Table 39 presents proportions for experiential frequencies by type of workplace violence, while Table 40 summarizes the mean response by type.

Table 39. Frequencies of workplace violence frequency by type

Type of workplace violence	**Frequency (%)**							
	Never	**A few times a year or less**	**Once a month**	**A few times a month**	**Once a week**	**A few times a week**	**Every day**	**N**
Physical assault	81.9	13.8	1.9	1.4	0.1	0.5	0.4	842
Threat of assault	54.5	28.7	5.2	4.6	2.4	2.5	2	842
Emotional abuse	39.2	32.4	6.9	10	3.5	5.2	2.7	839
Verbal sexual harassment	68.7	22.2	4.3	2.3	1.4	0.7	0.4	841
Sexual assault	97.9	1.8	0.1	0.1	0	0.1	0	840

Table 40. Descriptive statistics for workplace violence by type

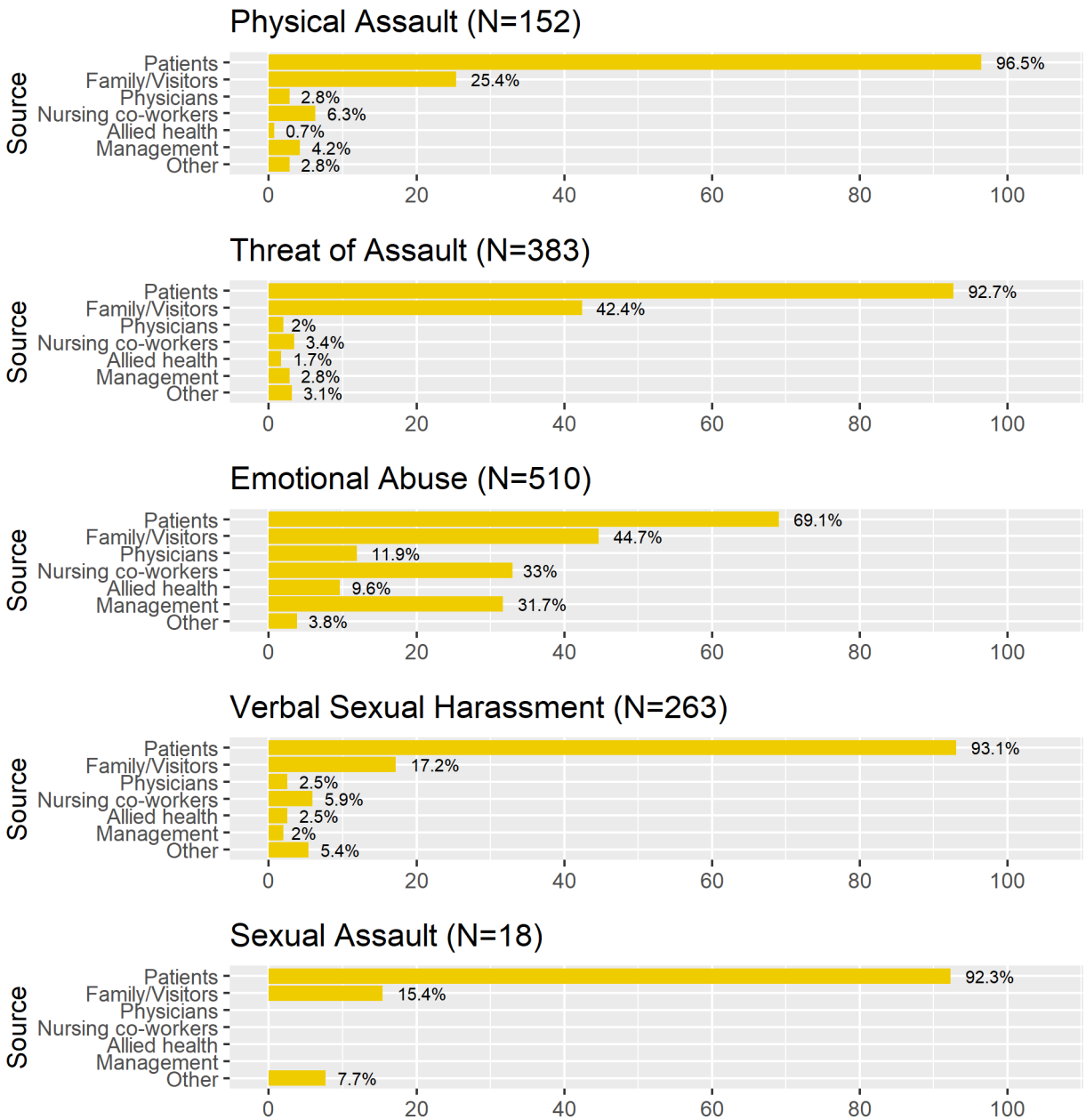
Type of workplace violence	**N**	**Mean^**	**SD^**	**Min^**	**Max^**
Physical assault	842	0.27	0.73	0	6
Threat of assault	842	0.87	1.37	0	6
Emotional abuse	839	1.33	1.61	0	6
Verbal sexual harassment	841	0.49	0.95	0	6
Sexual assault	840	0.03	0.25	0	5

^ Note: Workplace violence frequency is coded numerically as follows:
0: *Never*, 1: *A few times a year or less* […] 5: *A few times a week*, 6: *Every day*

SOURCES OF WORKPLACE VIOLENCE

Respondents who reported experiencing workplace violence were then asked a second set of questions about the sources of the workplace violence. For each reported type of violence (a response other than "Never"), the respondent was queried "Please indicate the source of workplace violence (check all that apply)" and presented seven options: patients, family/visitors, physicians, nursing co-workers, allied health, management, and other. Figure 50 displays the proportion of affirmative responses for each source, for each workplace violence type.

Figure 50. Sources of workplace violence by type

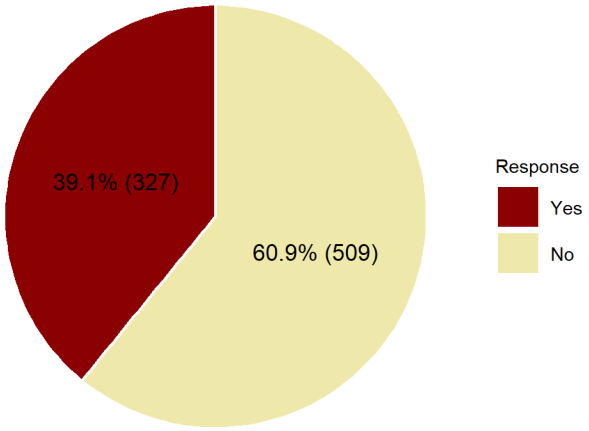


INDIRECT EXPERIENCES WITH WORKPLACE VIOLENCE

To examine nurses' indirect experiences with workplace violence, respondents were asked "Over the six months, have you ever witnessed any type of workplace violence without being directly involved?"

As shown in Figure 51, more than one-third of community care nurses reported witnessing workplace violence over the last six months.

Figure 51. Witnessed workplace violence without being directly involved, over the past six months

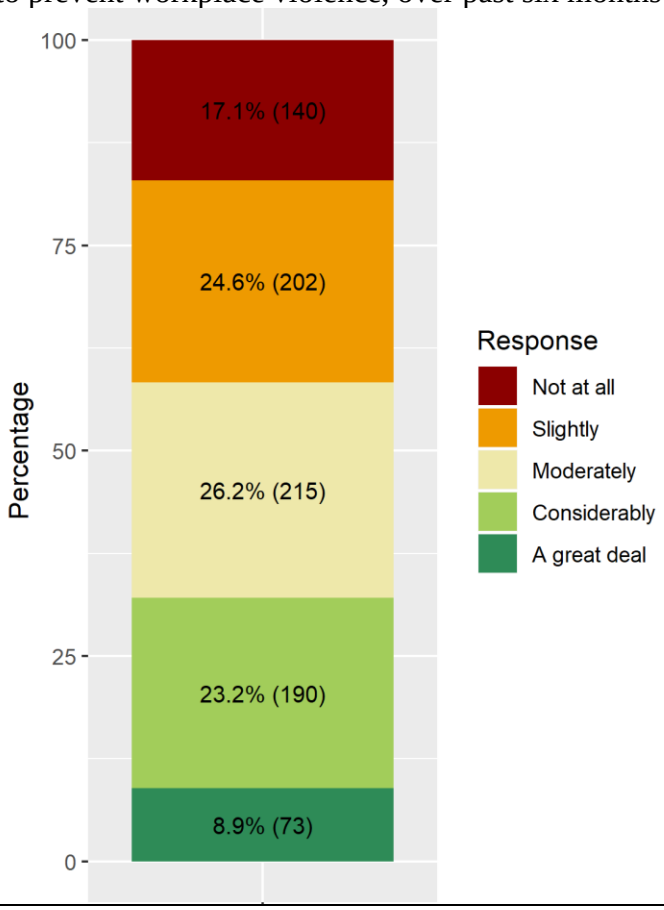


EMPLOYER EFFORTS TO PREVENT WORKPLACE VIOLENCE

Respondents were asked for their opinion on their employers' response to workplace violence in their primary workplace. The final question in the workplace violence section of the survey queried, "To what extent do you think your employer has taken appropriate measures to prevent violence in your primary workplace over the last six months?" The five available choices ranged from "Not at all" to "A great deal." The proportions of responses are displayed in Figure 52.

Approximately 42% of community care nurses rated their employers' efforts to prevent workplace violence as poor ("slightly", "Not at all").

Figure 52. Perceptions of extent of employer efforts to prevent workplace violence, over past six months



NURSE FACTORS

EXPERIENCES AS A RESULT OF WORKPLACE VIOLENCE EXPOSURE

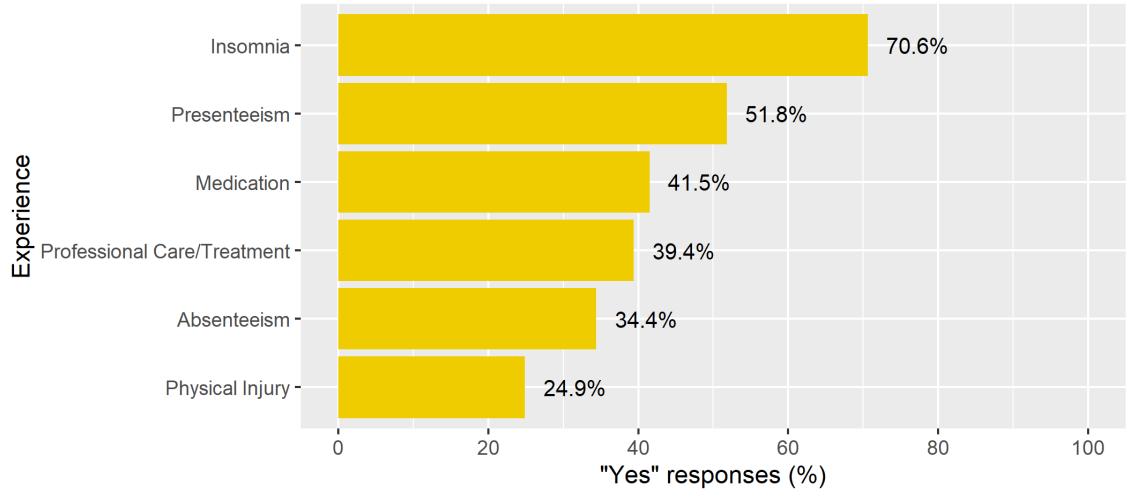
This survey included a number of question sets to assess respondents' perceptions of their physical and psychological health. The first series of questions followed up on nurses' exposure to workplace violence, asking respondents to select all applicable experiences in response to, "Have you had any of the following experiences as a result of exposure to workplace violence in your primary workplace over the last six months?" The six experiences listed were absenteeism ("Called in sick"), presenteeism ("Showed up to work despite feeling unwell"), medication ("used prescribed and/or over the counter medication, e.g., pain relievers, anti-anxiety medication"), insomnia ("difficulty falling asleep"), and professional care/treatment ("sought professional care/treatment, e.g. medical care, psychological care"). The results are presented in Table 41 and arranged in descending order in Figure 53.

At least one-third of community care nurse respondents reported "Yes" for each of the adverse experiences, except physical injury. The most common experiences were insomnia (71%), presenteeism (52%), and medication (42%).

Table 41. Proportions for experiences resulting from exposure to workplace violence, over the last six months

Experience	Yes (%)	No (%)	N
Absenteeism	34.4	65.6	575
Presenteeism	51.8	48.2	575
Medication	41.5	58.5	574
Insomnia	70.6	29.4	579
Physical Injury	24.9	75.1	575
Professional Care/Treatment	39.4	60.6	578

Figure 53. Experiences resulting from exposure to workplace violence, over the last six months



FINDINGS: LONG-TERM CARE SECTOR

DEMOGRAPHIC PROFILE OF LONG-TERM CARE NURSE RESPONDENTS

This section provides an overview of survey findings related to nurse respondents in the long-term care sector (N=483). Approximately 24% of respondents reported completing the 2019 baseline survey. The mean respondent age was 44.8 years (SD = 11.7). The majority of respondents were female (91%), direct care providers (74%), and working full-time (61%). The most common professional designation was Licensed Practical Nurse (LPN, 54%), followed by Registered Nurse (RN, 41%). More than half (60%) had a diploma or certificate, and 79% had more than five years of nursing experience. Table 42 provides a profile of respondents by baseline survey completion, age, gender, professional designation, education, nursing experience, and identification with BCNU equity-seeking caucuses. Table 43 provides demographic characteristics relevant to the respondents' primary workplace, such as their workplace geography, health authority, and nursing practice area.

Table 42. Demographic characteristics of long-term care sector nurse respondents

Characteristics	**N**	**%**
Completed baseline survey		
Yes	94	19.5
No	193	40
I don't remember/I don't know	195	40.5
Age		
Under 25	20	4.2
25 to 34	87	18.3
35 to 44	112	23.6
45 to 54	139	29.3
55 and above	117	24.6
Gender		
Female	438	90.7
Male	42	8.7
Prefer to describe	3	0.6
Professional Designation		
RN	198	41
RPN	21	4.3
LPN	260	53.8
Dually registered (RN/RPN)	1	0.2
Student nurse	3	0.6
Education		
Diploma/Certificate	289	60.2
Undergraduate degree	92	19.2
Graduate degree	85	17.7
Other	14	2.9
Overall nursing experience		
5 years or less	103	21.4
6 to 10 years	109	22.7
11 to 15 years	98	20.4
16 to 20 years	40	8.3

21 years or more	131	27.2
Identification with BCNU equity-seeking caucuses (respondents may identify with multiple caucuses simultaneously)		
Indigenous Leadership Circle	23	5.1
LGBTQ	22	5
Mosaic of Colour	86	19
Workers with Disabilities	32	7.2

Table 43. Demographic characteristics relevant to respondents' primary workplace

Primary workplace	**N**	**%**
Primary nursing role		
Direct care provider	356	73.7
Nurse leader	114	23.6
Educator	13	2.7
Provides direct patient/client care		
Yes	454	94.2
No	28	5.8
Health authority		
Vancouver Coastal Health	164	34
Fraser Health	87	18
Interior Health	85	17.6
Vancouver Island Health	64	13.3
Northern Health	32	6.6
Provincial Health Services	21	4.3
Providence Health	13	2.7
Workplace geography		
Urban	274	57.3
Suburban	102	21.3
Rural	102	21.3
Nursing practice area		
Home and community care	1	0.2
Long-term care	422	87.4
Mental health or psychiatry	24	5
Palliative	20	4.1
Other, please specify	12	2.5
Mixed (a combination of other areas)	3	0.6
Employment status		
Full-time	295	61.1
Part-time	146	30.2
Casual	42	8.7

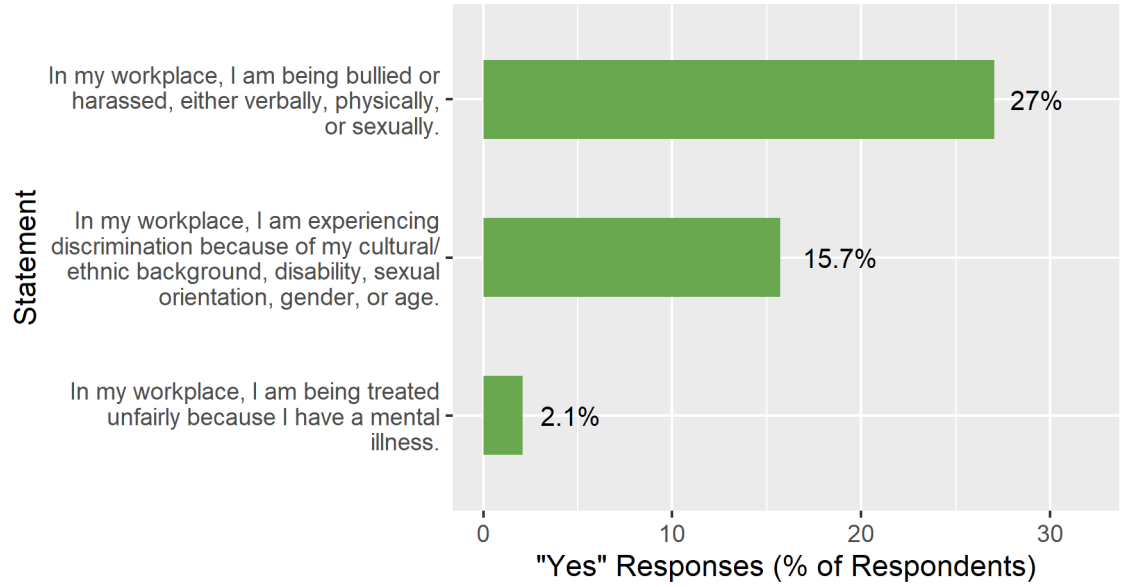
OVERALL WORKPLACE FACTORS

As part of this survey, respondents were queried about their experiences in the primary workplace through question sets spanning a variety of topics. The topics explored include general negative treatment in the workplace, COVID-19, and workplace violence.

WORKPLACE DISCRIMINATION, BULLYING/HARASSMENT, AND UNFAIR TREATMENT DUE TO MENTAL HEALTH

The first set of questions examining general negative treatment in the workplace were sourced from the Guarding Minds at Work assessment tool. The questions were comprised of three statements describing workplace bullying and harassment, discrimination, and unfair treatment due to mental illness, to which respondents indicated whether or not they had had such experiences over the last six months. Figure 54 presents the affirmative response proportion for each.

Figure 54. Proportion of responses reporting various workplace experiences



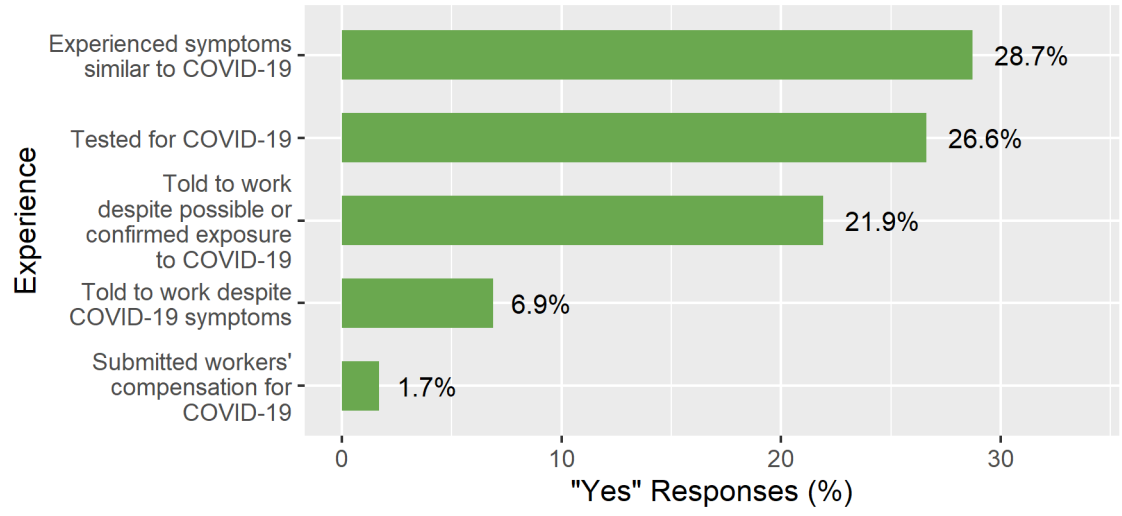
COVID-19 WITHIN THE WORKPLACE

The next set of questions were focussed on nurse experiences of the COVID-19 pandemic in the primary workplace. Respondents were asked to respond to the questions thinking about their workplace experiences **since the start of the COVID-19 pandemic in March 2020**. Respondents answered Yes/No prompts about personal COVID-19 experiences, and Likert-type items about subtopics including frequency of contact with COVID-19 patients, adequacy of staffing, sufficiency/quality of personal protective equipment (PPE), changes in workplace relationships, etc. Table 44 presents a comprehensive overview of response proportions for all COVID-19 questions.

Frequency of direct contact with COVID-19 patients: Respondents were asked how frequently they have had direct contact with suspected or confirmed COVID-19 patients, with response options ranging along a 7-point Likert scale from "Never" to "Almost every day". Almost three-quarters of respondents (74%) reported their frequency of contact as "Never" or "A few times", and 14% reported their frequency of contact as "Once a week" or greater.

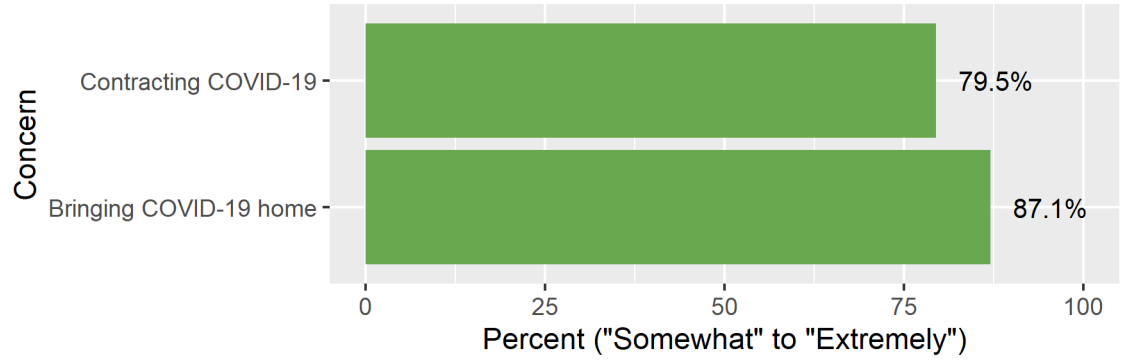
Personal COVID-19 experiences: Respondents were asked whether or not they had experienced any of five COVID listed experiences. The response proportions to each experience are shown in Figure 55.

Figure 55. Proportion of "Yes" responses to personal experiences related to COVID-19



Concern about COVID-19: Respondents reported their level of concern "about contracting COVID-19 at [their] workplace" and "about bringing COVID-19 home to those with whom [they] live and/or family/friends" along a 5-point Likert scale, ranging from "Extremely concerned" to "Not at all concerned". The response proportion for 'Somewhat' to 'Extremely' concerned responses are shown in Figure 56.

Figure 56. Proportion of 'Somewhat concerned' to 'Extremely concerned' responses for COVID-19 concerns

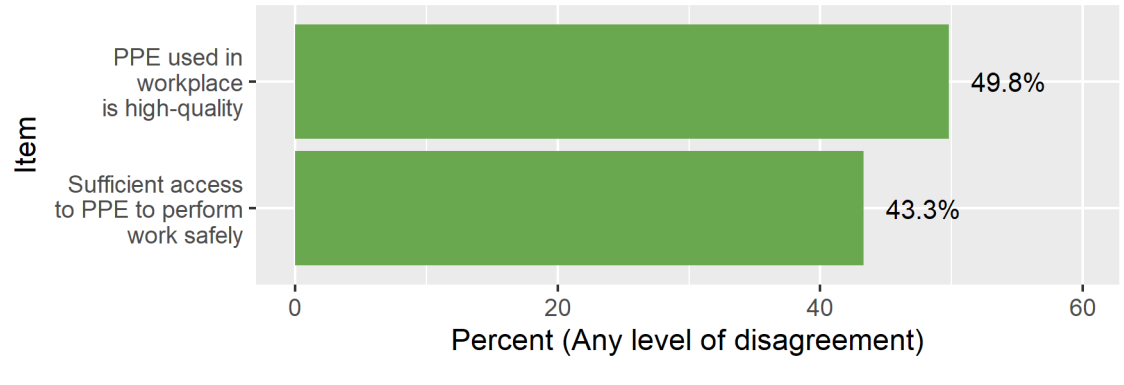


Adequacy of nurse staffing: Respondents rated the adequacy of nurse staffing in their primary workplace during COVID-19 along a 6-point Likert scale, ranging from "Extremely inadequate" to "Extremely adequate". Almost two-thirds (63%) rated staffing as inadequate.

Personal Protective Equipment (PPE): Respondents were asked about their workplace experiences with PPE during the pandemic, including their endorsement of the statements "I have had sufficient access to PPE to perform my work safely" and "The PPE used in my workplace is high-quality"; the length of time since they were fit tested for an N95 respirator; and how likely they were to exercise their right to refuse unsafe work if denied appropriate PPE.

As detailed in Figure 57, half (50%) disagreed that the PPE used in their workplace is high-quality, and 43% disagreed that they have had sufficient access to PPE to perform their work safely. About 40% reported that they had either never been fit tested for an N95, or that it had been two or more years since their last fit test. About 71% responded that they were likely or very likely to exercise their right to refuse unsafe work if denied appropriate PPE.

Figure 57. Disagreement response proportions for PPE quality and access to PPE during COVID-19 pandemic



Confidence in own ability to assess PPE requirements and personal risk: Respondents reported their confidence in their ability to adequately assess their PPE requirements and personal risk.

Approximately 57% responded “confident” or “very confident” towards assessment of PPE requirements, and 61% responded “confident” or “very confident” towards assessment of their personal risk.

Adequacy of training: Respondents rated the adequacy of their training to work safely with COVID-19 along a 4-point Likert scale ranging from “Extremely inadequate” to “Extremely adequate”, or indicated that they had never received such training. About 30% found their training to be inadequate, while 7% indicated that they had never received training.

Organizational factors: With the duration of the COVID-19 pandemic in mind, respondents rated their confidence in their organization’s/manager’s handling of the pandemic, the extent to which they were supported by their organization, the average frequency of protocol and policy change, and transparency of organizational decisions related to COVID-19.

- Approximately 60% reported that the average frequency of COVID-19 protocol and policy changes was weekly or higher, while 18% reported changes daily or multiple times a day.
- Approximately 39% rated the transparency of organizational decisions related to COVID-19 as poor or failing.
- Approximately 30% responded that they were not confident in their manager’s handling of the pandemic.
- Approximately 26% responded that they were not confident (‘not at all confident’, ‘not confident’) in organizational handling of the pandemic.
- Approximately 19% responded that they were not supported by their organization during the pandemic, while 34% responded that they were only ‘slightly supported’.

Changes to workplace relationships: Respondents were asked how their workplace relationships with their nursing colleagues, manager, and the rest of healthcare team (e.g. medicine, allied health) had changed during COVID-19. As shown in Figure 58, 35% reported worsening relationships with managers, 27% reported worsening relationships with colleagues, and 29% reported worsening relationships with the rest of the healthcare team.

Figure 58. Response proportions for changes in workplace relationships during COVID-19 pandemic

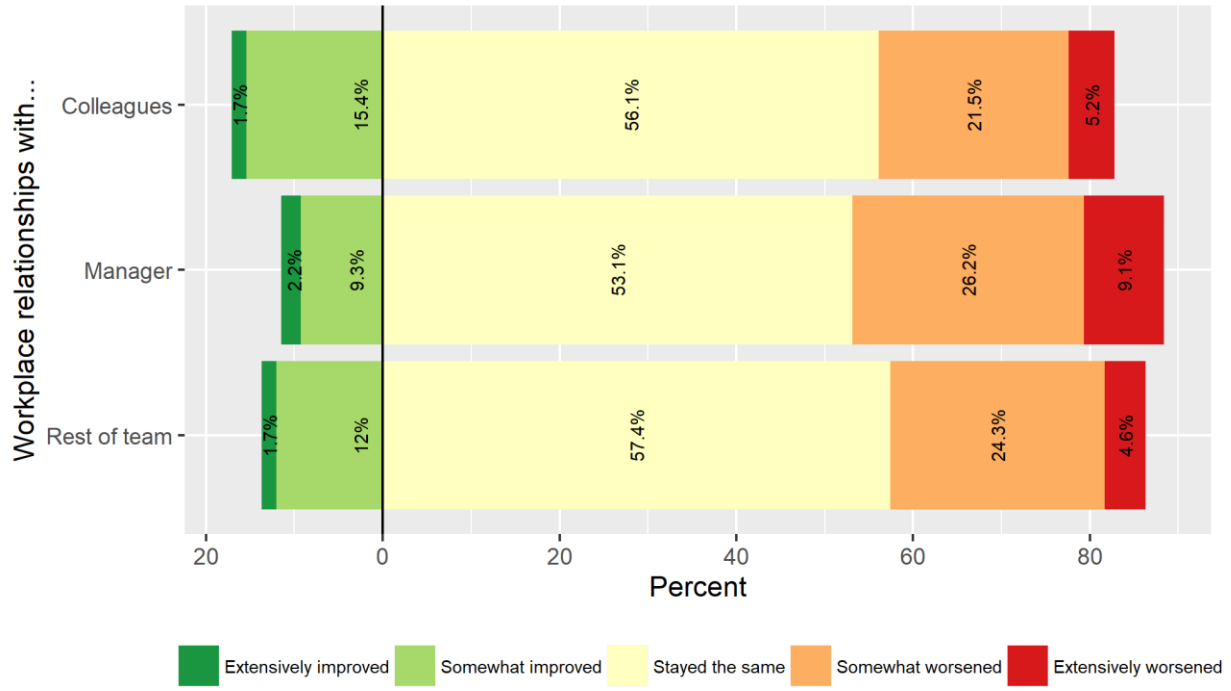


Table 44. Response proportions for all COVID-19 variables

Frequency	Never	A few times	Once a month	A few times a month	Once a week	A few times a week	Almost every day	N
Frequency of direct contact with suspected or confirmed COVID-19 patients	42.6	31.1	3	9.6	1.5	4.9	7.2	469

Personal experiences	Yes	No	N
Told to work despite possible or confirmed exposure to COVID-19	21.9	78.1	465
Experienced symptoms similar to COVID-19	28.7	71.3	467
Told to work despite COVID-19 symptoms	6.9	93.1	464
Tested for COVID-19	26.6	73.4	466
Submitted workers' compensation for COVID-19	1.7	98.3	463

Concern	Extremely concerned	Very concerned	Somewhat concerned	Slightly concerned	Not at all concerned	N
Concern about contracting COVID-19 at workplace	31.8	22.8	24.9	15.1	5.3	469
Concern about bringing COVID-19 home	45.8	24.7	16.6	7.9	4.9	469

Adequacy	Extremely inadequate	Moderately inadequate	Slightly inadequate	Slightly adequate	Moderately adequate	Extremely adequate	N
Adequacy of nurse staffing	16.1	28.9	17.6	9.2	22.5	5.8	467

	Never received such training	Extremely inadequate	Somewhat inadequate	Somewhat adequate	Extremely adequate	N
Adequacy of training to work safely with COVID	6.7	11	19	46.8	16.5	462

PPE	Strongly disagree	Disagree	Somewhat disagree	Somewhat agree	Agree	Strongly agree	N
Sufficient access to PPE necessary to perform work	12.1	15.9	15.3	20.5	25.2	11	464
High quality PPE are used in workplace	13.6	20.9	15.3	22.2	22	6	464

	Within last month	Within last 6 months	Within last year	1-2 years ago	2-5 years ago	5+ years ago	Never been fit tested	N
Time since last fit test for N95 mask	6.4	20.8	14.4	18.7	13.1	10.3	16.3	466

	Very unlikely	Unlikely	Likely	Very likely	N
If denied appropriate PPE, how likely to exercise right to refuse unsafe work	8.6	20.7	32.2	38.4	463

Confidence	Not at all confident	Not confident	Slightly confident	Somewhat confident	Confident	Very confident	N

Confidence in own ability to assess PPE requirements	3	7.9	12.7	19.3	41.8	15.2	466
Confidence in own ability to assess personal risk	1.3	5.2	9.4	22.7	42.1	19.3	466
Confidence in organization's handling of COVID-19 pandemic	11.1	14.6	21.5	25.9	22.2	4.8	460
Confidence in manager's handling of COVID-19 pandemic	13.9	15.6	17.7	24	20.8	8	462

Organizational support	**Not at all supported**	**Not supported**	**Slightly supported**	**Moderately supported**	**Extremely supported**	**N**
Extent of support from workplace organization during COVID-19 pandemic	6.7	12.4	34.1	34.1	12.6	460

Policy and protocol	**Never**	**A few times**	**Once a month**	**A few times a month**	**Once a week**	**A few times a week**	**Every day**	**Multiple times a day**	**N**
Average frequency of changes to COVID-19 related protocols and policies in workplace	1.5	14.5	1.3	22.8	12.8	29.1	12.4	5.6	461

Changes to workplace relationships during COVID-19 pandemic	**Extensively worsened**	**Somewhat worsened**	**Stayed the same**	**Somewhat improved**	**Extensively improved**	**N**
Nursing colleagues	5.2	21.5	56.1	15.4	1.7	460
Manager	9.1	26.2	53.1	9.3	2.2	461
Rest of the healthcare team	4.6	24.3	57.4	12	1.7	460

Transparency	**Failing**	**Poor**	**Fair**	**Good**	**Excellent**	**N**
Transparency of organizational decisions related to COVID-19	10.6	28	35.4	21.7	4.3	461

NURSE OUTCOMES

MENTAL HEALTH AND WELLBEING

Several established tools were included in the survey to assess respondents' psychological ill-being, with screening tools for post-traumatic stress disorder (PTSD), generalized anxiety disorder, major depressive disorder, and emotional exhaustion/burnout. Summary information for the data is displayed in Table 45. Category proportions, as defined by cutoff values, are shown in Table 46.

PTSD: Post-traumatic stress disorder was assessed using the Posttraumatic Stress Symptoms-14 (PTSS-14) instrument, a measure consisting of 14 items reflecting feelings over the last two weeks, such as "The need to withdraw from others", "Frequent mood swings" and "muscular tension". Respondents rated how frequently they experienced each feeling along a 7-point Likert scale, ranging from 1 = Never, to 7 = Always. Total scores of 45 or higher were categorized as positive for PTSD.

Approximately 41% of respondents scored within the 'positive' range for PTSD.

Anxiety: Generalized anxiety disorder was assessed using the Generalized Anxiety Disorder-7 (GAD7) instrument, which consists of seven items describing negative feelings within the last two weeks, such as "Feeling nervous, anxious or on edge" and "Trouble relaxing". Responses were given along a 4-point Likert scale, ranging from 0 = Not at all, to 3 = Nearly every day. Sum scores were categorized as: 0-4 = no anxiety, 5-9 = mild, 10-14 = moderate, 15-21 = severe.

Approximately 72% of respondents scored within some level of anxiety, with 32% within the moderate to severe anxiety range.

Depression: The Patient Health Questionnaire-9 (PHQ-9) consists of nine items reflecting perceptions such as poor appetite, anhedonia, and depressive mood. Respondents rated how often they were bothered by each perception within the last two weeks, along a 4-point Likert scale, ranging from 0 = Not at all, to 3 = Nearly every day. Sum scores were categorized as 0-4 = no depression, 5-9 = mild, 10-14 = moderate, 15-19 = moderately severe, and 20-27 = severe depression.

Approximately 68% were categorized at some level of depression, with 36% within the moderate to severe depression range.

Burnout: To assess nurse burnout, this survey used the Maslow Burnout Inventory - Human Services Survey, which includes three subscales of Emotional Exhaustion, Depersonalization, and Personal Accomplishment. Items in the scale include statements such as: for Emotional Exhaustion (9 items), "I feel emotionally drained from my work" and "I feel like I'm at the end of my rope"; for Depersonalization (5 items), "I worry that this job is hardening me emotionally"; for Personal Accomplishment (8 statements), "I feel very energetic". Respondents rated the frequency of each feeling along a 7-point Likert scale of increasing frequency, ranging from 0 = Never, 1 = A few times a year or less; to 5 = A few times a week, 6 = Every day. Subscale sum scores were categorized by cutoff scores: for emotional exhaustion, 0-16 = low,

17-26 = moderate, ≥ 27 = high; for depersonalization 0-6 = low, 7-12 = moderate, ≥ 13 = high; for personal accomplishment, 0-31 = low, 32-38 = moderate, ≥ 39 = high.

Approximately 57% of respondents indicated high emotional exhaustion, 21% indicated high depersonalization, and 35% indicated low personal accomplishment.

Table 45. Descriptive statistics for nurse outcome measures

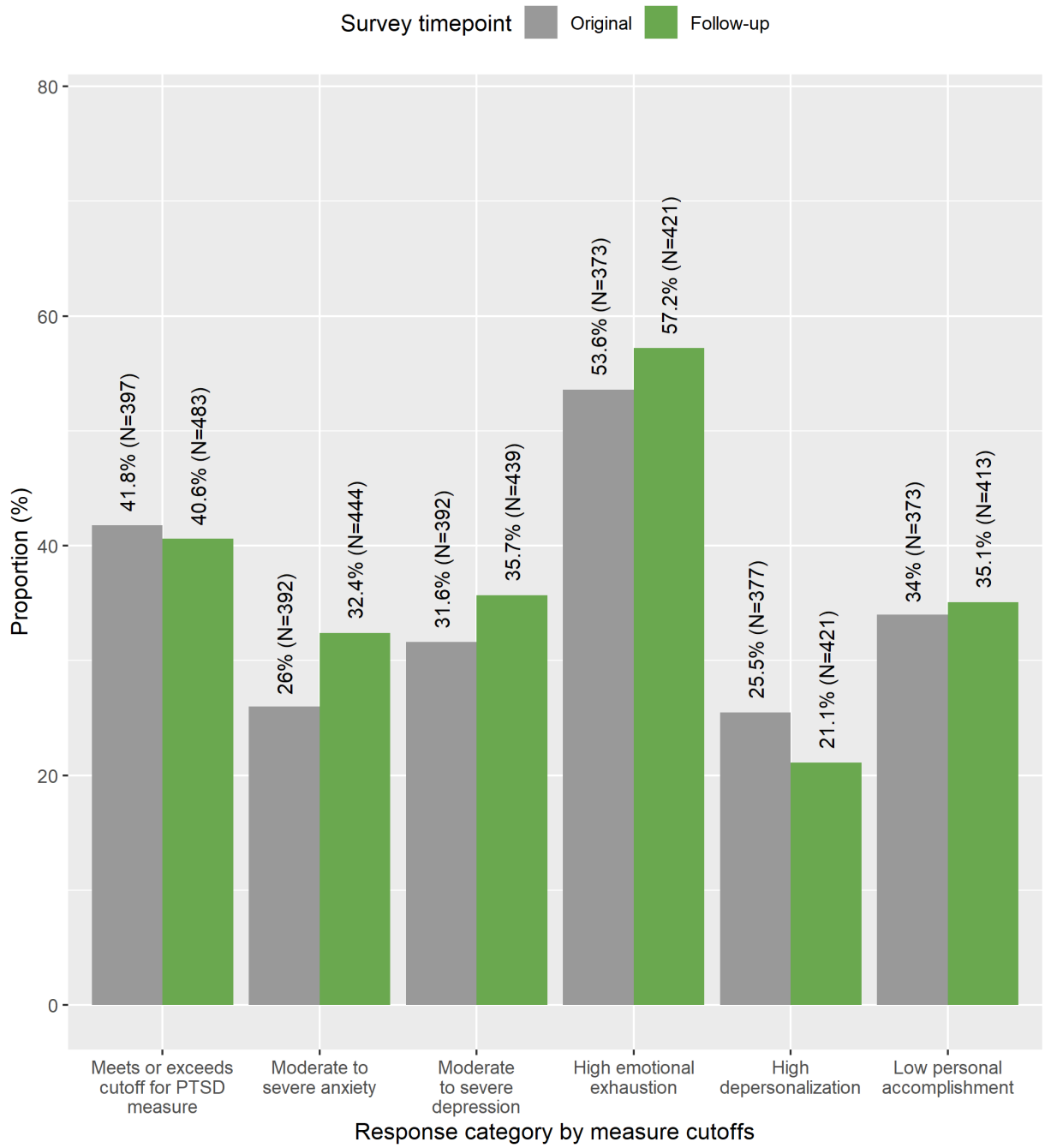
Measure	N	Mean	SD	Min	Max
Posttraumatic Stress Symptoms-14 (PTSS-14)[1]	435	44.74	20.57	14	98
Generalized Anxiety Disorder-7 (GAD-7)[1]	444	8.05	5.89	0	21
Patient Health Questionnaire-9 (Depression; PHQ-9)[1]	439	8.68	6.62	0	27
Maslach Burnout Inventory - Human Services Survey for Medical Personnel[2]					
Emotional Exhaustion (MBI-HSS (MP))	421	28.66	13.95	0	54
Depersonalization (MBI-HSS (MP))	421	7.6	6.6	0	29
Personal Accomplishment (MBI-HSS (MP))	413	34.13	8.13	0	48
Note: [1]Items refer to the past two weeks. [2]Items refer to the past six months.					

Table 46. Proportions for nurse outcome categories, as defined by sum score cut-offs

Measure	% in category (by cutoffs)					N
PTSS-14	Below cutoff	Above cutoff				
	59.4	40.6				483
GAD-7	No anxiety	Mild anxiety	Moderate anxiety	Severe anxiety		
	28.2	39.4	15.5	16.9		444
PHQ-9	No depression	Mild depression	Moderate depression	Moderately severe depression	Severe depression	
	32.1	32.1	16.6	9.8	9.3	439
MBI-HSS (MP)						
Emotional Exhaustion	Low EE	Moderate EE	High EE			421
	24.2	18.5	57.2			
Depersonalization	Low DP	Moderate DP	High DP			421
	53.9	24.9	21.1			
Personal Accomplishment	Low PA	Moderate PA	High PA			413
	35.1	29.8	35.1			

To examine the changes between the original province-wide survey and this follow-up survey, the proportions of cutoff categories for remeasured mental health outcomes were examined. Figure 59 shows a comparison of proportions between the two surveys, for categories of potential concern such as “Above PTSD cutoff”, “Moderate to severe anxiety”, etc. Proportion increases from the original survey can be seen for anxiety, depression, and emotional exhaustion.

Figure 59. Comparison of proportions for potentially concerning mental health cutoff categories, between original survey and follow-up survey



SUICIDAL IDEATION

Questions about suicide and suicidal ideation were also included in the survey. Respondents were reminded that participation was completely voluntary for any part of the survey and of the confidentiality of the survey. Respondents were initially asked two questions: "In your lifetime, have you seriously thought about committing suicide?" and "In the past 12 months, have you seriously thought about committing suicide?". If affirmative responses were given to either question, the following questions were presented "… have you ever made a plan for committing suicide?" and "… have you ever attempted suicide?" for the corresponding timeframe.

Response frequencies and proportions are shown in Table 47. Approximately a quarter (26%) of respondents reported having seriously thought about committing suicide in their lifetimes. Of that subgroup of respondents, 43% (11% overall) reported having made plans for committing suicide, and 16% (4.1% overall) reported having attempted suicide in their lifetime.

For the past 12 months, 7% of respondents reported having seriously thought about committing suicide. Of that subgroup, almost half (48%, 3.2% overall) reported having made plans for committing suicide in the past year, and 14% (0.9% overall) reported having attempted suicide in the past year.

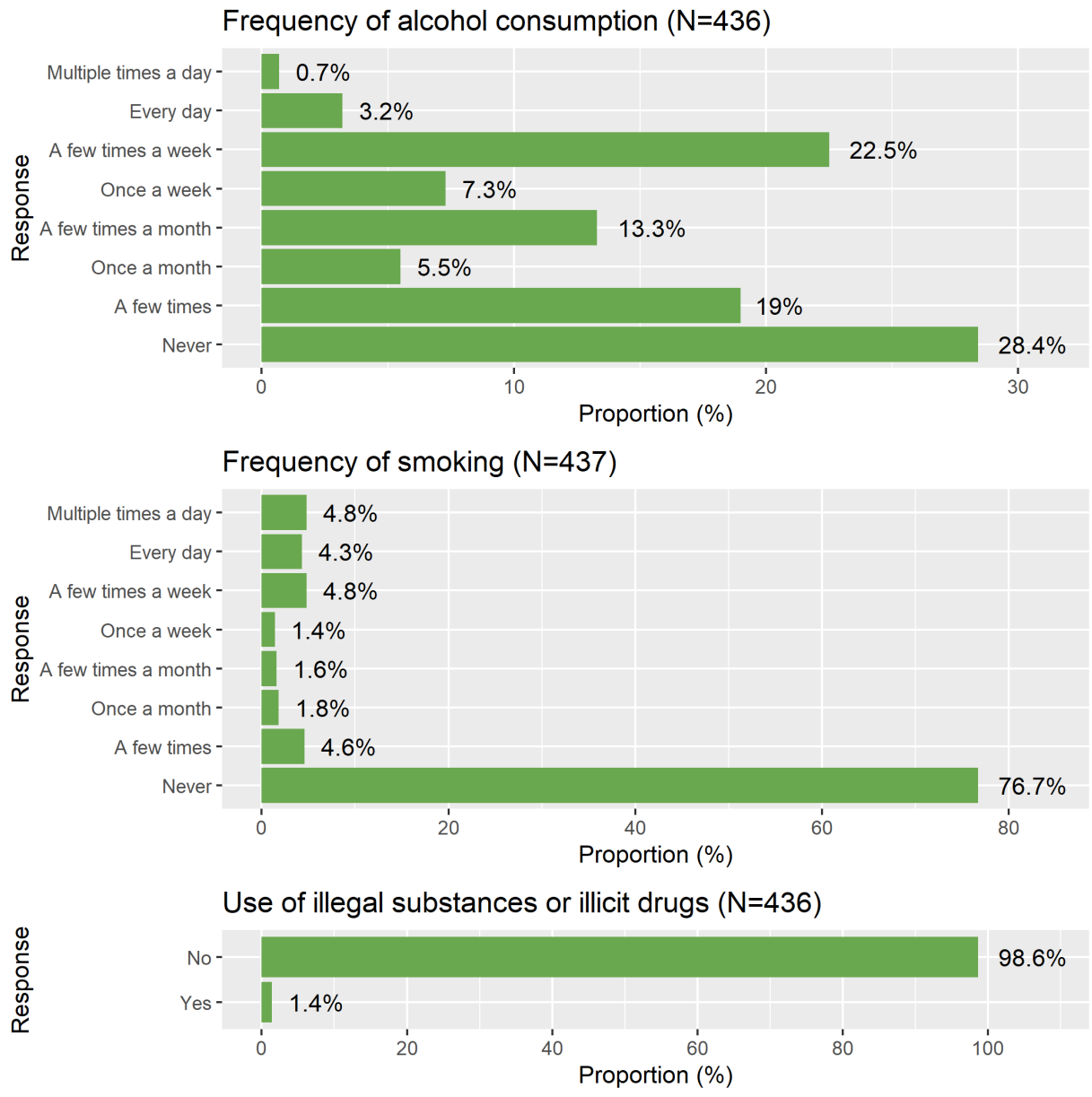
Table 47. Response proportions for suicide ideation items

Item	Yes (%)	No (%)	N
In your lifetime…			
Have you ever seriously thought about committing suicide?	25.5	74.5	435
Have you ever made a plan for committing suicide?	43.2	56.8	111
Have you ever attempted suicide?	16.4	83.6	110
In the past 12 months…			
Have you ever seriously thought about committing suicide?	6.7	93.3	434
Have you ever made a plan for committing suicide?	48.3	51.7	29
Have you ever attempted suicide?	13.8	86.2	29
Note: Items "have you ever made a plan…" and "have you ever attempted…" were only displayed if respondent answered Yes to the corresponding "have you ever seriously thought…" item. Lines display the upper bound of subsample size for the latter two questions per group.			

ALCOHOL AND SUBSTANCE USE

Respondents were also polled about their consumption habits for alcohol, smoking (e.g. cigarettes, marijuana, hookah), and illegal substances or illicit drugs (e.g. cocaine, opium) over the past six months. Response proportions are displayed graphically in Figure 60. Approximately one-third (34%) of long-term care nurse respondents drank alcohol at least once a week, while 15% smoked at least once a week. The overwhelming majority (99%) reported that they had not used illegal substances or illicit drugs.

Figure 60. Proportions for alcohol consumption frequency, smoking frequency, and substance use



QUALITY, SAFETY, AND WORKLOAD

WORKPLACE INCIDENTS DURING COVID-19

Respondents were asked about the frequency of various patient incidents at their primary workplace during the COVID-19 pandemic. The question asked, “On average, how frequently has each of the following incidents occurred, involving you and your patient during COVID-19?”, with eight incidents listed. Responses were indicated on a seven-point scale, spanning “Never”, “Few times or less”, … “A few times a week”, “Almost every day”. The response proportions for the frequencies of patient incidents is displayed in Figure 61. The most common incidents were patient complaints, urinary tract infections, and patient falls with injury. Figure 62 displays the number of nurse respondents based on the number of patient incidents reported as occurring monthly or more frequently. Approximately 44% of long-term care respondents had two or more patient incidents occurring monthly or more frequent.

Figure 61. Response proportions for frequencies of patient incidents during COVID-19 “monthly” or more frequent, in descending order

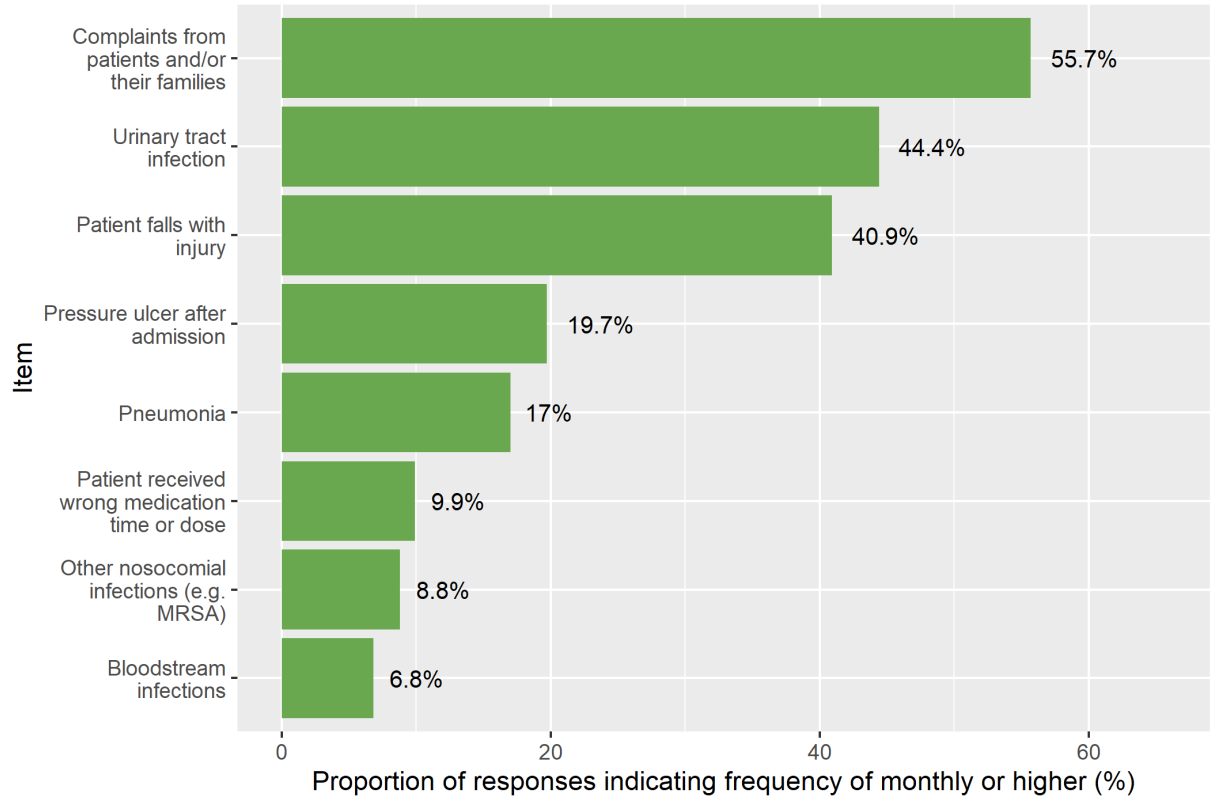
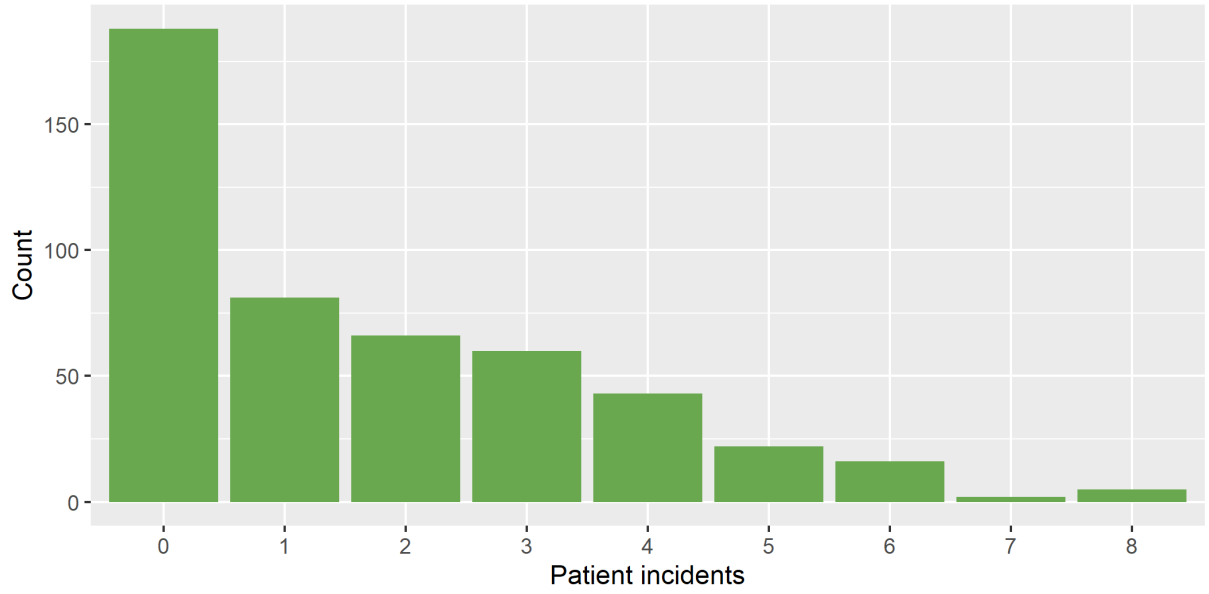


Figure 62. Nurse respondents grouped by number of patient incidents occurring monthly or more frequent (M=1.71, SD=1.88)



NURSING TASKS NECESSARY BUT LEFT UNDONE

Respondents were asked, “Which of the following nursing tasks were necessary but left undone during your last shift?” and could check all answers that applied. The nursing tasks presented as options, and their corresponding affirmative response proportions are shown in Figure 63. The most common necessary tasks left undone amongst long-term care nurses were developing or comforting/talking with patients, developing or updating nursing care plans/pathways, and adequately documenting nursing care.

The number of tasks left undone was also tallied by respondent. Figure 64 displays respondent count by number of tasks left undone. Approximately 10% had more than half (8 or more) of the listed tasks undone during the last shift.

Figure 63. Proportions for 'Yes' responses for nursing tasks necessary but left undone last shift

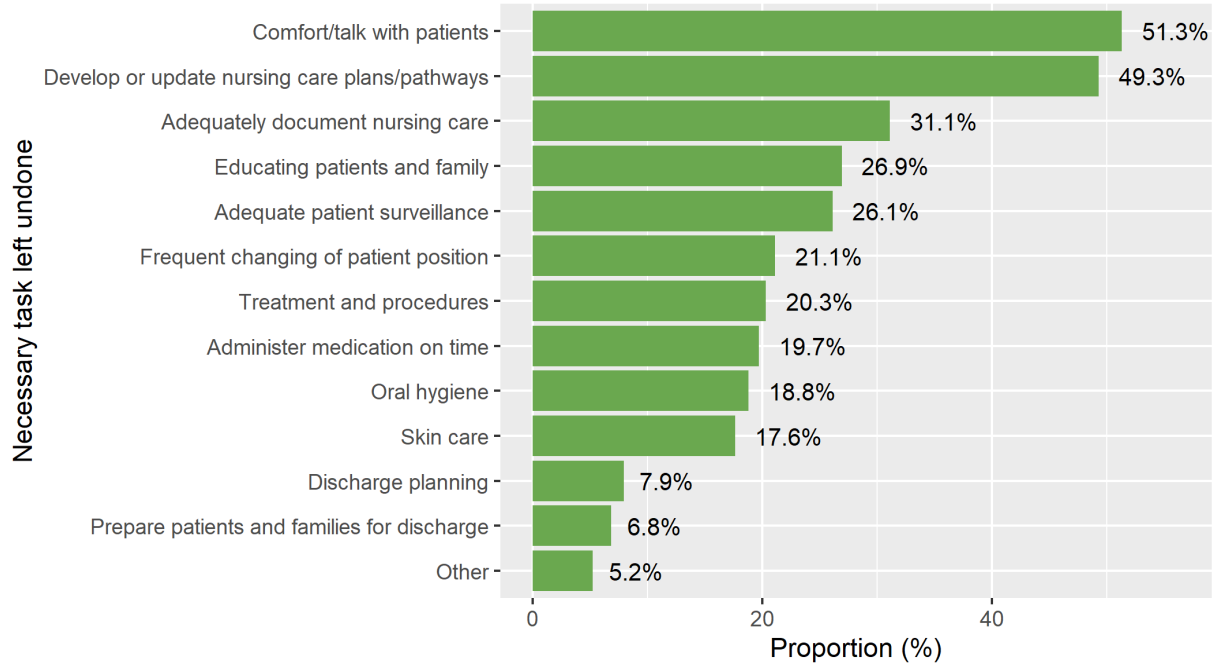
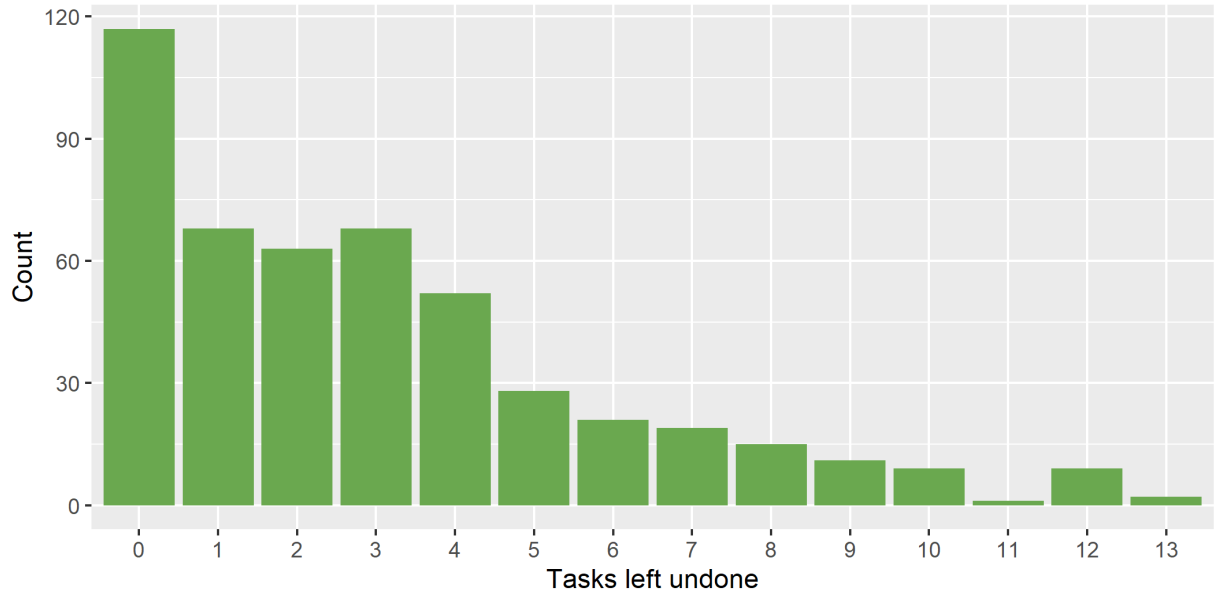


Figure 64. Nurse respondents grouped by number of reported tasks left undone (for number of tasks left undone, M=3.02, SD=2.97)



NON-NURSING TASKS

Respondents were also asked “Which of the following non-nursing tasks did you perform during your last shift”, and checked all applicable tasks from a short list. The proportion of “Yes” responses for each non-nursing task are shown in Figure 65. The most common non-nursing tasks performed were obtaining supplies and equipment, clerical duties, and delivering and retrieving food trays. The number of non-nursing tasks performed per respondent was also tallied, and is shown in Figure 66.

Figure 65. Proportion of 'Yes' responses for non-nursing tasks performed last shift

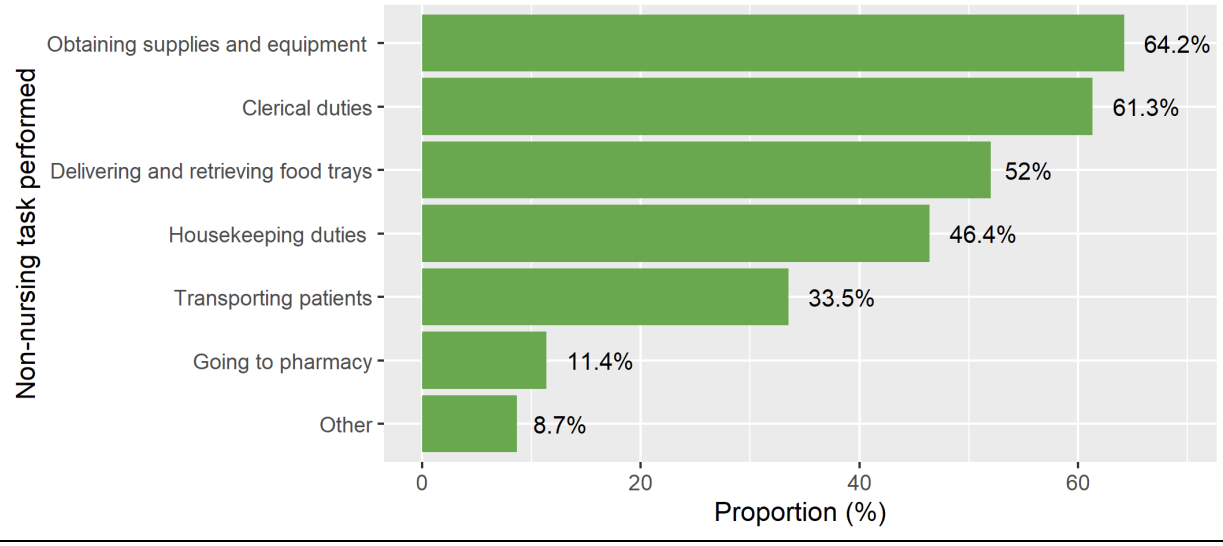
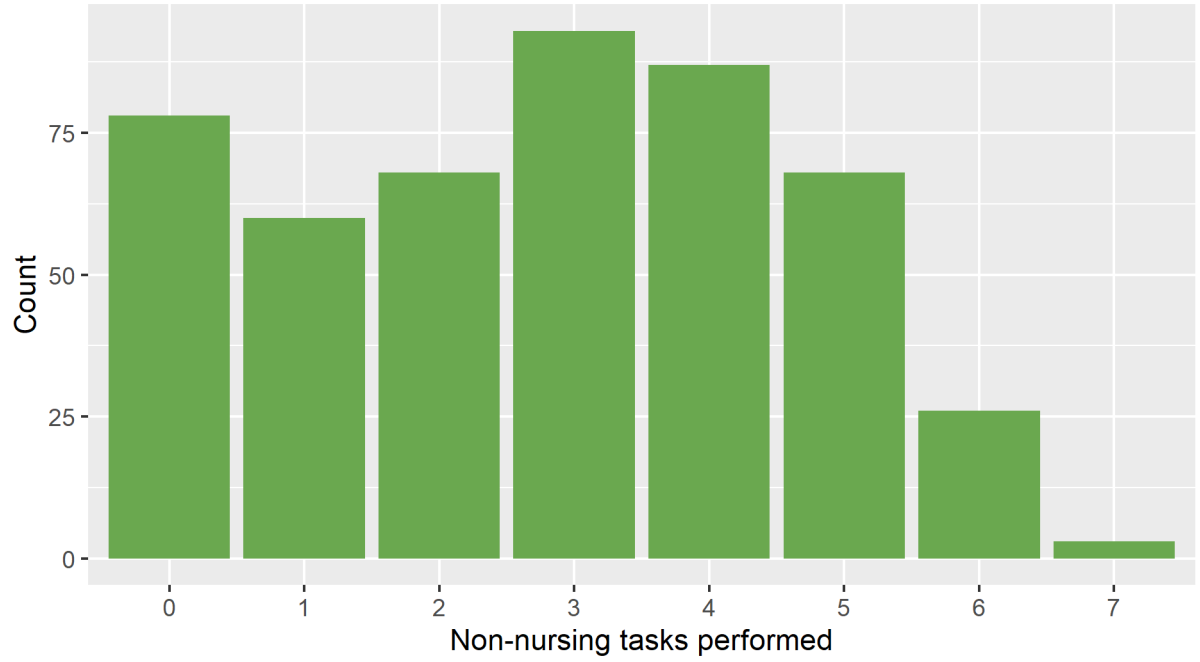


Figure 66. Nurse respondent count by number of non-nursing tasks performed (for non-nursing tasks performed last shift, M=2.77, SD=1.84)



OVERALL QUALITY AND SAFETY

Nurses were polled for their perceptions on quality of care and safety in their primary workplace, with questions asking about the quality of the nursing care they delivered, the overall patient safety, and the likelihood of recommending their primary workplace for care and as a workplace. The responses are tabulated by category in Table 48.

Approximately 80% of long-term care nurses described the general quality of nursing care they delivered as good or excellent, and 82% described the quality of care they delivered on their last shift as good or excellent. Approximately 16% gave a negative overall grade for patient safety in their primary workplace.

For recommendations, 69% of respondents were likely to recommend their primary workplace to friends and family if they needed care. Approximately 68% were likely to recommend their primary workplace to a nurse colleague as a good place to work.

Table 48. Proportions for nurses' perceptions on overall quality and safety

Quality of care questions	**Poor**	**Fair**	**Good**	**Excellent**	**N**
In general, how would you describe the quality of nursing care you delivered to patients in your primary workplace?	1.9	17.8	52.3	28	428
How would you describe the quality of nursing care you delivered to patients in your primary workplace on your last shift?	2.3	15.9	55	26.7	427

Patient safety grade question	**Failing**	**Poor**	**Acceptable**	**Very good**	**Excellent**	**N**
Please give your primary workplace an overall grade on patient safety.	4.7	11	40.2	34.8	9.3	428

Recommendation questions	**Definitely no**	**Probably no**	**Probably yes**	**Definitely yes**	**N**
Would you recommend your primary workplace to your friends and family if they needed care?	9.9	20.9	43	26.3	426
Would you recommend your primary workplace to a nurse colleague as a good place to work?	8.6	23.6	43.7	24.1	428

WORKPLACE VIOLENCE

FREQUENCY OF WORKPLACE VIOLENCE BY TYPE

The set of questions examining workplace violence asked about the frequencies of different types of workplace violence, querying respondents "**Over the last six months**, how frequently have you experienced each of the following types of violence in your primary workplace?" The five types presented were physical assault, threat of assault, emotional abuse, verbal sexual harassment, and sexual assault. For each type, respondents selected from seven options of increasing frequency, ranging from "Never" to "Every day."

The type of workplace violence with the highest proportion of experience was threat of assault, with approximately 81% of respondents reporting some frequency of experience within the last six months. The type with the lowest proportion of experience was sexual assault, with approximately 11% of respondents reporting experiencing workplace sexual assault. Table 49 presents proportions for experiential frequencies by type of workplace violence, while Table 50 summarizes the mean response by type.

Table 49. Frequencies of workplace violence frequency by type

Type of workplace violence	Frequency (%)							N
	Never	A few times a year or less	Once a month	A few times a month	Once a week	A few times a week	Every day	
Physical assault	26.2	31.4	7.9	19	4.1	8.1	3.3	458
Threat of assault	18.6	28.7	8.1	18.4	7.7	12.5	5.9	456
Emotional abuse	20.2	30.7	8.3	17.8	6.8	9.6	6.6	456
Verbal sexual harassment	52.4	26.8	6.1	7.2	3.1	2.2	2.2	456
Sexual assault	88.7	8.6	0.2	0.9	0.4	0.4	0.7	452

Table 50. Descriptive statistics for workplace violence by type

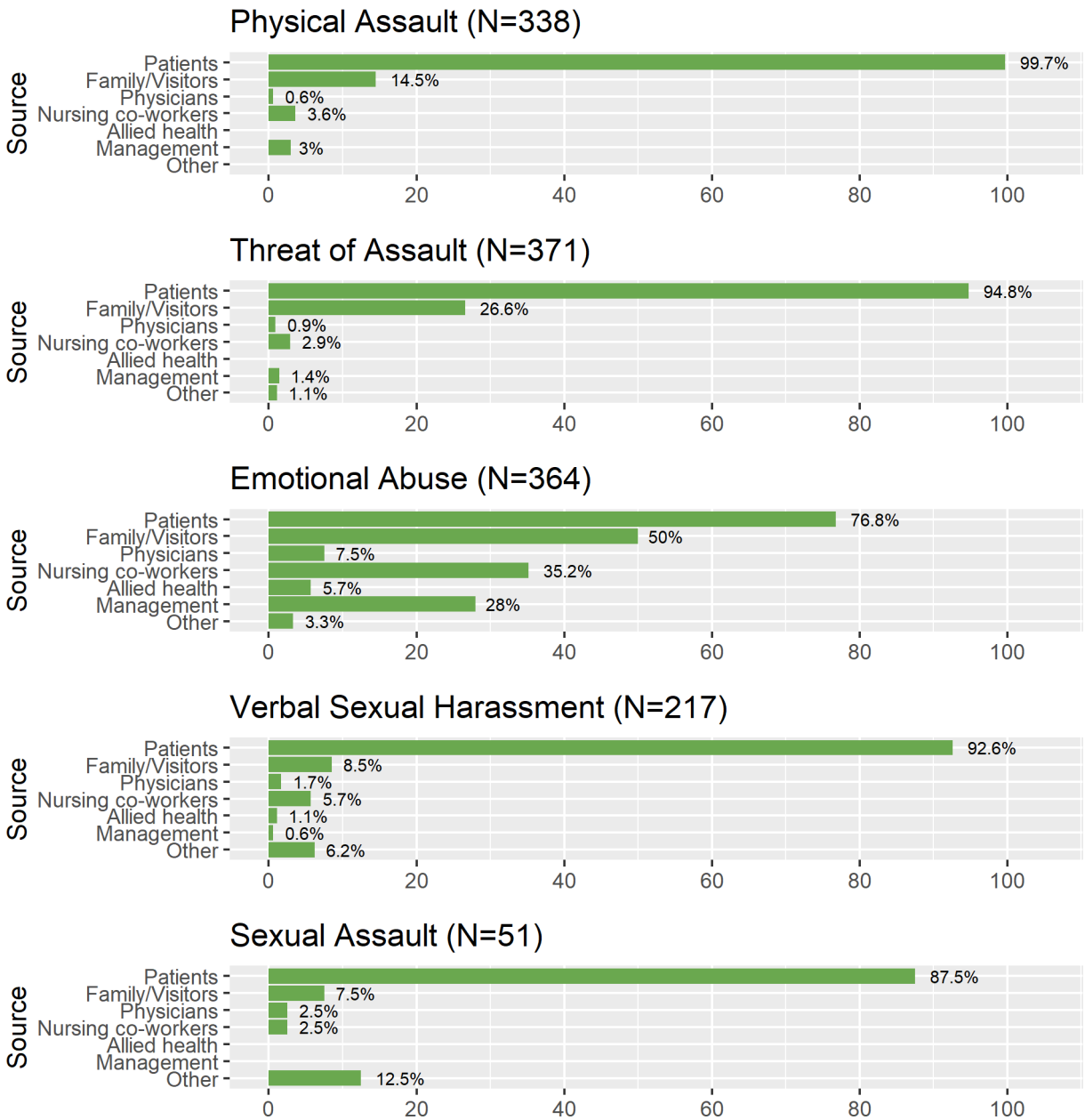
Type of workplace violence	N	Mean^	SD^	Min^	Max^
Physical assault	458	1.81	1.71	0	6
Threat of assault	456	2.29	1.88	0	6
Emotional abuse	456	2.16	1.86	0	6
Verbal sexual harassment	456	0.97	1.43	0	6
Sexual assault	452	0.2	0.75	0	6

^ Note: Workplace violence frequency is coded numerically as follows:
0: *Never*, 1: *A few times a year or less* […] 5: *A few times a week*, 6: *Every day*

SOURCES OF WORKPLACE VIOLENCE

Respondents who reported experiencing workplace violence were then asked a second set of questions about the sources of the workplace violence. For each reported type of violence (a response other than "Never"), the respondent was queried "Please indicate the source of workplace violence (check all that apply)" and presented seven options: patients, family/visitors, physicians, nursing co-workers, allied health, management, and other. Figure 67 displays the proportion of affirmative responses for each source, for each workplace violence type.

Figure 67. Sources of workplace violence by type

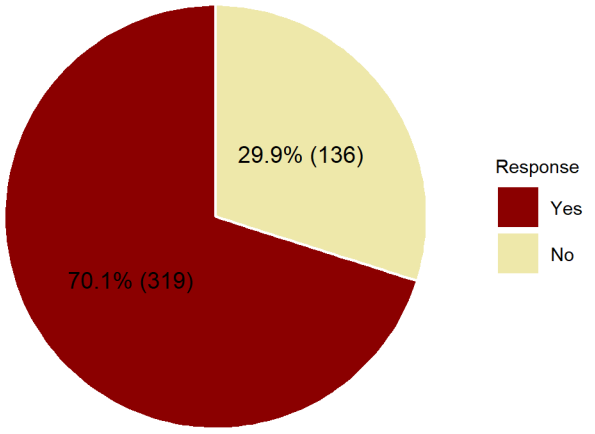


INDIRECT EXPERIENCES WITH WORKPLACE VIOLENCE

To examine nurses' indirect experiences with workplace violence, respondents were asked "Over the six months, have you ever witnessed any type of workplace violence without being directly involved?"

As shown in Figure 68, more than two-thirds of long-term care nurses reported witnessing workplace violence over the last six months.

Figure 68. Witnessed workplace violence without being directly involved, over the past six months

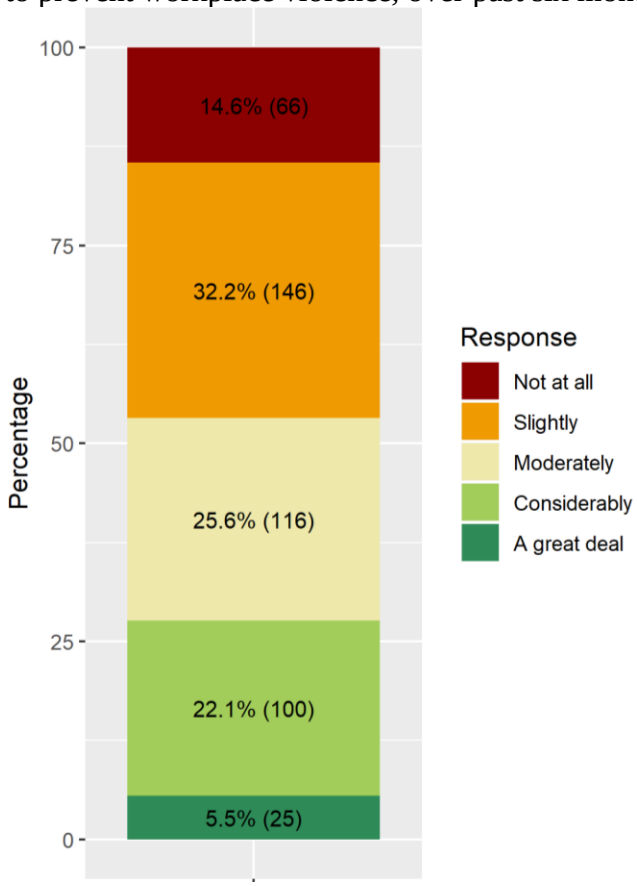


EMPLOYER EFFORTS TO PREVENT WORKPLACE VIOLENCE

Respondents were asked for their opinion on their employers' response to workplace violence in their primary workplace. The final question in the workplace violence section of the survey queried, "To what extent do you think your employer has taken appropriate measures to prevent violence in your primary workplace over the last six months?" The five available choices ranged from "Not at all" to "A great deal." The proportions of responses are displayed in Figure 69.

Almost half (47%) of long-term care nurses rated their employers' efforts to prevent workplace violence as poor ("slightly", "Not at all").

Figure 69. Perceptions of extent of employer efforts to prevent workplace violence, over past six months



NURSE FACTORS

EXPERIENCES AS A RESULT OF WORKPLACE VIOLENCE EXPOSURE

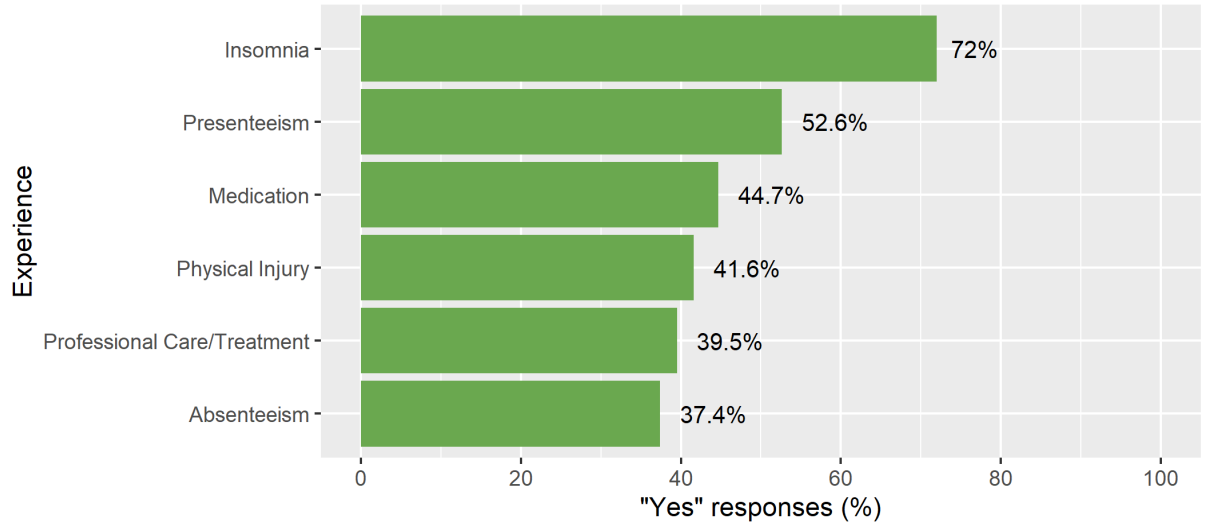
This survey included a number of question sets to assess respondents' perceptions of their physical and psychological health. The first series of questions followed up on nurses' exposure to workplace violence, asking respondents to select all applicable experiences in response to, "Have you had any of the following experiences as a result of exposure to workplace violence in your primary workplace over the last six months?" The six experiences listed were absenteeism ("Called in sick"), presenteeism ("Showed up to work despite feeling unwell"), medication ("used prescribed and/or over the counter medication, e.g., pain relievers, anti-anxiety medication"), insomnia ("difficulty falling asleep"), and professional care/treatment ("sought professional care/treatment, e.g. medical care, psychological care"). The results are presented in Table 51 and arranged in descending order in Figure 70.

At least one-third of long-term care nurses reported "Yes" for each of the six adverse experiences. The most common experiences were insomnia (72%), presenteeism (53%), and medication (45%).

Table 51. Proportions for experiences resulting from exposure to workplace violence, over the last six months

Experience	Yes (%)	No (%)	N
Absenteeism	37.4	62.6	406
Presenteeism	52.6	47.4	403
Medication	44.7	55.3	405
Insomnia	72	28	411
Physical Injury	41.6	58.4	401
Professional Care/Treatment	39.5	60.5	405

Figure 70. Experiences resulting from exposure to workplace violence, over the last six months



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