



Preliminary Results for the Pandemic Healthcare Workers' Survey

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& the COVID-19 ad-hoc Survey Group
May 1, 2020



Background:

- Invited to help with the healthcare unions in responding to draft infection control procedures from the PHO & PHAC
- Based on previous work done with them during SARS, 2009-nH1N1 and Ebola (also involved with PHO & MOH in organizing a summit to address infection control issues between pandemics – 2014-15)
- Reviewing the literature coming out of China, noted a number of surveys done to characterize mental health risks to HCW's
- Floated the idea of doing a survey with Ontario HCW unions & the CFNU and created an ad hoc team to devise a survey



Studies in China:

- Zhu et al (Feb 20 2020) “COVID-19 in Wuhan - Immediate Psychological Impact on 5062 Health Workers”
<https://www.medrxiv.org/content/10.1101/2020.02.20.20025338v2>
- Dai et al (Mar 6 2020) “Psychological impact of the coronavirus disease 2019 (COVID-19) outbreak on healthcare workers in China”
<https://www.medrxiv.org/content/10.1101/2020.03.03.20030874v1>
- Liu et al (Mar 6 2020) “The prevalence and influencing factors for anxiety in medical workers fighting COVID-19 in China - A cross-sectional survey”
<https://www.medrxiv.org/content/10.1101/2020.03.05.20032003v1>



Members of COVID-19 ad hoc Survey Group:

- Ontario healthcare unions H&S staff reps (ONA, SEIU, OPSEU, CUPE, Unifor, USW)
- Canadian Federation of Nurses Unions (CFNU)
- OFL, BCNU, HSABC
- Guy Potter, occupational psychologist with Duke University Hospital in North Carolina (COPSOQ International Network)
- Peter Smith, researcher with Institute for Work and Health (IWH)
- A variety of interested academics and activists from Canada and the US
- Valerie Wolfe, Daryl Stephenson & myself (OHCOW)



Survey content

- COPSQ scales measuring **burnout, stress** and **sleep symptoms** (2 questions each);
- GAD-2 and the PHQ-2 scales to measure **anxiety** and **depression** symptoms (2 questions each);
- 3 questions from the DSM5 **acute stress** scale (pre-PTSD);
- 3 questions from a German **self-efficacy** scale (General Self-Efficacy Short Scale (ASKU));
- Custom made **exposure** scales
- COPSQ scales for **work pace, predictability, role conflict, supervisor support, colleague support** (created a similar question for **family support**)
- StressAssess questions about **psychological H&S climate**, and organizational **culture's tolerance of behaviours harmful to mental health**



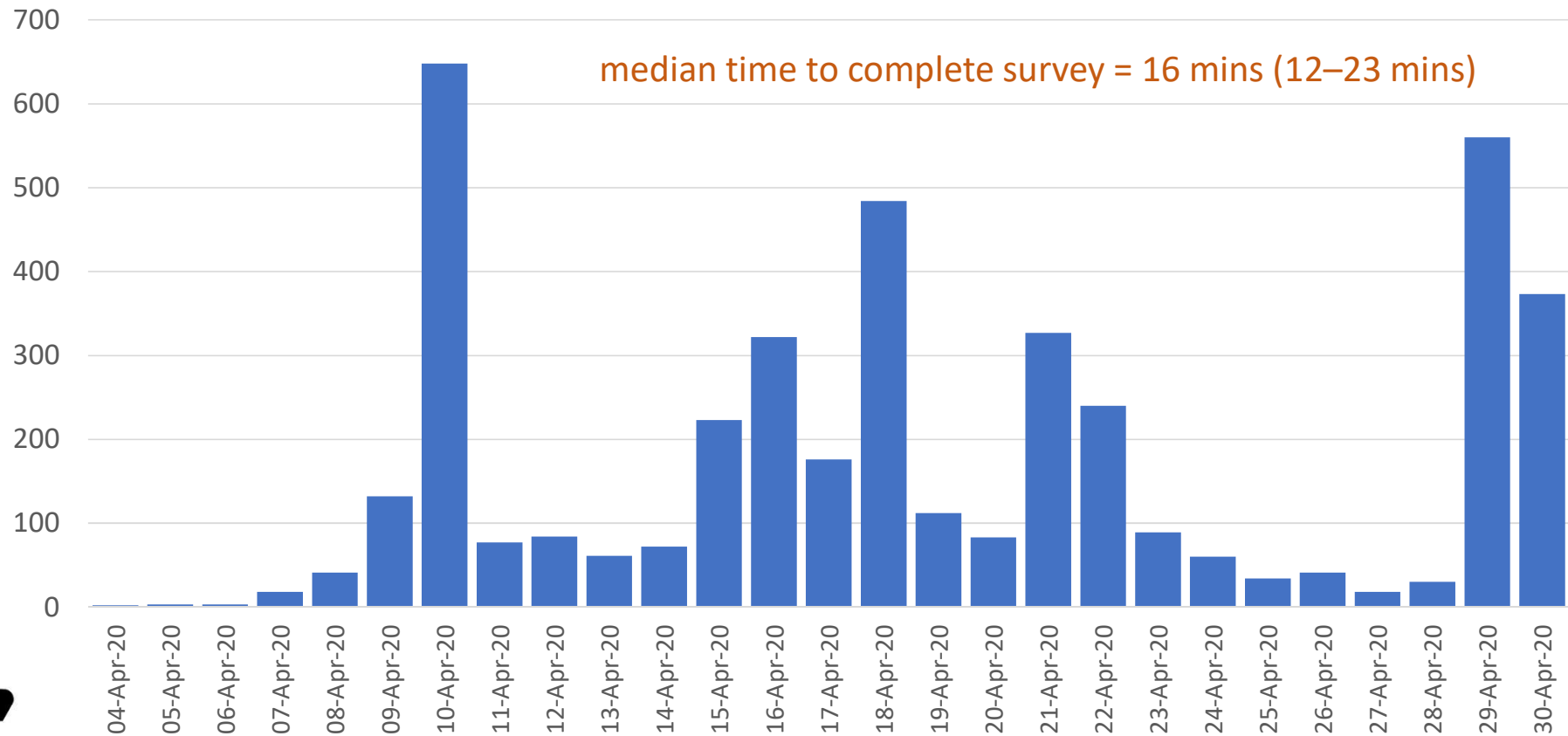
Survey characteristics



- about 70 questions
- takes about 15 minutes to fill out
- allows respondent to create an id code so they can fill out the survey more than once (things are changing over time)
- in French & English (thanks to USW for translating and Marie-Claude Letellier (Laval) for checking)
- available on OHCOW's SurveyMonkey account:
https://www.surveymonkey.com/r/Pandemic_Survey (EN)
https://www.surveymonkey.com/r/sondage_pandemie (FR)



Number of responses by date (N = 4,313)



Results as of Apr 29th 4 pm:

4421 completed (at least 70% done) responses

≈30% abandonment (don't reach 70% of survey done)

unions participating (>50 responses):

SEIU 998

OPSEU 807

ONA 652

BCNU 492

UNA 383

HSABC 234

Unifor 121

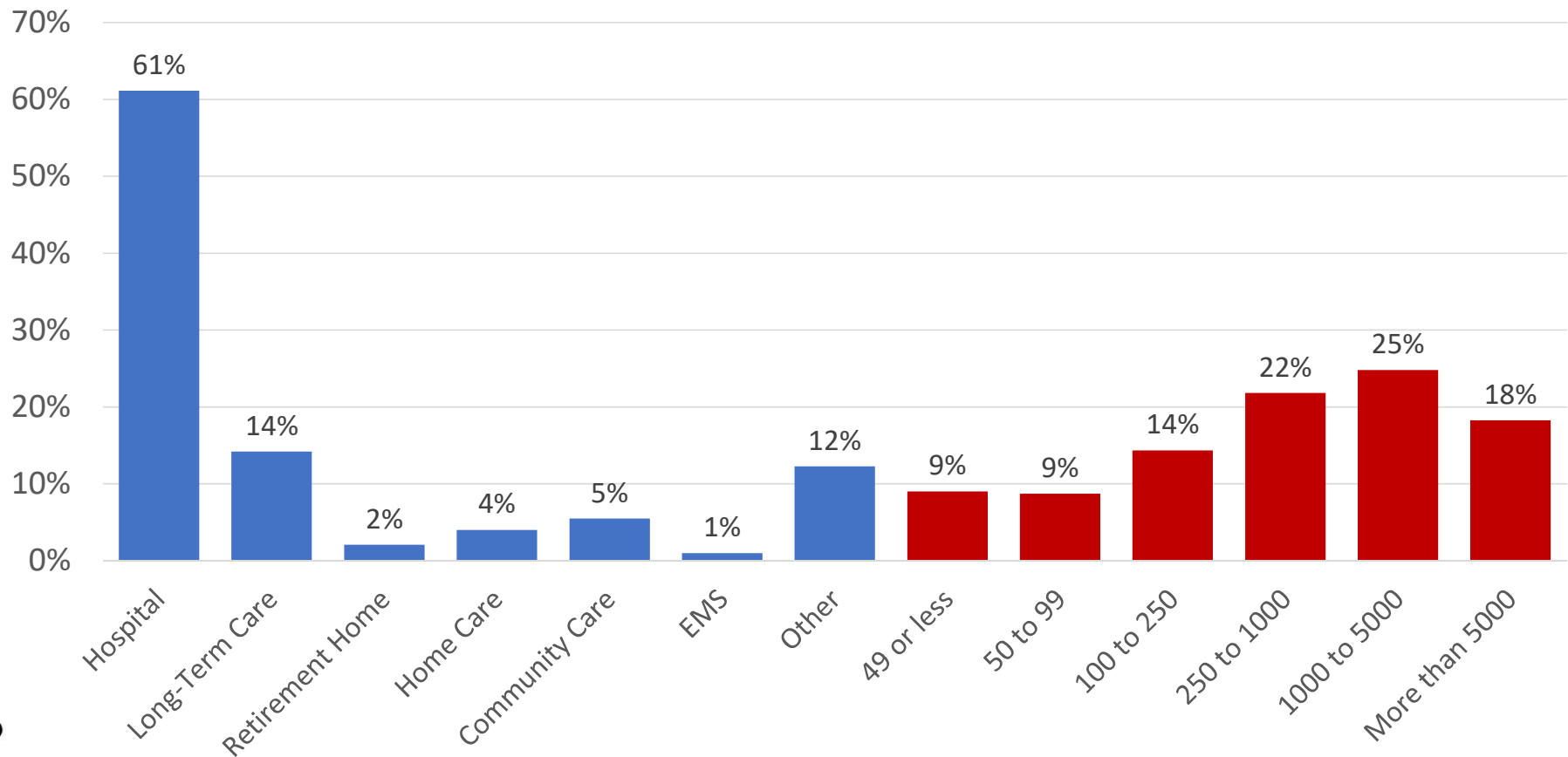
NSNU 100

CUPE 89

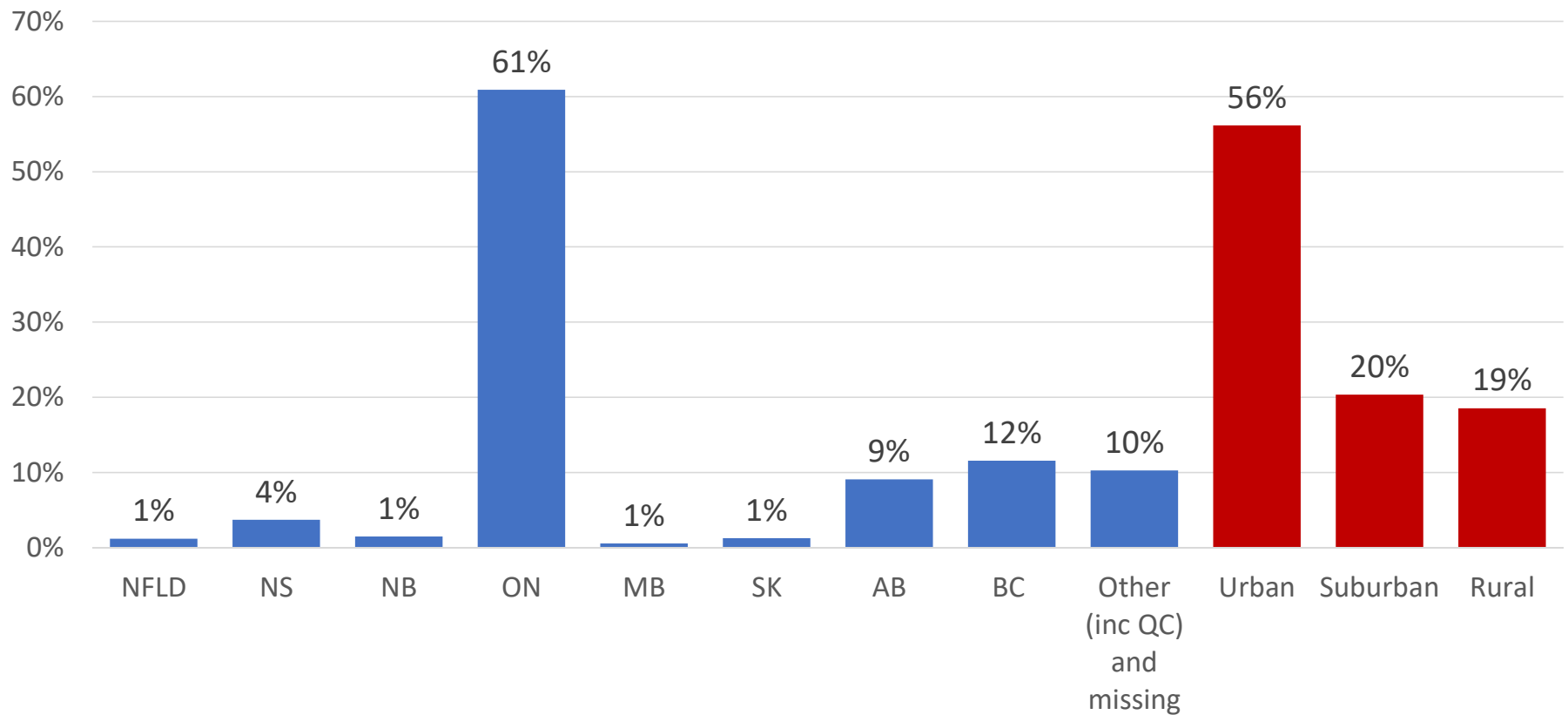
USW 71



Type of workplace and workplace size (N = 4,313)



Province and population density

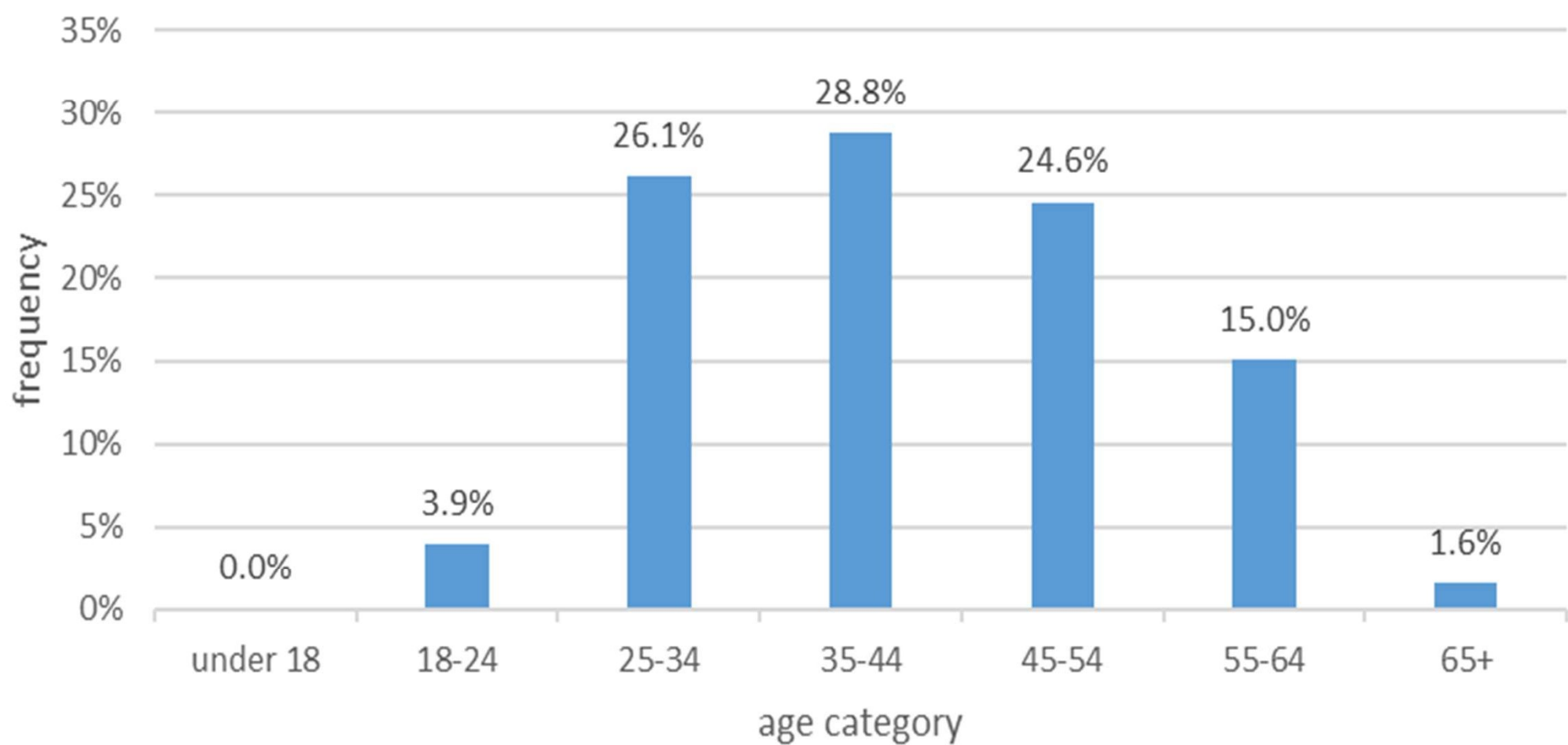


By Province:

Alberta	391
British Columbia	729
Manitoba	24
New Brunswick	68
Newfoundland and Labrador	51
Nova Scotia	158
Ontario	2627
Prince Edward Island	1
Québec	3
Saskatchewan	53
Northwest Territories	1
Nunavut	1
Yukon	0

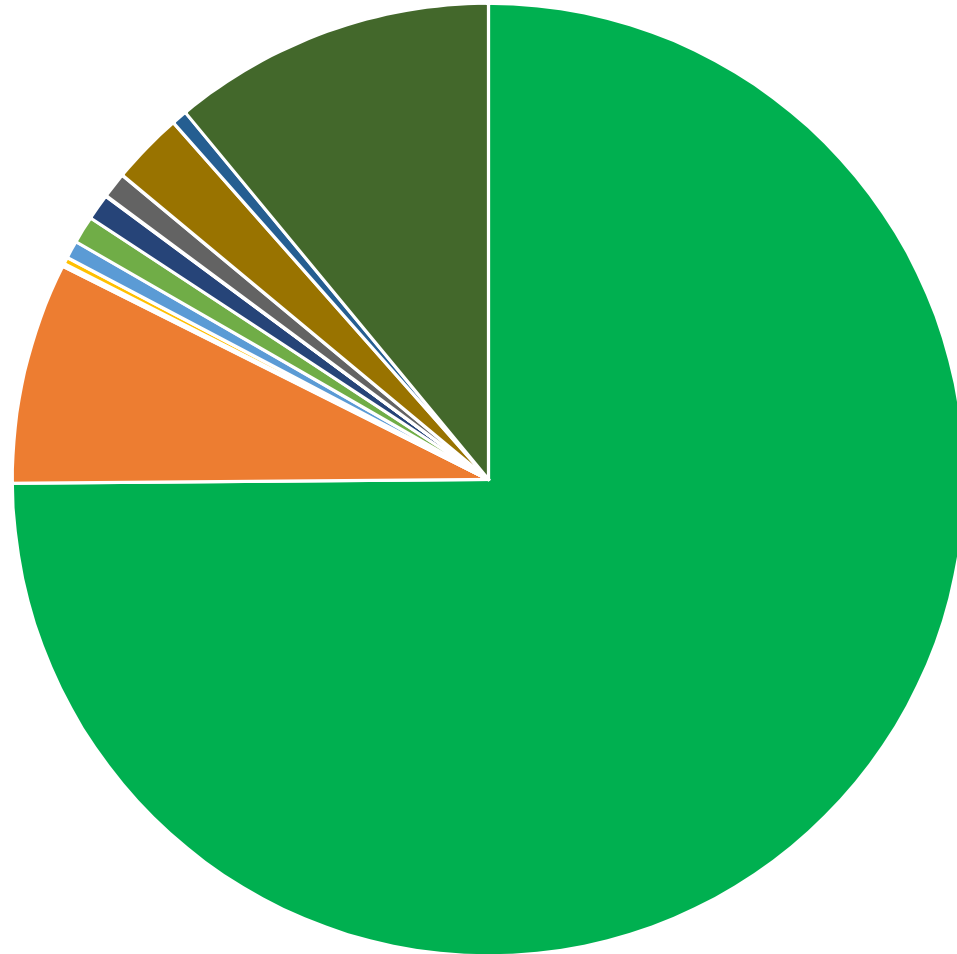


age



Identity

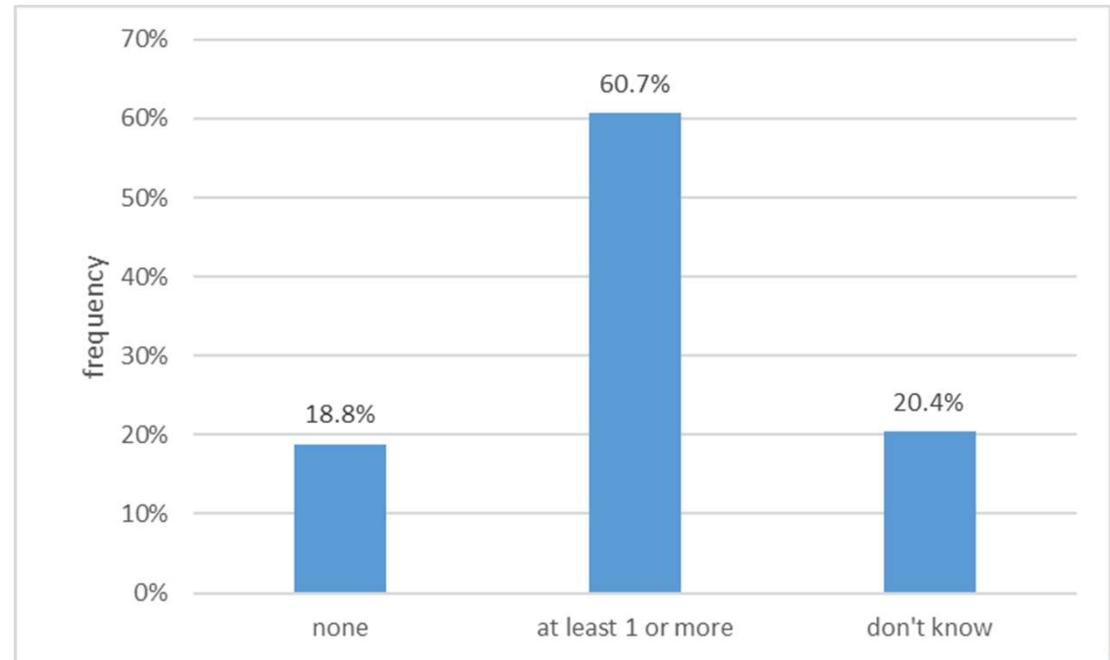
- Female
- Male
- Transgender
- Non-binary
- Lesbian
- Gay
- Queer
- 2 Spirit
- Aboriginal
- Visible minority/racialized
- Disabled
- other



Exposure to patients with COVID-19 (1):

How many patients infected with COVID-19 (suspected/presumed and/or confirmed) in your organization?

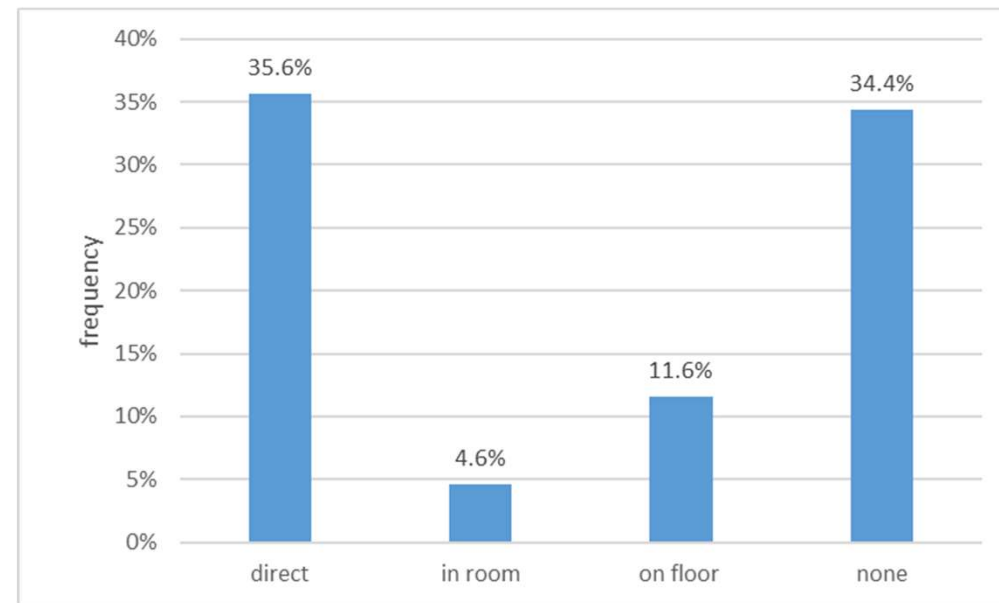
none	18.8%
only one	3.7%
2-5 patients	14.3%
6-10 patients	9.3%
11-20 patients	10.4%
20-50 patients	12.6%
50+ patients	10.4%
don't know	20.4%



Exposure to patients with COVID-19 (2):

How much contact do you have with COVID-19 patients?

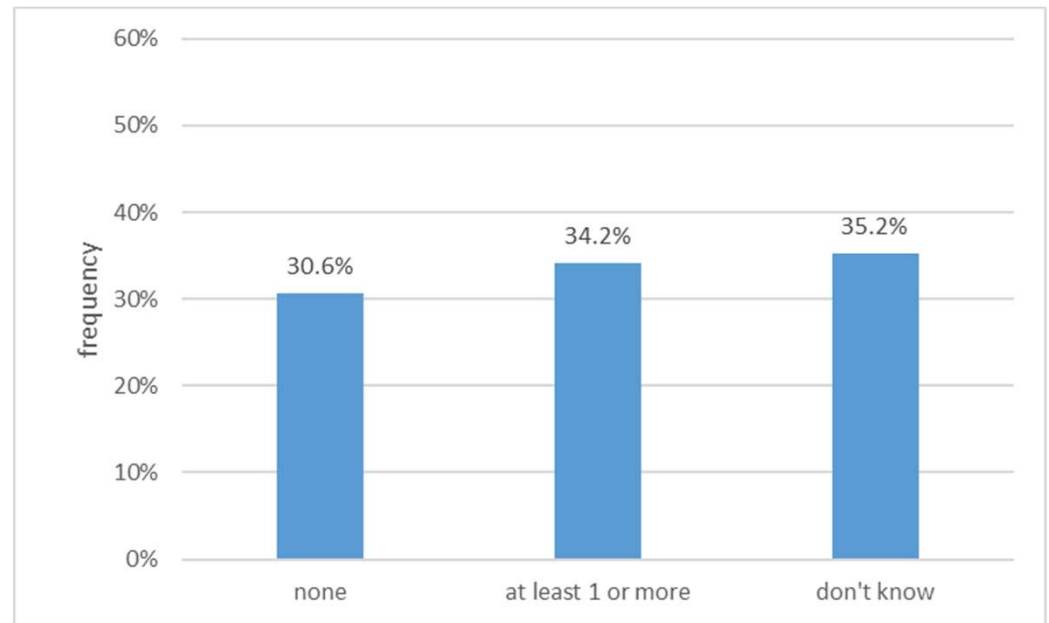
- 35.6% direct contact with patient(s)
- 3.3% within 6 feet of a patient
- 1.3% in the patients' rooms (more than 6 feet away)
- 6.7% work on the same floor/ward/dept.
- 4.9% visit such a floor/ward/dept as part of my work
- 13.8% share work spaces with other workers who work with/near COVID-19 patients
- 34.4% none that I am aware of



Workers with COVID-19:

How many workers have been infected with COVID-19 (suspected/presumed &/or confirmed) in your workplace?

none	30.6%
only one	6.2%
2-5 workers	14.5%
6-10 workers	5.4%
11-20 workers	4.0%
20-50 workers	3.1%
50+ workers	1.0%
don't know	35.2%



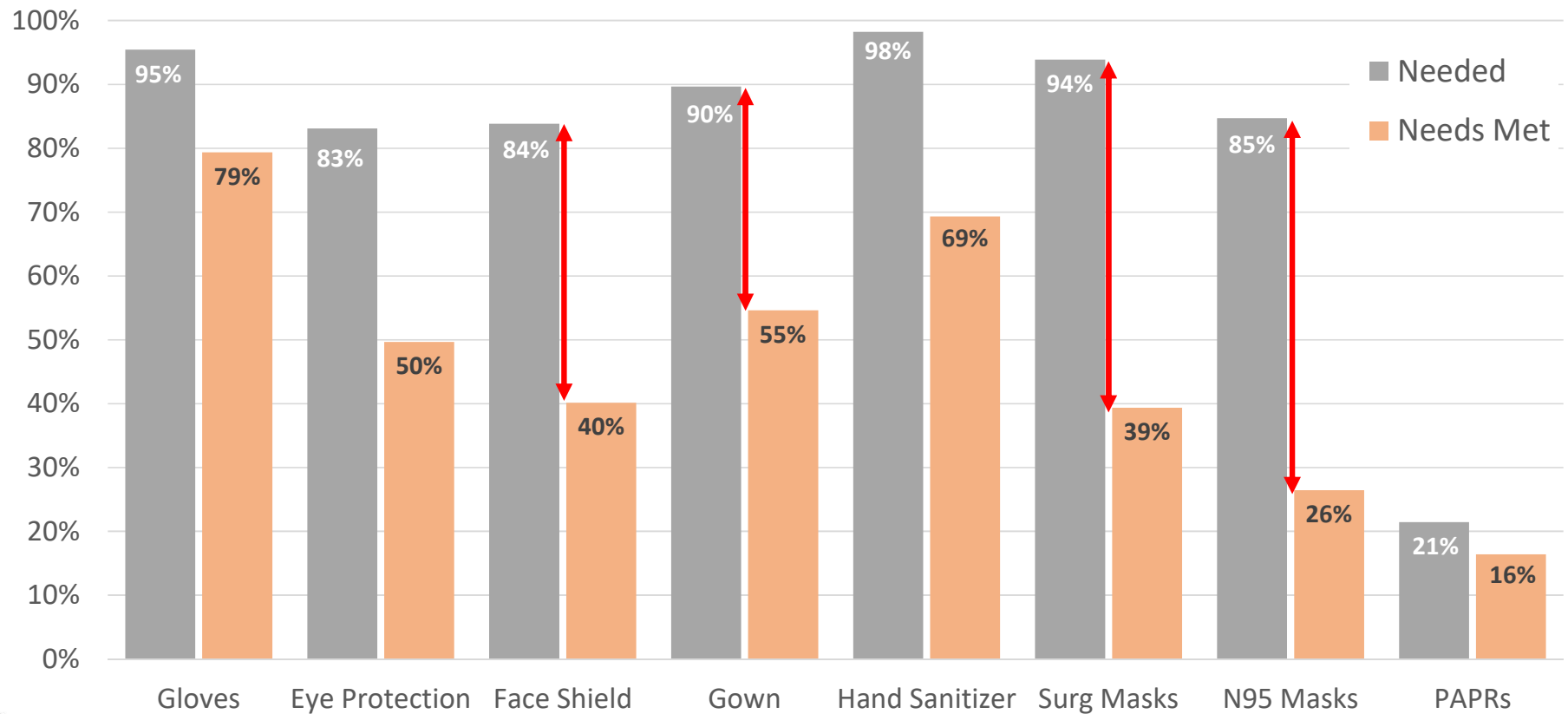
Personal protective equipment (PPE) supply and adequacy

Appropriate type and adequate supply	Appropriate type but inadequate supply	Inappropriate type, but adequate supply	Inappropriate type and inadequate supply	Needed, but not available	Not sure/don't know what is appropriate	Not applicable
Type of PPE is needed					Type of PPE is not needed	
Needs Met	Needs not Met				Not Applicable	

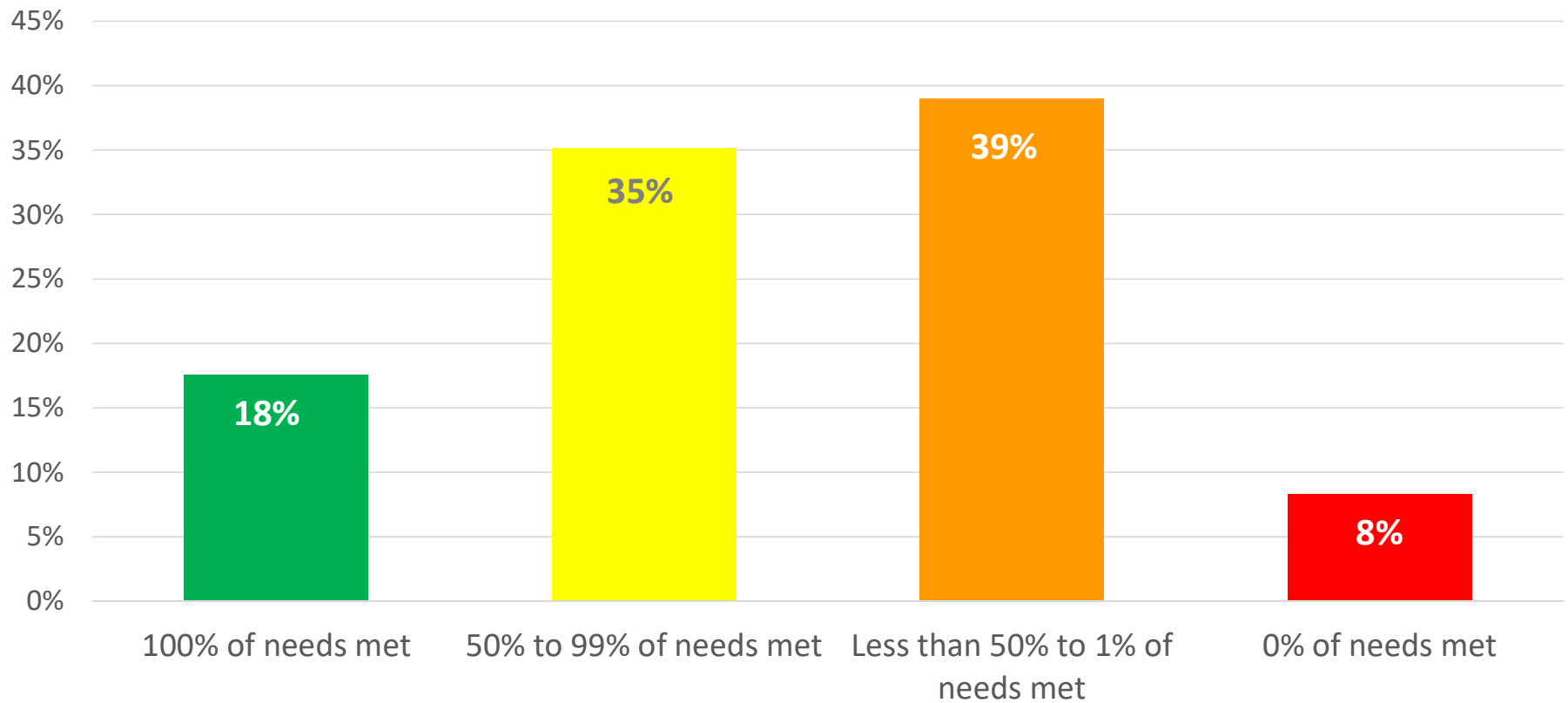
(1) Gloves; (2) Eye protection/goggles; (3) face shield; (4) gown; (5) hand sanitizer; (6) surgical or procedure masks; (7) N95 masks; (8) PAPR (powered air particulate respirators)



Personal protective equipment (PPE) needs and needs met



Summary of proportion of PPE needs met (N = 4,245)



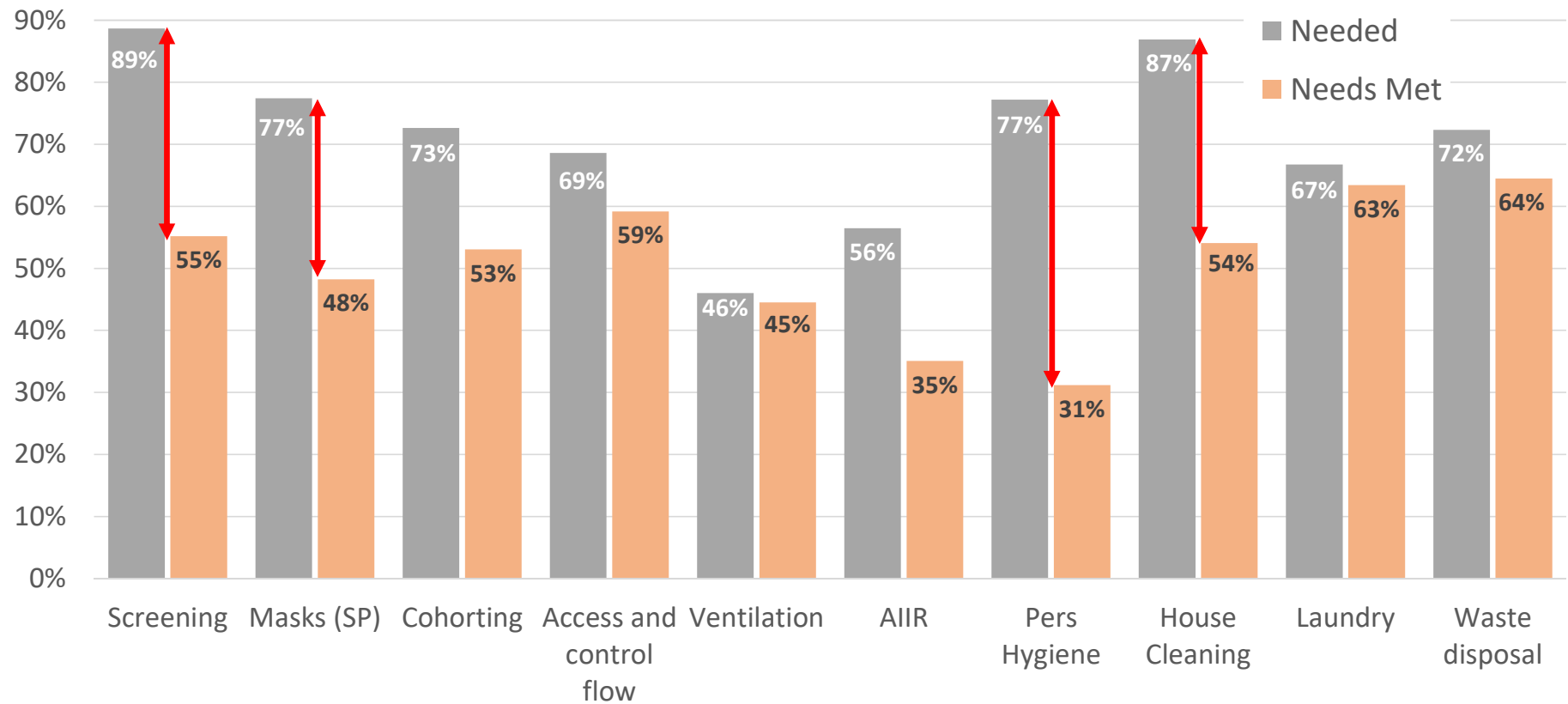
Adequacy of preventive measures and procedures (P&P)

Appropriate and adequately implemented	Appropriate type but inadequately implemented	Inappropriate	Lacking	Not sure/don't know what is appropriate	Not applicable
Type of P&P is needed				Type of P&P is not needed	
Needs Met	Needs not Met			Not Applicable	

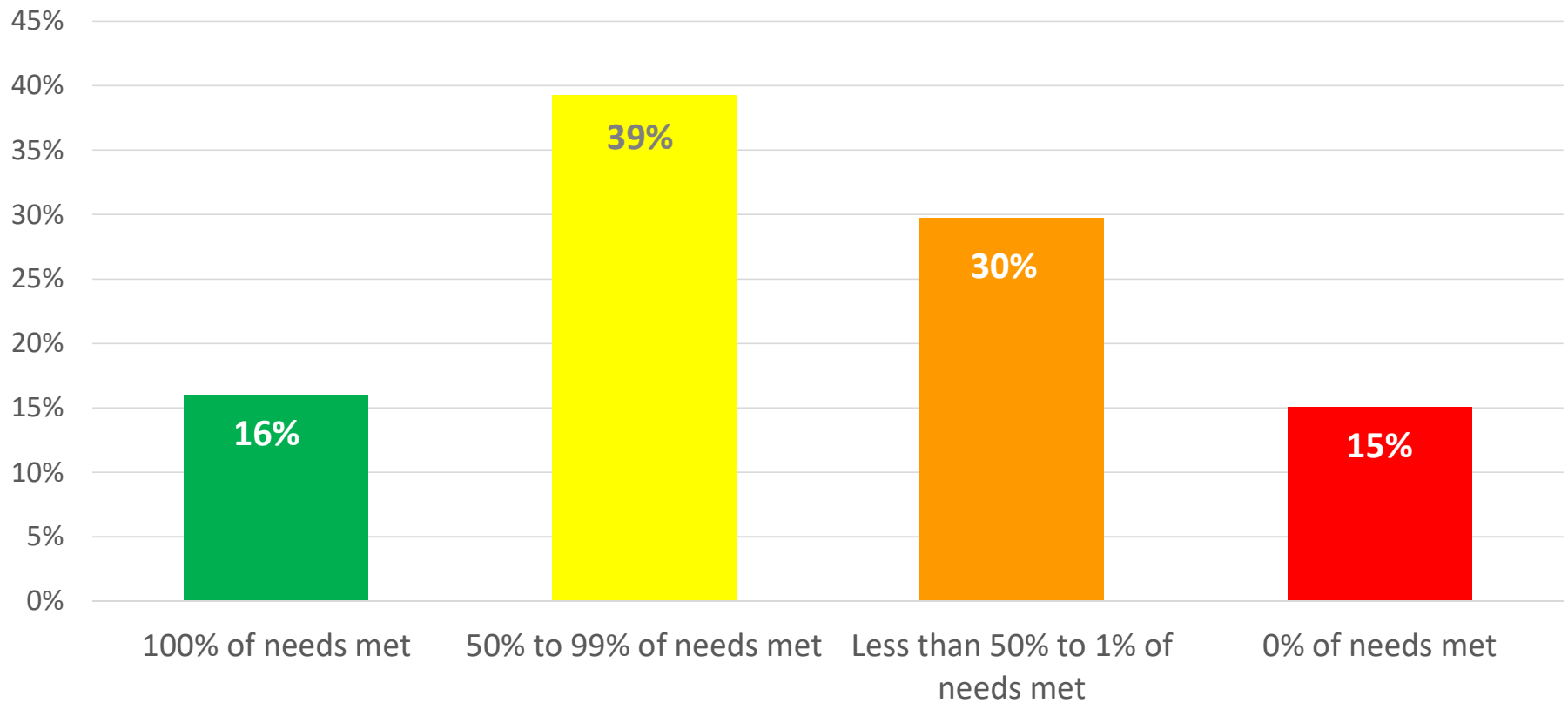
(1) Screening incoming patients; (2) Symptomatic patients wearing masks; (3) cohorting patients; (4) restrict access and control flow of COVID patients; (5) ventilation system; (6) Airborne infection isolation rooms (AIIR); (7) Personal hygiene facilities; (8) house cleaning practices; (9) laundry cleaning practices; (10) waste disposal practices



Preventive measures and procedures (P&P) needs and needs met



Summary of proportion of P&P needs met (N = 4,205)



Training related to COVID-19

- How would you rate the adequacy of your training in regards to working with COVID-19?

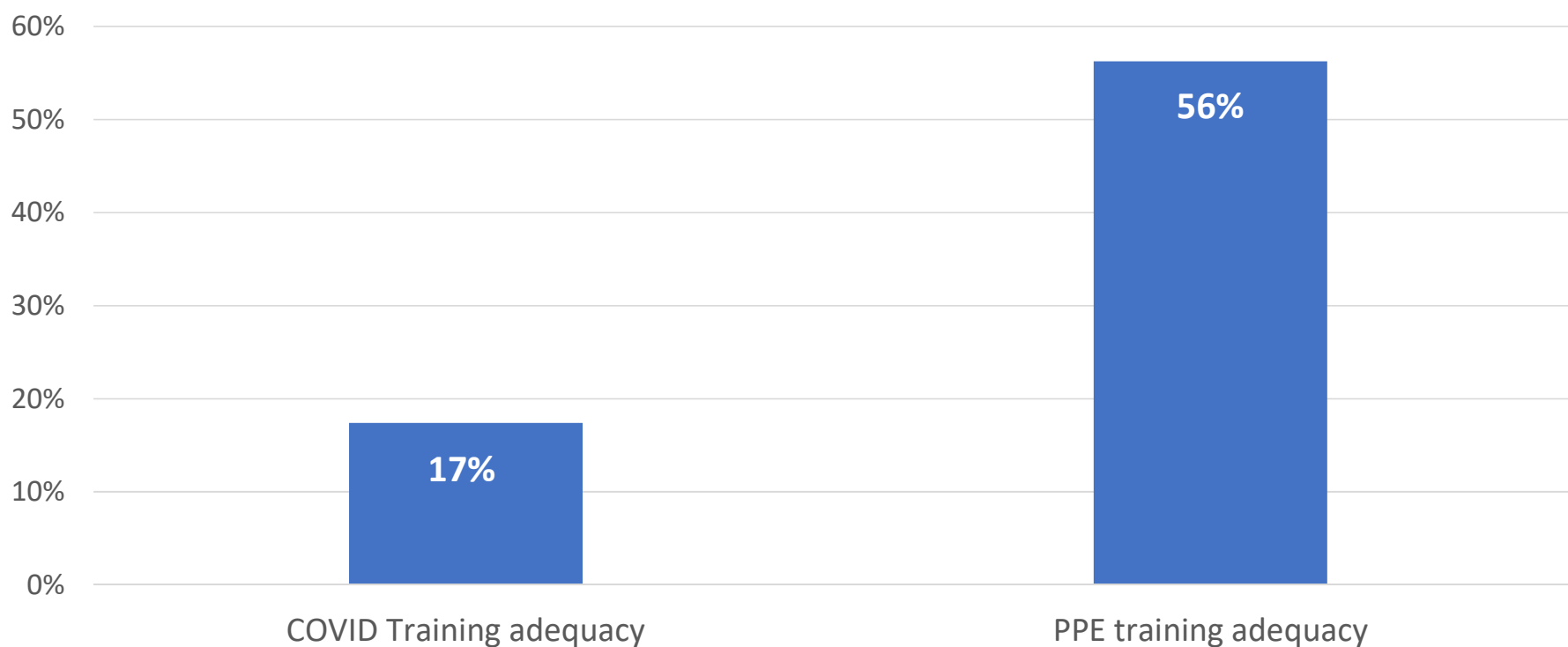
(**excellent; very good**; good; neutral; not so good; poor; none at all; not applicable)

- Do you feel sufficiently trained to don and doff your PPE without contaminating yourself?

(**I have been trained and feel very confident; I have been trained and feel confident**; I have been trained and feel somewhat confident; I have been trained but do not feel confident; I have not received such training)



Proportion of respondents indicating working with COVID-19 training and PPE training was adequate



Selected health outcomes (1)

Generalized Anxiety Disorder 2-item (GAD-2)

The following questions ask about thoughts, feelings, and behaviours, often tied to concerns about family, health, finances, school, and work over the last 7 days.

- Feeling nervous, anxious or on edge
- Not being able to stop or control worrying

Patient Health Questionnaire-2 (PHQ-2)

- Little interest or pleasure in doing things
- Feeling down, depressed or hopeless

Response options: Not at all (0), several days (1), more than half the days (2), nearly every day (3).

Scores of **three and higher** standard cut point for screening for anxiety and depression.



Selected health outcomes (2)

Fear

On a scale from 1 to 10 how would you rate your current level of fear about this whole pandemic situation?

little to no fear at all = 1 2 3 4 5 6 7 8 9 10 = as much fear as I have ever felt

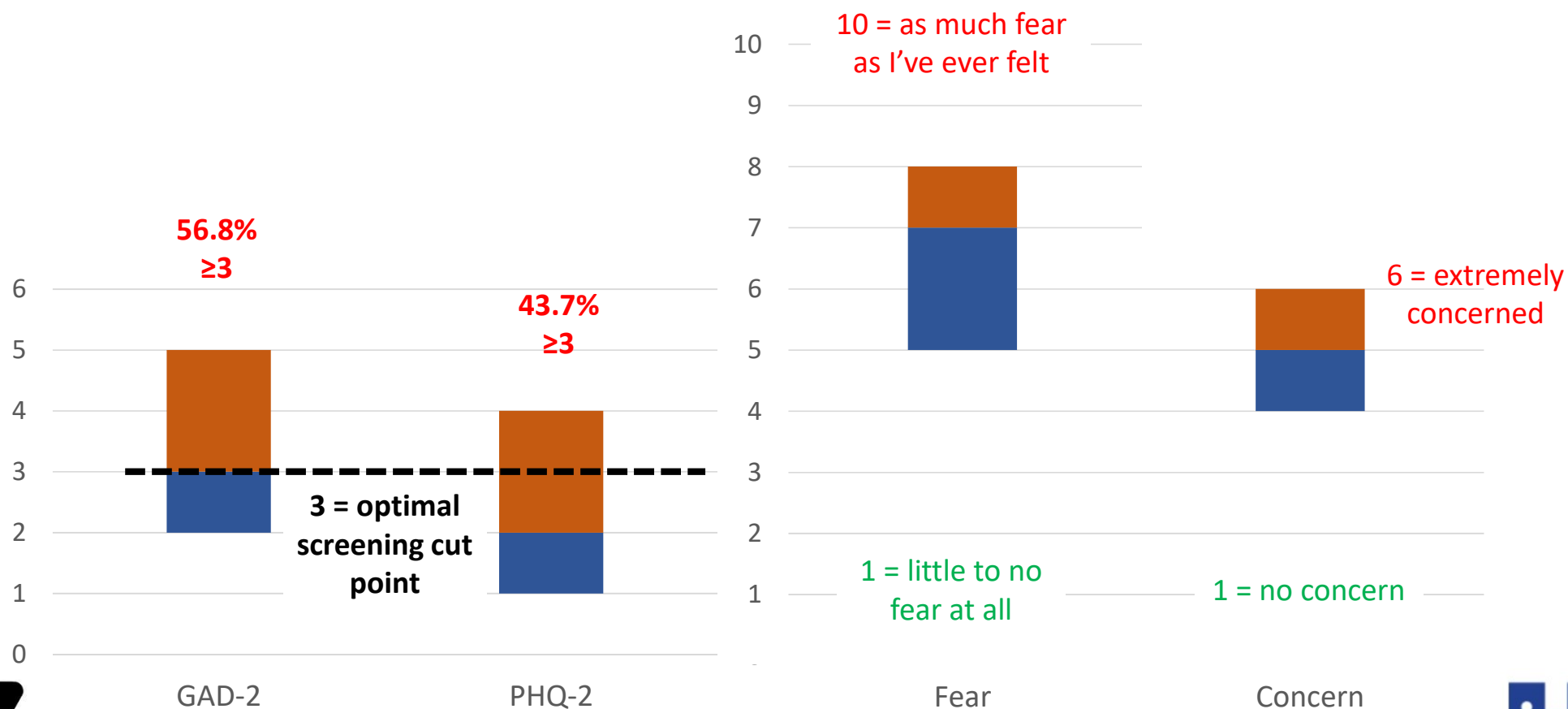
Concern

How concerned are you about bringing the virus home to those who you live and/or friends?

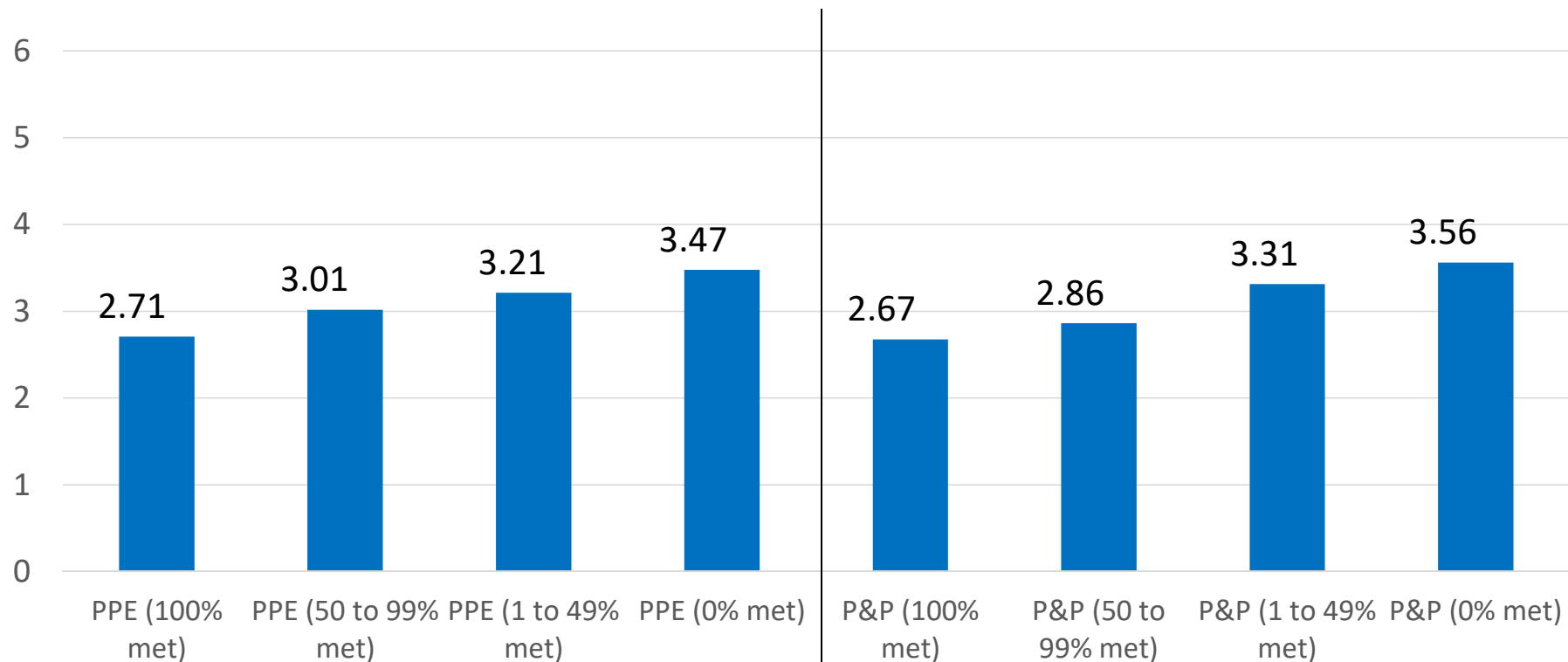
no concern = 1, little concern, some concern, concerned, very concerned, extremely concerned = 6



Distributions (median and interquartile ranges) for selected mental health outcomes

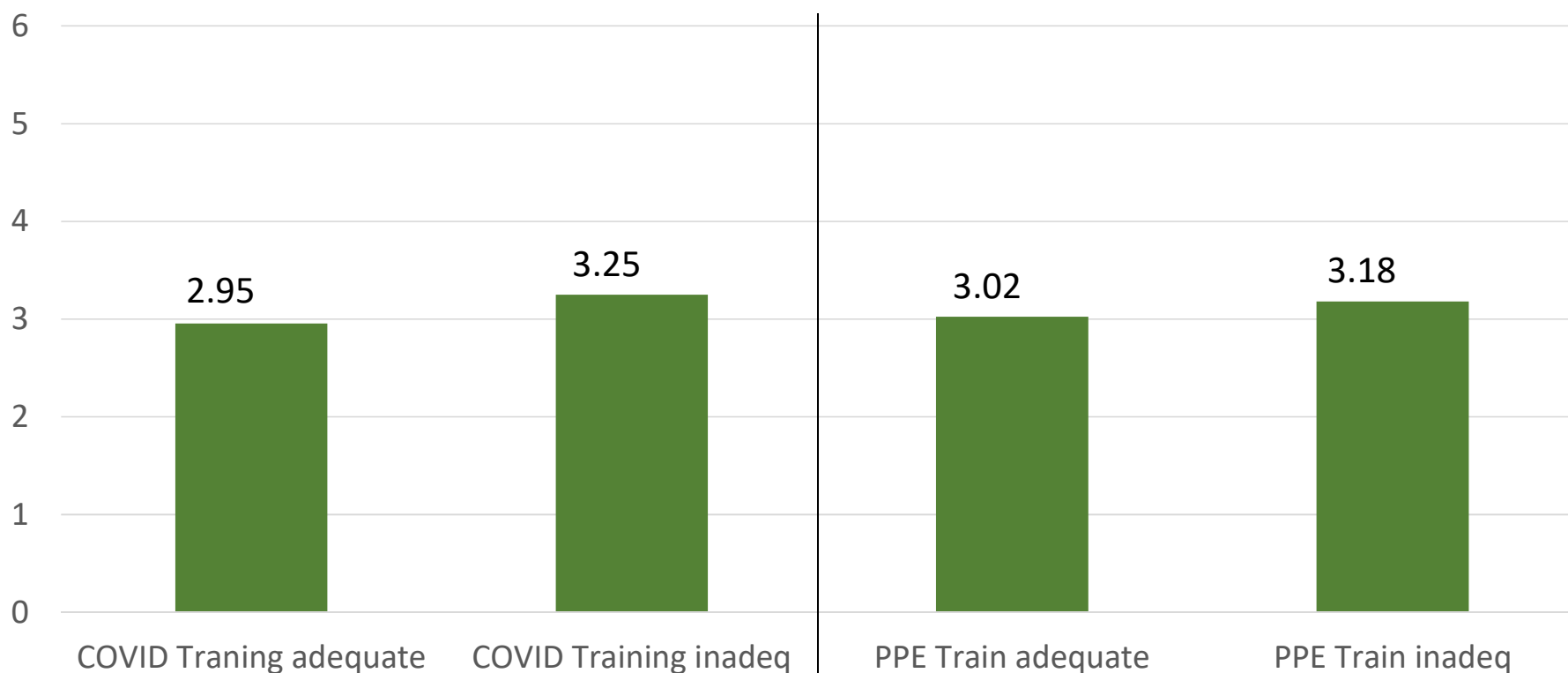


Adjusted* mean anxiety (GAD-2) scores by PPE needs met, P&P needs met (N = 4,145)



* Adjusted for gender, age, facility type, province, population density, experiencing COVID-19 symptoms, told had contact with patient with COVID-19, COVID-19 training, and PPE don and doff training.

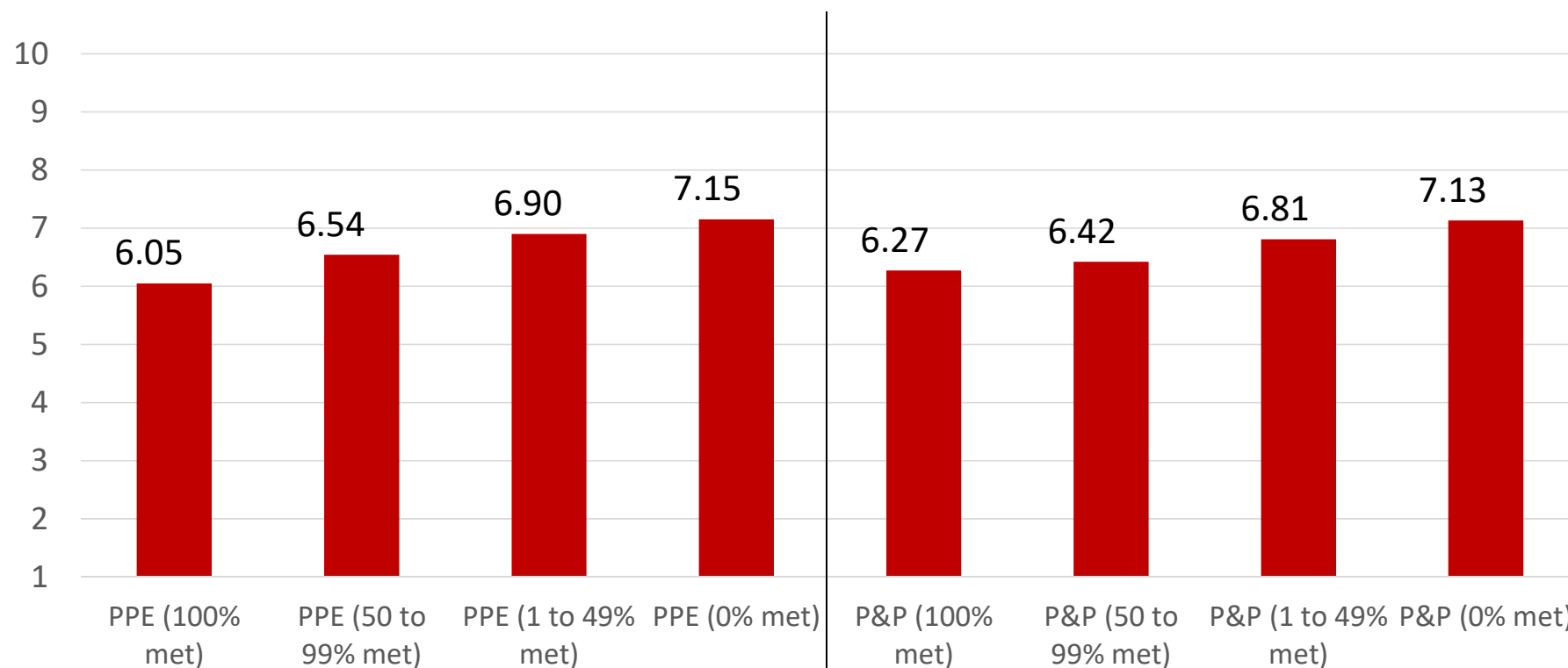
Adjusted* means anxiety (GAD-2) scores by training adequacy



* Adjusted for gender, age, facility type, province, population density, experiencing COVID-19 symptoms, told had contact with patient with COVID-19, PPE needs met, and P&P needs met.



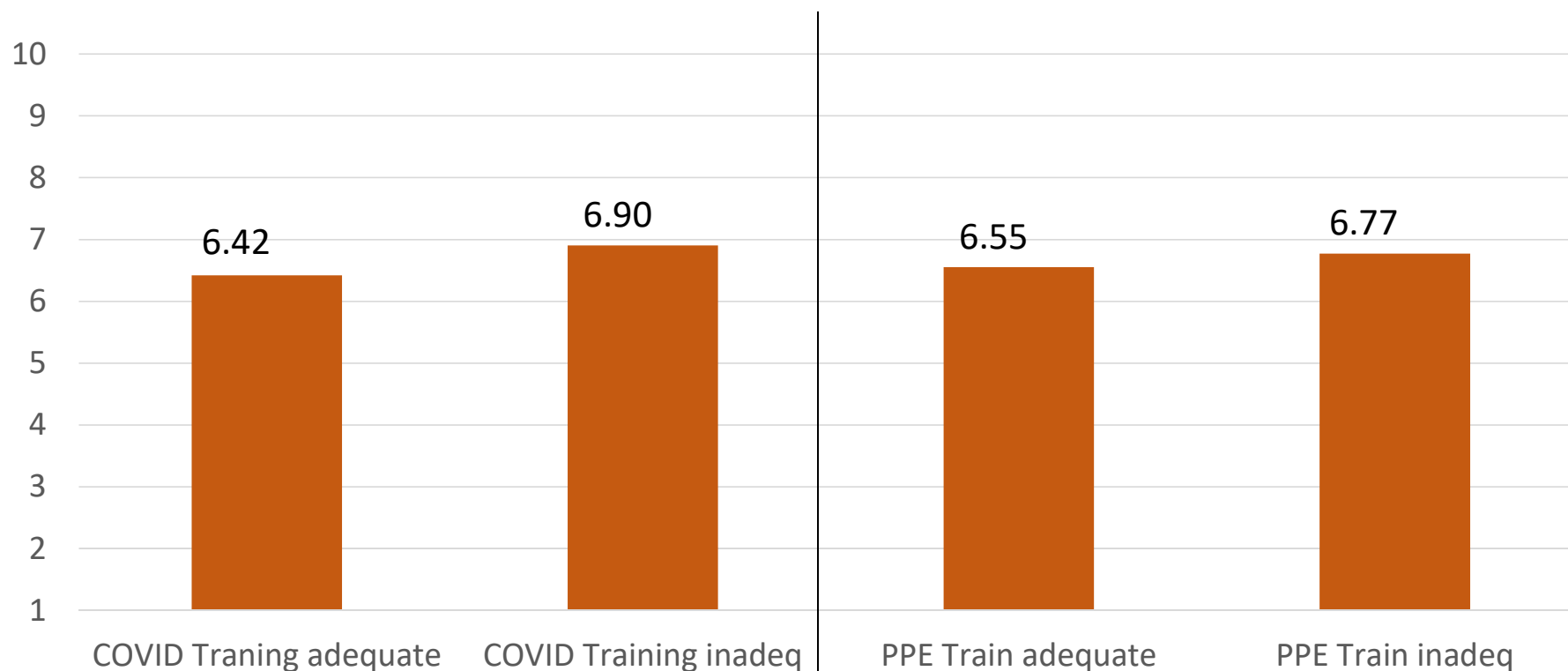
Adjusted* means fear scores by PPE needs met, P&P needs met (N = 4,153)



* Adjusted for gender, age, facility type, province, population density, experiencing COVID-19 symptoms, told had contact with patient with COVID-19, COVID-19 training, and PPE don and doff training.



Adjusted* means fear scores by training adequacy (N = 4,153)



* Adjusted for gender, age, facility type, province, population density, experiencing COVID-19 symptoms, told had contact with patient with COVID-19, PPE needs met, and P&P needs met.





INTERNATIONAL NETWORK

COPSOQ Symptom Scales (range of scale: 0 to 100):

	average	std dev	% missing	floor	ceiling
burnout symptoms	68	22	0.3%	0.9%	12.2%
stress symptoms	64	20	0.3%	0.6%	5.7%
sleep symptoms	61	26	0.2%	3.0%	12.6%

COPSOQ Psychosocial Factor Scales (range of scale: 0 to 100):

	average	std dev	% missing	floor	ceiling
work pace	70	21	3.7%	0.3%	15.5%
predictability	44	23	3.7%	6.8%	1.5%
role conflicts	52	25	5.0%	4.9%	5.9%
supervisor support	60	28	3.8%	4.3%	15.4%
colleague support	78	19	3.7%	0.4%	23.8%
family support*	73	26	3.6%	2.9%	36.0%



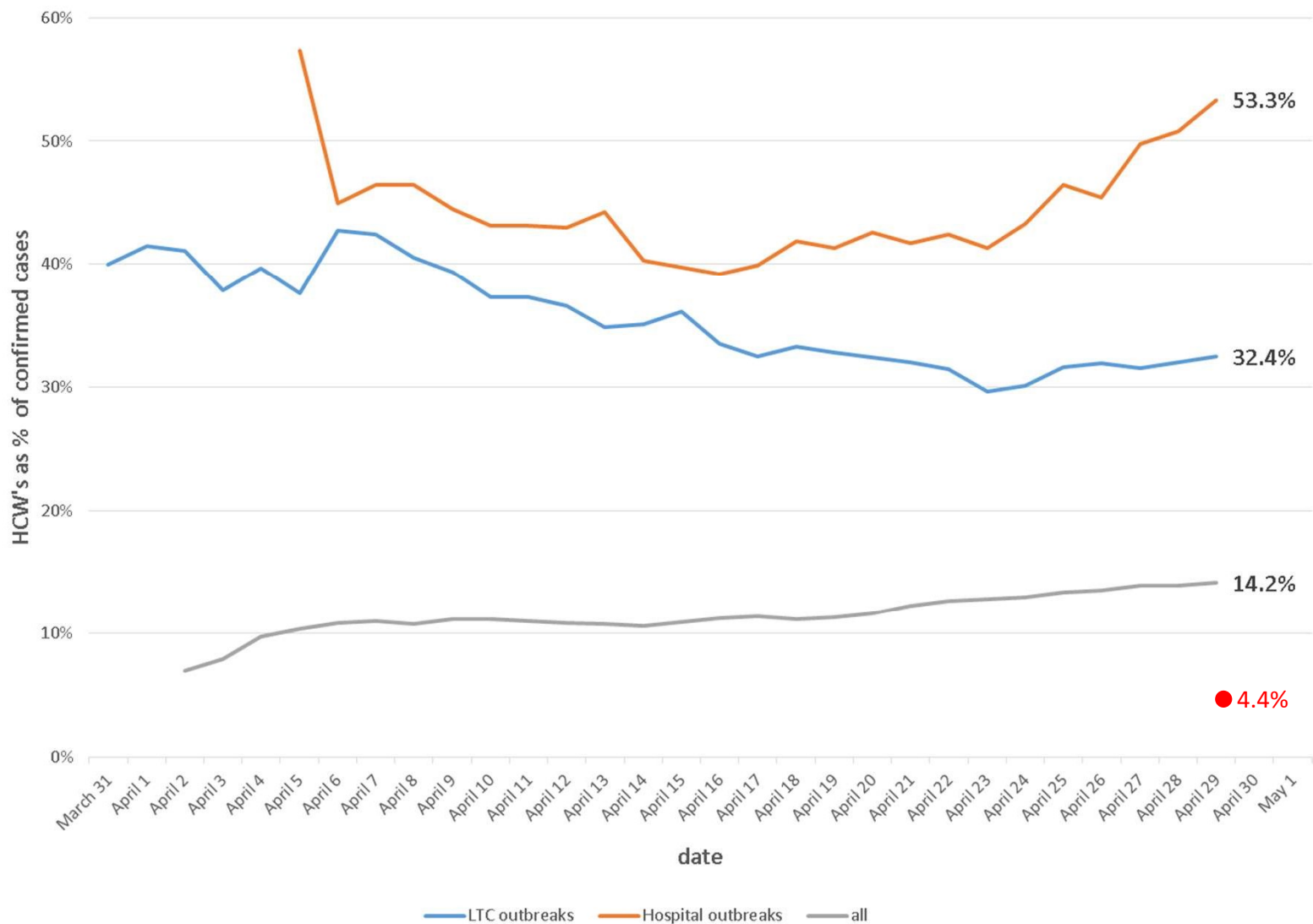
How are we doing?

agree/strongly agree union is doing its best	57.0%
agree/strongly agree employer is doing their best	39.7%
agree/strongly agree government is doing its best	38.1%
agree/strongly agree H&S committee/rep are doing their best	35.5%

member of a union	95.1%
data missing	2.6%
not a union member	2.1%
not sure	0.2%
unwilling to say	0.04%



Proportion of HCW's as % of Total COVID-19 Cases

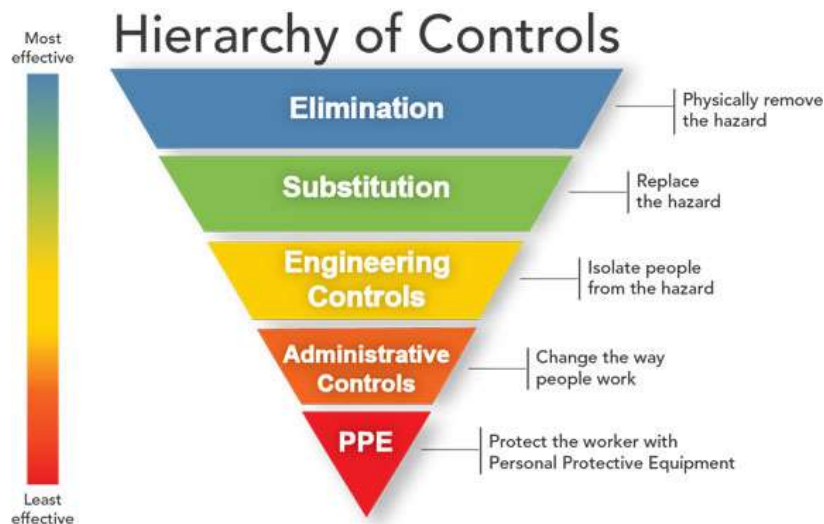


Compared to Ontario's 14.2%, China had 4.4%; When China was faced with this kind of situation they stepped up their controls to Ebola type protection and after that not a single case of infection occurred among over 42,000 healthcare workers

whatever we're doing – it's not working!



Hierarchy of Controls



Level	Example control	Useful for contact exposures	Useful for aerosol exposures
Elimination <i>Removes hazard entirely</i>	Telemedicine services to obviate need for some patients to enter the healthcare workplace	☑	☑
Substitution <i>Uses less or non-hazardous alternative</i>	Blunt-tip sutures instead of sharp sutures to close internal fascia	☑	
	Adhesives, strips, zipper closures or staples for other suturing applications	☑	
	Alternative cutting devices, such as electrosurgical pencils	☑	
Engineering controls <i>Isolate workers from hazards or place physical barriers between workers and hazard</i>	Physical barriers separating staff from patients in triage areas	☑	☑
	Negative-pressure, airborne infection isolation rooms with high-efficiency particulate arrestance (HEPA)-filtered exhaust air		☑
	Closed circuit audio/visual communication between staff and patients in isolation	☑	☑
	Sharps with injury protection (SIPs), including retracting blades and syringes	☑	
	Needleless intravenous catheters/connectors	☑	
Administrative controls and safe work practices <i>Change how workers perform their duties</i>	Neutral zone/no-hands passing	☑	
	Activating safety features on SIPs	☑	
	Rest periods to reduce fatigue (time outs)	☑	☑
	Training staff to work safely	☑	☑
	Situational awareness (communicating about exposure hazards)	☑	☑
PPE <i>Items worn to prevent exposures that cannot be controlled through other means</i>	Barrier protection (single, double, and/or heavy-duty gloves; protective eyewear or face shields; gowns, coveralls and other protective garments)	☑	☑*
	Appropriate respirators	☑†	☑

Most effective
Least effective
Order of implementation

Figure 1. Examples for instituting hierarchy of controls for contact and aerosol exposures. * Protects workers from components of aerosols that may cause mucocutaneous exposure, including to non-intact skin, to intact skin from which pathogenic micro-organisms could then be transferred to non-intact skin or mucosa, and to mucosa. † Protects workers from facial mucous membrane exposure when respirator protects all or part of the face.

Help for stressed workers:

- Ontario COVID-19 Mental Health Network <https://covid19therapists.com>

Ontario COVID-19 Mental Health Network

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We facilitate pro bono mental health services for healthcare workers who have been impacted by COVID-19.

REQUEST SUPPORT HERE



A Survey of Non-Healthcare Workers' Experiences during a Pandemic

- This survey was adapted from the HCW's survey by Dorothy Wigmore, Laura Lozanski, Alec Farquhar and the COVID-19 ad hoc Survey Group
- Similar to the HCW survey, it is designed to capture worker experiences during a pandemic.
- To access the survey please follow this link:
https://www.surveymonkey.com/r/worker_survey
- In French: https://www.surveymonkey.com/r/pandemie_sondage



Thank you! ... any questions/comments?
(please use the chat box)

