



# Canadian consensus of COVID-19 policy management aspects

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## BACKGROUND

As evidence rapidly changes, a need for consensus in hospital policy and management aspects of COVID-19 patient care are needed. This study describes areas where consensus exists and is needed in infection control, and occupational health policy.

## METHOD

Online Survey (May-June 2020)  
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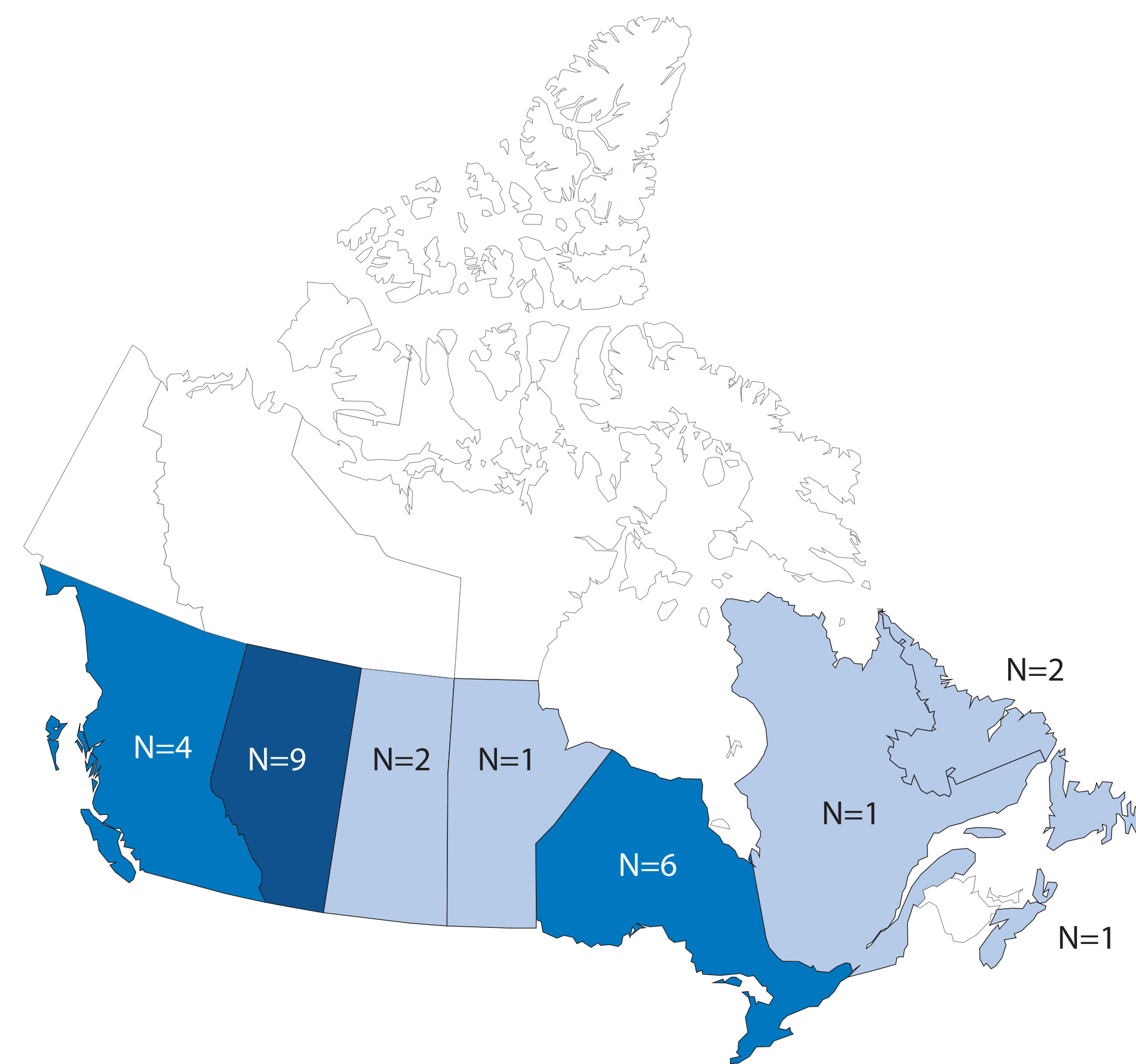
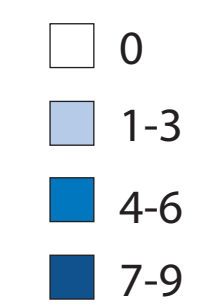


An online survey was sent to the membership of the Association of Medical Microbiology and Infectious Disease (n~700). The survey included questions about COVID-19 patient and outbreak management, personal protective equipment (PPE), and occupational health considerations.

## DEMOGRAPHICS OF SURVEY PARTICIPANTS (N=28)

### Hospital Location

Number of Survey Participants (n=29)

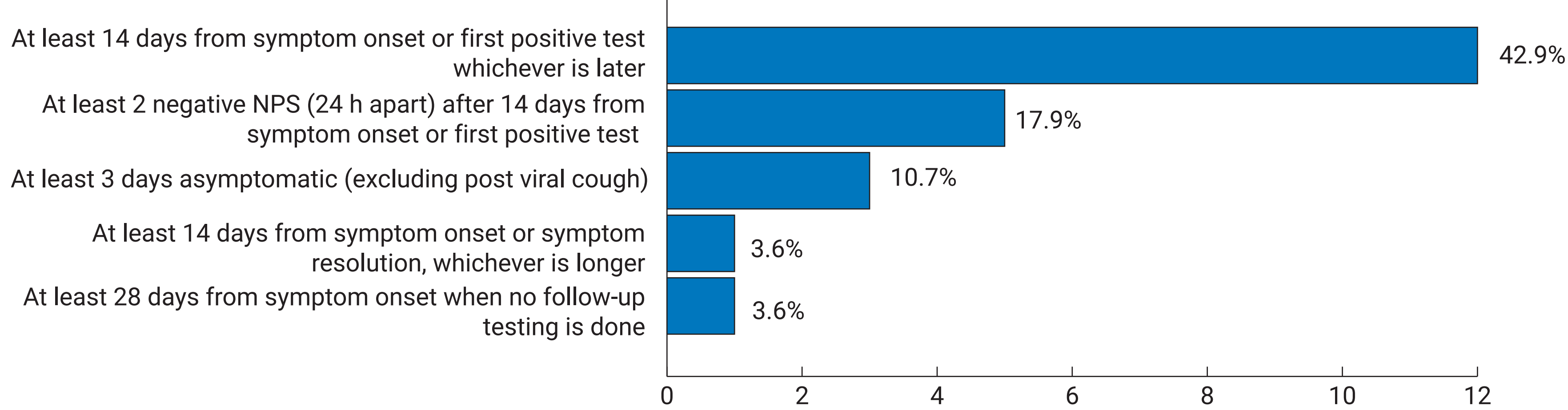


### Role in the Hospital

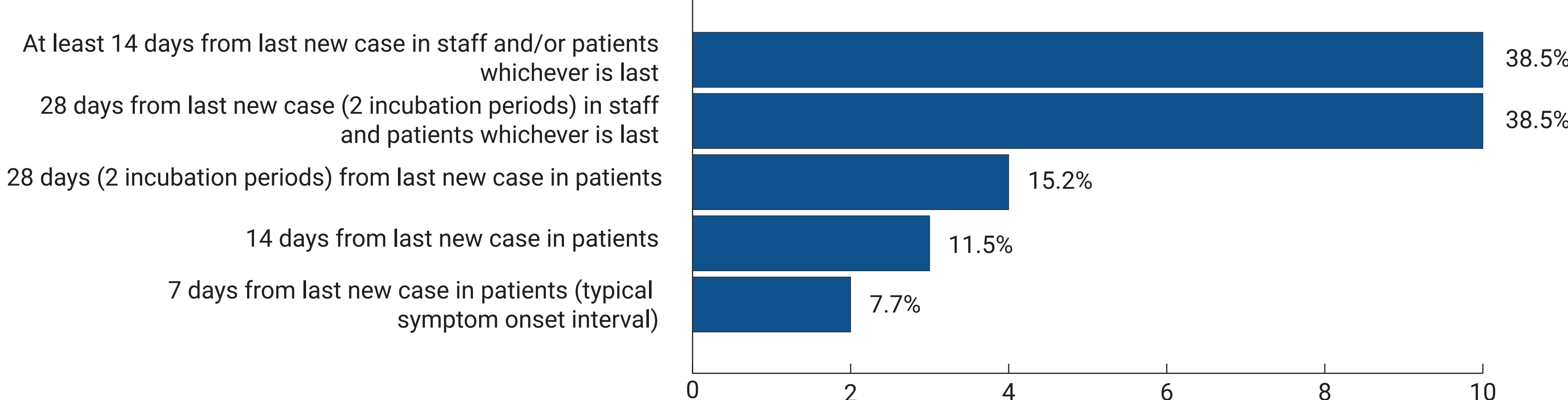
All survey respondents were infectious disease MD/NP, infection control medical directors, or a medical microbiologist.

## AREAS OF COVID-19 MANAGEMENT LACKING CONSENSUS

### When would you consider removing a patient with COVID-19 from additional precautions? (N=28)



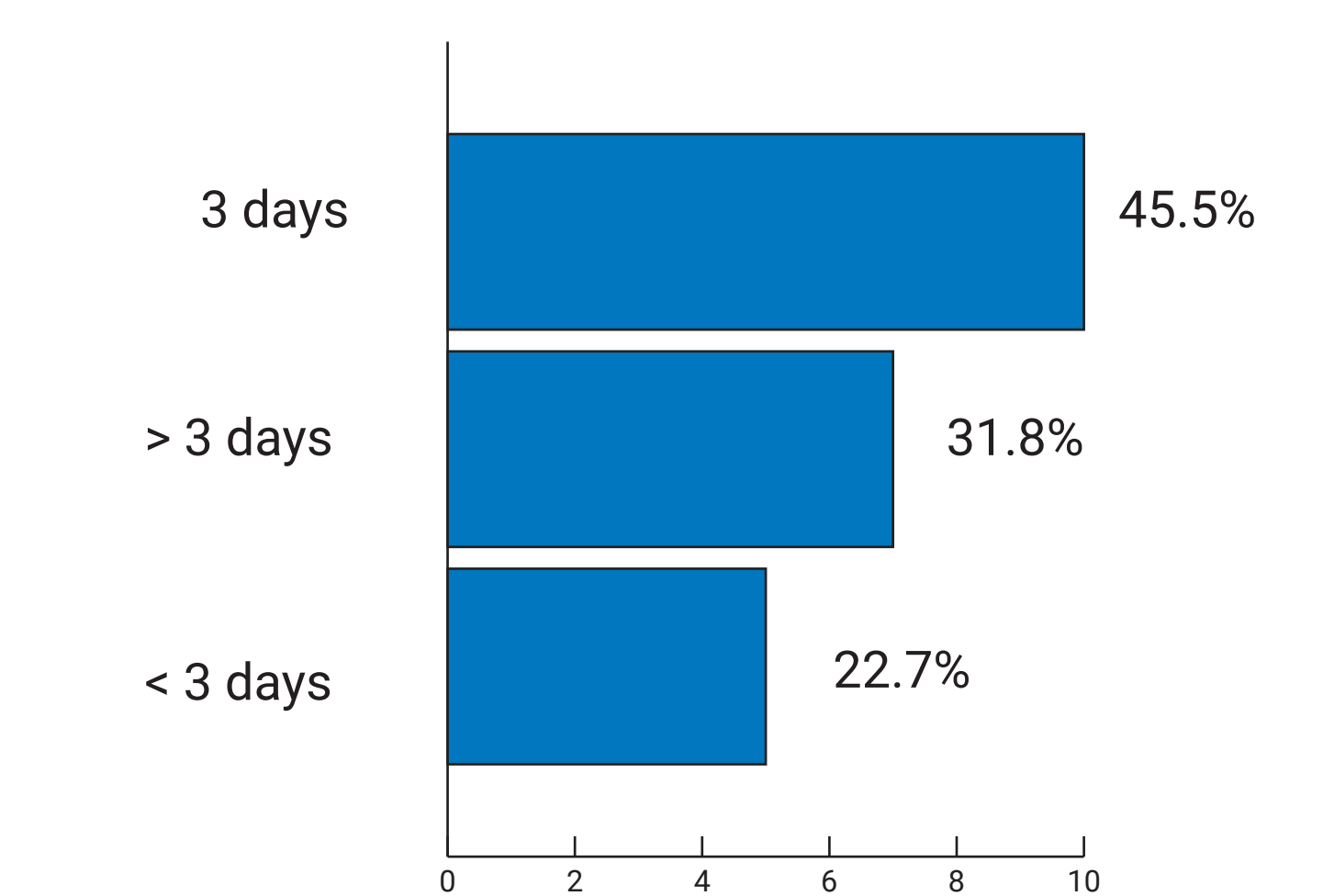
### Threshold for outbreak to be declared over (N=25)



### Populations of asymptomatic testing (N=25)

- In patient requiring high risk surgery (eg. ENT surgery) to dictate PPE requirements or delay of surgery (64%)
- Babies born to COVID-19 positive mom (36%)
- Discharging from acute care to LTCF (long term care facilities) (52%)
- In patients undergoing a planned AGMP (eg. elective intubation) to dictate N95 use (44%)
- Pre-bone marrow transplant – recipient (44%)
- Babies born to COVID-19 positive mom (36%)
- Transfer to acute care from LTCF (long term care facilities) (36%)
- Pre-immunosuppression (32%)
- Pre solid organ donor – recipient (32%)
- Inpatient requiring ongoing AGMP (32%)
- Health care worker returning post exposure to COVID case (28%)
- Pre-bone marrow transplant – donor (28%)
- All admissions (28%)
- Pre solid organ donor – donor (24%)
- Chemotherapy patients (20%)
- Labouring or pregnant women (16%)
- Health care worker returning from working at other facilities (eg. long term care facilities) (12%)
- All staff working on high risk units (12%)

### Duration of unlikely COVID-19 survival on mask (N=22)



## PROCEDURES CONSIDERED AS AEROSOL GENERATING MEDICAL PROCEDURES

Potential AGMP Procedure	Number of respondents (%) (n=28)
Intubation, bronchoscopy	27 (96.4)
Bilevel Positive Airway Pressure (BIPAP) / Continuous positive airway pressure (CPAP)	27 (96.4)
Nebulized medications	26 (92.9)
Ear Nose Throat or Airway/Thoracic procedures	22 (78.6)
High flow nasal cannula (O2) (e.g. AirVo)	21 (75)
Care of intubated patients (due to potential ventilator disconnects)	12 (42.9)
Transport of intubated patient (staff within 2m)	12 (42.9)
Upper endoscopy	10 (35.7)
Chest tube insertions (if underlying air leak)	10 (35.7)
Caesarean section where risk of imminent intubation may occur, and surgical team stays in the room	9 (32.1)
Trans-esophageal echocardiography	5 (17.9)
Transport of intubated patient (airway/head of bed staff)	3 (10.7)
Surgeries where aerosolization of non-pulmonary tissue (e.g. Orthopedic bone saw, or laser plume)	3 (10.7)
Induced sputum	1 (3.6)
Urgent Procedures where patient is screen positive for: symptoms, travel	1 (3.6)

Procedures considered as aerosol generating medical procedures (AGMPs). Respondents (n=28) were allowed to select more than one option. Neck personal protective equipment was not used by 18/22 (66.7%) of respondents, while 4 respondents (18.2%) commented that they use neck personal protective equipment only for incubator, code blue stations, or anesthesia.

## PERSONAL PROTECTIVE EQUIPMENT CONSERVATION STRATEGIES

There is universal masking (28/28 respondents) and universal eye protection (16/16 respondents) in place for all clinical staff.

Most respondents (26/28, 92.9%) are using air-purified respirators (PAPRs) for aerosol generating medical procedures.

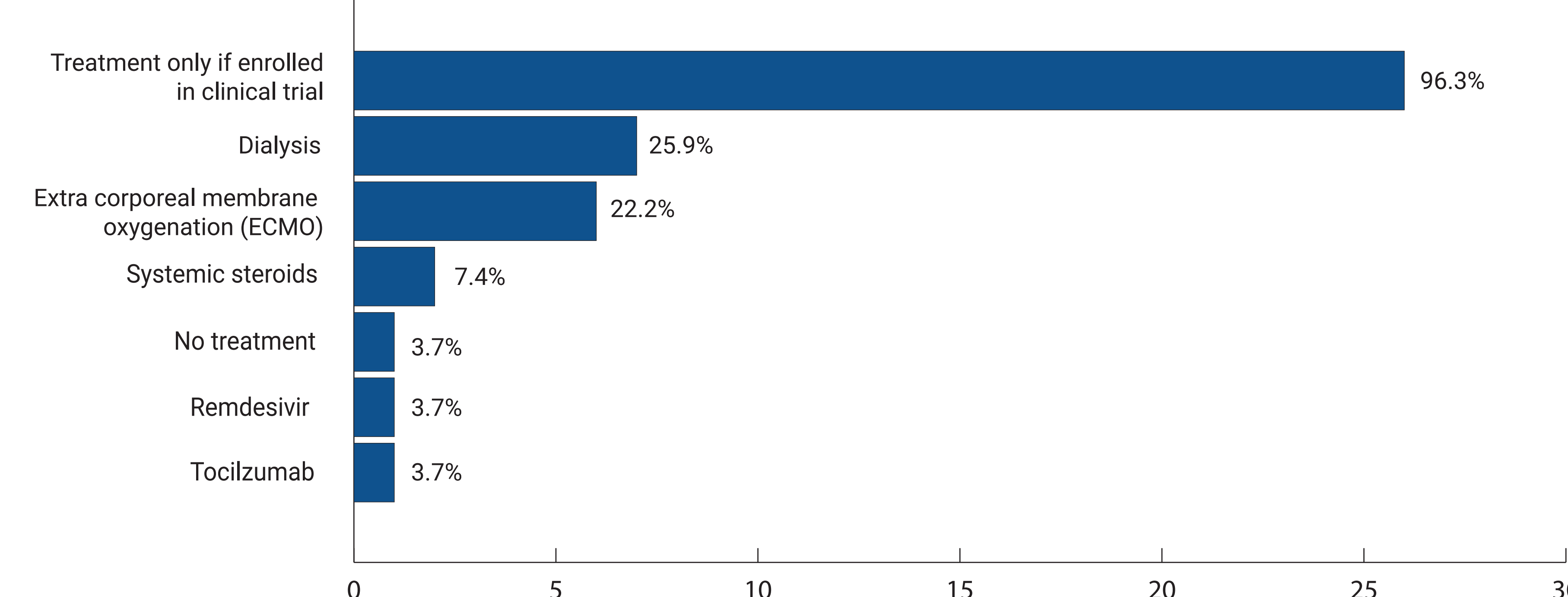
Of 26 respondents, 15 (57.7%) do not regulate which American Society for Testing and Materials (ASTM) levels of masks that are available in different areas.

PPE Conservation Strategy	N95 respirators N (%)	Surgical masks N (%)
No reuse - For single patient encounter only	9 (37.5)	NA
Extended use - Use in between multiple patients	13 (48.1)	NA
Reprocessed and returned back to same user	9 (33.3)	NA
Reprocessed and given to any health care worker	15 (55.6)	NA
Maximum duration of use is until becomes wet or visible soiled	23 (92)	NA
Planning for potential reprocessing	13 (54.2)	1 (3.7)
<b>Method of reprocessing:</b>		
STERIS/STERRAD machine	12 (60)	0 (0)
Hydrogen peroxide	6 (30)	1 (100)
Steam	2 (10)	1 (100)
UV disinfectant	3 (15)	1 (100)

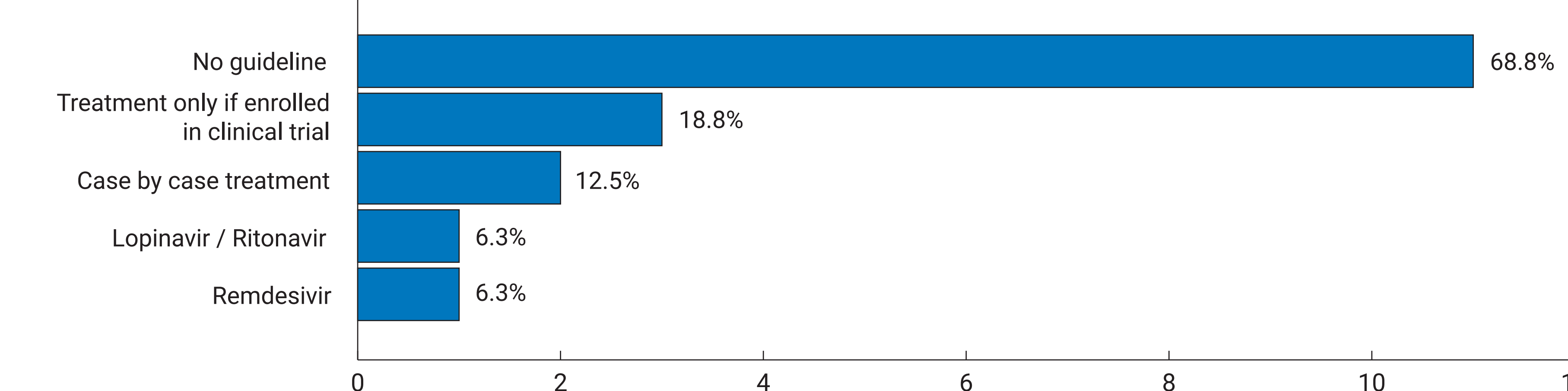
Personal protective equipment (PPE) conservation strategies (n=28). Not all respondents answered every question. The percentage in brackets was calculated with the number of respondents per question as the denominator. NA corresponds to the question not asked in the survey.

## TREATMENT GUIDELINES

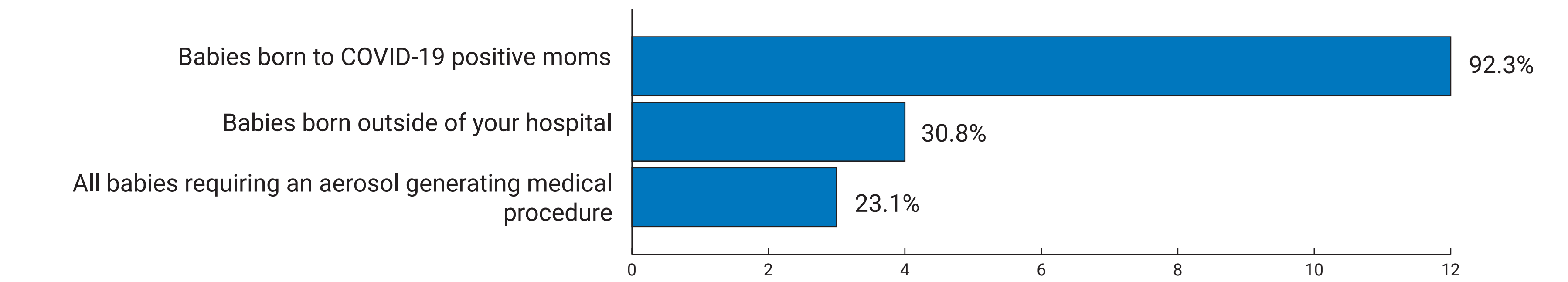
### What medical treatment are you recommending or using on severely ill adult (e.g., intubated or multi-organ failure) COVID-19 patients? (N=27)



### Do you have any treatment guidelines for a COVID-19 infected baby? (N=16)



## COVID-19 NEONATE TESTING (N=13)



Only one respondent (1/16, 6.3%) tested neonates admitted to their Neonatal Intensive Care Unit regardless of maternal COVID-19 status.

All respondents (15/15, 100%) isolate babies born to COVID-19 positive moms in droplet contact after delivery if NICU care is needed.

No respondents (N=16) have had neonates test COVID-19 positive after being born to COVID-19 positive moms.

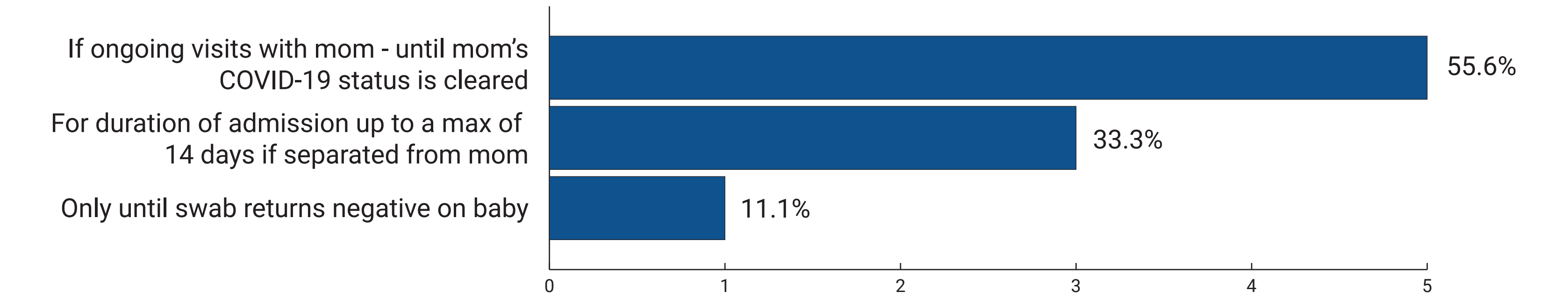
### Symptoms in a neonate that are an indication for COVID-19 testing are (N=12):

- lower respiratory tract symptoms (100%)
- upper respiratory tract symptoms (91.7%)
- fever (91.7%)
- hypothermia (83.3%)
- lymphopenia (66.7%)
- diarrhea (66.7%)
- feeding intolerance (50%)
- vomiting (41.7%)
- acute cardiac symptoms (41.7%)
- elevated C-reactive protein (CRP) (33.3%)

## PERSONAL PROTECTIVE EQUIPMENT FOR NEONATES

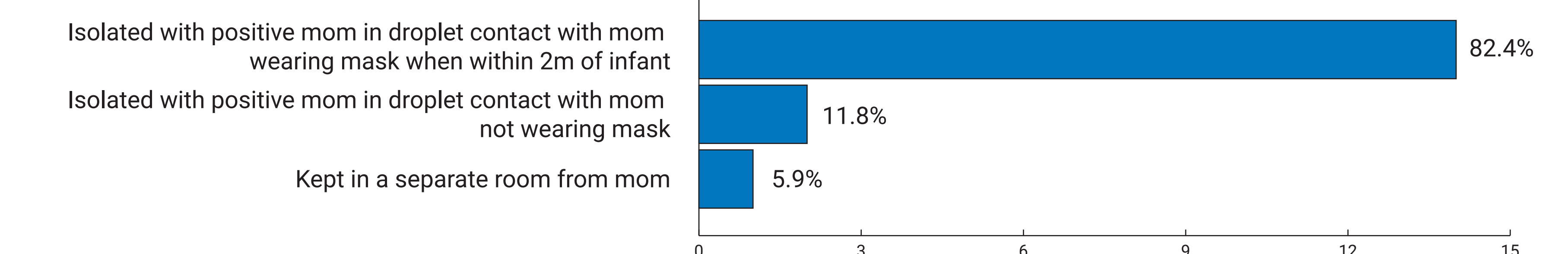
Most respondents (10/15, 66.7%) are using N95 respirators for all neonates born to COVID-19 positive moms during aerosol generating medical procedures (AGMP) from the initial neonatal resuscitation process.

### When do you stop using N95 respirators with neonates? (N=9)



## COVID-19 POSITIVE MOMS (N=17)

### For well-babies born to COVID-19 positive moms, they are:



A few (3/17) respondents have no restrictions on infant feeding practices of babies born to COVID-19 positive moms. A majority of respondents (13/17, 76.5%) would allow mom to breastfeed while wearing a mask and one respondent restricted baby to have formula/expressed breast milk only.

For COVID-19 positive women in labour, respondents stated that they would allow their partner to be there for vaginal delivery (9/9, 100%) and cesaerian section (6/9, 66.7%).

## SUMMARY

This survey of Canadian infectious disease MD/NP and infection control medical directors exemplifies areas of COVID-19 policy management aspects with and without consensus.

Respondents showed consensus in outbreak definitions and universal masking of clinical staff.

There is significant variation in practice with respect to discontinuing additional precautions or outbreak measures, asymptomatic testing, aerosol generating medical procedure definitions, personal protective equipment conservation strategies, neonate treatment and testing, and COVID-19 positive mom restrictions.

As evidence evolves, national infection control guidelines will be important to improve standardization of practice and optimize patient care and staff safety.