

# Use of personal protective equipment in Canadian pediatric emergency departments

Sarah M. Reid, MD\* ; Ken J. Farion, MD\* ; Kathryn N. Suh, MD, MSc\* ; Tobey Audcent, MD\* ; Nicholas J. Barrowman, PhD\*† ; Amy C. Plint, MD, MSc\*

## APPENDIX: USE OF PERSONAL PROTECTIVE EQUIPMENT IN CANADIAN PEDIATRIC EMERGENCY DEPARTMENTS

**R**espiratory and other types of infections are common reasons for visits to the pediatric emergency department. Each institution has its own recommendations regarding infection control practices and the use of personal protective equipment when interacting with these patients. The emergency department work environment presents significant challenges in adhering to these recommendations.

For this survey, we define **personal protective equipment (PPE)** as specialized clothing or equipment that is worn to protect against infectious materials, such as masks, gloves, gowns, and shields. It does not include full-body protective suits with respirators, as would be worn during a chemical, biologic, or nuclear disaster.

This survey consists of 21 questions and should take 10 to 15 minutes to complete. Your answers will be held in confidence, and only aggregate data will be reported. The questions concern you, your experiences, your knowledge, and your attitudes toward infection control practices and the use of personal protective equipment in the pediatric emergency department.

1. What is your year of birth?

\_\_\_\_\_

2. What is your gender?

- Female  
 Male

3. What year did you start independent practice?

\_\_\_\_\_

4. Which best describes your training? (*Please pick one.*)

- FRCPC pediatrics  
 FRCPC pediatrics + pediatric EM fellowship  
 FRCPC EM  
 FRCPC EM + pediatric EM fellowship  
 CCFP  
 CCFP EM  
 Other (*please describe*) \_\_\_\_\_

5. Do you have access to an infection control manual in your department?

- Yes  
 No  
 I do not know

6. If you answered “Yes” to question 5, please estimate how often you access the infection control manual for information? (*If you answered “No” or “I do not know,” please proceed to question 7.*)

- Once per shift  
 Once per week  
 Once per month  
 Once per year

From the \*Departments of Pediatrics and Emergency Medicine, University of Ottawa, Ottawa, ON; and †Clinical Research Unit of Ottawa, Children’s Hospital of Eastern Ontario Research Institute, Ottawa, ON.

**Correspondence to:** Dr. Sarah Reid, Children’s Hospital of Eastern Ontario, 401 Smyth Road, Ottawa, ON K1H 8L1; reid\_sa@cheo.on.ca.

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- Never
- 7. At the time of the SARS outbreak (spring 2003), were you working in a hospital that assessed and treated potential or actual SARS patients?
  - Yes
  - No
- 8. Do you currently work in a hospital that assessed and treated potential or actual SARS patients?
  - Yes
  - No
- 9. Does your ED have a negative pressure isolation room?
  - Yes—If “Yes,” how many? \_\_\_\_\_
  - No
  - I do not know
- 10. How many closed treatment rooms (physical walls and doors) does your ED have, excluding negative pressure rooms?  
\_\_\_\_\_
- 11. How comfortable are you with your knowledge of transmission-based isolation practices for infectious patients (eg, “contact,” “droplet,” “airborne”)?
  - Very uncomfortable
  - Somewhat uncomfortable
  - Neutral
  - Somewhat comfortable
  - Very comfortable
- 12. When were you last fitted for an N95 mask?
  - I do not recall
  - < 12 months ago
  - 12–24 months ago
  - > 24 months ago
  - Never
- 13. When did you last receive training in the use of personal protective equipment (PPE)?
  - I do not recall
  - < 12 months ago
  - 12–24 months ago
  - > 24 months ago
  - Never
- 14. During viral season 2006–2007, please estimate how often you wore each of the items below when

seeing febrile respiratory patients using the scale provided.

	Never	Rarely	Sometimes	Usually	Always
Gloves	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mask	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Gown	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Eye protection	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

- 15. When you CHOOSE to use PPE, to what extent do the following factors influence your decision to follow PPE guidelines?

	No influence	Moderate influence	Significant influence
Patient charts are clearly marked with information necessary to decide if PPE is necessary	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Information on what to wear is easily accessible	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Equipment (masks/gloves/gowns) is available in the department	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hand hygiene (sinks, antiseptic wash pumps) is easily accessible/convenient	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Equipment (masks/gloves/gowns) is easily accessible/convenient	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
PPE is a priority in my ED	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My colleagues follow the guidelines	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I receive regular training on what to wear and when to wear it	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Table . Continued**

	No influence	Moderate influence	Significant influence
I want to protect myself and family	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I want to protect my patients	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I had input into the creation and/or implementation of the guidelines	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

16. When you CHOOSE NOT to use PPE, to what extent do the following factors influence your decision NOT to follow PPE guidelines?

	No influence	Moderate influence	Significant influence
Patients are not identified before I go into the room	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am not sure what to wear	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Equipment (masks/gloves/gowns) is not available in the department	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hand hygiene (sinks, antiseptic wash pumps) is not accessible/convenient	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Equipment (masks/gloves/gowns) is not accessible/convenient	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
PPE takes too long	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
PPE is not feasible with the volume of patients I must see	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
PPE interferes with patient care	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
PPE frightens children	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My colleagues do not use PPE	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
PPE is not a priority in my department	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Guidelines are unreasonable/impractical	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Existing guidelines are out of date	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

17. In the future, to what extent would the following factors influence your decision to follow PPE guidelines MORE OFTEN?

	No influence	Moderate influence	Significant influence
Patient charts were clearly marked with information to decide if PPE is necessary	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Information on what to wear was easily accessible	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Equipment (masks/gloves/gowns) was available in the department	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hand hygiene (sinks, antiseptic wash pumps) was easily accessible/convenient	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Equipment (masks/gloves/gowns) was easily accessible/convenient	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
PPE was a priority in my ED	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My colleagues followed the guidelines	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I received regular training on what to wear and when to wear it	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I or my family became sick	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I contaminated one of my patients	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I had input into the creation and/or implementation of the guidelines	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

18. For each of the following scenarios, please select the personal protective equipment that reflects your PERSONAL DAY-TO-DAY PRACTICE in the ED.  
(Please choose all that apply.)

	Hand hygiene	Regular gloves	Sterile gloves	Surgical mask	N95 mask	Clean gown	Sterile gown	Eye protection/shield	No protective equipment
An 8-month-old boy presents with a 3-day history of fever, vomiting, and diarrhea	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A 4-year-old girl with a history of asthma presents with 2 days of URTI symptoms, 24 hours of increasing respiratory distress, and a low-grade fever	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
You are performing a lumbar puncture on a febrile 2-week-old boy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A 10-year-old is involved in a major motor vehicle collision and will arrive in 10 minutes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
You are seeing a 12-year-old girl with fever and dysuria. Her mother hands you the sterile urine sample. You perform dipstick urinalysis.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A 16-year-old boy arrives in your department with a Glasgow Coma Scale score of 6 following a toxic ingestion. You prepare to intubate the patient.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

19. According to your PERSONAL KNOWLEDGE of infection control practices, which precautions are indicated for the following patients/diagnoses? (Please refer to the definitions of each type of precaution below. Please indicate all that apply.)

	Contact	Droplet	Air-borne	Reverse isolation	Hand hygiene
Suspected pulmonary TB	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Febrile neutropenia	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Suspected meningococcal meningitis	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Varicella	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
RSV bronchiolitis	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Rotavirus	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
MRSA (+) patient	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mild cellulitis in healthy patient	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Known <i>C. difficile</i> patient	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Suspected influenza	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Norwalk virus	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Definitions for Question 19

- Contact = hand hygiene, gloves, and gowns
- Droplet = hand hygiene, gloves, gown, mask, and eye protection
- Airborne = hand hygiene, gloves, gown, N95 mask, and negative pressure room
- Reverse isolation = patient in a closed room for his/her protection
- Hand hygiene = using soap/water or antiseptic hand wash before and after patient contact

20. In the past 12 months, approximately how many episodes of respiratory tract infection or gastroenteritis did you have?

\_\_\_\_\_

21. In the past 12 months, approximately how many days of work have you missed due to an acute infectious illness?

\_\_\_\_\_

That's it! Thank you for taking the time to complete this questionnaire.

Please place your completed questionnaire in the postage-paid addressed envelope that has been provided.

If you have any questions concerning the study or wish to share anything with us that we may have neglected to ask, please feel free to do so in the space

below. You may also contact the principal investigator, Dr. Sarah Reid, at the Children's Hospital of Eastern Ontario, at (613) 737-7600 ext 2318.

Again, thank you very much for your time.

Comments

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*THANK YOU!*