

Supplementary Material

Pre-Survey

Dear Study Participant, this brief survey will ask you questions about your prior and current respirator use, as well as any problems or issues wearing the elastomeric respirator you may be anticipating. This survey should take no longer than 10 minutes to complete. If you have any questions, please ask a study team member that assisted you with the set-up of this survey. Thank you for choosing to be in our study.

- 1) Prior to the pandemic, which of the following personal protective equipment did you wear to perform your job? (Check all that apply)
 - Surgical or procedural mask
 - N95 respirator
 - Elastomeric half-mask respirator (EHMR)
 - Powered air-purifying respirator (PAPR)
 - Controlled air-purifying respirator (CAPR)
 - Other (Please Specify)
- 2) During the pandemic, which of the following personal protective equipment did you wear to perform your job? (Check all that apply)
 - Surgical or procedural mask
 - N95 respirator
 - Elastomeric half-mask respirator (EHMR)
 - Powered air-purifying respirator (PAPR)
 - Controlled air-purifying respirator (CAPR)
 - Other (Please Specify)
- 3) During the pandemic, how frequently have you worn the following while engaged in patient care? (Never, Sometimes, About half the time, Most of the time, Always)
 - Glasses
 - Safety Goggles
 - Face shield
- 4) Do you currently have long hair or a hair-style (e.g., pony tail, braids) that makes it difficult to wear a respirator?
- 5) After today's fit testing and training, please rate how comfortable you feel with performing each of the following elastomeric respirator tasks. (Extremely Uncomfortable, Uncomfortable, Comfortable, Extremely Comfortable)
 - Inspecting the elastomeric respirator
 - Putting on (donning) the elastomeric respirator
 - Checking the elastomeric respirator for leaks (ensuring positive pressure seal)
 - Checking the elastomeric respirator for collapse (ensuring negative pressure seal)
 - Adjusting the straps
 - Taking off (doffing) the elastomeric respirator
 - Cleaning and disinfecting the elastomeric respirator

- 6) After today's fit testing and training, indicate your level of agreement regarding the elastomeric respirator compared to the N95 respirator (Strongly Disagree, Somewhat Disagree, Agree, Strongly Agree)
- The elastomeric respirator fits better
 - The elastomeric respirator provides more protection from viruses and bacteria
 - I prefer to wear the elastomeric respirator during this pandemic when caring for COVID-19 patients
- 7) Imagine your future experience wearing the elastomeric respirator. For each of the following, how often do you believe wearing the elastomeric respirator will cause discomfort? (None of the time, Some of the time, All of the time)
- Tightness of straps
 - Facial irritation (leaves marks/indents)
 - Facial itching
 - Facial pinching
 - Nose, nose-bridge (pinching, redness)
 - Facial heat/warmth
 - Sweat/moisture buildup
 - Lack of fresh air
 - Nausea
 - Headache
 - Interference with wearing glasses, goggles, face shield (e.g., compatibility of fit with respirator or fogginess)
 - Difficulty getting straps over hair (hair pulling)
- 8) Imagine your future experience wearing the elastomeric respirator. For each of the following, indicate how you expect to experience the following. (None of the time, Some of the time, All of the time)
- Dizziness
 - Loss of energy/tiredness/fatigue
 - Claustrophobia
 - Shortness of breath
 - Difficulty breathing
 - Dry or itchy eyes
 - Frustration with wearing
- 9) Imagine your future experience with wearing the elastomeric respirator. Please indicate your level of agreement with each statement. (Strongly Disagree, Disagree, Agree, Strongly Agree)
- The elastomeric respirator will affect my concentration while working (always adjusting the mask)
 - I will have difficulty verbally communicating to others (unintelligible, muffled speech)
 - I will have difficulty hearing others
 - The elastomeric respirator will obstruct my vision

- The respirator will interfere with my patient care duties (quick to leave room, less interaction)
- Patients will react negatively to the elastomeric respirator
- Co-workers will react negatively to the elastomeric respirator

10) Please provide any comments or challenges you foresee with wearing the elastomeric respirator to perform your job.

11) Please indicate why you decided to participate in this study.

Participant Bi-Weekly Survey

Dear Study Participant, please complete the following survey regarding your elastomeric respirator use in the prior 2 weeks. This survey should take no longer than 3 to 5 minutes to complete.

- 1) In the past two weeks, how many hours per day (on average) did you wear your elastomeric respirator?
 - None
 - 1-3
 - 4-6
 - 7-10
 - 11+
- 2) Please indicate the primary reason why you did not wear the elastomeric respirator in the past two weeks.
 - It was uncomfortable to wear
 - I had difficulty performing work tasks while wearing it
 - I did not care for an infectious patient that required a respirator I was not scheduled to work in the past two weeks
 - Other reason(s): (Please Specify) _____
- 3) In the past two weeks, please check if you wore any of the following types of respirators instead of the
 - Surgical type mask or cloth mask
 - N95 respirator
 - elastomeric respirator
 - Powered air-purifying respirator (PAPR)
 - Controlled air purifying respirator (CAPR)
 - None
- 4) In the past two weeks, what is the longest period of continuous time that you wore the elastomeric respirator in a given day?
 - < 1 hour
 - 1-2 hours
 - 3-4 hours
 - 5-6 hours
 - 7+ hours
- 5) In the past two weeks, were there times when you wore a different respirator or face covering (N95, PAPR, surgical mask) instead of the elastomeric respirator?
- 6) Please indicate the other types of respiratory protection that you wore in the past two weeks.
 - Surgical or procedural mask
 - N95 respirator
 - Powered air-purifying respirator (PAPR)
 - Controlled air purifying respirator (CAPR)

- 7) Please indicate why you wore a different type of respirator or face covering rather than the elastomeric respirator. (Check those that are the most relevant)
- It was more comfortable
 - It was easier to don (put on)
 - It made me feel more protected
 - It was available
 - I did not have my elastomeric respirator with me
 - Other (Please Specify): _____
- 8) Of all the times in the past two weeks when you removed (doffed) your respirator, what percentage of time did you disinfect your elastomeric respirator? (Place a mark on the scale above)
- 9) In the past two weeks, how frequently did you experience any of the following problems with disinfecting your respirator? (None of the time, Some of the time, All of the time)
- I did not have access to the disinfection wipes
 - The disinfection and drying takes too long
 - The wipes irritate the skin on my face
 - The wipes irritate the skin on my hands
 - The odor from the wipes irritate my lungs/breathing
- 10) Please tell us if you had any other problems with disinfecting your elastomeric respirator?
- 11) In the past two weeks, where did you typically store your elastomeric respirator between uses?
- I carried it with me most or all of the time
 - I stored it in my office/locker
 - I stored it in a supply area on my work unit
 - I stored it somewhere else (describe where): _____
- 12) Please tell us about any problems you had with storing your elastomeric respirator?
- 13) Please indicate if you had difficulty (yes/no) performing any of the following tasks in the past two weeks because you were wearing the elastomeric respirator. If you did not perform the task, check "not performed."
- Talking with patient or family member
 - Bathing/Feeding patient
 - Dressing Patient
 - Taking vital signs (e.g., blood pressure, temperature)
 - Performing physical assessment
 - Starting IV
 - Drawing blood
 - Distributing medication
 - Assisting patient with walking
 - Changing dressing
 - Suctioning
 - Moving patient (from bed to chair, from bed to stretcher)

- Performing CPR
- Assisting with medical procedure
- Patient transports
- Other: _____

14) For each of the following, how often did wearing the elastomeric respirator in the past two weeks cause discomfort? (None of the time, Some of the time, All of the time)

- Tightness of straps
- Facial irritation (leaves marks/indents)
- Facial itching
- Facial pinching
- Nose, nose-bridge (pinching, redness)
- Facial heat/warmth
- Sweat/moisture buildup
- Lack of fresh air
- Nausea
- Headache
- Interference with wearing glasses, goggles, face shield (compatibility of fit with respirator or fogginess)
- Difficulties getting straps over hair (hair pulling)

15) Due to wearing the elastomeric respirator, I experienced the following: (Please select one response for each item below.) (None of the time, Some of the time, All of the time)

- Dizziness
- Loss of energy/tiredness/fatigue
- Claustrophobia
- Shortness of breath
- Difficulty breathing
- Dry or itchy eyes
- Frustration with wearing

16) Think about your experience wearing the elastomeric mask in the past two weeks and indicate your level of agreement with each statement. (Strongly Disagree, Disagree, Agree, Strongly Agree)

- The mask affected my concentration while working (always adjusting the mask)
- I had difficulty verbally communicating to others (unintelligible, muffled speech)
- I had difficulty hearing others
- The mask obstructed my vision
- The mask interfered with my patient care duties (quick to leave room, less interaction)
- Patients reacted negatively to the respirator
- Co-workers reacted negatively to the respirator

17) Please tell us about anything in the past two weeks that has improved in your experience wearing your elastomeric respirator?

18) Please tell us if anything in the past two weeks that continues to be or is a new challenge to wearing the elastomeric respirator?

Participant Post-Survey

1) After wearing your elastomeric respirator during the past three months, please rate how comfortable you feel with performing each of the following elastomeric respirator tasks. (Extremely Uncomfortable, Uncomfortable, Comfortable, Extremely Comfortable)

- Inspecting the elastomeric respirator
- Putting on (donning) the elastomeric respirator
- Checking the elastomeric respirator for leaks (ensuring positive pressure seal)
- Checking the elastomeric respirator for collapse (ensuring negative pressure seal)
- Adjusting the straps
- Taking off (doffing) the elastomeric respirator
- Cleaning and disinfecting the elastomeric respirator

2) After wearing the elastomeric respirator during the past three months, please indicate your level of agreement regarding the elastomeric compared to the N95 respirator. (Strongly Disagree, Disagree, Agree, Strongly Agree)

- The elastomeric respirator fits better
- The elastomeric respirator provides more protection from viruses and bacteria
- I prefer to wear the elastomeric respirator during this pandemic when caring for COVID-19 patients

3) Please state your level of agreement with the following statements regarding the elastomeric respirator. (Strongly Disagree, Disagree, Agree, Strongly Agree)

- I would prefer to wear the N95 respirator over the elastomeric respirator in non-pandemic conditions
- I feel comfortable continuing to wear an elastomeric respirator for patient care during the remainder of the pandemic
- I feel comfortable wearing an elastomeric respirator while caring for patients in a non-pandemic environment
- I feel comfortable recommending the elastomeric respirator to my colleague

4) Please think back over the past 3 months about your experience wearing the elastomeric respirator and your prior experience wearing the N95. Please indicate how often the elastomeric and the N95 caused discomfort.

- Tightness of straps
- Facial irritation (leaves marks/indents)
- Facial itching
- Facial pinching
- Nose, nose-bridge (pinching, redness)
- Facial heat/warmth
- Sweat/moisture buildup
- Lack of fresh air
- Nausea
- Headache

- Interference with wearing glasses, goggles, face shield (e.g., compatibility of fit with respirator or fogginess)
 - Difficulty getting straps over hair (hair pulling)
- 5) Please think back over the past 3 months about your experience wearing the elastomeric respirator and your prior experience wearing the N95. Please indicate your experience with each of the following.
- Dizziness
 - Loss of energy/ tiredness/ fatigue
 - Claustrophobia
 - Shortness of breath
 - Difficulty breathing
 - Dry or itchy eyes
 - Frustration with wearing
- 6) Please think back over the past 3 months about your experience wearing the elastomeric respirator and your prior experience wearing the N95. Please indicate your level of agreement with each statement.
- The respirator affected my concentration while working (always adjusting the mask)
 - I had difficulty verbally communicating to others (unintelligible, muffled speech)
 - I had difficulty hearing others
 - The respirator obstructed my vision
 - The respirator interfered with my patient care duties (quick to leave room, less interaction)
 - Patients reacted negatively to the respirator
 - Co-workers reacted negatively to the respirator

15) What did you like about the elastomeric respirator?

16) What did you dislike about the elastomeric respirator?

17) Please provide any suggestions about how the design of the elastomeric respirator could be improved.

18) Is there anything else about your experience wearing the elastomeric respirator that you would like us to know?

We welcome your suggestions to improve the use of elastomeric respirators by healthcare workers in the future.