BSL-SNAP-002 Data Analysis Report

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# Table of Contents

Introduction

Following is a report that summarizes the findings of a clinical trial to evaluate patient preference regarding the Bleep Eclipse Mask™.

The Eclipse mask uses adhesive pads (Halo pads) placed at the entrance to the nares that have metallic rings with vent holes inside the ring. Those rings align with the nares openings to allow ventilation. The mating fitting on the end of the patient circuit, the frame, has matching flat rings with a series of circumferentially positioned magnets that magnetically connect the frame to the Halo pads. Flexibility in the silicone pads of the frame permits sufficient rotation and translation to allow the rings to align directly so that an airtight seal is formed. This arrangement removes the need for headgear.
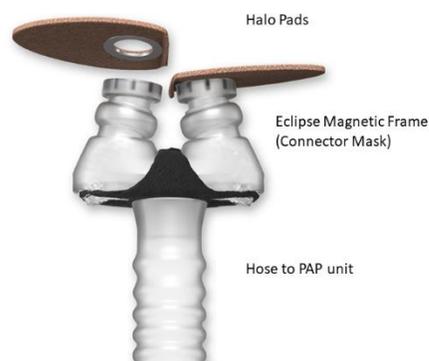
Figure 1: Diagram showing the halo pads attaching to the magnets on the frame of the Eclipse mask.

Methods and Materials

In this study, (Study 363104), seventy adherent CPAP users volunteered to trial the Eclipse mask for two nights in their homes. Participants attended an appointment at one of three offices of Sleep Centers of Middle Tennessee (SCMT) and were trained how to use the Eclipse mask, then asked to use the Eclipse for two consecutive nights and then complete a participant survey after the second night. Volunteers were gathered from the pool of SCMT participants and were financially incentivized to participate in the study. The volunteers (N = 70) were selected to cover a demographic range of races and gender as specified in the following tables. The Participant roster with specific data regarding the data collection dates and specific demographics are found in Appendix A.

Race	Actual Count	Target %	Actual %	Variance%
White	23	30%	32.9%	2.9%
Black	26	40%	37.1%	-2.9%
Hispanic	14	20%	20.0%	0.0%
Asian	7	10%	10.0%	0.0%

Gender	Actual Count	Target %	Actual %	Variance%
Male	44	60%	62.9%	2.9%
Female	26	40%	37.1%	-2.9%

Table 1: Targeted and actual demographic participant recruitment summary.

Demographic		Actual Count	Target	Variance %
White	Male	15	12.6	3.4%
Black	Male	16	16.8	-1.1%
Hispanic	Male	8	8.4	-0.6%
Asian	Male	5	4.2	1.1%
White	Female	8	8.4	-0.6%
Black	Female	10	11.2	-1.7%
Hispanic	Female	6	5.6	0.6%
Asian	Female	2	2.8	-1.1%

Table 2: Detailed breakdown of target and actual demographics employed in Study 363104.

The study was conducted under the auspices of the NHLBI, and its protocols and documentation were approved by a private institutional review board (WBC[1]). All patient interaction was conducted at the offices of SCMT.

In this study to evaluate the Bleep Eclipse, SCMT patients who were already adherent CPAP users were asked if they wanted to participate in research. For those that fell within the demographic ranges and expressed an interest, a telephone interview was set up to discuss the study. During the interview, the technician discussed the clinical activities and provided a video describing the Eclipse mask. Participants were compensated for engaging in the study.

The study sites included the SCMT offices in Murfreesboro and Clarksville. Prior to initiating the study, the technician reviewed the protocol and all potential safety issues with the participant. After this, the participant could sign the Study 363104 Informed Consent form (IRB-approved) and proceed with the study or decline to participate.

The protocol involved the technician training the participant how to attach the Eclipse mask. The participant was then asked to apply the mask on themselves. In some, but not all cases,

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[1] https://www.wcgirb.com/

cutting and shaping were required to tailor the halo to the participant's nose. Data collected by the DME technician during the application included:

- Recording the number and the content of technical issues encountered by the participant.
- Recording the number of additional instructions and causation of the additional instructions needed by the participant during the trials.
- Technician comments for each participant

Following the training, the participant was given an adequate amount of Eclipse materials for use at home for two nights. The technician then followed up with the participant after an agreed upon date and sent them a web link to the participant survey. The survey consisted of 16 questions that used a five-point Likert scale (Strongly Disagree, Disagree, Neither Agree nor Disagree, Agree and Strongly Agree), and two subjective questions (as noted below).

Likert-scale questions
1. This mask made me feel claustrophobic.
2. This mask was difficult to put on.
3. This mask was difficult to take off.
4. I had to adjust this mask frequently.
5. This mask was difficult to disconnect.
6. This mask was difficult to reconnect.
7. This mask made it difficult to sleep in my usual position.
8. This mask caused discomfort to my face.
9. This mask caused discomfort to my eyes.
10. This mask interfered with my hair.
11. This mask leaked.
12. I could use this mask every night with CPAP.
13. This mask took minimal time to set up for use.
14. Using this mask did not complicate my night-time routine.
15. Using this mask improved the quality of my life.
16. I would recommend this mask to others.

Subjective questions
17. How does this mask compare to other masks that you have tried in the past?
18. Thinking about your experiences with other masks, what did this mask address the best?

Evaluation of the Likert scale data was conducted using the single sample t-test to compare the responses to the midpoint of 3 (Neither Agree Nor Disagree) for each question. In addition, regression analyses were conducted to examine the association between the Likert responses and

age, gender, and race for each question. The responses to the subjective questions are found in Appendix C.

Results

Survey Responses

Detailed patient survey responses appear in Appendix C. The following column charts (Figures 2a-p) are graphical representations of the responses to the survey. For questions 1-11 (Figures 2a-k), a positive response in favor of the Eclipse is indicated on the "disagree" side of the five-point Likert scale. For questions 12-16 (Figures 2l-p), a positive response in favor of the Eclipse is indicated on the "agree" side of the five-point Likert scale. Median scores from this data were tabulated and appear also in Appendix C.

This mask made me feel claustrophobic

Response	Percentage
Strongly Disagree	63%
Disagree	29%
Neither Agree nor Disagree	6%
Agree	1%
Strongly agree	1%
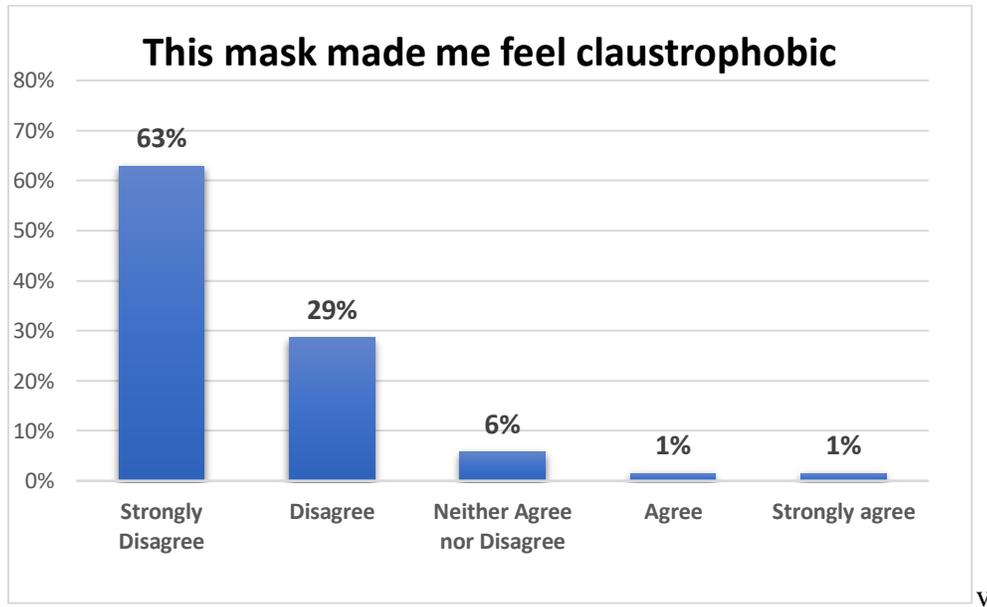
Figure 2a: Response to Question 1 of the participant survey (N = 70).
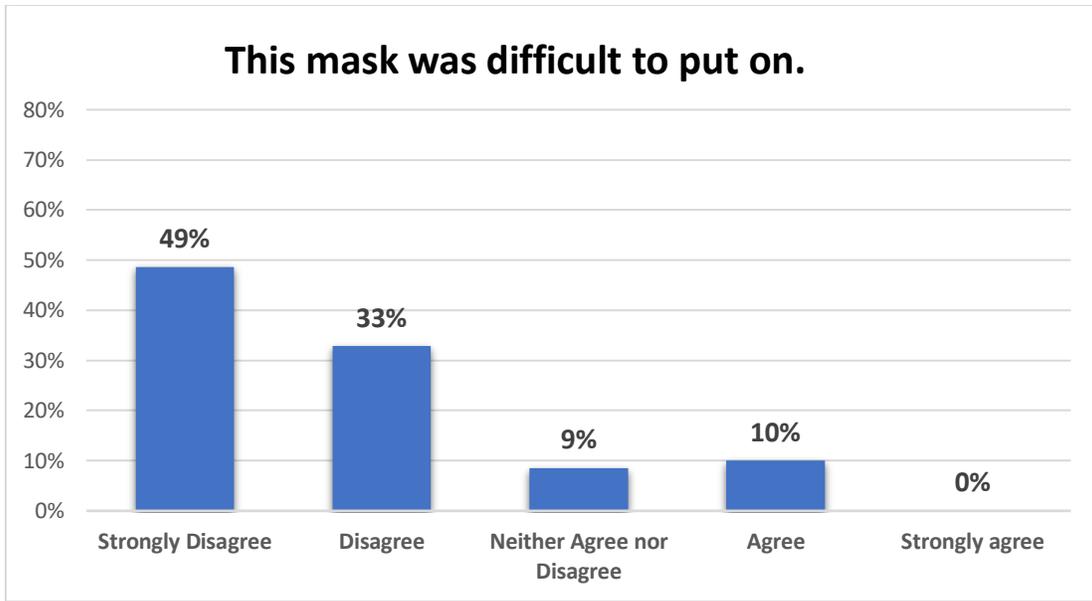
Figure 2b: Response to Question 2 of the participant survey (N = 70).
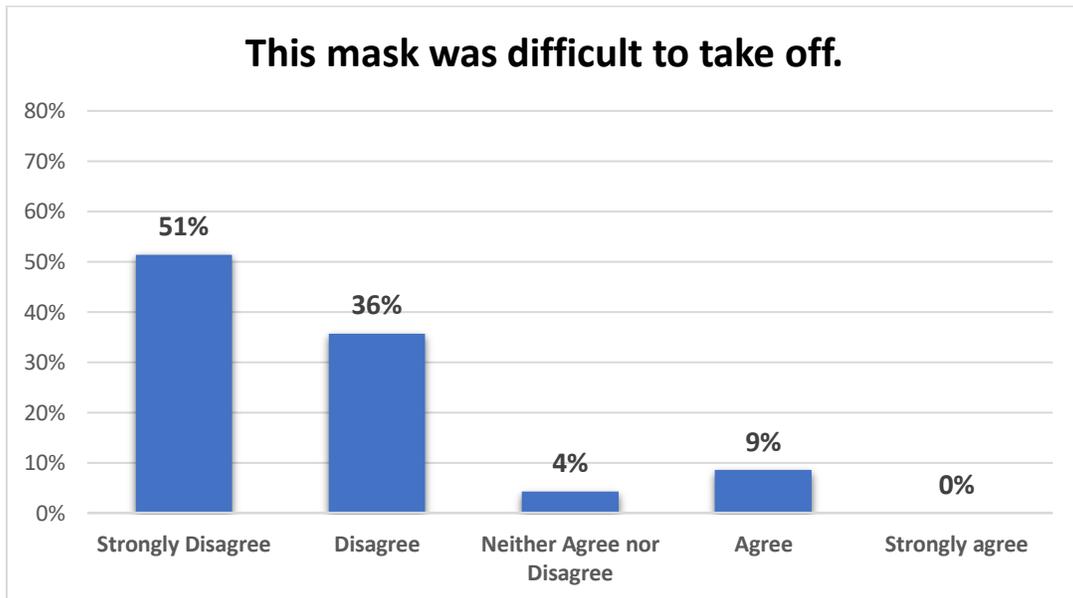
Figure 2c: Response to Question 3 of the participant survey (N = 70).
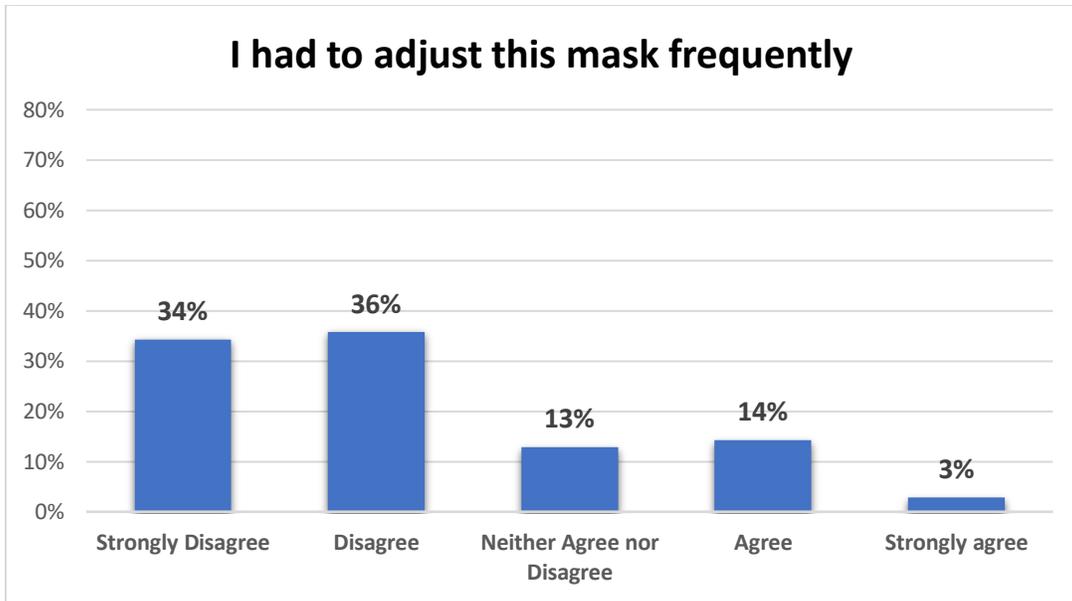
Figure 2d: Response to Question 4 of the patient survey (N = 70).
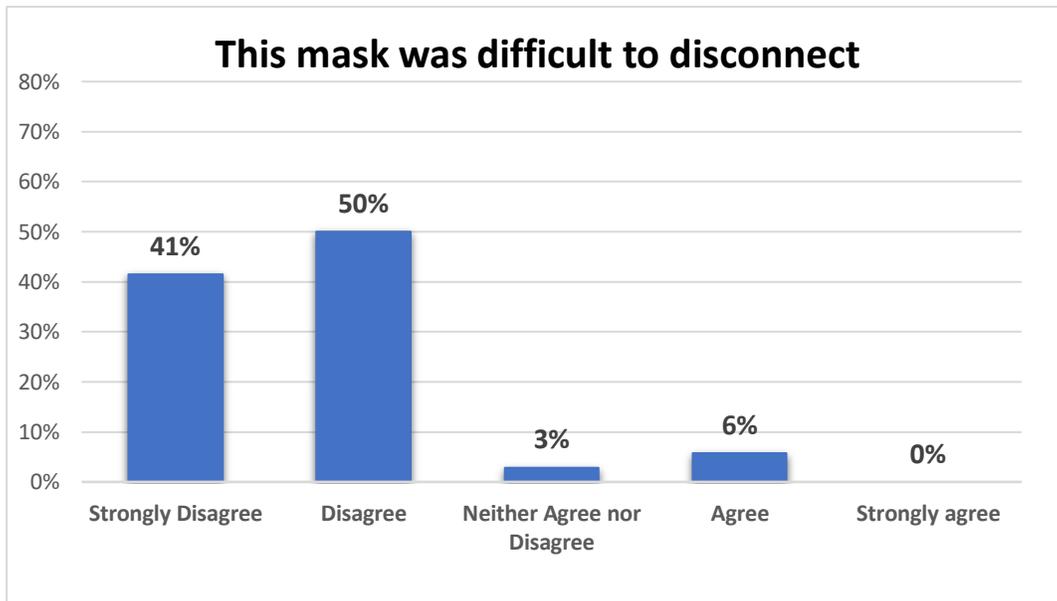
Figure 2e: Response to Question 5 of the participant survey (N = 70).
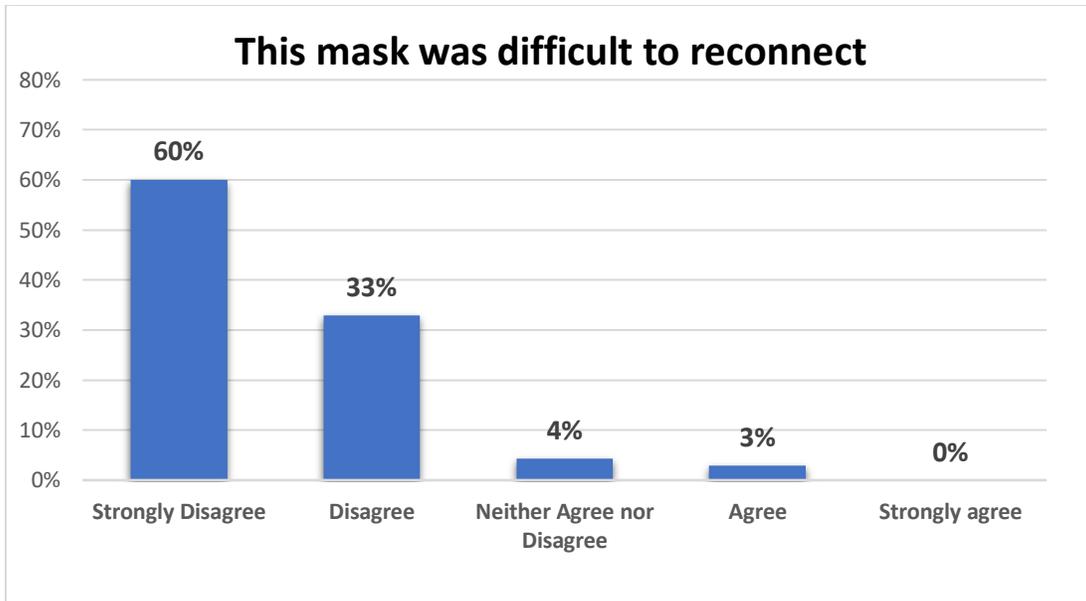
Figure 2f: Response to Question 6 of the participant survey (N = 70).
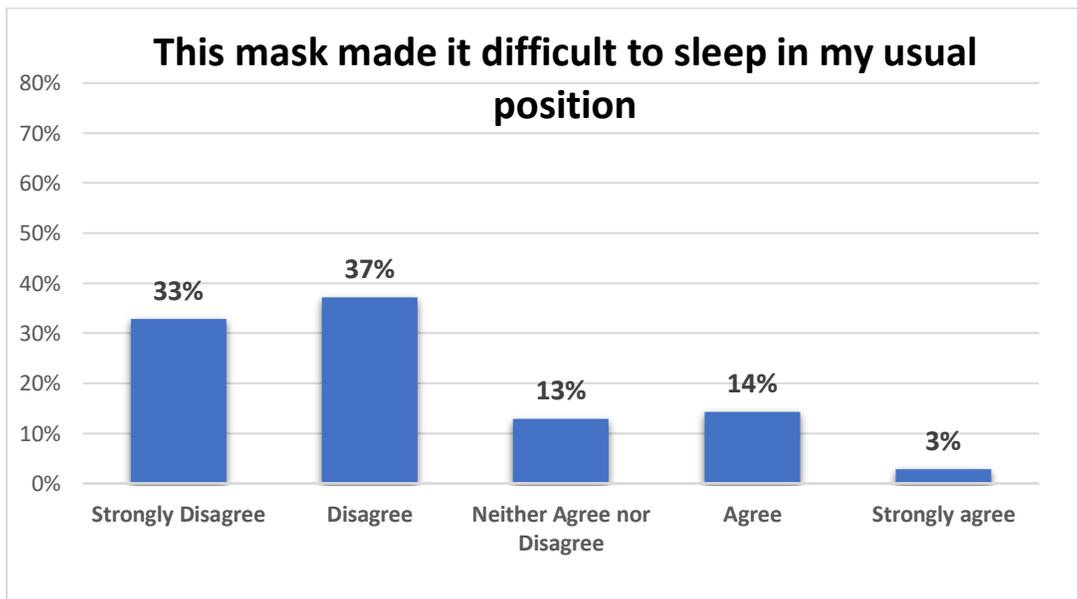
Figure 2g: Response to Question 7 of the participant survey (N = 70).
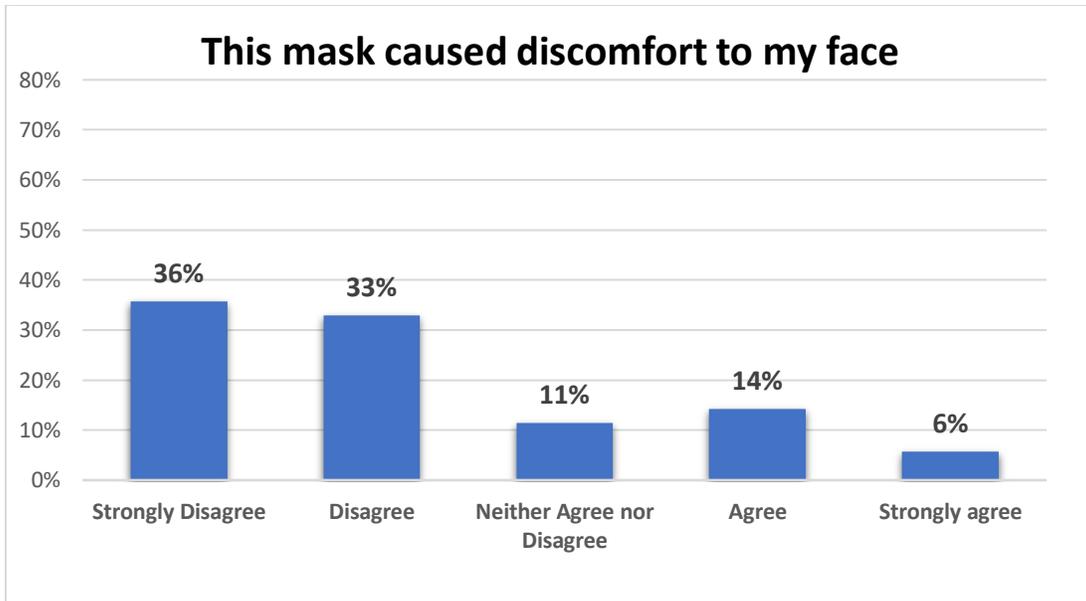
Figure 2h: Response to Question 8 of the participant survey (N = 70).
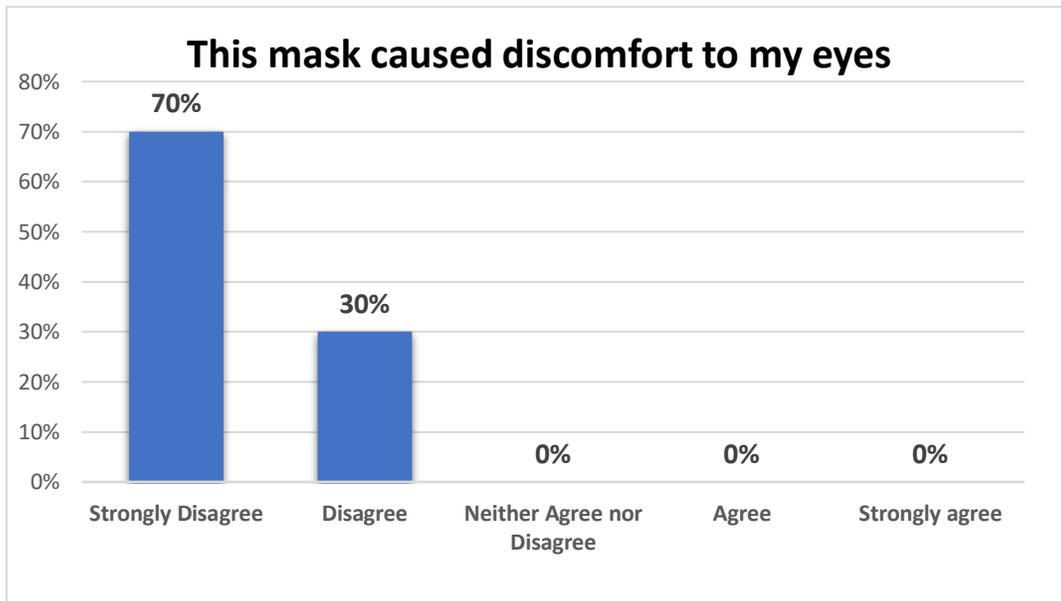
Figure 2i: Response to Question 9 of the participant survey (N = 70).
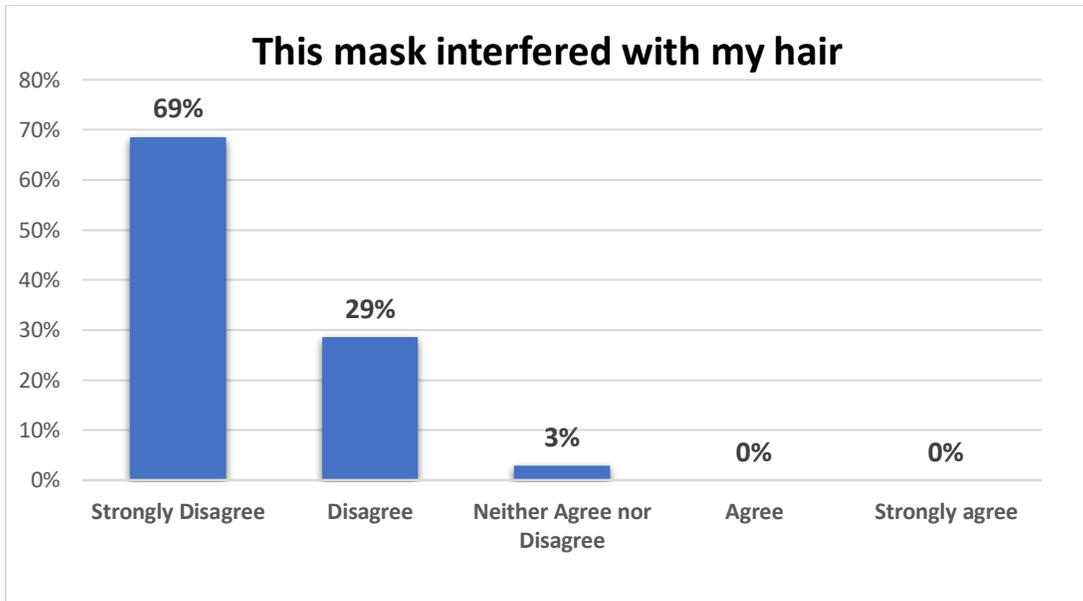
Figure 2j: Response to Question 10 of the participant survey (N = 70).
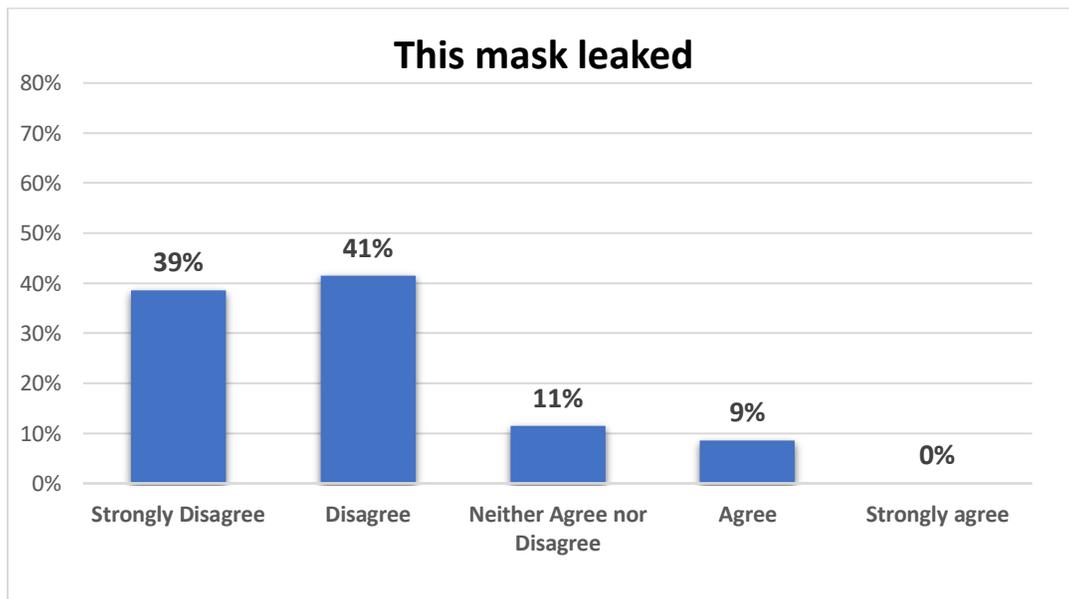
Figure 2k: Response to Question 11 of the participant survey (N = 70).
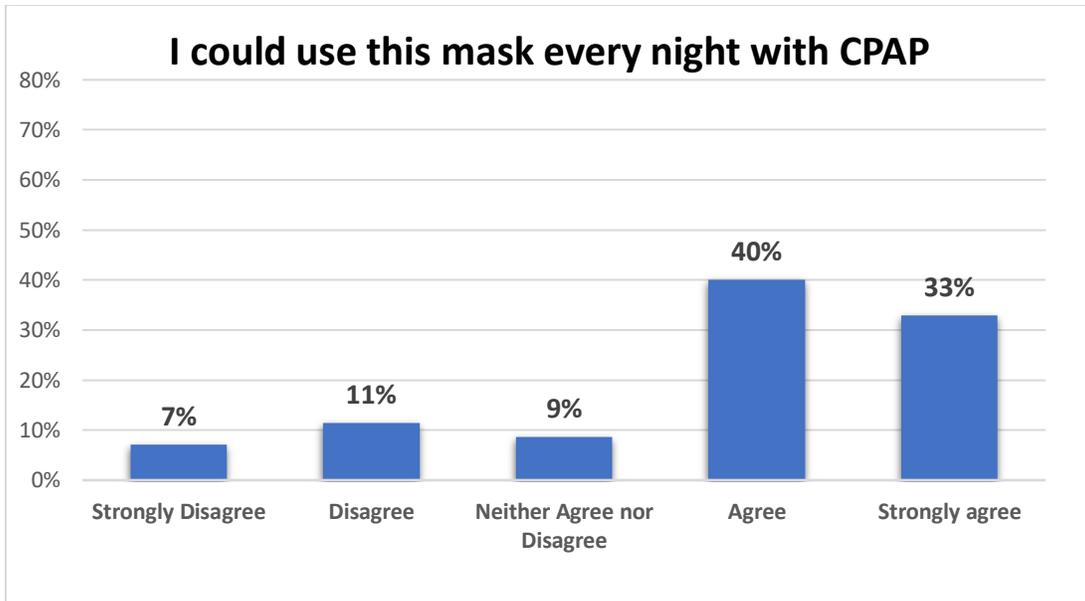
Figure 2l: Response to Question 12 of the participant survey (N = 70).
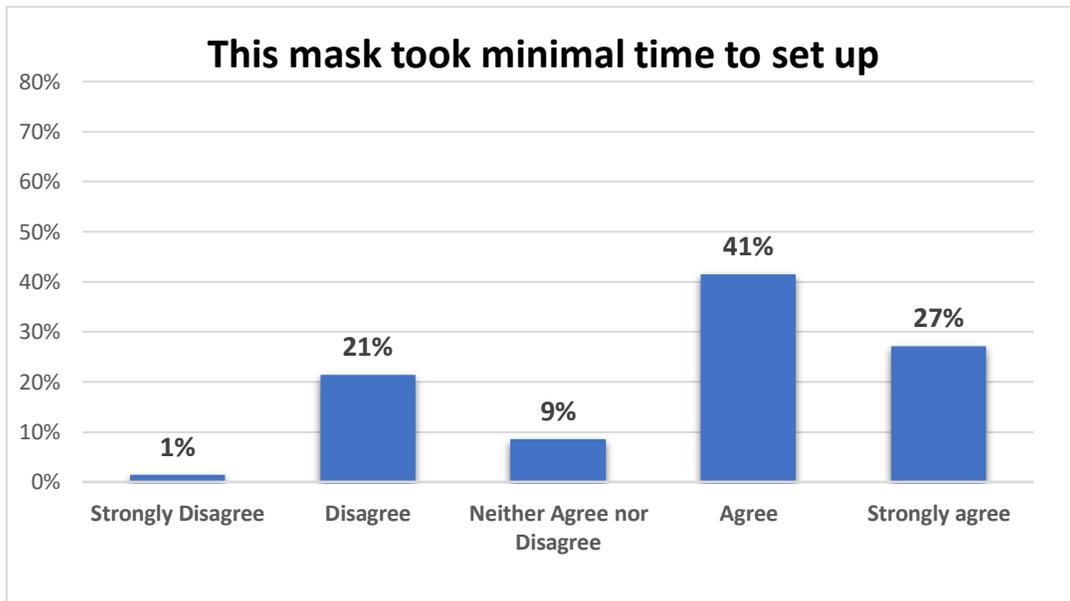
Figure 2m: Response to Question 13 of the participant survey (N = 70).
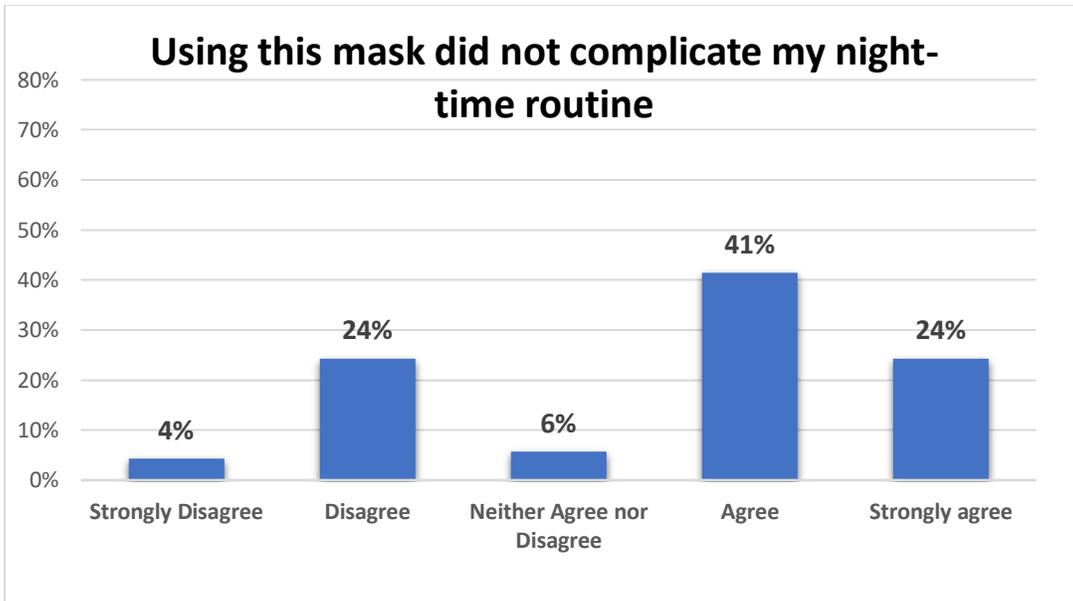
Figure 2n: Response to Question 14 of the participant survey (N = 70).
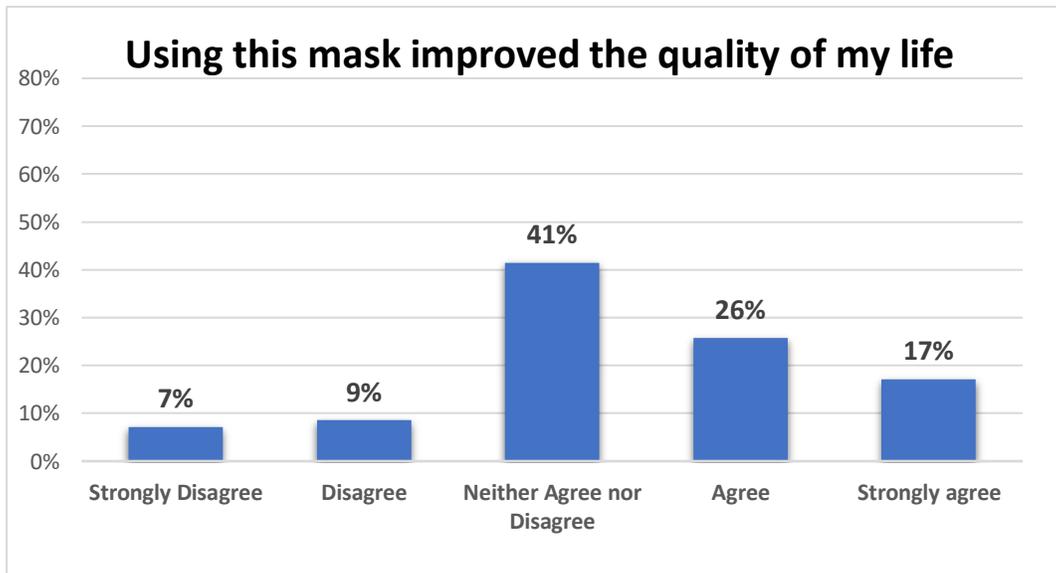
Figure 2o: Response to Question 15 of the participant survey (N = 70).
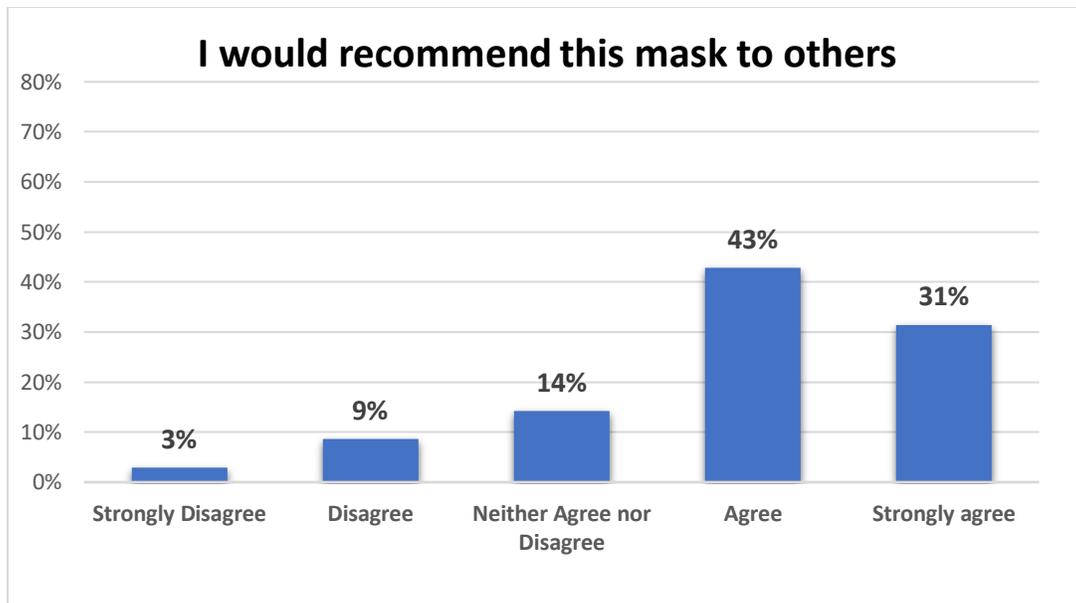
Figure 2p: Response to Question 16 of the participant survey (N = 70).

Statistical analysis was performed on the Likert Scale data using a single sample t-test for each question. To conduct the analysis, the 5-level responses were numerically coded with Strongly Disagree having value 1 while Strongly Agree on the opposing end had value 5, with the others corresponding in numerical succession between.

In the first analysis, deviation from the midpoint (i.e., a value of 3 corresponding to Neither Agree nor Disagree) was evaluated for each of the 16 questions. For reference, the 16 questions are listed in Methods and Materials above, while results of the first analysis appear in the following table. In this analysis, questions 1-11 are framed such that a response indicating a positive preference regarding the Bleep Eclipse Mask by the test subject is associated with a low numerical value (Disagree end of the Likert Scale), while the opposite is the case for questions 12-16.

Questions	Mean	SD	t statistic	p-value	Cohen's d
1	1.50	0.79	-15.81	1.26E-24	-1.89
2	1.80	0.97	-10.33	1.21E-15	-1.23
3	1.70	0.91	-12.00	1.5E-18	-1.43
4	2.16	1.14	-6.20	3.63E-08	-0.74
5	1.73	0.78	-13.66	2.67E-21	-1.63
6	1.50	0.72	-17.50	4.52E-27	-2.09
7	2.17	1.13	-6.14	4.61E-08	-0.73
8	2.21	1.24	-5.31	1.27E-06	-0.63
9	1.30	0.46	-30.82	4.57E-42	-3.68
10	1.34	0.54	-25.90	2.86E-37	-3.10
11	1.90	0.92	-10.01	4.44E-15	-1.20
12	3.80	1.22	5.47	6.69E-07	0.65
13	3.77	1.09	5.91	1.18E-07	0.71
14	3.74	1.13	5.52	5.49E-07	0.66
15	3.66	0.95	5.81	1.75E-07	0.69
16	4.03	0.92	9.39	5.83E-14	1.12

Table 4: Results of t-test analysis comparing the responses of each question to the midpoint value of 3 out of 5 Likert Scale responses (N=70). Questions 1-11 are framed such that positive preferences for the Bleep mask have values below 3 and for questions 12-16, positive preferences have values above 3. Means and standard deviations of Likert responses for each question appear in the leftward columns while statistics appear in the rightward.

Regression analysis was conducted to evaluate the association between responses for each question and the demographic variables (i.e., age, gender, and race). To control the familywise error rate, Bonferroni correction was used to adjust the alpha level (i.e., 0.05/16=0.003125). Results showed that age and gender were not statistically associated with the responses for all 16 questions. For question 2, responses from Asian and Hispanic users were significantly lower than White users (i.e., Asian, and Hispanic users had fewer problems with the masks than White users). For question 8, responses from Asian and Black users were significantly lower than White users (i.e., Asian, and Black users had fewer problems with the masks than White users). Regression coefficients, t-statistics, and the associated p-values were presented in the table below.

Questions	Age			Gender (Female vs. Male)			Race (Asian vs. White)			Race (Black vs. White)			Race (Hispanic vs. White)		
	B	t statistic	p-value	B	t statistic	p-value	B	t statistic	p-value	B	t statistic	p-value	B	t statistic	p-value
1	0.01	1.02	0.31	-0.07	-0.35	0.72	-0.50	-1.42	0.16	0.05	0.21	0.83	0.02	0.06	0.95
2	0.00	-0.43	0.67	-0.17	-0.76	0.45	-1.44	-3.69	0.00	-0.71	-2.77	0.01	-0.99	-3.17	0.00
3	0.00	-0.17	0.86	0.12	0.58	0.56	-1.08	-2.88	0.01	-0.69	-2.80	0.01	-0.81	-2.71	0.01
4	0.01	0.58	0.56	-0.14	-0.48	0.63	-0.87	-1.73	0.09	-0.04	-0.14	0.89	-0.27	-0.68	0.50
5	0.01	0.85	0.40	0.01	0.07	0.94	-0.74	-2.24	0.03	-0.48	-2.21	0.03	-0.38	-1.44	0.15
6	-0.01	-1.19	0.24	0.04	0.25	0.81	-0.77	-2.46	0.02	-0.23	-1.14	0.26	-0.35	-1.41	0.16
7	0.00	0.10	0.92	0.17	0.59	0.56	-0.79	-1.58	0.12	-0.41	-1.24	0.22	-0.60	-1.49	0.14
8	-0.03	-2.45	0.02	-0.05	-0.18	0.86	-1.55	-3.09	0.00	-1.03	-3.12	0.00	-1.20	-3.01	0.00
9	0.00	-0.08	0.94	0.07	0.62	0.54	-0.20	-0.98	0.33	-0.01	-0.04	0.97	-0.14	-0.86	0.39
10	0.00	0.51	0.61	-0.06	-0.44	0.66	0.05	0.19	0.85	0.18	1.11	0.27	0.13	0.66	0.51
11	0.01	1.25	0.22	-0.32	-1.47	0.15	-0.77	-1.98	0.05	-0.03	-0.13	0.90	-0.43	-1.38	0.17
12	-0.01	-1.15	0.26	0.54	1.97	0.05	1.41	2.90	0.01	0.95	2.99	0.00	0.75	1.93	0.06
13	0.00	0.06	0.95	0.25	0.92	0.36	0.93	1.93	0.06	0.16	0.52	0.60	0.46	1.21	0.23
14	0.00	0.06	0.95	0.27	1.00	0.32	1.18	2.51	0.01	0.79	2.55	0.01	1.00	2.66	0.01
15	-0.01	-0.72	0.47	0.37	1.60	0.12	0.77	1.89	0.06	0.02	0.07	0.95	0.29	0.88	0.38
16	0.00	-0.18	0.86	0.37	1.75	0.08	1.06	2.84	0.01	0.61	2.50	0.02	0.79	2.65	0.01

Table 5: Results of regression analysis examining the association between the Likert Scale responses and age, gender, and race (N=70). Because most test subjects were white, that race was used as a reference for other races. Highlighted p-values indicate significant difference in responses according to alpha = 0.003125.

Technical Issues, Additional Instructions, and Technican comments

In the following figure, the number of technical issues noted during the mask training are delineated. A summary of the detailed comments appears in Appendix D.

Number of Technical Issues	7
Number of Additional Instructions Needed	7
Number of Technician Comments	28

Table 6: Numerical count of the number of technical issues, additional comments, and technician comments that were noted during Study 363104.

A logistic regression analysis to evaluate the association between the demographics and the technical issues/additional instructions was also conducted. The only significant result is that female users are 12.31 times more likely to need additional instructions than male users (p=0.034).

Adverse Effects

There were no adverse effects in any of the Study 363104 trials.

Discussion and Conclusions

A brief discussion follows with conclusions broken out by section as delineated in the Results section. These are given below.

Survey Responses

The Participant survey response distribution is shown in the column charts in Figures 2a-p. These 16 questions in general asked about ease of use and the comfort of the Eclipse mask. As noted earlier in this report, a five-point Likert response scale was used in the survey. For questions 1-11, a positive response in favor of the Eclipse is indicated on the "Disagree" side of the Likert scale. For questions 12-16, a positive response in favor of the Eclipse is indicated on the "Agree" side of the Likert scale (the opposite of questions 1-11).

The statistical analysis presented in Table 5 indicates that for all 16 questions, the Eclipse mask is well liked with median to large effect size (Cohen's d > 0.5). Additionally, in Table 6, we can see that there is no association between responses and age or gender, and that only questions 2 and 8 have a racial dependency. Those questions are:

2] This mask was difficult to put on.

8] This mask caused discomfort to my face.

From these responses, the following can be concluded:

- Overall, participants liked the mask.
- The Eclipse does not make patients feel claustrophobic.
- Reconnecting the mask, which means to reconnect the frame was easy enough.
- The Eclipse mask would be a welcome option for most of the participants.
- The uniqueness of this mask and its novel approach application process was not a deterrent to its use.

Some of the issues in this section noted by the research team regarding the questions and how they may be modified in the future include the following:

- In four instances, the participants commented on the lack of swivel capability with the Eclipse; they commented that this would be a desired enhancement.
- It was not clear by the wording of the participant survey questions, if it was difficult to take the mask off or disconnect the magnetically connected hose from the Halo pads. This might be better clarified in future questionnaires by ensuring the questions are specific as to the exact cause of a difficulty.

Technical Issues, Additional Instructions and Technical Comments

Technical Issues are shown in Table D in Appendix D. There were seven technical issues reported. All seven of them related to the halo pads in some manner.

The required Additional Instructions are shown in Table E in Appendix E. Seven additional instructions were required in the trials. Again, all of them related to some aspect of the halo application.

The Technician Comments are shown in Table F in Appendix F. There was a total of 28 comments made by the DME technician during all the trials for all 70 participants. The comments can be summarized as to sentiment in three groups (Positive, Neutral, Negative) and generalized in five areas (design, availability, application, night wear, and CPAP issue).

The only significant statistical correlation found was that female subjects were 12.31 times more likely to require additional instructions ($p=0.034$).

<u>**Positive sentiment**</u>
- Design – 10 instances, excitement about the new design, no mask lines
- Availability – 1 instance, excited and wanted to know availability

<u>**Neutral sentiment**</u>
- Application – 6 instances, various application issues
- Design – 7 instances, curious as to cost, specifically-sized halo pads
- Night wear – 1 instance, wondered how to sneeze at night with the gear on

- CPAP issue – 2 instances, needed assistance with their CPAP unit (unrelated to Eclipse)

Negative sentiment
- Application – 1 instance, complained about the alcohol wipes

Additional Questions

The Participant survey included two open-end questions:

- Question 17 - How does this mask compare to other masks that you have tried in the past?
- Question 18- Thinking about your experiences with other masks, what did this mask address the best?

The responses to these questions are found in Appendix G

Summary

This study was conducted with 70 participants modeled on the race and gender guidelines as prescribed in protocol number BSL-SNAP-002, "*At-Home Usability Study Accessing the Use of Bleep DreamPort-Eclipse,*" 6/30/2022, Version 2.0.

The major positive takeaways are:

- Many were eager to use the mask right away
- Not having headgear was important to most participants

A negative takeaway:

- A minority of participants did not like the adhesive nature of the Halo pads

Acknowledgment

We would like to thank Dr. Ying Jin for providing the detailed statistical analysis for this report.

Appendix A – Participant Roster

Specific study participant demographic and identification breakdown:

Date of Trial	Race	Gender	Age
11/10/2022	Black	Female	61
11/10/2022	Black	Male	58
11/10/2022	White	Female	50
11/10/2022	Black	Male	57
11/11/2022	Black	Male	51
11/11/2022	White	Female	58
11/11/2022	White	Male	51
11/11/2022	White	Male	43
11/14/2022	Black	Male	45
11/14/2022	Hispanic	Female	60
11/15/2022	White	Male	56
11/15/2022	Asian	Male	27
11/15/2022	White	Male	37
11/17/2022	White	Female	44
11/17/2022	White	Male	49
11/17/2022	White	Male	59
11/17/2022	Black	Male	44
11/18/2022	Black	Female	35
11/18/2022	White	Male	49
11/11/2022	White	Female	48
11/18/2022	Black	Male	25
11/21/2022	White	Male	57
11/21/2022	Black	Female	64
11/21/2022	Black	Male	48
11/21/2022	Black	Male	63
11/21/2022	Asian	Male	44
11/22/2022	White	Male	34
11/23/2022	White	Male	38
11/23/2022	White	Female	41
11/28/2022	Asian	Female	40
12/6/2022	Hispanic	Female	36
12/6/2022	Hispanic	Male	34
12/6/2022	Black	Female	60
12/6/2022	Asian	Male	49
12/6/2022	Black	Female	44
12/7/2022	White	Female	41
12/7/2022	White	Male	49
12/7/2022	White	Male	73
12/7/2022	Black	Female	35
12/8/2022	White	Male	63
12/8/2022	White	Female	66
12/9/2022	White	Male	42
12/12/2022	Black	Female	45
12/13/2022	Black	Male	51

12/15/2022	Black	Male	53
12/16/2022	Black	Female	59
12/20/2022	Hispanic	Female	30
12/20/2022	Black	Male	36
12/20/2022	Black	Male	55
12/21/2022	Black	Male	57
12/22/2022	Hispanic	Male	35
12/28/2022	Hispanic	Female	37
12/28/2022	Hispanic	Male	32
12/28/2022	Black	Male	59
12/28/2022	Hispanic	Female	41
12/29/2022	Hispanic	Male	48
12/30/2022	Hispanic	Male	53
1/3/2023	Hispanic	Male	41
1/3/2023	Asian	Male	57
1/3/2023	Hispanic	Female	50
1/5/2023	Black	Male	34
1/10/2023	Hispanic	Male	43
1/10/2023	Hispanic	Male	56
1/10/2023	Black	Female	31
12/22/2022	Asian	Female	35
12/7/2022	White	Male	60
1/12/2023	White	Female	66
1/13/2023	Black	Male	29
1/13/2023	Black	Female	29
1/23/2023	Asian	Male	51

Table A: The Participant Roster for Study 363104.

Appendix B – At-home Trial Data

The trial data is shown below, denoting the Technician name, the SCMT clinic site, date of clinic visit and the data for all 70 participants. Of note is that the Bleep masks did not have a lot number on them; as a place holder '12345' was added to fill out that entry.

Technician	SCMT Site	Date of Clinic Visit	Race	Gender	Age	Bleep Mask Lot number
Bethany Douglas	Murfreesboro	11/10/2022	Black	Male	58	12345
Bethany Douglas	Murfreesboro	11/10/2022	White	Female	50	12345
Bethany Douglas	Murfreesboro	11/10/2022	Black	Male	57	12345
Bethany Douglas	Murfreesboro	11/10/2022	Black	Female	61	12345
Bethany Douglas	Murfreesboro	11/11/2022	White	Male	51	12345
Bethany Douglas	Murfreesboro	11/11/2022	White	Female	58	12345
Bethany Douglas	Murfreesboro	11/11/2022	White	Male	43	12345
Bethany Douglas	Murfreesboro	11/11/2022	White	Female	48	12345
Bethany Douglas	Murfreesboro	11/11/2022	Black	Male	51	12345
Bethany Douglas	Murfreesboro	11/14/2022	Black	Male	45	12345
Bethany Douglas	Murfreesboro	11/14/2022	Hispanic	Female	60	12345
Bethany Douglas	Murfreesboro	11/15/2022	Asian	Male	27	12345
Bethany Douglas	Murfreesboro	11/15/2022	White	Male	37	12345
Bethany Douglas	Murfreesboro	11/15/2022	White	Male	56	12345
Bethany Douglas	Murfreesboro	11/17/2022	White	Male	59	12345
Bethany Douglas	Murfreesboro	11/17/2022	White	Female	44	12345
Bethany Douglas	Murfreesboro	11/17/2022	White	Male	49	12345
Bethany Douglas	Murfreesboro	11/17/2022	Black	Male	44	12345
Bethany Douglas	Murfreesboro	11/18/2022	White	Male	49	12345
Bethany Douglas	Murfreesboro	11/18/2022	Black	Male	25	12345
Bethany Douglas	Murfreesboro	11/18/2022	Black	Female	35	12345
Bethany Douglas	Murfreesboro	11/21/2022	White	Male	57	12345
Bethany Douglas	Murfreesboro	11/21/2022	Black	Female	64	12345
Bethany Douglas	Murfreesboro	11/21/2022	Black	Male	63	12345
Bethany Douglas	Murfreesboro	11/21/2022	Asian	Male	44	12345
Bethany Douglas	Murfreesboro	11/21/2022	Black	Male	48	12345
Bethany Douglas	Murfreesboro	11/22/2022	White	Male	34	12345
Bethany Douglas	Murfreesboro	11/23/2022	White	Female	41	12345
Bethany Douglas	Murfreesboro	11/23/2022	White	Male	38	123456
Bethany Douglas	Murfreesboro	11/28/2022	Asian	Female	40	12345
Bethany Douglas	Clarksville	12/6/2022	Hispanic	Female	36	12345
Bethany Douglas	Clarksville	12/6/2022	Black	Female	60	12345
Bethany Douglas	Clarksville	12/6/2022	Black	Female	44	12345
Bethany Douglas	Clarksville	12/6/2022	Hispanic	Male	34	12345
Bethany Douglas	Clarksville	12/6/2022	Asian	Male	49	12345
Bethany Douglas	Murfreesboro	12/7/2022	White	Female	41	12345
Bethany Douglas	Murfreesboro	12/7/2022	Black	Female	35	12345
Bethany Douglas	Murfreesboro	12/7/2022	White	Male	60	12345

Bethany Douglas	Murfreesboro	12/7/2022	White	Male	73	12345
Bethany Douglas	Murfreesboro	12/7/2022	White	Male	49	12345
Bethany Douglas	Murfreesboro	12/8/2022	White	Female	66	12345
Bethany Douglas	Murfreesboro	12/8/2022	White	Male	63	12345
Bethany Douglas	Murfreesboro	12/9/2022	White	Male	42	12345
Bethany Douglas	Murfreesboro	12/12/2022	Black	Female	45	12345
Bethany Douglas	Murfreesboro	12/13/2022	Black	Male	51	12345
Bethany Douglas	Murfreesboro	12/15/2022	Black	Male	53	12345
Bethany Douglas	Murfreesboro	12/16/2022	Black	Female	59	12345
Bethany Douglas	Murfreesboro	12/20/2022	Black	Male	55	12345
Bethany Douglas	Murfreesboro	12/20/2022	Hispanic	Female	30	12345
Bethany Douglas	Murfreesboro	12/20/2022	Black	Male	36	12345
Bethany Douglas	Murfreesboro	12/21/2022	Black	Male	57	12345
Bethany Douglas	Murfreesboro	12/22/2022	Hispanic	Male	35	12345
Bethany Douglas	Murfreesboro	12/22/2022	Asian	Female	35	12345
Bethany Douglas	Clarksville	12/28/2022	Black	Male	59	12345
Bethany Douglas	Clarksville	12/28/2022	Hispanic	Female	41	12345
Bethany Douglas	Clarksville	12/28/2022	Hispanic	Female	37	12345
Bethany Douglas	Clarksville	12/28/2022	Hispanic	Male	32	12345
Bethany Douglas	Murfreesboro	12/29/2022	Hispanic	Male	48	12345
Bethany Douglas	Murfreesboro	12/30/2022	Hispanic	Male	53	12345
Bethany Douglas	Clarksville	1/3/2023	Asian	Male	57	12345
Bethany Douglas	Clarksville	1/3/2023	Hispanic	Female	50	12345
Bethany Douglas	Clarksville	1/3/2023	Hispanic	Male	41	12345
Bethany Douglas	Murfreesboro	1/5/2023	Black	Male	34	12345
Bethany Douglas	Clarksville	1/10/2023	Black	Female	31	12345
Bethany Douglas	Clarksville	1/10/2023	Hispanic	Male	43	12345
Bethany Douglas	Clarksville	1/10/2023	Hispanic	Male	56	12345
Bethany Douglas	Murfreesboro	1/12/2023	White	Female	66	12345
Bethany Douglas	Murfreesboro	1/13/2023	Black	Male	29	12345
Bethany Douglas	Murfreesboro	1/13/2023	Black	Female	29	12345
Bethany Douglas	Murfreesboro	1/23/2023	Asian	Male	51	12345

Table B: Eclipse mask trial dates for all participants.

Appendix C – Participant Survey Responses

Date	Race	Gender	Age	This mask made me feel claustrophobic	This mask was difficult to put on.	This mask was difficult to take off.
11/20/2022	White	Male	59	Disagree	Neither Agree nor Disagree	Disagree
12/9/2022	White	Female	41	Disagree	Neither Agree nor Disagree	Agree
11/17/2022	Black	Male	45	Neither Agree nor Disagree	Strongly disagree	Strongly disagree
11/28/2022	White	Male	34	Strongly disagree	Strongly disagree	Strongly disagree
12/9/2022	Black	Female	35	Disagree	Strongly disagree	Strongly disagree
11/20/2022	White	Male	51	Strongly disagree	Disagree	Disagree
12/13/2022	White	Male	42	Strongly disagree	Agree	Neither Agree nor Disagree
11/16/2022	White	Female	58	Disagree	Disagree	Disagree
11/17/2022	Black	Male	58	Strongly disagree	Strongly disagree	Strongly disagree
12/8/2022	White	Male	57	Neither Agree nor Disagree	Agree	Agree
11/14/2022	White	Female	50	Disagree	Disagree	Disagree
11/20/2022	White	Male	49	Strongly disagree	Agree	Agree
11/16/2022	Hispanic	Female	60	Strongly disagree	Strongly disagree	Disagree
11/29/2022	Black	Female	64	Disagree	Disagree	Disagree
11/18/2022	Asian	Male	27	Strongly disagree	Strongly disagree	Strongly disagree
11/14/2022	White	Male	43	Disagree	Neither Agree nor Disagree	Agree
11/17/2022	White	Male	37	Strongly disagree	Strongly disagree	Strongly disagree
11/21/2022	White	Female	44	Strongly disagree	Strongly disagree	Disagree
11/17/2022	White	Male	56	Strongly disagree	Strongly disagree	Strongly disagree
12/10/2022	White	Female	66	Disagree	Disagree	Neither Agree nor Disagree
11/23/2022	Black	Male	25	Strongly disagree	Strongly disagree	Neither Agree nor Disagree
11/20/2022	White	Male	49	Strongly disagree	Strongly disagree	Strongly disagree
11/20/2022	Black	Female	35	Disagree	Strongly disagree	Strongly disagree
12/9/2022	White	Male	60	Strongly disagree	Strongly disagree	Strongly disagree
11/23/2022	Black	Male	63	Disagree	Disagree	Agree
12/12/2022	White	Male	63	Strongly disagree	Agree	Disagree
12/12/2022	White	Male	73	Neither Agree nor Disagree	Disagree	Disagree
11/27/2022	Asian	Male	44	Strongly disagree	Strongly disagree	Strongly disagree
12/15/2022	Black	Female	45	Strongly disagree	Disagree	Disagree
11/28/2022	Black	Male	44	Disagree	Disagree	Disagree
11/20/2022	White	Female	48	Strongly disagree	Agree	Agree
11/25/2022	White	Female	41	Strongly disagree	Disagree	Strongly disagree
12/9/2022	White	Male	49	Disagree	Neither Agree nor Disagree	Strongly disagree
11/14/2022	Black	Male	57	Strongly disagree	Strongly disagree	Strongly disagree
11/24/2022	Black	Male	48	Strongly disagree	Strongly disagree	Strongly disagree
11/21/2022	Black	Male	51	Disagree	Disagree	Disagree
11/25/2022	White	Male	38	Disagree	Neither Agree nor Disagree	Disagree
11/14/2022	Black	Female	61	Strongly disagree	Strongly disagree	Strongly disagree
12/7/2022	Asian	Female	40	Strongly disagree	Strongly disagree	Strongly disagree

Date	Race	Gender	Age	This mask made me feel claustrophobic	This mask was difficult to put on.	This mask was difficult to take off.
12/13/2022	Black	Male	51	Disagree	Disagree	Strongly disagree
12/18/2022	Black	Female	59	Strongly disagree	Strongly disagree	Disagree
12/17/2022	Black	Male	53	Strongly disagree	Strongly disagree	Strongly disagree
12/30/2022	Black	Male	57	Strongly disagree	Agree	Strongly disagree
12/28/2022	Hispanic	Female	30	Strongly disagree	Strongly disagree	Disagree
12/22/2022	Black	Male	36	Disagree	Strongly disagree	Disagree
12/25/2022	Hispanic	Male	35	Strongly disagree	Disagree	Disagree
12/31/2022	Asian	Female	35	Strongly disagree	Strongly disagree	Strongly disagree
1/3/2023	Hispanic	Male	53	Strongly disagree	Strongly disagree	Strongly disagree
1/3/2023	Hispanic	Male	48	Strongly disagree	Strongly disagree	Strongly disagree
1/9/2023	Black	Male	34	Strongly disagree	Neither Agree nor Disagree	Disagree
1/15/2023	White	Female	66	Disagree	Disagree	Disagree
1/16/2023	Black	Male	29	Strongly disagree	Disagree	Strongly disagree
1/16/2023	Black	Female	29	Disagree	Disagree	Disagree
12/8/2022	Hispanic	Female	36	Neither Agree nor Disagree	Strongly disagree	Strongly disagree
12/19/2022	Black	Female	60	Strongly disagree	Strongly disagree	Strongly disagree
12/8/2022	Black	Female	44	Strongly disagree	Disagree	Strongly disagree
12/9/2022	Hispanic	Male	34	Disagree	Disagree	Strongly disagree
12/14/2022	Asian	Male	49	Strongly disagree	Strongly disagree	Strongly disagree
1/5/2023	Asian	Male	57	Strongly disagree	Strongly disagree	Strongly disagree
1/12/2023	Black	Female	31	Strongly disagree	Agree	Disagree
12/30/2022	Black	Male	59	Strongly agree	Strongly disagree	Strongly disagree
12/31/2022	Hispanic	Female	41	Strongly disagree	Strongly disagree	Strongly disagree
1/5/2023	Hispanic	Female	50	Disagree	Disagree	Disagree
12/29/2022	Hispanic	Female	37	Strongly disagree	Strongly disagree	Strongly disagree
12/30/2022	Hispanic	Male	32	Strongly disagree	Strongly disagree	Strongly disagree
1/5/2023	Hispanic	Male	41	Agree	Disagree	Disagree
1/13/2023	Hispanic	Male	43	Strongly disagree	Disagree	Disagree
1/12/2023	Hispanic	Male	56	Strongly disagree	Disagree	Strongly disagree

Table C1: Summary of all survey data for all participants, Questions 1,2 and 3.

Date	Race	Gender	Age	I had to adjust this mask frequently	This mask was difficult to disconnect	This mast was difficult to reconnect
11/20/2022	White	Male	59	Agree	Neither Agree nor Disagree	Strongly disagree
12/9/2022	White	Female	41	Neither Agree nor Disagree	Agree	Disagree
11/17/2022	Black	Male	45	Agree	Disagree	Disagree
11/28/2022	White	Male	34	Strongly disagree	Strongly disagree	Strongly disagree
12/9/2022	Black	Female	35	Strongly disagree	Strongly disagree	Strongly disagree
11/20/2022	White	Male	51	Disagree	Disagree	Strongly disagree
12/13/2022	White	Male	42	Neither Agree nor Disagree	Agree	Agree
11/16/2022	White	Female	58	Neither Agree nor Disagree	Strongly disagree	Strongly disagree
11/17/2022	Black	Male	58	Strongly disagree	Strongly disagree	Strongly disagree
12/8/2022	White	Male	57	Agree	Agree	Neither Agree nor Disagree
11/14/2022	White	Female	50	Disagree	Disagree	Disagree
11/20/2022	White	Male	49	Strongly disagree	Disagree	Strongly disagree
11/16/2022	Hispanic	Female	60	Agree	Disagree	Disagree
11/29/2022	Black	Female	64	Disagree	Disagree	Disagree
11/18/2022	Asian	Male	27	Disagree	Strongly disagree	Strongly disagree
11/14/2022	White	Male	43	Strongly agree	Disagree	Neither Agree nor Disagree
11/17/2022	White	Male	37	Strongly disagree	Strongly disagree	Strongly disagree
11/21/2022	White	Female	44	Disagree	Disagree	Disagree
11/17/2022	White	Male	56	Strongly disagree	Strongly disagree	Strongly disagree
12/10/2022	White	Female	66	Disagree	Neither Agree nor Disagree	Disagree
11/23/2022	Black	Male	25	Disagree	Strongly disagree	Neither Agree nor Disagree
11/20/2022	White	Male	49	Strongly disagree	Strongly disagree	Strongly disagree
11/20/2022	Black	Female	35	Neither Agree nor Disagree	Disagree	Strongly disagree
12/9/2022	White	Male	60	Disagree	Disagree	Strongly disagree
11/23/2022	Black	Male	63	Disagree	Agree	Disagree
12/12/2022	White	Male	63	Neither Agree nor Disagree	Disagree	Disagree
12/12/2022	White	Male	73	Strongly disagree	Disagree	Disagree
11/27/2022	Asian	Male	44	Strongly disagree	Strongly disagree	Strongly disagree
12/15/2022	Black	Female	45	Strongly disagree	Disagree	Strongly disagree
11/28/2022	Black	Male	44	Disagree	Disagree	Disagree
11/20/2022	White	Female	48	Agree	Disagree	Strongly disagree
11/25/2022	White	Female	41	Disagree	Strongly disagree	Strongly disagree
12/9/2022	White	Male	49	Neither Agree nor Disagree	Disagree	Disagree
11/14/2022	Black	Male	57	Strongly disagree	Strongly disagree	Strongly disagree
11/24/2022	Black	Male	48	Disagree	Strongly disagree	Strongly disagree
11/21/2022	Black	Male	51	Neither Agree nor Disagree	Disagree	Disagree
11/25/2022	White	Male	38	Disagree	Disagree	Disagree
11/14/2022	Black	Female	61	Strongly disagree	Disagree	Disagree
12/7/2022	Asian	Female	40	Strongly disagree	Strongly disagree	Strongly disagree
12/23/2022	Black	Male	55	Agree	Strongly disagree	Strongly disagree
12/13/2022	Black	Male	51	Neither Agree nor Disagree	Strongly disagree	Strongly disagree
12/18/2022	Black	Female	59	Disagree	Disagree	Strongly disagree
12/17/2022	Black	Male	53	Strongly disagree	Strongly disagree	Strongly disagree

Date	Race	Gender	Age	I had to adjust this mask frequently	This mask was difficult to disconnect	This mast was difficult to reconnect
12/30/2022	Black	Male	57	Agree	Strongly disagree	Strongly disagree
12/28/2022	Hispanic	Female	30	Strongly disagree	Disagree	Disagree
12/22/2022	Black	Male	36	Agree	Disagree	Disagree
12/25/2022	Hispanic	Male	35	Disagree	Disagree	Disagree
12/31/2022	Asian	Female	35	Strongly disagree	Disagree	Strongly disagree
1/3/2023	Hispanic	Male	53	Strongly agree	Disagree	Strongly disagree
1/3/2023	Hispanic	Male	48	Strongly disagree	Strongly disagree	Strongly disagree
1/9/2023	Black	Male	34	Disagree	Disagree	Strongly disagree
1/15/2023	White	Female	66	Disagree	Disagree	Disagree
1/16/2023	Black	Male	29	Disagree	Disagree	Strongly disagree
1/16/2023	Black	Female	29	Disagree	Disagree	Disagree
12/8/2022	Hispanic	Female	36	Strongly disagree	Strongly disagree	Strongly disagree
12/19/2022	Black	Female	60	Agree	Strongly disagree	Strongly disagree
12/8/2022	Black	Female	44	Disagree	Strongly disagree	Strongly disagree
12/9/2022	Hispanic	Male	34	Strongly disagree	Strongly disagree	Strongly disagree
12/14/2022	Asian	Male	49	Strongly disagree	Strongly disagree	Strongly disagree
1/5/2023	Asian	Male	57	Disagree	Strongly disagree	Strongly disagree
1/12/2023	Black	Female	31	Neither Agree nor Disagree	Strongly disagree	Agree
12/30/2022	Black	Male	59	Strongly disagree	Strongly disagree	Strongly disagree
12/31/2022	Hispanic	Female	41	Disagree	Strongly disagree	Strongly disagree
1/5/2023	Hispanic	Female	50	Disagree	Disagree	Disagree
12/29/2022	Hispanic	Female	37	Strongly disagree	Strongly disagree	Strongly disagree
12/30/2022	Hispanic	Male	32	Disagree	Disagree	Strongly disagree
1/5/2023	Hispanic	Male	41	Agree	Disagree	Disagree
1/13/2023	Hispanic	Male	43	Strongly disagree	Disagree	Disagree
1/12/2023	Hispanic	Male	56	Strongly disagree	Disagree	Strongly disagree

Table C2: Summary of all survey data for all participants, Questions 4, 5, and 6.

Date	Race	Gender	Age	This mask made it difficult to sleep in my usual position	This mask caused discomfort to my face	This mask caused discomfort to my eyes
11/20/2022	White	Male	59	Agree	Disagree	Strongly disagree
12/9/2022	White	Female	41	Neither Agree nor Disagree	Agree	Disagree
11/17/2022	Black	Male	45	Agree	Agree	Disagree
11/28/2022	White	Male	34	Strongly disagree	Strongly agree	Strongly disagree
12/9/2022	Black	Female	35	Disagree	Disagree	Strongly disagree
11/20/2022	White	Male	51	Disagree	Disagree	Strongly disagree
12/13/2022	White	Male	42	Disagree	Agree	Strongly disagree
11/16/2022	White	Female	58	Neither Agree nor Disagree	Strongly disagree	Strongly disagree
11/17/2022	Black	Male	58	Strongly disagree	Strongly disagree	Strongly disagree
12/8/2022	White	Male	57	Strongly agree	Strongly agree	Disagree
11/14/2022	White	Female	50	Disagree	Disagree	Disagree
11/20/2022	White	Male	49	Neither Agree nor Disagree	Agree	Strongly disagree
11/16/2022	Hispanic	Female	60	Disagree	Strongly disagree	Strongly disagree
11/29/2022	Black	Female	64	Disagree	Disagree	Disagree
11/18/2022	Asian	Male	27	Disagree	Disagree	Disagree
11/14/2022	White	Male	43	Agree	Agree	Disagree
11/17/2022	White	Male	37	Strongly disagree	Strongly disagree	Strongly disagree
11/21/2022	White	Female	44	Agree	Agree	Disagree
11/17/2022	White	Male	56	Strongly disagree	Strongly disagree	Strongly disagree
12/10/2022	White	Female	66	Disagree	Neither Agree nor Disagree	Disagree
11/23/2022	Black	Male	25	Strongly disagree	Strongly disagree	Strongly disagree
11/20/2022	White	Male	49	Strongly disagree	Strongly disagree	Strongly disagree
11/20/2022	Black	Female	35	Strongly disagree	Neither Agree nor Disagree	Strongly disagree
12/9/2022	White	Male	60	Strongly disagree	Strongly disagree	Strongly disagree
11/23/2022	Black	Male	63	Agree	Agree	Disagree
12/12/2022	White	Male	63	Disagree	Neither Agree nor Disagree	Strongly disagree
12/12/2022	White	Male	73	Strongly disagree	Strongly disagree	Strongly disagree
11/27/2022	Asian	Male	44	Strongly disagree	Strongly disagree	Strongly disagree
12/15/2022	Black	Female	45	Disagree	Disagree	Strongly disagree
11/28/2022	Black	Male	44	Disagree	Disagree	Strongly disagree
11/20/2022	White	Female	48	Agree	Agree	Strongly disagree
11/25/2022	White	Female	41	Disagree	Neither Agree nor Disagree	Strongly disagree
12/9/2022	White	Male	49	Agree	Strongly agree	Strongly disagree
11/14/2022	Black	Male	57	Strongly disagree	Strongly disagree	Strongly disagree
11/24/2022	Black	Male	48	Neither Agree nor Disagree	Disagree	Strongly disagree
11/21/2022	Black	Male	51	Neither Agree nor Disagree	Strongly disagree	Strongly disagree
11/25/2022	White	Male	38	Disagree	Agree	Disagree
11/14/2022	Black	Female	61	Disagree	Strongly disagree	Strongly disagree
12/7/2022	Asian	Female	40	Disagree	Strongly disagree	Strongly disagree
12/23/2022	Black	Male	55	Disagree	Disagree	Disagree
12/13/2022	Black	Male	51	Neither Agree nor Disagree	Disagree	Strongly disagree
12/18/2022	Black	Female	59	Disagree	Disagree	Disagree
12/17/2022	Black	Male	53	Strongly disagree	Strongly disagree	Strongly disagree

Date	Race	Gender	Age	This mask made it difficult to sleep in my usual position	This mask caused discomfort to my face	This mask caused discomfort to my eyes
12/30/2022	Black	Male	57	Disagree	Disagree	Disagree
12/28/2022	Hispanic	Female	30	Disagree	Strongly disagree	Strongly disagree
12/22/2022	Black	Male	36	Disagree	Disagree	Disagree
12/25/2022	Hispanic	Male	35	Disagree	Disagree	Disagree
12/31/2022	Asian	Female	35	Neither Agree nor Disagree	Neither Agree nor Disagree	Strongly disagree
1/3/2023	Hispanic	Male	53	Strongly agree	Strongly agree	Strongly disagree
1/3/2023	Hispanic	Male	48	Strongly disagree	Strongly disagree	Strongly disagree
1/9/2023	Black	Male	34	Agree	Disagree	Disagree
1/15/2023	White	Female	66	Agree	Disagree	Disagree
1/16/2023	Black	Male	29	Strongly disagree	Disagree	Strongly disagree
1/16/2023	Black	Female	29	Neither Agree nor Disagree	Neither Agree nor Disagree	Disagree
12/8/2022	Hispanic	Female	36	Disagree	Strongly disagree	Strongly disagree
12/19/2022	Black	Female	60	Strongly disagree	Strongly disagree	Strongly disagree
12/8/2022	Black	Female	44	Neither Agree nor Disagree	Strongly disagree	Strongly disagree
12/9/2022	Hispanic	Male	34	Strongly disagree	Disagree	Strongly disagree
12/14/2022	Asian	Male	49	Strongly disagree	Strongly disagree	Strongly disagree
1/5/2023	Asian	Male	57	Disagree	Strongly disagree	Strongly disagree
1/12/2023	Black	Female	31	Disagree	Agree	Strongly disagree
12/30/2022	Black	Male	59	Strongly disagree	Strongly disagree	Strongly disagree
12/31/2022	Hispanic	Female	41	Strongly disagree	Strongly disagree	Strongly disagree
1/5/2023	Hispanic	Female	50	Disagree	Disagree	Disagree
12/29/2022	Hispanic	Female	37	Strongly disagree	Neither Agree nor Disagree	Strongly disagree
12/30/2022	Hispanic	Male	32	Disagree	Neither Agree nor Disagree	Strongly disagree
1/5/2023	Hispanic	Male	41	Agree	Disagree	Disagree
1/13/2023	Hispanic	Male	43	Strongly disagree	Strongly disagree	Strongly disagree
1/12/2023	Hispanic	Male	56	Strongly disagree	Disagree	Strongly disagree

Table C3: Summary of all survey data for all participants, Questions 7, 8 and 9.

Date	Race	Gender	Age	This mask interfered with my hair	This mask leaked	I could use this mask every night with CPAP
11/20/2022	White	Male	59	Strongly disagree	Neither Agree nor Disagree	Disagree
12/9/2022	White	Female	41	Disagree	Neither Agree nor Disagree	Disagree
11/17/2022	Black	Male	45	Disagree	Agree	Disagree
11/28/2022	White	Male	34	Strongly disagree	Strongly disagree	Strongly disagree
12/9/2022	Black	Female	35	Strongly disagree	Strongly disagree	Agree
11/20/2022	White	Male	51	Strongly disagree	Disagree	Agree
12/13/2022	White	Male	42	Strongly disagree	Strongly disagree	Agree
11/16/2022	White	Female	58	Strongly disagree	Neither Agree nor Disagree	Agree
11/17/2022	Black	Male	58	Strongly disagree	Strongly disagree	Strongly agree
12/8/2022	White	Male	57	Disagree	Agree	Strongly disagree
11/14/2022	White	Female	50	Strongly disagree	Disagree	Agree
11/20/2022	White	Male	49	Strongly disagree	Strongly disagree	Strongly disagree
11/16/2022	Hispanic	Female	60	Strongly disagree	Disagree	Neither Agree nor Disagree
11/29/2022	Black	Female	64	Disagree	Disagree	Agree
11/18/2022	Asian	Male	27	Strongly disagree	Strongly disagree	Strongly agree
11/14/2022	White	Male	43	Strongly disagree	Agree	Disagree
11/17/2022	White	Male	37	Strongly disagree	Strongly disagree	Strongly agree
11/21/2022	White	Female	44	Disagree	Disagree	Disagree
11/17/2022	White	Male	56	Strongly disagree	Strongly disagree	Agree
12/10/2022	White	Female	66	Disagree	Disagree	Neither Agree nor Disagree
11/23/2022	Black	Male	25	Strongly disagree	Neither Agree nor Disagree	Strongly agree
11/20/2022	White	Male	49	Strongly disagree	Neither Agree nor Disagree	Agree
11/20/2022	Black	Female	35	Disagree	Neither Agree nor Disagree	Strongly agree
12/9/2022	White	Male	60	Strongly disagree	Disagree	Strongly agree
11/23/2022	Black	Male	63	Disagree	Disagree	Strongly disagree
12/12/2022	White	Male	63	Strongly disagree	Neither Agree nor Disagree	Neither Agree nor Disagree
12/12/2022	White	Male	73	Strongly disagree	Disagree	Neither Agree nor Disagree
11/27/2022	Asian	Male	44	Strongly disagree	Strongly disagree	Strongly agree
12/15/2022	Black	Female	45	Strongly disagree	Disagree	Agree
11/28/2022	Black	Male	44	Disagree	Disagree	Agree
11/20/2022	White	Female	48	Strongly disagree	Strongly disagree	Agree
11/25/2022	White	Female	41	Strongly disagree	Disagree	Agree
12/9/2022	White	Male	49	Strongly disagree	Disagree	Disagree
11/14/2022	Black	Male	57	Strongly disagree	Disagree	Strongly agree
11/24/2022	Black	Male	48	Strongly disagree	Strongly disagree	Agree
11/21/2022	Black	Male	51	Strongly disagree	Neither Agree nor Disagree	Neither Agree nor Disagree
11/25/2022	White	Male	38	Disagree	Disagree	Neither Agree nor Disagree
11/14/2022	Black	Female	61	Strongly disagree	Disagree	Strongly agree
12/7/2022	Asian	Female	40	Strongly disagree	Strongly disagree	Agree
12/23/2022	Black	Male	55	Disagree	Agree	Agree
12/13/2022	Black	Male	51	Disagree	Strongly disagree	Agree
12/18/2022	Black	Female	59	Strongly disagree	Strongly disagree	Agree
12/17/2022	Black	Male	53	Strongly disagree	Strongly disagree	Strongly agree

Date	Race	Gender	Age	This mask interfered with my hair	This mask leaked	I could use this mask every night with CPAP
12/30/2022	Black	Male	57	Disagree	Agree	Disagree
12/28/2022	Hispanic	Female	30	Strongly disagree	Strongly disagree	Strongly agree
12/22/2022	Black	Male	36	Disagree	Disagree	Strongly agree
12/25/2022	Hispanic	Male	35	Disagree	Disagree	Agree
12/31/2022	Asian	Female	35	Strongly disagree	Strongly disagree	Strongly agree
1/3/2023	Hispanic	Male	53	Strongly disagree	Agree	Strongly disagree
1/3/2023	Hispanic	Male	48	Strongly disagree	Strongly disagree	Strongly agree
1/9/2023	Black	Male	34	Disagree	Disagree	Agree
1/15/2023	White	Female	66	Disagree	Disagree	Agree
1/16/2023	Black	Male	29	Strongly disagree	Disagree	Agree
1/16/2023	Black	Female	29	Disagree	Disagree	Agree
12/8/2022	Hispanic	Female	36	Strongly disagree	Strongly disagree	Strongly agree
12/19/2022	Black	Female	60	Strongly disagree	Strongly disagree	Strongly agree
12/8/2022	Black	Female	44	Strongly disagree	Disagree	Strongly agree
12/9/2022	Hispanic	Male	34	Strongly disagree	Strongly disagree	Strongly agree
12/14/2022	Asian	Male	49	Strongly disagree	Strongly disagree	Agree
1/5/2023	Asian	Male	57	Neither Agree nor Disagree	Disagree	Agree
1/12/2023	Black	Female	31	Strongly disagree	Strongly disagree	Strongly agree
12/30/2022	Black	Male	59	Strongly disagree	Disagree	Strongly agree
12/31/2022	Hispanic	Female	41	Strongly disagree	Strongly disagree	Strongly agree
1/5/2023	Hispanic	Female	50	Disagree	Disagree	Agree
12/29/2022	Hispanic	Female	37	Strongly disagree	Strongly disagree	Strongly agree
12/30/2022	Hispanic	Male	32	Strongly disagree	Strongly disagree	Agree
1/5/2023	Hispanic	Male	41	Disagree	Disagree	Disagree
1/13/2023	Hispanic	Male	43	Neither Agree nor Disagree	Disagree	Agree
1/12/2023	Hispanic	Male	56	Strongly disagree	Strongly disagree	Agree

Table C4: Summary of all survey data for all participants, Questions 10, 11, and 12.

Date	Race	Gender	Age	This mask took minimal time to set up	Using this mask did not complicate my night-time routine
11/20/2022	White	Male	59	Disagree	Disagree
12/9/2022	White	Female	41	Disagree	Disagree
11/17/2022	Black	Male	45	Agree	Agree
11/28/2022	White	Male	34	Agree	Disagree
12/9/2022	Black	Female	35	Neither Agree nor Disagree	Agree
11/20/2022	White	Male	51	Agree	Agree
12/13/2022	White	Male	42	Disagree	Disagree
11/16/2022	White	Female	58	Agree	Agree
11/17/2022	Black	Male	58	Strongly agree	Strongly agree
12/8/2022	White	Male	57	Agree	Disagree
11/14/2022	White	Female	50	Agree	Agree
11/20/2022	White	Male	49	Disagree	Disagree
11/16/2022	Hispanic	Female	60	Disagree	Disagree
11/29/2022	Black	Female	64	Agree	Agree
11/18/2022	Asian	Male	27	Agree	Agree
11/14/2022	White	Male	43	Neither Agree nor Disagree	Disagree
11/17/2022	White	Male	37	Strongly agree	Strongly agree
11/21/2022	White	Female	44	Agree	Agree
11/17/2022	White	Male	56	Strongly agree	Strongly agree
12/10/2022	White	Female	66	Agree	Agree
11/23/2022	Black	Male	25	Strongly agree	Strongly agree
11/20/2022	White	Male	49	Neither Agree nor Disagree	Agree
11/20/2022	Black	Female	35	Strongly agree	Strongly agree
12/9/2022	White	Male	60	Agree	Agree
11/23/2022	Black	Male	63	Agree	Disagree
12/12/2022	White	Male	63	Disagree	Disagree
12/12/2022	White	Male	73	Agree	Agree
11/27/2022	Asian	Male	44	Strongly agree	Strongly agree
12/15/2022	Black	Female	45	Agree	Agree
11/28/2022	Black	Male	44	Agree	Agree
11/20/2022	White	Female	48	Disagree	Disagree
11/25/2022	White	Female	41	Agree	Agree
12/9/2022	White	Male	49	Agree	Disagree
11/14/2022	Black	Male	57	Strongly agree	Strongly agree
11/24/2022	Black	Male	48	Agree	Agree
11/21/2022	Black	Male	51	Neither Agree nor Disagree	Neither Agree nor Disagree
11/25/2022	White	Male	38	Strongly Disagree	Disagree
11/14/2022	Black	Female	61	Strongly agree	Agree
12/7/2022	Asian	Female	40	Strongly agree	Strongly agree
12/23/2022	Black	Male	55	Disagree	Disagree
12/13/2022	Black	Male	51	Disagree	Agree
12/18/2022	Black	Female	59	Agree	Agree
12/17/2022	Black	Male	53	Strongly agree	Agree

Date	Race	Gender	Age	This mask took minimal time to set up	Using this mask did not complicate my night-time routine
12/30/2022	Black	Male	57	Disagree	Disagree
12/28/2022	Hispanic	Female	30	Agree	Agree
12/22/2022	Black	Male	36	Strongly agree	Strongly agree
12/25/2022	Hispanic	Male	35	Agree	Agree
12/31/2022	Asian	Female	35	Strongly agree	Strongly agree
1/3/2023	Hispanic	Male	53	Agree	Strongly Disagree
1/3/2023	Hispanic	Male	48	Strongly agree	Strongly agree
1/9/2023	Black	Male	34	Disagree	Neither Agree nor Disagree
1/15/2023	White	Female	66	Agree	Agree
1/16/2023	Black	Male	29	Disagree	Agree
1/16/2023	Black	Female	29	Neither Agree nor Disagree	Disagree
12/8/2022	Hispanic	Female	36	Strongly agree	Agree
12/19/2022	Black	Female	60	Strongly agree	Strongly agree
12/8/2022	Black	Female	44	Strongly agree	Strongly agree
12/9/2022	Hispanic	Male	34	Agree	Strongly agree
12/14/2022	Asian	Male	49	Agree	Agree
1/5/2023	Asian	Male	57	Neither Agree nor Disagree	Disagree
1/12/2023	Black	Female	31	Disagree	Agree
12/30/2022	Black	Male	59	Disagree	Strongly agree
12/31/2022	Hispanic	Female	41	Agree	Agree
1/5/2023	Hispanic	Female	50	Agree	Agree
12/29/2022	Hispanic	Female	37	Strongly agree	Strongly Disagree
12/30/2022	Hispanic	Male	32	Agree	Neither Agree nor Disagree
1/5/2023	Hispanic	Male	41	Disagree	Strongly Disagree
1/13/2023	Hispanic	Male	43	Strongly agree	Neither Agree nor Disagree
1/12/2023	Hispanic	Male	56	Agree	Strongly agree

Table C5: Summary of all survey data for all participants, Questions 13, 14.

Date	Race	Gender	Age	Using this mask improved the quality of my life	I would recommend this mask to others
11/20/2022	White	Male	59	Neither Agree nor Disagree	Neither Agree nor Disagree
12/9/2022	White	Female	41	Neither Agree nor Disagree	Neither Agree nor Disagree
11/17/2022	Black	Male	45	Disagree	Neither Agree nor Disagree
11/28/2022	White	Male	34	Strongly Disagree	Disagree
12/9/2022	Black	Female	35	Agree	Agree
11/20/2022	White	Male	51	Agree	Agree
12/13/2022	White	Male	42	Neither Agree nor Disagree	Agree
11/16/2022	White	Female	58	Neither Agree nor Disagree	Agree
11/17/2022	Black	Male	58	Strongly agree	Strongly agree
12/8/2022	White	Male	57	Neither Agree nor Disagree	Disagree
11/14/2022	White	Female	50	Agree	Strongly agree
11/20/2022	White	Male	49	Strongly Disagree	Disagree
11/16/2022	Hispanic	Female	60	Neither Agree nor Disagree	Neither Agree nor Disagree
11/29/2022	Black	Female	64	Neither Agree nor Disagree	Agree
11/18/2022	Asian	Male	27	Neither Agree nor Disagree	Agree
11/14/2022	White	Male	43	Disagree	Disagree
11/17/2022	White	Male	37	Strongly agree	Strongly agree
11/21/2022	White	Female	44	Disagree	Neither Agree nor Disagree
11/17/2022	White	Male	56	Neither Agree nor Disagree	Agree
12/10/2022	White	Female	66	Neither Agree nor Disagree	Agree
11/23/2022	Black	Male	25	Neither Agree nor Disagree	Strongly agree
11/20/2022	White	Male	49	Neither Agree nor Disagree	Agree
11/20/2022	Black	Female	35	Agree	Strongly agree
12/9/2022	White	Male	60	Neither Agree nor Disagree	Strongly agree
11/23/2022	Black	Male	63	Disagree	Disagree
12/12/2022	White	Male	63	Neither Agree nor Disagree	Agree
12/12/2022	White	Male	73	Neither Agree nor Disagree	Neither Agree nor Disagree
11/27/2022	Asian	Male	44	Strongly agree	Strongly agree
12/15/2022	Black	Female	45	Agree	Agree
11/28/2022	Black	Male	44	Neither Agree nor Disagree	Neither Agree nor Disagree
11/20/2022	White	Female	48	Agree	Agree
11/25/2022	White	Female	41	Agree	Agree
12/9/2022	White	Male	49	Strongly Disagree	Disagree
11/14/2022	Black	Male	57	Neither Agree nor Disagree	Strongly agree
11/24/2022	Black	Male	48	Neither Agree nor Disagree	Agree
11/21/2022	Black	Male	51	Disagree	Neither Agree nor Disagree
11/25/2022	White	Male	38	Neither Agree nor Disagree	Agree
11/14/2022	Black	Female	61	Agree	Strongly agree
12/7/2022	Asian	Female	40	Strongly Disagree	Strongly Disagree
12/23/2022	Black	Male	55	Neither Agree nor Disagree	Agree
12/13/2022	Black	Male	51	Neither Agree nor Disagree	Agree
12/18/2022	Black	Female	59	Neither Agree nor Disagree	Agree
12/17/2022	Black	Male	53	Strongly agree	Strongly agree

Date	Race	Gender	Age	Using this mask improved the quality of my life	I would recommend this mask to others
12/30/2022	Black	Male	57	Neither Agree nor Disagree	Neither Agree nor Disagree
12/28/2022	Hispanic	Female	30	Strongly agree	Strongly agree
12/22/2022	Black	Male	36	Agree	Strongly agree
12/25/2022	Hispanic	Male	35	Neither Agree nor Disagree	Agree
12/31/2022	Asian	Female	35	Strongly agree	Strongly agree
1/3/2023	Hispanic	Male	53	Strongly Disagree	Strongly Disagree
1/3/2023	Hispanic	Male	48	Strongly agree	Strongly agree
1/9/2023	Black	Male	34	Neither Agree nor Disagree	Agree
1/15/2023	White	Female	66	Agree	Agree
1/16/2023	Black	Male	29	Neither Agree nor Disagree	Agree
1/16/2023	Black	Female	29	Neither Agree nor Disagree	Agree
12/8/2022	Hispanic	Female	36	Strongly agree	Strongly agree
12/19/2022	Black	Female	60	Strongly agree	Strongly agree
12/8/2022	Black	Female	44	Strongly agree	Agree
12/9/2022	Hispanic	Male	34	Agree	Agree
12/14/2022	Asian	Male	49	Agree	Agree
1/5/2023	Asian	Male	57	Agree	Agree
1/12/2023	Black	Female	31	Strongly agree	Strongly agree
12/30/2022	Black	Male	59	Strongly agree	Strongly agree
12/31/2022	Hispanic	Female	41	Agree	Strongly agree
1/5/2023	Hispanic	Female	50	Neither Agree nor Disagree	Agree
12/29/2022	Hispanic	Female	37	Agree	Agree
12/30/2022	Hispanic	Male	32	Agree	Agree
1/5/2023	Hispanic	Male	41	Disagree	Neither Agree nor Disagree
1/13/2023	Hispanic	Male	43	Neither Agree nor Disagree	Strongly agree
1/12/2023	Hispanic	Male	56	Agree	Strongly agree

Table C6: Summary of all survey data for all participants, Questions 15, and 16.

Participant Survey Median values

The following tables show the calculated median values of the participant survey questions. Using the five-point Likert scale, values were assigned as follows: Strongly Disagree, 1; Disagree, 2; Neither Agree nor Disagree, 3; Agree, 4; and Strongly Agree, 5, the median value of each response was calculated. The following tables show the median score by the annotated category. The scores are shown in a heat map fashion with darker colors denoting favorable values.

For all Participants	
This mask made me feel claustrophobic	1.0
This mask was difficult to put on.	2.0
This mask was difficult to take off.	1.0
I had to adjust this mask frequently	2.0
This mask was difficult to disconnect	2.0
This mast was difficult to reconnect	1.0
This mask made it difficult to sleep in my usual position	2.0
This mask caused discomfort to my face	2.0
This mask caused discomfort to my eyes	1.0
This mask interfered with my hair	1.0
This mask leaked	2.0
I could use this mask every night with CPAP	4.0
This mask took minimal time to set up	4.0
Using this mask did not complicate my night-time routine	4.0
Using this mask improved the quality of my life	3.0
I would recommend this mask to others	4.0

Table C7: This table illustrates the median survey scores for each question across all participants.

By Race	White	Black	Hispanic	Asian
This mask made me feel claustrophobic	1.0	1.0	1.0	1.0
This mask was difficult to put on.	2.0	1.5	1.0	1.0
This mask was difficult to take off.	2.0	1.0	1.0	1.0
I had to adjust this mask frequently	2.0	2.0	1.5	1.0
This mask was difficult to disconnect	2.0	1.5	2.0	1.0
This mast was difficult to reconnect	2.0	1.0	1.0	1.0
This mask made it difficult to sleep in my usual position	2.0	2.0	2.0	2.0
This mask caused discomfort to my face	3.0	2.0	2.0	1.0
This mask caused discomfort to my eyes	1.0	1.0	1.0	1.0
This mask interfered with my hair	1.0	1.0	1.0	1.0
This mask leaked	2.0	2.0	1.0	1.0
I could use this mask every night with CPAP	3.0	4.0	4.0	5.0
This mask took minimal time to set up	4.0	4.0	4.0	5.0
Using this mask did not complicate my night-time routine	4.0	4.0	4.0	5.0
Using this mask improved the quality of my life	3.0	3.0	4.0	4.0
I would recommend this mask to others	4.0	4.0	4.0	4.0

Table C8: This table shows the median survey scores for either gender.

By Gender	Male	Female
This mask made me feel claustrophobic	1.0	1.0
This mask was difficult to put on.	2.0	1.5
This mask was difficult to take off.	1.0	2.0
I had to adjust this mask frequently	2.0	2.0
This mask was difficult to disconnect	2.0	2.0
This mast was difficult to reconnect	1.0	1.0
This mask made it difficult to sleep in my usual position	2.0	2.0
This mask caused discomfort to my face	2.0	2.0
This mask caused discomfort to my eyes	1.0	1.0
This mask interfered with my hair	1.0	1.0
This mask leaked	2.0	2.0
I could use this mask every night with CPAP	4.0	4.0
This mask took minimal time to set up	4.0	4.0
Using this mask did not complicate my night-time routine	4.0	4.0
Using this mask improved the quality of my life	3.0	4.0
I would recommend this mask to others	4.0	4.0

Table C9: This table depicts the median score for each race.

By Demographic	White Male	Black Male	Hispanic Male	Asian Male	White Female	Black Female	Hispanic Female	Asian Female
This mask made me feel claustrophobic	1.0	1.0	1.0	1.0	2.0	1.0	1.0	1.0
This mask was difficult to put on.	3.0	1.5	2.0	1.0	2.0	1.5	1.0	1.0
This mask was difficult to take off.	2.0	1.0	1.0	1.0	2.0	1.5	1.5	1.0
I had to adjust this mask frequently	2.0	2.0	1.5	2.0	2.0	2.0	1.5	1.0
This mask was difficult to disconnect	2.0	1.0	2.0	1.0	2.0	2.0	1.5	1.5
This mast was difficult to reconnect	1.0	1.0	1.0	1.0	2.0	1.0	1.5	1.0
This mask made it difficult to sleep in my usual position	2.0	2.0	1.5	1.0	3.0	2.0	2.0	2.5
This mask caused discomfort to my face	3.0	2.0	2.0	1.0	3.0	2.0	1.0	2.0
This mask caused discomfort to my eyes	1.0	1.0	1.0	1.0	2.0	1.0	1.0	1.0
This mask interfered with my hair	1.0	1.5	1.0	1.0	1.5	1.0	1.0	1.0
This mask leaked	2.0	2.0	1.5	1.0	2.0	2.0	1.0	1.0
I could use this mask every night with CPAP	3.0	4.0	4.0	5.0	4.0	4.5	5.0	4.5
This mask took minimal time to set up	4.0	4.0	4.0	4.0	4.0	4.0	4.0	5.0
Using this mask did not complicate my night-time routine	2.0	4.0	3.5	4.0	4.0	4.0	4.0	5.0
Using this mask improved the quality of my life	3.0	3.0	3.5	4.0	3.5	4.0	4.0	3.0
I would recommend this mask to others	4.0	4.0	4.0	4.0	4.0	4.0	4.5	3.0

Table C10: This table shows the median values calculated for each demographic separately.

Appendix D – Technical Issues

In the following table lists all technical issues observed and recorded by the DME technician while observing the participants putting on each mask.

Trial Date	Race	Gender	Age	Technical Issue
11/17/2022	Black	Male	44	pt cut the halo pads too small.
11/21/2022	Black	Female	64	halo pad did not stick
12/6/2022	Black	Female	60	WITH HER NOSE RING HOOP, THE ADHENSIVE DID HAVE TROUBLE ATTACHING TO THE SKIN. WE HAD TO TAKE THE PADS OFF AND TROUBLESHOOT TO SEE HOW THEY WOULD STICK BEST.
12/7/2022	White	Male	49	pt placed the halo pad in a position that pinched his right nostril. we discussed that placement of the halo and where exactly the ring should be placed.
12/8/2022	White	Male	63	used three sets of halo pads; he had very oily skin, and sweated a lot; we trimmed them, used two alcohol pads; we then had to be sure to pat the nose down with a paper towel heavily to achieve dryness.
12/20/2022	Hispanic	Female	30	Pt struggled getting the halo pads to stick on the sides of her nose. I advised her to using two alcohol wipes would help remove more oils from her nose, which would cause the adhesive to do their job.
12/28/2022	Hispanic	Male	32	PT HAD VERY OILY SKIN, AND WE HAD TO USE MULTIPLE ALCOHOL PADS TO GET THE HALO PADS TO STICK.

Table D: Technical comments from the entire study regarding observations of technical issues that arose for participants while applying either mask.

Appendix E – Additional Instructions

In the following tables are the entirety of additional instructions required by participants while attaching either mask.

Trial Date	Race	Gender	Age	Additional Instructions Causation
11/14/2022	Hispanic	Female	60	just needed to be reminded.
11/17/2022	Black	Male	44	pt cut halo pads too small
11/21/2022	Black	Female	64	cut less off
12/6/2022	Black	Female	60	Nose ring
1/12/2023	White	Female	66	halo pads had a hard time sticking well
1/13/2023	Black	Female	29	pt had a nose ring and was questioning how the halos would work with it.

Table E: This table shows the additional instructions that were required while applying the mask by the participant during mask training.

Appendix F – Technician Comments

In the following tables are the entirety of commentary from the study coordinator from each trial of each patient in Study 001. The length of the data necessitated breaking the data into two tables.

PID	Trial Date	Race	Gender	Age	Technician Comments
2-101119	11/10/2022	Black	Male	58	PT is excited to try this product!
2-101467	11/10/2022	Black	Female	61	she is excited, and wanted to know when they would be available for regular use
2-101133	11/14/2022	Hispanic	Female	60	pt just needed to be reminded of how to cut down and apply the halo pads correctly
2-101141	11/15/2022	Asian	Male	27	pt is going out of the country, so I went ahead and sent him with two boxes of halo pads because he will be gone for 21 days!
2-101356	11/17/2022	Black	Male	44	directed the pt on how we want to cut and place the halo pads.
2-101130	11/18/2022	White	Male	49	PT was concerned about how he would sneeze at night.
2-101138	11/21/2022	Black	Female	64	I advised the pt to take the halos off and start over. She cut too much off, which caused it not to stick appropriately.
2-101252	11/21/2022	Black	Male	63	pt is excited for more research to come
2-101473	11/28/2022	Asian	Female	40	pt said she was not sleeping well, and it may take her a few more than 2 days to complete. I let her know just to keep me posted and I could change the start date.
2-103108	12/6/2022	Hispanic	Female	36	pt is excited about this mask and she does not love her current mask.
2-103136	12/6/2022	Black	Female	60	WE LEARNED TO MAKE SURE TO LEAVE THE ADHESIVE LONGER ON THE SIDES SO THAT SHE HAS ENOUGH TO PLACE IT OVE TOP OF THE NOSE HOOP.
2-103474	12/6/2022	Asian	Male	49	pt was asking info on a pressure check for his machine. I let him know to check with his doctor.
2-101117	12/9/2022	White	Male	42	pt mentions multiple times that he felt like for wider nose, you need to create a wider frame
2-101346	12/12/2022	Black	Female	45	pt is excited about not having to have lines on her face when she wakes up in the am
2-101477	12/20/2022	Black	Male	55	he was curious as to how often the frame needs to be replaced.
2-101481	12/21/2022	Black	Male	57	pt mentioned that if they must be trimmed every time, the manufacture needs to fix that so that people do not have to do so.
2-103592	12/28/2022	Black	Male	59	Pt is very excited about this mask!! he wanted to go home with his extra set of halo pads today, but I let him know to email me and I would have it ready for pick up.
2-103629	12/28/2022	Hispanic	Female	41	PT WAS VERY EXCITED ABOUT TRYING THIS MASK ON BUT WAS CONCERNED ABOUT PRICING!

2-103631	12/28/2022	Hispanic	Female	37	pt is excited to try this mask. her husband is extremely interested as well.
2-101634	12/29/2022	Hispanic	Male	48	pt is excited about using this mask
2-103554	1/3/2023	Asian	Male	57	pt is curious of the cost
2-103635	1/3/2023	Hispanic	Male	41	pt complained about the alcohol wipes, and I recommended witch hazel again as that is what I would prefer to use.
2-103564	1/10/2023	Black	Female	31	pt is excited about not having head gear!
2-103637	1/10/2023	Hispanic	Male	43	pt put the mask on and was in awe about how comfortable it is vs his traditional with head gear!! he left so excited to use this!
2-101661	1/12/2023	White	Female	66	be sure the patient wipes the nose surface very well before applying the halo pads
2-101662	1/13/2023	Black	Male	29	pt is excited as his current head gear leaves lines in his bald head
2-101663	1/13/2023	Black	Female	29	I let her know that many patients in the past have had nose rings and it has not been an issue. just be careful when pulling down to remove the halo.
2-101664	1/23/2023	Asian	Male	51	pt is curious about how much this is going to cost in the long run vs. other masks.

Table F: Technician Comments

Appendix G – Additional Questions

Date	Race	Gender	Age	Question 17 - How does this mask compare to other masks that you have tried in the past
11/20/2022	White	Male	59	My current mask swivels which makes it better when changing positions at night. My current mask clips to the top of my head so it's not heavy and pulling on my face like this mask I tested did. When I have a cold or allergies my current mask would work much better. And my current mask is better for taking 30-minute naps during the day, so I don't waste the sticky metal piece on my nose.
12/9/2022	White	Female	41	The idea is great but the prep work it takes to cut the nasal stickers was tedious. I do not imagine I would enjoy doing this nightly. I also did not like the residue left behind on my nose from the stickers - it was hard to remove in the morning and my nose felt very sticky and oily - which I didn't like
11/17/2022	Black	Male	45	I felt heavy and it pulled every time I moved
11/28/2022	White	Male	34	There was substantial discomfort from the pull on my nose from the mask as well as the air passing over the entrance of the nasal passage
12/9/2022	Black	Female	35	Honestly, I think that it is as good as the other masks that I have. I unfortunately do not think it's better, but it does the job.
11/20/2022	White	Male	51	I have used both a full-face mask and the nasal pillows with my Phillip's Dreamstation 2. Of the full face and nasal pillows, I prefer the nasal pillows as I have fewer issues with air leakage requiring a readjustment of the headgear during the night. With the magnetic attachments on the mask and adhesive nasal applicators, I did not experience any leakage issues at all. I did have to manage a bit of adjustment to how the hose of the new mask lay slightly against my mouth. With the nasal pillows (and full-face mask) the hose attaches at the top of the head gear which can interfere with laying my head on a pillow, especially if my head is turned to the side, but the hose is kept away from my face. With the magnetic attachments being right on the nasal openings causing the hose to run down in front of the mouth, there was a bit of an adjustment to having the hose lay across my lips. This was dealt with by either laying on my side or holding a little pressure on the hose with one hand on my chest as I lay on my back.

Date	Race	Gender	Age	Question 17 - How does this mask compare to other masks that you have tried in the past
12/13/2022	White	Male	42	- Have a wider variety of mask tubing (Where the magnets are wider apart) The mask crimped my nose; Adhesive strips took a while to put on; Alcohol wipes were very strong and dry out the skin easily; Magnets were difficult to connect because the magnets on tubing side of the connection was close together; I found this more difficult to take off and put on when waking up in the middle of the night (bathroom break) than my current mask; It did not mess up my hair like my usual mask does. (leaving a line like hat head)
11/16/2022	White	Female	58	Its design means that I don't have marks on my face for hours upon waking. I'd suggest a swivel just beyond the magnets on the tubing for ease of movement/turning while sleeping.
11/17/2022	Black	Male	58	Less cumbersome allowing me to get a more relaxed sleep.
12/8/2022	White	Male	57	the hose seems to pull down on my nose
11/14/2022	White	Female	50	It is the best mask I have had and I have had a lot over the years I love not having head gear which gave me issues and caused leaks It is very easy to connect and disconnect. Any leaks was because my mouth was open The only items I had issues with are user error: Getting used to getting the eclipse halos positioned correctly so there are no leaks I have to find a good way to put my hose so I have more movement(not an issue with eclipse)
11/20/2022	White	Male	49	I am used to going to bed and putting my mask on immediately. This mask takes a little time to prepare to use it. The adhesive nose pads were not really comfortable and left a stickiness after being removed. I would not want to deal with applying it and taking it off on a daily basis. I'm not sure how practical this mask is for other people, but I went in with an open mind and couldn't see how it was a great improvement over what I'm already using. In fact, it is more of a hindrance.
11/16/2022	Hispanic	Female	60	No head gear and it is very comfortable. You have to cut the nose pods every night not as convenient to just slip on the other masks.
11/29/2022	Black	Female	64	When compared to other masks, I liked that it didn't leave strap marks and it was easier to sleep on my side.
11/18/2022	Asian	Male	27	I like it better than the pillows as the pillows were a bit uncomfortable and aggravated my nose
11/14/2022	White	Male	43	The mask was uncomfortable with the magnet pulling on each other and it didn't seem to stay seal. I could not move with it, and it would eventually move itself
11/17/2022	White	Male	37	The ability of a little more movement and without the complications of head gear coming off. I slept so good with this mask and a lot less leakage.
Date	Race	Gender	Age	Question 17 - How does this mask compare to other masks that you have tried in the past

Date	Race	Sex	Age	Comment
11/21/2022	White	Female	44	I really wanted to like it—I like the concept. I liked to have less stuff on my face. Putting the stickers on was not hard—but my #1 problem was, the pressure was not as good, which made me wake up multiple times. #2 problem, when laying down the weight of the magnets pulled my nose and face down, away from a natural, comfortable position.
11/17/2022	White	Male	56	The packaging is minimal and easy to get into, I like that! Losing the headgear is a definite plus, now I don't feel like I'm in an "Alien" movie every night. It's quieter than other masks I've used. All in all, the Bleep is a step up in every way.
12/10/2022	White	Female	66	The mask was fine overall. My only issue with it was how it rested on my mouth. I found it a little annoying, but if I positioned a cover and kept my hands/arms where it was lifted off, it was okay.
11/23/2022	Black	Male	25	This mask is very comfortable, easy to put on, and allows me to change position without worrying about it. The only thing I didn't like was that I had to use a different strip one night because it won't seal correctly on my nose.
11/20/2022	White	Male	49	I like it as I didn't have the strap rubbing on my cheeks. However, one side of the felt cover seems to vent air making it noisy. Especially when inhaling. The other side made no noise of had venting of air. Not sure if this was a defective mask or not. It made it difficult to get to sleep because of the loud sound; One other thing to note, with a higher humidity, by morning the adhesive was breaking down. One morning turning over with some tension one of the pads started to peel off and vented air. Had to switch masks until getting up later
11/20/2022	Black	Female	35	It was easy and great to use, Now the 1st night as I was moving around you could hear the air coming out, so the 2nd night had to make sure that it was on tight.
12/9/2022	White	Male	60	It is much more comfortable.
11/23/2022	Black	Male	63	This mask felt like something was pulling on my nose, and the hose kept getting stuck in the bed railing. The mask need to come with a chin strap, my mouth kept coming open
12/12/2022	White	Male	63	A lot harder to put on. I had problems with the adhesive pads on my nose. I have oily skin and sweat a lot. I had to wash with soap and water, then use the alcohol pads to get the pads to stick. Once they were attached, they did stay. The felt that was used to help hold the nose piece on set on my lips felt odd. The time to put the mask on was much greater than my current mask. The weight on my nose was noticeable but I sleep with my hose on my chest, so it was not uncomfortable

Date	Race	Gender	Age	Question 17 - How does this mask compare to other masks that you have tried in the past
12/12/2022	White	Male	73	I felt I was not getting the tape situated correctly. After more than one try, I was able to straighten the tape so there were no leaks. It is more time consuming to put the equipment on.
11/27/2022	Asian	Male	44	It does not get in the way of your sleep. You can sleep side way and it does not come off when you turn.
12/15/2022	Black	Female	45	I really like the strapless feature. It stays in place better doesn't move when I sleep and doesn't leave lines in my face & hair
11/28/2022	Black	Male	44	This mask is slightly more comfortable because my usual mask fits around my head and face.
11/20/2022	White	Female	48	More hassle to put on. The weight of the hose pulled on my nose throughout the night & made it difficult to switch positions. The hose laid on my mouth, which was bothersome.
11/25/2022	White	Female	41	It required a little more prep than my normal mask, but not much, and once that was complete it was simple to put on. The second night I didn't get one of the rings on properly (felt like it was leaking air when I connected it to the halo) and had to take them off and apply new ones. It did take a little time to get used to the "weight" of the mask on my nose. Even with draping it over the headboard, there did seem to be a little bit of pull from the weight of the hose. But once I got the hose into the right position it was fine and not a problem at all.
12/9/2022	White	Male	49	I did not like the adhesive pads. I found them to be uncomfortable. They irritated my skin and pulled on my nostrils. The nose pieces on the mask bothered my nose. The nose pieces pinched the front of my nose when attached.
11/14/2022	Black	Male	57	Smaller and less intrusive on my sleeping position
11/24/2022	Black	Male	48	Overall, I thought the mask compared well to some of the best masks that I previously tried. I would say that the only issue was that the design caused the mask to sit on my lip and I could feel the weight of the magnets. It's an annoying feeling, but it did not keep me from falling asleep.
11/21/2022	Black	Male	51	It's not a bad idea but needs a few tweaks
11/25/2022	White	Male	38	It takes much longer to prepare for bed. If you have to blow your nose or anything of that, you waste a halo as you'd have to peel the ones on off. Some of the halos do NOT have the metal ring lined up properly with the sticky portion (manufacturing quality issue) which makes for a noisy night if you use those as you would not want to waste them as they'd cost money. The idea of no head gear is nice, however all of the weight is connected to your nostrils, so things like laying on your side felt like your nose was being pulled all night. The overall concept is nice, but finding a way to eliminate the tubing would be far greater than eliminating the headset.

Date	Race	Gender	Age	Question 17 - How does this mask compare to other masks that you have tried in the past
11/14/2022	Black	Female	61	Me personally prefer this mask because it's not like the others with a strap around your head, more comfortable.
12/7/2022	Asian	Female	40	It was easy to assemble and does not leave marks on your face.
12/23/2022	Black	Male	55	The mask started out quietly but seemed to leak or sound more into my sleep routine. Interrupted my sleep as I tried to adjust to keep f4om hearing the air pass through.
12/13/2022	Black	Male	51	not having the headgear is very nice
12/18/2022	Black	Female	59	I like how the mask connects and reduces air leaks. I am not sure how the sticky pads to the nose will feel after weeks of use. The hose pulls on your nose, but not if you move the hose over your head or headboard.
12/17/2022	Black	Male	53	It is great for not leaking and I do not have to wake up multiple times during the night to adjust it.
12/30/2022	Black	Male	57	Whiles the connection is great in the beginning 6 hours at level 4 on the humidity cause leaks
12/28/2022	Hispanic	Female	30	I love it! I love how it works and it's so different from the other mask I have used, I would love to continue to use this mask and definitely told others about this as well.
12/22/2022	Black	Male	36	It was comfortable.
12/25/2022	Hispanic	Male	35	It felt less obtrusive than other masks. Also seemed to take up less room on my nightstand since there was no straps to worry about.
12/31/2022	Asian	Female	35	The mask is convenient; there are no head straps to adjust and less supplies to clean. My face feels less constrained compared to a mask with headgear. It is more front-heavy compared to other masks in an upright position, but lying down is not as noticeable.
1/3/2023	Hispanic	Male	53	It is convenient not to have straps on my head, but it is very uncomfortable and unlikely to reuse it again. Although the magnet adhere very well to my nose it actually pulls as I move in bed which made me uncomfortable and woke me up every time I moved. Also, it is very loud when I breath-in which doesn't allow me to fall sleep to me nor my wife.
1/3/2023	Hispanic	Male	48	There's no comparison it's better than the other ,it's more effective and more comfortable
1/9/2023	Black	Male	34	it pulls from the nose, which isn't the most comfortable, but nothing is going to be perfect. I feel like you have to give a little to not have to have the headgear! if there was a swivel, I'd be more willing to wear this mask nightly. not having a swivel was annoying more than anything

Date	Race	Gender	Age	Question 17 - How does this mask compare to other masks that you have tried in the past
1/15/2023	White	Female	66	The mask was easy to apply and use. I just wish it had a swivel like other masks have . I usually sleep on my side, and I had to keep adjusting the hose out of my way.
1/16/2023	Black	Male	29	I have a bald head, so not having lines from the headgear all night was great!
1/16/2023	Black	Female	29	I generally do a moisturizing routine on my face at night, and with having to use alcohol pads, it has thrown that off and caused my nose to be a little drier than normal! Gravity also pulls, which can be annoying! But overall, I liked it!
12/8/2022	Hispanic	Female	36	This mask has a great seal with no air leaks, I can connect and disconnect easier without any hassle, is not messing my hair or getting tangle in it and I wake up feeling at whole lot rested cause of it. This mask is definitely all the opposite of my old ones.
12/19/2022	Black	Female	60	It is very convenient and comfortable. Leaves no marks on your face. I would like to change to this mask from the pillar mask. Thank you
12/8/2022	Black	Female	44	I have tried the nasal cushions which hurt my nose and made it impossible to sleep throughout the night. The Bleep allowed me to sleep through the night without discomfort. The magnet is strong, and one does have to get used to the overall feeling of adding an adhesive around the nostril area. However, with a magnetized connection sleeping was much more comfortable and secure.
12/9/2022	Hispanic	Male	34	I enjoyed not having to have a whole head band to hold the CPAP in place.
12/14/2022	Asian	Male	49	smaller, easy to sleep with, quieter
1/5/2023	Asian	Male	57	Much less facial entrapments; need to prepare for mask by accurately attaching the nose stickers which takes time to prep before bedtime; you can't just simply slip on the mask.
1/12/2023	Black	Female	31	This mask was better than other masks I've tried in the past because it didn't interfere or cause damage to my hair, it didn't pull completely off my face when changing sleeping positions, and the tubing to the CPAP didn't twist and turn while I slept.
12/30/2022	Black	Male	59	This mask is incredible. The only issues I had was that I used a 3B Luna CPAP and the hose would not connect . I had to tear the coupling of the hose I was using to be able to connect the Bleep hose. The 1st night I had leaks, so I readjusted the hose. The 2nd night was totally amazing. This is the mask that I would prefer over any other. No leakage. Easy to disconnect and reconnect for those bathroom breaks. No annoying air flow that can disrupt your sleeping partner. So much more comfortable than having to wear the head harness. Wonderful invention.

Date	Race	Gender	Age	Question 17 - How does this mask compare to other masks that you have tried in the past
12/31/2022	Hispanic	Female	41	It's easier to wear and keep it on all night.
1/5/2023	Hispanic	Female	50	This mask was easy to use - lightweight
12/29/2022	Hispanic	Female	37	This mask compared to one's in the past, I like that it doesn't have the face straps because the one before used to give me headaches with it. Also, it's easier to put on and put back off. Something that I didn't like was that my nose felt weighted and my throat was dry all the time that I've used it.
12/30/2022	Hispanic	Male	32	You can't compare it with other ones in the market just With the magnetic feature is a game changer.
1/5/2023	Hispanic	Male	41	I sleep with a full-face mask or an air pillow. Both have their pros and cons. I enjoyed the minimal amount of equipment I had to wear on my face and think the concept of no head gear is great. What I did not like was how I was constantly having to pull my hose and hold throughout the night because the system was too light. The lack of weight allowed the hose to pull off the bed and felt like the mask was being pulled. The nose strips also caused my nose to break out and I now have red blotches on the tip of my septum.
1/13/2023	Hispanic	Male	43	The Bleep system is one I could use always to sleep with. The system is simple and very effective compared to any other device/mask I have ever used. Its minimal invasive design gives you the freedom of movement desired while sleeping as there is no headgear nor a mask frame that interferes with movement.
1/12/2023	Hispanic	Male	56	The biggest difference is, there is no head gear to deal with, head gear is difficult to keep adjusted so the mask doesn't leak. This mask attaches using magnets which seem to keep mask on tight to prevent leaks. The mask stayed attached without any leaks the nights I used the new mask.
1/25/2023	Asian	Male	51	In fact, my comfort level was much improved, because of the nature of easy fitting and no additional contact such as a headgear. Also, compared with a gel pillow that I usually use, no daily care is plus due to no direct contact to skin. Thus, this mask is very beneficial to me.

Table Figure G1, Question 17

Date	Race	Gender	Age	Question 18 - Thinking about your experiences with other masks, what did this mask address the best?
11/20/2022	White	Male	59	It is quieter than my other mask, it didn't blow air onto my husband laying next to me, and it didn't mess up my hair or leave marks on my face.
12/9/2022	White	Female	41	I thought the idea was great and if my nose didn't feel sticky and extra oily the next day, I would be interested
11/17/2022	Black	Male	45	Nothing really. It was kind of uncomfortable
11/28/2022	White	Male	34	The diffuser on the mask was a nice addition. I enjoyed the lack of headgear and the ease of don and doff.
12/9/2022	Black	Female	35	The mask did not disconnect, however the time that it took to find scissors or to make sure it cut correctly is slightly irritating.
11/20/2022	White	Male	51	The freedom to easily move to laying on my side while wearing this new mask was a huge bonus. Additionally, not having to deal with air leakage while moving in my sleep was just as important.
12/13/2022	White	Male	42	Not messing up my hair.
11/16/2022	White	Female	58	No marks on face!
11/17/2022	Black	Male	58	The size of it.
12/8/2022	White	Male	57	Not difficult to apply but it was not comfortable.
11/14/2022	White	Female	50	No head gear, no hair getting stuck, not sitting on my lip which usually cause me pain, Very easy to connect and disconnect if I need to take off to go to the bathroom
11/20/2022	White	Male	49	Two things. Not having head gear, which I don't mind at all, and it actually had a very good seal.
11/16/2022	Hispanic	Female	60	I would have to say the comfort was the best experience once you have everything adjusted.
11/29/2022	Black	Female	64	Face marks
11/18/2022	Asian	Male	27	Comfort
11/14/2022	White	Male	43	I like it was a nasal mask and not guilty face with straps. Just could not get comfortable with it
11/17/2022	White	Male	37	I could keep it on and helped me sleep longer and better.
11/21/2022	White	Female	44	I like not having the lines on my face.

Date	Race	Gender	Age	Question 18 - Thinking about your experiences with other masks, what did this mask address the best?
11/17/2022	White	Male	56	When wearing other masks, any movement of my head against the pillow would cause tension on the back of the headgear straps that would then translate to the nose mask and nudge it out of alignment, causing it to leak. Also, my old nose piece was causing severe contact dermatitis. It was painful, and ugly. I looked like I tried to hypnotize myself with an orbital sander and succeeded. My only concern so far, will the adhesive irritate my skin. Which is why I answered Q-16 the way I did. Time will tell, but for right now . . . I love it. In fact, I am asking myself, 'why not get metal rings surgically embedded at the end of my nostrils?'. It would raise my "street punk" cred and I wouldn't need the sticky parts. Just a thought.
12/10/2022	White	Female	66	I did like how it remained in place, preventing leakage and the need to reposition throughout the night like my other headgear/mask.
11/23/2022	Black	Male	25	Leaks and comfort
11/20/2022	White	Male	49	it did not move around, didn't rub on the sides of my face.
11/20/2022	Black	Female	35	It was attached to my nose and no contraptions around my head, so it made it easy to sleep with.
12/9/2022	White	Male	60	The uncomfortable straps that need to be adjusted constantly.
11/23/2022	Black	Male	63	Nothing, I did not like it
12/12/2022	White	Male	63	I have some issues with the nasal cannulas slipping out of my nose using my current headgear, causing a loud roaring that can wake my wife up, This should not be able to occur with this mask. I could see if someone was concerned with their hair or the lines other mask cause (I am bald, not much an issue for me) that is a major issue this mask eliminates
12/12/2022	White	Male	73	Not a lot of bulk and extra "stuff" around your nose and mouth.
11/27/2022	Asian	Male	44	Bad mask head hair and coming off your face when you turn.
12/15/2022	Black	Female	45	Stays in place better. No uncommon lines on my face and head
11/28/2022	Black	Male	44	Not having to be attached to my head and around my face was convenient.
11/20/2022	White	Female	48	No leakage
11/25/2022	White	Female	41	I liked that it didn't require straps across my face or head in order to wear it. The current one I use has caused redness and irritation on my face from the way it lays against it. With the Bleep, which was not an issue. It also didn't cause any issues with my hair (pulling, breaking, creases) since it only attached to the nose.
12/9/2022	White	Male	49	Leaking and proper seal.
11/14/2022	Black	Male	57	Comfort and less chance to leak.

Date	Race	Gender	Age	Question 18 - Thinking about your experiences with other masks, what did this mask address the best?
11/24/2022	Black	Male	48	It eliminated the pressure caused by mask straps.
11/21/2022	Black	Male	51	Lines on face from mask
11/25/2022	White	Male	38	The idea of magnets connecting is a great idea. Also, not having headgear to fool with is a great concept. Being a bit more compact, it may be the best mask to travel with.
11/14/2022	Black	Female	61	Comfort, made it easy to get up and go to the restroom during the night.
12/7/2022	Asian	Female	40	The mask feels lightweight, less stress on your head. It feels like you are hardly wearing anything at all.
12/23/2022	Black	Male	55	Less invasive
12/13/2022	Black	Male	51	not having headgear
12/18/2022	Black	Female	59	No headgear, tight fit around nose which reduce the air leaks.
12/17/2022	Black	Male	53	Leaks and comfort. I did not have any leaks and I slept through the night without having to wake up and adjust the mask. I love this mask. I had 100% on my air comfort both nights during the test period.
12/30/2022	Black	Male	57	Really good connection in the beginning.
12/28/2022	Hispanic	Female	30	It really stopped leaks, it is comfortable and not overwhelming at all
12/22/2022	Black	Male	36	It took up less space.
12/25/2022	Hispanic	Male	35	I didn't have to worry about a strap coming loose if I switched to either side to rest on. Also, little readjustment was needed after placing the mask.
12/31/2022	Asian	Female	35	This mask felt less claustrophobic compared to other masks. It is discreet and takes up less space on my face. Not having the headgear and straps is a nice feature because there are less items touching my face. There is not a headgear pulling on my hair either. I also felt that I didn't have to adjust the nasal pieces often, the magnets were strong enough to stay put throughout the night.
1/3/2023	Hispanic	Male	53	I would rather have the straps on my head. This new mask is very uncomfortable and makes a lot of noise. I won't recommend it or at least I won't use it.
1/3/2023	Hispanic	Male	48	The sleeping I can rest better, and it doesn't leave marks on your face, and it has between seal
1/9/2023	Black	Male	34	no head gear was amazing!!! Also, the ability to eliminate leaks with the system was great!
1/15/2023	White	Female	66	The mask was easy to use and wear. it did not leave a mark on my face like the head gear for my other mask does.
1/16/2023	Black	Male	29	No headgear!
1/16/2023	Black	Female	29	Not having headgear! I have dreads, so that was a great plus!
12/8/2022	Hispanic	Female	36	This mask has no leaks of air that was really impressive, it made feel rested in the morning like I haven't felt in a long time compared to my old ones. I totally love it!!!!

Date	Race	Gender	Age	Question 18 - Thinking about your experiences with other masks, what did this mask address the best?
12/19/2022	Black	Female	60	Being comfortable and not leaving any marks on my head and face.
12/8/2022	Black	Female	44	The Bleep addressed the airflow issue, meaning that no air leakage dried out my eyes and I had less of a dry mouth throughout the night. The lack of headgear was beautiful to experience.
12/9/2022	Hispanic	Male	34	Discomfort that comes with a whole head rig
12/14/2022	Asian	Male	49	quieter
1/5/2023	Asian	Male	57	Much fewer facial entrapments
1/12/2023	Black	Female	31	This mask addressed my sleeping position the best because I didn't have to lie in one stiff direction or spot the entire night which allowed me to turn on different sides or on my back to sleep comfortably.
12/30/2022	Black	Male	59	What this mask addressed best was leakage. I mean there was absolutely no leakage once I got the hose connected properly.
12/31/2022	Hispanic	Female	41	I can turn and move easier while sleeping
1/5/2023	Hispanic	Female	50	No headgear was an added benefit to using this type of mask
12/29/2022	Hispanic	Female	37	The thing that I liked most is that I don't have to put it directly on my nose, and it doesn't bother me much whenever I sleep. To add on; I don't wake up to headaches due to the mask all night.
12/30/2022	Hispanic	Male	32	The magnetic feature with that feature the person have quick access for take it off if the person have to do something quick and then just plug back in. I just recommend to find a way to integrate a pivot system right after the mask like other mask, in that way it can be more comfortable for the person at the time to sleep in that way is not uncomfortable around the lips because the weight of the mask. Other than that, the mask concept it's great.
1/5/2023	Hispanic	Male	41	Reduction of head gear needed to be worn at night. It's not fun when you arrive to work hours after getting up in the morning and still have mask strap marks on your face and hair is flattened on the top.
1/13/2023	Hispanic	Male	43	The best performance this Bleep system mask offers is the total improvement and quality of sleep since it does not leak air nor have to be adjusting a frame or headgear in the middle of the night due to head movement while sleeping. I slept all the time through the night.

Date	Race	Gender	Age	Question 18 - Thinking about your experiences with other masks, what did this mask address the best?
1/12/2023	Hispanic	Male	56	This mask best addresses the head gear issue, I like most people don't like having to deal with head gear, having to adjust it so it doesn't leak. A lot of times the head gear that I use loosens when I move causing it to leak, and there is an issue of the head gear irritating the skin on my face where the straps touch, causing a rash to form. So having a mask without head gear making sleeping with CPAP a lot easier.
1/25/2023	Asian	Male	51	The downside of this mask is the application of Haloes to my nasal area. Cleaning the area with alcohol makes my skin dry, so I might need a kind of lotion to keep it from dryness. Further, as the other consideration, the mask portion contacts the area under my nose during sleeping because I am a facing-up sleeper and the entire tube sags. This makes me a bit uncomfortable before falling sleep. I usually use the hose stand for a use of the headgear daily, but this configuration was not directly applicable to this mask. I know these stands are offered by the third parties, but the market is grown in CPAP ecosystem, so you might want to keep it in mind.

Table Figure G2, Question 18