

# SUPPLEMENTARY MATERIAL

**Table S1.** Questionnaire for collecting data on the perception of devices by patients.

|  |  |                               |                               |                               |
|--|--|-------------------------------|-------------------------------|-------------------------------|
| <b>Do you understand that the containment bubble has the function of reducing the contamination of the environment and thus making it possible that you can be treated with ventilatory support, but without intubation?</b> | <input type="checkbox"/> Yes<br><input type="checkbox"/> No  |                               |                               |                               |
| <b>Were you able to interact easily with the medical staff?</b>  | 1<br><input type="checkbox"/>                                | 2<br><input type="checkbox"/> | 3<br><input type="checkbox"/> | 4<br><input type="checkbox"/> |
| <b>Were you able to feed yourself inside the bubble?</b>   | 1<br><input type="checkbox"/>                                | 2<br><input type="checkbox"/> | 3<br><input type="checkbox"/> | 4<br><input type="checkbox"/> |
| <b>Have you felt or do you feel claustrophobic about using the bubble?</b>   | <input type="checkbox"/> Sim<br><input type="checkbox"/> Não |                               |                               |                               |
| <b>Did you experience any discomfort regarding the use of the bubble?</b>  | <input type="checkbox"/> Sim<br><input type="checkbox"/> Não |                               |                               |                               |
| <b>If the answer above is yes, please report it.</b>   | Description of discomfort                                    |                               |                               |                               |
| <b>In general, please rate the experience of using the bubble.</b>   | 1<br><input type="checkbox"/>                                | 2<br><input type="checkbox"/> | 3<br><input type="checkbox"/> | 4<br><input type="checkbox"/> |

Rating gradation: (1) very bad, (2) bad, (3) good, and (4) very good.

**Table S2.** Questionnaire for collecting data on the perception of devices by health professionals.

|   |                   |           |          |          |
|---|-------------------|-----------|----------|----------|
| <b>Rate the degree of ease of access to the patient through the side windows of the bubble</b>  | 1<br>( )          | 2<br>( )  | 3<br>( ) | 4<br>( ) |
| <b>Rate the degree of ease of access to the patient's arm</b>   | 1<br>( )          | 2<br>( )  | 3<br>( ) | 4<br>( ) |
| <b>Is the patient being treated being fed?</b>  | ( ) Yes<br>( ) No |           |          |          |
| <b>If the previous answer is yes, please rate the ease of delivery of the food to the patient</b>   | 1<br>( )          | 2<br>( )  | 3<br>( ) | 4<br>( ) |
| <b>Regarding the use of side access windows, rate the ease of use, considering opening, holding it open, and closing</b>                                  | 1<br>( )          | 2<br>( )  | 3<br>( ) | 4<br>( ) |
| <b>Regarding the visibility of the patient through the bubble, please rate the ease of visual interaction with the patient</b>                            | 1<br>( )          | 2<br>( )  | 3<br>( ) | 4<br>( ) |
| <b>Regarding the manipulation of the blister to place it on the patient and remove it, rate the ease of this operation, considering volume and weight</b> | 1<br>( )          | 2<br>( )  | 3<br>( ) | 4<br>( ) |
| <b>Overall, how useful is the blister for treating patients with COVID-19?</b>  | 1<br>( )          | 2<br>( )  | 3<br>( ) | 4<br>( ) |
| <b>Was the patient who used the Bubble treated with non-invasive ventilatory support?</b>   | Yes<br>( )        | No<br>( ) |          |          |
| <b>In general, do you understand that the bubble is a useful device to reduce the viral load within the environment (room/ ward/ ICU/ other)?</b>         | 1<br>( )          | 2<br>( )  | 3<br>( ) | 4<br>( ) |

Rating gradation: (1) very bad, (2) bad, (3) good, and (4) very good

**Table S3.** Questionnaire for collecting data on the perception of devices by cleaning professionals (sanitization).

|   |  |
|---|--|
| <p>The bubble is made of clear acrylic. The same material is used in baby incubators and other medical devices. The curtains are made of transparent vinyl. What product is being used by the Hospital Infection Control Committee to disinfect the bubble?</p> | <p>Describe the cleaning product:</p> <p>_____</p> |
| <p>The bubble is designed with a semi-spherical, one-piece shape to avoid joining parts and sharp edges. Overall, give a score from 0 to 10 regarding the ease of cleaning/disinfection of the containment bubble</p>   | <p>Rating from 0 to 10</p> <p>(    )</p>           |
| <p>Considering the hospital's disinfection procedure and the constructive characteristics of the containment bubble, how successful is the expected decontamination? Rate from 0 to 10, being 10 the ideal decontamination</p>                                  | <p>Rating from 0 to 10</p> <p>(    )</p>           |



|   | <b>D1</b> | <b>D4</b> | <b>D7</b> | <b>D1</b> | <b>D4</b> | <b>D7</b> |
|---|-----------|-----------|-----------|-----------|-----------|-----------|
| pH  | 7,48      | 7,49      | 7,52      | 7,38      | 7,36      | 7,28      |
| paO <sub>2</sub> (mmHg)                   | 90        | 107       | 123       | 115,38    | 107,33    | 103,00    |
| paCO <sub>2</sub> (mmHg)                  | 37,15     | 39,71     | 36,00     | 48,31     | 48,67     | 42,00     |
| Sodium Bicarbonate (mol.L <sup>-1</sup> ) | 27,73     | 30,20     | 30,10     | 25,88     | 24,73     | 21,30     |
| SaO <sub>2</sub> (%)                      | 94,91     | 92,90     | 99,00     | 97,62     | 97,67     | 96,00     |
| Lactate (mol.L <sup>-1</sup> )            | 1,96      | 1,68      | 1,80      | 1,51      | 1,70      | 4,45      |