## GENERAL HEALTH AND SAFETY RISK ASSESSMENT FORM

**Site**
Centre for Human Brain Health

**Department**
CoLES/CHBH

**Activity Location**
TMS-EEG lab area

**Version / Ref No.**
2

**Activity Description**
TMS-EEG QA, Phantom Measurement, Stimuli Testing during COVID-19 pandemic

**Assessor**
Federica Meconi, Emily Loftus

**Assessment Date**
10.11.20

**Date of Assessment Review**
TBC

### Hazard Assessment

<table>
<thead>
<tr>
<th>Hazard Category</th>
<th>Hazards Identified</th>
<th>Who Might be harmed?</th>
<th>How might people be harmed?</th>
<th>Existing Control Measures</th>
<th>Initial Risk Rating</th>
<th>Are these adequate?</th>
<th>Changes to/ Additional Controls</th>
<th>Residual Risk Rating</th>
<th>Owner</th>
<th>Due Date</th>
<th>Action Complete</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organisational</td>
<td>Virus Transmission in the workplace and TMS-EEG Controlled Access area</td>
<td>TMS-EEG Authorised Operators, EEG Support Officer</td>
<td>Exposure to respiratory droplets carrying COVID-19 from an infectious individual transmitted via sneezing, coughing or speaking.</td>
<td>1. All TMS-EEG Lab Users must have read or completed the following prior to commencing any activity within the TMS-EEG lab area; a. Received approval for their proposed research activity to re-commence from the CHBH Operations Manager; after such activity has been reviewed by the Modality Lead, CHBH Co-Director, CHBH Operations Manager, the EEG Support Officer to ensure that the proposed activity will be compliant with all relevant CHBH risk assessments and University guidance b. Read the University Covid-19 Handbook c. Completed the University online return to campus CANVAS course d. Attended an online CHBH building induction session e. Read and acknowledged the CHBH Building Covid-Secure Risk Assessment f. Read and acknowledged this risk assessment</td>
<td>S L R</td>
<td>10</td>
<td>Yes</td>
<td></td>
<td></td>
<td>Federica Meconi, Emily Loftus</td>
<td>10.11.20 (rolling, for any new activity or new lab user)</td>
</tr>
<tr>
<td>Hazard Assessment</td>
<td>Control Assessment</td>
<td>Actions</td>
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<tr>
<td>Organisational</td>
<td>Psychologi cal and Mental Well-being</td>
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<tr>
<td>Loss of knowledge , technical skills and EEG or TMS competenc y affecting TMS-EEG Safety and Participant Safety and Equipment Safety</td>
<td>EEG/EEG Authorised Operators and EEG Support Officer</td>
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<tr>
<td>Loss of skill competency with EEG acquiring or TMS equipment due to not being in the TMS-EEG Environment for a period of over three months, Can lead to anxiety, confusion, loss of skills and be a major TMS-EEG Safety Risk and also a risk to participant during COVID-19</td>
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<tr>
<td>1) Due to there being extra Safety and Infection Control measures being put into place after re-opening extra time will always be allocated in the booked TMS-EEG scanning slot to allow for the following:</td>
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<tr>
<td>- Safety Risk</td>
<td>Initial Risk Rating</td>
<td>Are these adequate?</td>
<td>Changes to/ Additional Controls</td>
<td>Residual Risk Rating</td>
<td>Owner</td>
<td>Due</td>
<td>Action</td>
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<td>- Equipment</td>
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<td>- Participant Safety and TMS</td>
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<td>2) This extra time allowance will not be charged for by the project and this time allowance leniency will avoid any TMS-EEG Operators getting overwhelmed and stressed affecting their psychological wellbeing and thus compromising TMS-EEG Safety or Infection Control COVID-19 safety measures.</td>
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<tr>
<td>3) To assist with organisation and welfare of TMS-EEG Operators and to keep TMS-EEG room access to a minimum, all booking sessions on Calpendo will be within designated time slots of up to 3 hours. Sufficient time after each session will be booked to allow cleaning and aeration of the spaces.</td>
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<td>When performing QA/Phantom Measurement, testing stimuli:</td>
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<tr>
<td>- EEG Support / Operator to power up, check all relevant equipment.</td>
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<tr>
<td>- EEG Support Officers to remind himself of Operator Training and to follow Refresher Training before running QA/Phantom Measurements.</td>
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<tr>
<td>All TMS-EEG Operators undergoing the TMS-EEG Operator Refresher Training-COVID-19 will need to acknowledge their understanding and competency in the additional policies including infection control and with no-compromise to TMS-EEG Safety or Participant Safety.</td>
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<tr>
<td>As a period of over 6 months has lapsed since TMS-EEG Operators have loaded/checked their experiments on the stimulus PCs, and some knowledge or expertise may have been affected, they will need to check the scripts, triggering, equipment usage prior to the acquisition session commencement, with the help of TMS Responsible person or EEG Support as necessary. These checks can be pre-booked directly with the EEG Support once a TMS-EEG session booking has been made successfully on Calpendo.</td>
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</tbody>
</table>
### Building checklist

**All technical problems with any equipment must be reported by operators/shadowers/EEG Support to observe the control measures in place.**

**Indicate the control measures to consider reducing the risk of infection.**

**Social distancing:**

- **Specific individual worker risk assessment** undertaken for those who have a self-declared health condition which could increase their risk profile.
- **Social distancing:** Building checklist has been completed to identify the control measures to consider reducing the risk of workplace infections.

1. **Virus transmission in the workplace and TMS-EEG Controlled Access area.**
   - **EEG Support Officer** required to provide written and verbal guidance to ensure that all users are fully aware of vigorous handwashing.
   - **Operators/Shadowers** will provide written and verbal guidance to ensure that all users are fully aware of vigorous handwashing. All TMS-EEG users will be instructed to wash their hands following the NHS guidance [https://www.nhs.uk/live-well/healthy-living/hand-wash-your-hands/](https://www.nhs.uk/live-well/healthy-living/hand-wash-your-hands/) before and after entering or exiting the TMS-EEG lab; immediately after coughing or sneezing; at regular intervals (every 30 minutes is recommended) during TMS-EEG lab usage. If leaving the TMS-EEG lab area during the activity would compromise TMS-EEG Safety, users will be reminded to use 70% alcohol hand gel as an alternative to hand washing.

2. **Operators/Shadowers/Shadower to attend EEG Support Office – phone or email to report problem and to ask for advice.**

3. **Operator/Shadowers:** To identify the control measures to consider reducing the risk of workplace infections.

4. **Operators/Shadowers:** The control measures to consider reducing the risk of workplace infections.

5. **Operators/Shadowers:** The control measures to consider reducing the risk of workplace infections.

6. **Operators/Shadowers:** The control measures to consider reducing the risk of workplace infections.

7. **Operators/Shadowers:** The control measures to consider reducing the risk of workplace infections.

8. **Operators/Shadowers:** The control measures to consider reducing the risk of workplace infections.

9. **Operators/Shadowers:** The control measures to consider reducing the risk of workplace infections.

**Changes to Additional Controls**

- All TMS-EEG QA/Phantom measurements, stimulus and testing during COVID-19 pandemic.

**Residual Risk Rating**

- Operators/Shadowers must leave the TMS-EEG area and wait in the corridor before and after entering or exiting the TMS-EEG lab; immediately after coughing or sneezing; at regular intervals (every 30 minutes is recommended) during TMS-EEG lab usage. If leaving the TMS-EEG lab area during the activity would compromise TMS-EEG Safety, users will be reminded to use 70% alcohol hand gel as an alternative to hand washing.

**Rating System**

<table>
<thead>
<tr>
<th>Hazard Category</th>
<th>Hazards Identified</th>
<th>Who might be harmed?</th>
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</tr>
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<tbody>
<tr>
<td>Virus Transmissi</td>
<td>Operator/Shadower</td>
<td>Exposure to respiratory droplets carrying COVID-19 from an infectious individual transmitted via sneezing, coughing or speaking.</td>
<td><strong>Specific individual worker risk assessment</strong> undertaken for those who have a self-declared health condition which could increase their risk profile.</td>
<td><strong>Specific individual worker risk assessment</strong> undertaken for those who have a self-declared health condition which could increase their risk profile.</td>
<td>S L R</td>
<td>5 3 15</td>
</tr>
</tbody>
</table>

**Actions**

- **Operators/Support personnel need to enter with good reason while the TMS-EEG session is in progress than the Operator or Shadower must leave the TMS-EEG area and wait in the corridor, if unable to adequately social distance.**

**Information provided, or steps in place prior to commencement of first training session.**

- **Ned Jenkinson & Jonathan Winter/Dagmar Fraser**

- **On-going for all CHBH TMS-EEG sessions**

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**Activity Location:** TMS-EEG lab area  
**Activity Description:** TMS-EEG QA, Phantom Measurement, Stimuli Testing during COVID-19 pandemic  
**Assessor:** Federica Meconi, Emily Loftus  
**Assessment Date:** 11.11.20  
**Date of Assessment Review:** TBC  
**Academic / Manager Name:** Federica Meconi  
**Academic / Manager Signature:**

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**Completed Action:**

- All TMS-EEG QA/Phantom measurements highlighted in the Covid Secure Plan document, which details duties of the TMS-EEG Operator/Shadower, EEG Support within the booked session.

- TMS-EEG Operators/Shadowers, EEG Support will provide written and verbal guidance to ensure that all users are fully aware of vigorous handwashing.

- TMS-EEG Operators/Shadowers, EEG Support to observe the Government recommended personal distancing (currently advised at 2 meters) wherever possible within the workplace.

- TMS-EEG Operators/Shadowers, EEG Support to observe the recommended personal distancing (at least 2 meters) wherever possible within the workplace.

- TMS-EEG Operators/Shadowers, EEG Support to observe the Government recommended personal distancing (currently advised at 2 meters) whenever possible within the TMS-EEG Area. Safety marking tape will be placed on the floor within the TMS-EEG lab area to identify 2 metre distances.

- Where TMS-EEG have greater than one person occupancy, each person will wear a face covering when not able to maintain 2 metre distances.

- Posters are displayed around the workplace including in welfare facilities reminding staff of the importance of handwashing.

- Soap and water and hand towels (alcohol gel etc.) are provided in the workplace and adequate supplies are maintained in lab areas.

- TMS-EEG Operators/Shadowers, EEG Support to practise minimum contact with all objects e.g. screens, keyboards, surfaces, and chairs, only touching items they need to use, when running QA/Phantom measurements, testing stimuli, or acquiring data from Participants.

- TMS-EEG Operators/Shadowers, EEG Support to be made aware of not to touch mouth, nose and eyes which are the known routes for infection bodily entry. Individuals are reminded to cough into elbows and sneeze in tissues – Follow: “Catch it, Bin it, Kill it!” and to avoid touching face, eyes, nose or mouth with unclean hands.

- Posters are displayed around the workplace.

- TMS-EEG Operators/Shadowers, EEG Support to be advised to follow government guidelines if using public transport for CHBH; e.g. wearing of a face covering or mask and social distancing.

- TMS-EEG Operators/Shadowers, EEG/TMS Support must not consume food in the TMS-EEG areas and TMS-EEG environment.

- TMS-EEG lab capacity will be clearly displayed on the door of the TMS-EEG lab rooms.
### Environmental

#### Virus transmission in the workplace due to lack of social distancing

- **Hazard:** Exposure to respiratory droplets carrying COVID-19 from an infectious individual transmitted via sneezing, coughing or speaking.

  - **Operator/Shadower:** EEG Support

  - **Existing Control Measures:**
    - **Initial Risk Rating:** S4L4R20
    - **Are these adequate?** No

  - **Changes to/Additional Controls:**
    1. All surfaces that have come into contact with TMS-EEG Personnel and TMS-EEG Participants are to be cleaned as detailed in the EEG Cleaning protocol.
    2. EEG Support, TMS-EEG Operator/Shadower (if attending) must follow the TMS-EEG-COVID-19 Cleaning checklist and disinfect equipment/areas they have been in contact with. The cleaning must include, but not be limited to, door handles, chair, button boxes, Stimulus/Console keyboard, mice, telephone and any other accessory equipment or item that may have been touched during the QA/Phantom Measurement, the stimuli testing.
    3. No entry should be permitted in the TMS-EEG area for any other TMS-EEG Operators/Shadowers, or CHBH Staff, unless it is absolutely essential. If a question needs to be asked or answered then Staff can call the TMS-EEG phone number in the first instance or email the TMS-EEG Operator/Shadower, EEG Support.
    4. If entry is permitted to the TMS-EEG areas then the activity must be as short as possible and the Staff member should leave the area ASAP once complete, washing their hands as soon as possible afterwards.
    5. Immediately after the booked session, and cleaning completed, all used alcohol wipes, green paper towel, gloves, and disposable aprons to be disposed of in the TMS-EEG waste bin provided, in accordance with the University’s waste disposal guidance.
    6. All bodily fluid spillages to be hygienically cleaned as per biohazard spillage.

  - **Residual Risk Rating:** S2L2R10

  - **Owner:** Jonathan Winter/Dagmar Fraser

#### Additional EEG guidance provided to all researchers during training before commencement of first session

### Environmental (Continued)

#### Mechanical

- **Hazard:** Food in a potential source of pathogens and carries a risk in contaminating the EEG controlled areas leading to infectious

  - **Operator/Shadower:** EEG Support

  - **Existing Control Measures:**
    - **Initial Risk Rating:** S5L3R15
    - **Are these adequate?** No

  - **Changes to/Additional Controls:**
    1. Food consumption is not allowed in the TMS-EEG areas.
    2. Any drinks used by the EEG/TMS Support or TMS-EEG Operator/Shadower should be in covered personal containers or covered disposable containers.
    3. EEG/TMS Support or TMS-EEG Operators/Shadowers running afternoon sessions for QA/Phantom measurement, stimuli testing will be advised to have lunch before the session commences.

  - **Residual Risk Rating:** S2L2R10

  - **Owner:** Jonathan Winter/Dagmar Fraser

#### Additional EEG guidance provided to all researchers before commencement of first session
## Hazard Assessment

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<th>Owner</th>
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<th>Action Complete</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transmission to humans. Pathogens including COVID-19 may be transmitted from objects or surfaces to the mouth.</td>
<td>Staff</td>
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<td>Exposure to Chemicals/ Skin contact during Infection Control and Cleaning.</td>
<td>Students/ Contractors/ Others</td>
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<td>1)</td>
<td>All cleaning solutions/wipes will be pre-mixed and pre-prepared (as required). 2) Only CHBH supplied disinfection products are to be used at all times. 3) No free liquids are to be used near electrical devices and outlets. 4) TMS-EEG Personnel to wear gloves and aprons during EEG and TMS cleaning procedures.</td>
<td>S 2 10</td>
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**Actions**

1. EEG caps and electrodes will be disinfected using manufacturer recommended disinfectant, following manufacturer's instructions on the bottle, and following the EEG cleaning protocol.
2. TMS equipment and adjustable frame will be disinfected using 70% Ethanol Alcohol for > 1 minute following WHO guidance.
Risk Assessment Guidance

Risk Scoring System

The scoring system is provided as a tool to help structure thinking about assessments and to provide a framework for identifying which are the most serious risks and why.

| Consequence / Severity score (severity levels) and examples of descriptors |
|---|---|---|---|---|---|
|Domains|Negligible|Minor|Moderate|Major|Catastrophic|
|Impact on the safety of staff, students or public (physical / psychological harm)|Minimal injury not requiring first aid or requiring no/minimal intervention or treatment. No time off work|Minor injury or illness, first aid treatment needed or requiring minor intervention. Requiring time off work for <3 days|Moderate injury requiring professional intervention Requiring time off work for 4-14 days RIDDOR / MHRA / agency reportable incident|Major injury leading to long-term incapacity/ disability (loss of limb) Requiring time off work for >14 days|Incident leading to death Multiple permanent injuries or irreversible health effects|

The Initial Risk Rating is the level of risk before control measures have been applied or with current control measures in place.

The Residual Risk is the level of risk after further control measures are put in place.

The overall level of risk is then calculated by multiplying the two scores together.

Risk Level = Consequence / Severity x Likelihood (C x L)

<table>
<thead>
<tr>
<th>Likelihood score</th>
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<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
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<tbody>
<tr>
<td>Frequency</td>
<td>Rare</td>
<td>Unlikely</td>
<td>Possible</td>
<td>Likely</td>
<td>Almost certain</td>
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<tr>
<td>Broad descriptor</td>
<td>This will probably never happen/occur</td>
<td>Do not expect it to happen/occur but it is possible it may do so</td>
<td>Might happen or occur occasionally</td>
<td>Will probably happen/occur but it is not a persisting issue</td>
<td>Will undoubtedly happen/occur, possibly frequently</td>
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<td>Time-framed descriptor</td>
<td>Not expected to occur for years</td>
<td>Expected to occur at least annually</td>
<td>Expected to occur at least monthly</td>
<td>Expected to occur at least weekly</td>
<td>Expected to occur at least daily</td>
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<td>Probability</td>
<td>Will it happen or not?&lt;0.1 per cent</td>
<td>0.1–1 per cent</td>
<td>1.1–10 per cent</td>
<td>11–50 per cent</td>
<td>&gt;50 per cent</td>
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