

Care Transitions Data Collection Protocol

Materials Checklist

- Box for transporting items
- Paperwork Binder (1 for each simulation)
 - o 11 - consent forms
 - o 11- Pre Simulation surveys
 - o 11- I-SBAR sheets
 - o 5 - verbal handoff sheets
 - o 4 - eye tracker protocols
 - o 11 - post simulation surveys
 - o 4 - Focus Group Scripts
 - o 12 - name tags
 - o 12 - name tents
 - o 11 - Final Experience Surveys
 - o 4 - Care Transitions Data Collection Protocols
- SEIPS model poster
- Focus Group Ground Rules poster
- Eye trackers
 - o 4 Glasses
 - o 4 memory cards
 - o 4 recording units
 - o Charged batteries (8, 1 for each pair of glasses and 1 extra for each)
 - o Calibration cards (4)
 - o Microfiber cloth and alcohol swabs
 - o 4 surface pros and chargers
 - o Hair clip/headband (4)
 - o Masking tape (to mark the floor where participant stands for calibration)
 - o Measuring tape (to measure 1m distance for calibration)
- Surface pro (4)
- Surface pro charger
- Audio recorders (2)
- Pens (15)
- Pencils (15)
- Notebooks (one for each note taker)
- Colored markers
- Flip chart paper

→ Pre Data Collection

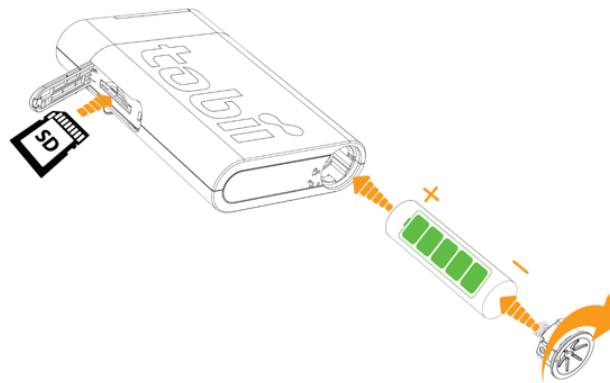
Pre Data Collection (*day before simulation*)

- Create binders with all the necessary paperwork
- Double check participant names and time of data collection
- Make sure surface pros are charged
- Make sure SD cards have space
- Check audio recorders battery and storage
- Make sure eye tracker batteries are charged
- Pack box with all necessary items (*use materials checklist*)

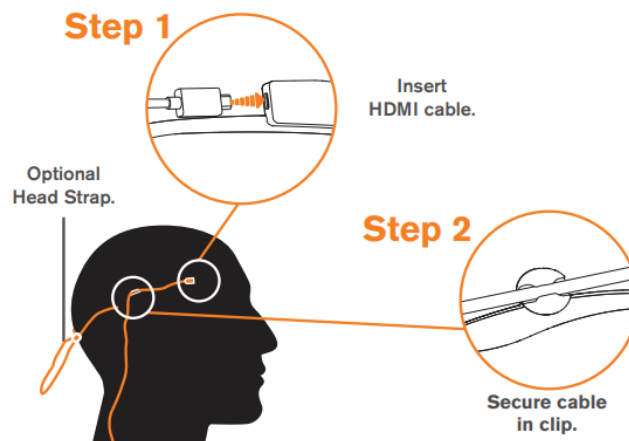
→ Room Setup

Room Setup (at data collection)

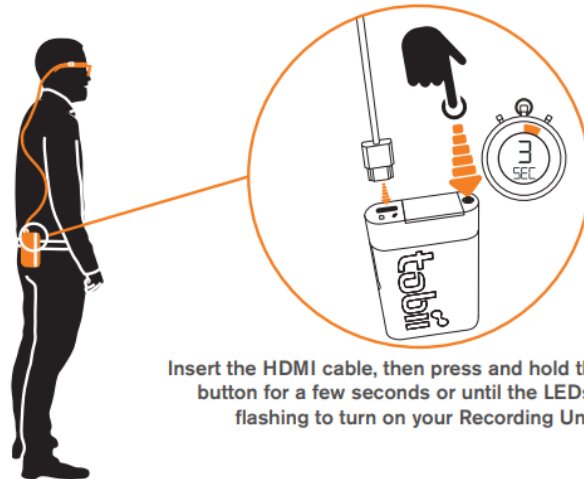
- Discussion Room set up
 - o Set up Eye trackers
 - Stick 4 calibration stickers on the wall and mark the location on the floor (1 meter/3.28 ft from the wall) where participant should stand when doing the calibration.
 - Do a test search with one of the researcher's team to ensure that each eye tracker is working properly.
 - Prepare and connect Tobii Pro Glasses
 - Insert SD memory card
 - Insert charged battery (+ goes first/on the bottom)



- Connect head unit to recording unit (cable is located underneath the recording unit in the box).



- To turn on, touch the power button for 3 seconds. Power LED is solid green if the battery is good/charging.



Insert the HDMI cable, then press and hold the power button for a few seconds or until the LEDs stop flashing to turn on your Recording Unit.

- Connect controller (SurfacePro) to recording unit
 - Wireless connection (Look on the back of the recording unit for the serial number, this will be the name of the WLAN network. The WLAN password is **TobiiGlasses**)



- To check the connection, check the light indicator on the recording unit (as shown below).
- Local account login for surfacepro in case internet is poor:
 - User: .\hfss user (space in between hfss and user)
 - Password: HfssL@b!



Connection LED on
(recording unit is connected)



Connection LED off
(recording unit is not connected)

- Start up the “Tobii Pro Glasses Controller” on the ipad (NOTE: Tobii Pro Controller is different with Tobii Pro Lab”)
 - Make sure that the software and firmware is updated.
- Create new recording

- If this is your first ever recording, create a new Project before proceeding.
 - Press “Start New Recording” on the relevant pair of Tobii Pro Glasses 2.
 - Type the participant’s name and relevant information (i.e. participant ID), then press “Create”.

- Set up paperwork piles
 - Consent forms
 - Pre Simulation Surveys
 - I-SBAR Papers
 - Verbal Handoff Papers
 - Post Simulation Surveys
- Write Participant IDs and role on nametags
- Write Participant IDS and role on name tents
 - Put name tents at each chair for participants

→ Introductions

*****Invite Participants to sit at table behind their name tent*****

Introductions *(discussion room)*

- Prof Wooldridge and Research Assistants
- Participants
- Ask participants to put on nametags

Informed Consent *(discussion room)*

- Prof Wooldridge verbally presents elements of informed consent to each participant

Protocol Title: Using Simulation to Evaluate and Improve Team Cognition in Handoffs

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You are invited to participate in a research study.

Things you should know:

- Taking part in this research study is voluntary. You don't have to participate, and you can stop at any time.
 - The purpose of this study is to measure team cognition during patient handoffs. By doing this we will be able to provide feedback to learners, evaluate handoff interventions in future work, and also identify what makes handoff communication easier or harder. We will use this information to assist in developing sociotechnical strategies to improve handoff communication. If you choose to participate you will be asked to take part in a pre-simulation survey, an OR to PICU handoff simulation, a post simulation survey, and a short debrief. Following the debrief, you will take part in a final survey about your experience. A small sample of participants will also be invited to wear eye-tracking glasses during the hand off simulation which will record where they are looking. The total amount of time you will be involved in this study, from the pre-simulation survey to the post-simulation survey, will be about 1 hour. Data analysis will occur for approximately 9 months after data collection.
 - There are no known risks associated with wearing the eye-tracking glasses. However, if you experience any discomfort while wearing them, you may remove them at any time.
 - There are no risks associated with participation in the simulation. If you feel discomfort, you may stop participating at any time.
 - There are no risks associated with participation in the surveys. If you feel discomfort, you may stop participating at any time.
 - There are no risks associated with participation in the debrief. If you feel discomfort, you may stop participating at any time.
 - There is no direct benefit to you for participating in pre-handoff survey, handoff simulations, post handoff surveys or debrief.
 - If you do not wish to participate in this study, you may decline.
- Answer any questions participants may have
 - Get written documentation of consent

→ Pre Simulation Survey

Pre Simulation Survey *(discussion room)*

- Give participants paper survey

Simulation

- Prepare Participants for simulation

- Give phone call I-SBAR to all participants
- Give written copy of verbal handoff to the OR team (roles 1-4)
- Answer any remaining questions

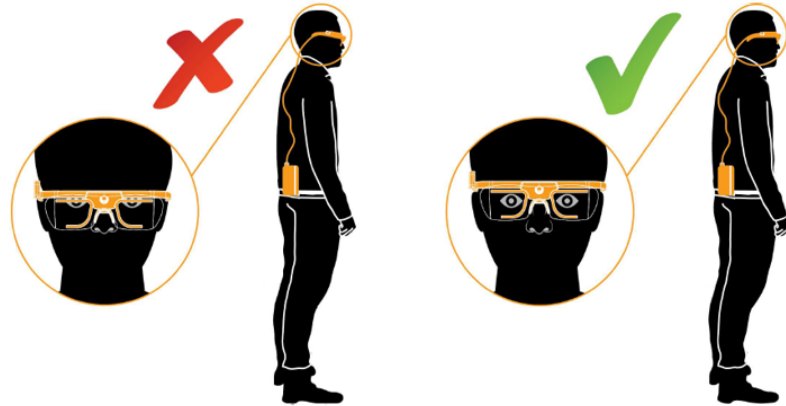
- Set up eye trackers

- Give eye trackers to the following participants:
 - Surgery attending
 - anesthesia attending
 - PICU attending/APN
 - PICU nurse
- On SurfacePro , Press “Start New Recording” on the relevant pair of Tobii Pro Glasses 2.
- Type the participant’s role and relevant information (i.e. participant ID), then press “Create”.
- Settings are listed in cogwheel on bottom left hand corner.
 - The wireless settings can be adjusted if needed. Channel 1, 6, and 11 are the most common and busy channels. Try using the other channel for better connection.
- Use a separate channel for each participant.



- Fit head unit to participant
 - Use hair clip/head band to secure the loose hair that might interrupt the eye tracker.
 - Gently fit the head unit onto participant (see Step 1 below). Exchange the nose pad if necessary. (NOTE: Tobii Pro head unit will sit on the higher up position of the nose, different that the normal glasses).
 - Black dot: large nose bridge (usually Caucasian)
 - White dot: small nose bridge (usually Asian)

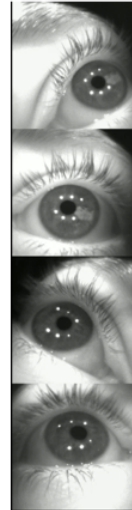
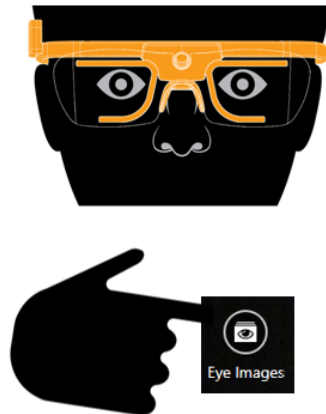
- Green dot: similar to the white dot, but puts the eye tracker a little further away from the eyes



- To confirm that the eye tracker is placed properly:
 - Click on the “adjustment” menu to see if the two white dots are in the middle of the lens.



- Click on the “eye images” menu to make sure that:
 - The eyeball is seen clearly. If it is cut off, try changing the nose piece.
 - The pupil and six glints are visible on participant’s eyes when they are looking straight (see pictures below).
 - If there are more than six glints visible, try adjusting the room lighting.



- Calibrate the participant
 - To calibrate the eye trackers, have participant stand on 0.5-1.5 meter (1.65-4.9 ft) away from the calibration sticker (as marked on the floor) and ask them to look straight toward the calibration circle.
 - Make sure the eye is aligned in the center of the target.
 - Press the calibrate button to start the calibration process and wait until the calibration is successful.
 - Once calibration is successful, do a calibration check in environment by moving card around and ask them to continue following it with their eyes.
 - Accuracy of gaze is better when the gaze angle isn't extreme.

- After calibration is complete, press record on all 4 eye trackers **SIMULTANEOUSLY**

******Move participants to simulation room******

→ Begin Simulation

- **Begin Simulation**

- *While the simulation is occurring, another research assistant can set up the discussion room for the focus group*
 - *Set up posters*
 - *Focus Group Ground Rules*
 - *SEIPS Model*
 - *Set up tables*
 - *Prof Wooldridge*
 - *Copy of Focus Group Guide*
 - *Writing utensil*
 - *Research Assistants*
 - *Note sheet*
 - *Writing utensils*
 - *Participants*
 - *Put a copy of post simulation survey at each seat*
 - *Put a pen at each seat*
 - *Put audio recorders on table with participants*

- **End of Simulation**

******Bring Participants back to Discussion Room******

- remove eye trackers and stop recording
- have participants sit where their name tent is

→ Post Simulation Survey

Post Simulation Survey

- Give participants paper surveys

*****TURN ON AUDIO RECORDERS*****

Post Simulation Debrief (*Focus Group*)

****notetaker 1 = record roles in turns of talk;**

****notetaker 2 = write notes;**

****notetaker 3 = time keeping, note missed questions**

Objective of Focus Group: Now we will have a group discussion on how you think the handoff you just participated in went. *[introduce facilitator, notetakers if not already done so]*

→ went well

1. What do you think **went well** during the handoff? Things that that may have improved patient safety or quality of care, made sure the patient's care was not compromised, and/or made it go well from your viewpoint?
 - a. Why do you think that went well?
 - b. **[PERSON]** How did the people involved play a role in making the handoff go well?
 - i. What were the individuals doing that made that portion go well?
 - ii. How did any prior working experience or relationships with the people have an impact in this portion of the handoff?
 - iii. How did the amount of people involved play a role in making this portion go well?
 - iv. How did the people involved play a role in this portion of the handoff?
 - c. **[ENVIRONMENT]** How did any aspect of the room or environment play a role in making that portion go well?
 - i. Were any noises through this handoff a distraction?
 - ii. What about the room setup/space assisted in making this portion of the handoff go well?
 - iii. How did any other environmental factors, such as lighting, temperature, humidity, or air quality that affect this portion of the handoff?
 - d. **[T/T]** How did the tools/technologies you used play a role in making this handoff go well?
 - i. **How did the written information you received about the case influence the transition?**
 - e. **[Organization]** How did organization of the play a role in making this handoff go well?
 - i. Are there are any aspects of the hospital culture (specific rules, procedures, workload) that you feel contributes to making a handoff go well? Why/how?
 - ii. Were you able to communicate with everyone during the handoff? Was that important?
 - f. **[Task]** Did you feel that you could accomplish your tasks
 - i. Do you feel as though you received all the necessary information during this portion of the handoff? Why or Why not?
 - ii. Do you feel as though you were able to convey all the necessary information during this portion of the handoff? Why or why not?

2. Are there any other factors not already discussed that you feel assist in making a handoff go well? If so, how?

→ went poorly

3. What do you think **went poorly** during the handoff? Things that might have interfered with patient safety or quality of care, compromised the patient's care, and/or made it not go well from your viewpoint?
 - a. Why do you think that went poorly?
 - b. **[PERSON]** How did the people involved play a role in making the handoff go poorly?
 - i. What were the individuals doing that made that portion go poorly?
 - ii. How did any prior working experience or relationships with the people have an impact in this portion of the handoff?
 - iii. How did the amount of people involved play a role in making this portion go poorly?
 - iv. How did the people involved play a role in this portion of the handoff?
 - c. **[ENVIRONMENT]** How did any aspect of the room or environment play a role in making that portion go poorly?
 - i. Were any noises through this handoff a distraction?
 - ii. What about the room setup/space assisted in making this portion of the handoff go poorly?
 - iii. How did any other environmental factors, such as lighting, temperature, humidity, or air quality that affect this portion of the handoff?
 - d. **[T/T]** How did the tools/technologies you used play a role in making this handoff go poorly?
 - e. **[Organization]** How did organization of the play a role in making this handoff go well?
 - i. Are there are any aspects of the hospital culture (specific rules, procedures, workload) that you feel contributes to making a handoff go poorly? Why/how?
 - ii. Were you able to communicate with everyone during the handoff? Was that important?
 - f. **[Task]** Did you feel that you could accomplish your tasks?
 - i. Do you feel as though you received all the necessary information during this portion of the handoff? Why or Why not?
 - ii. Do you feel as though you were able to convey all the necessary information during this portion of the handoff? Why or why not?

4. Are there any other factors not already discussed that you feel contribute to making a handoff go poorly? If so, how?

→general

5. What could have been improved in the handoff you just participated in?

a. How could that portion of the handoff have been improved?

b. Why do you think that would have improved the handoff?

6. Do you have any questions for us?

7. Is there anything else you would like to add?

Going forward, our research team will look at the data we collected and analyze it. We might reach out to you if we have any follow up questions, and we will also give you a chance to review the conclusions that we make from the data analysis.

******Turn off recorders once discussion is finished******

→ Final Survey

Final Survey

- Give participants paper survey

End of Study

- Thank the participants

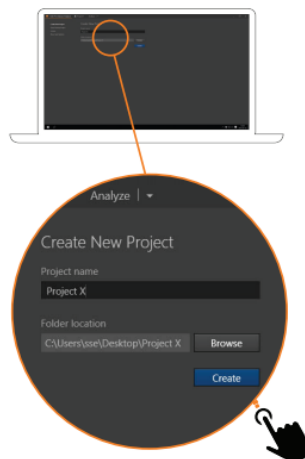
After Participants Leave

- Eyetrackers
 - o Clean eye tracker nose piece and frame
 - o Make notes on the battery level of eye tracker and surface pro.
- Pack posters and other research materials
- Can save audio recording on one of the surface pros.
- Transfer eye tracker's recording files after coming back to lab
- Make sure eye tracker data is saved?

→ Importing eye tracker data

Importing Eye Tracker Data *(in HFSS lab)*

- ❑ Importing recording data
 - Remove SD memory card from the recording unit and insert it to the computer.
 - Launch Tobii Pro Lab to import recording files with the following credentials:
Username: .\Tobii
Password: Shared4Toby!
(NOTE: This is different with Tobii Pro Controlled app).
 - Create a project on Tobii Pro Lab Analyzer Edition.
 - Name the file and choose the location. Remember to save project to a local C drive.
 - Click Import>Glasses Recording
 - Open SD memory card folder and look for *.ttgp file, click Import.



Using the "Tobii Pro Lab Analyzer Edition" choose a name for your new project and where to save it, then press create.

- At the project dashboard, click "Import > Glasses Recording". Locate and select the data file (*.ttgp) on the SD memory card to import it.

