

Clinical Considerations for Future Non-Implantable Brain-Computer Interface (BCI)

May 10, 2023
7:00-8:00 PM EDT



Presented by Melanie Fried-Oken, Betts Peters and Michelle Kinsella

ABOUT THE PRESENTERS:

Melanie Fried-Oken, PhD, provides expertise about assistive technology for people with acquired disabilities who cannot use speech or writing to communicate. She is a leading international clinician and researcher in AAC. She directs the REKNEW lab at Oregon Health & Science University and CAMBI. For the past 15 years, the lab has been working on development of a non-implantable brain-computer interface for communication.

Betts Peters is an ASHA-certified speech-language pathologist specializing in AAC and assistive technology. Her research interests include BCI systems for communication by people with locked-in syndrome, communicative participation for people who use AAC, and improving communication interventions for people with ALS.

Michelle Kinsella is a licensed occupational therapist specializing in cognitive rehabilitation and low vision. Her research interests include supporting the visual and cognitive demands of brain-computer interface systems for communication through interface design for people with severe speech and physical impairments (SSPI).

SEMINAR DESCRIPTION:

The REKNEW (Realizing Expressive Knowledge in Everyone With communication disorders) lab at OHSU believes the ability to express oneself is a basic human right. We are committed to the development of non-implantable AAC BCI systems for individuals with severe speech and physical impairments. Our current focus is on the BCI Functional Implementation Toolkit. The BCI-FIT is a hybrid system combining EEG with other signals such as EMG or eye tracking. This webinar will include a discussion of clinical screening tools for AAC-BCI use, and a demonstration of how data is gathered and used to match technology to optimize BCI-FIT performance for individual users.

MODERATED BY: Betsy Caporale, M.S., CCC-SLP

CE courses are available for Free to USSAAC/ISAAC members only.

Non-members pay \$25 for each webinar.

This course is offered for 0.1 ASHA CEUs (Introductory level; Professional area.)

PARTICIPANTS WILL:

1. Become familiar with potential screening tools for gathering information to best inform AAC-BCI system configuration to support communication and computer control for people with SSPI.
2. Recognize ways to elicit user preference related to AAC-BCI technology design and use.
3. Explain methods to incorporate end user input and feedback into an interactive design process for AAC-BCI systems.

TIME ORDERED AGENDA:

- 5 minutes: Introduction of speaker, USSAAC and topic
- 8 minutes: Introduction to non-implantable BCI systems
- 25 minutes: Clinical screening tools for user preferences (motor, visual, language, cognitive)
- 9 minutes: Person-to-technology match for AAC-BCI systems
- 8 minutes: Eliciting user input and feedback for iterative system design
- 5 minutes: Q and A

American Speech-Language-Hearing Association (ASHA) CEUs in speech-language pathology and audiology are awarded by the ASHA CE Registry upon receipt of the CEU Participant Form from the ASHA Approved CE Provider, USSAAC. ASHA CEUs are provided to full registrations. This program is offered for .1 ASHA CEUs (Introductory Level, Professional Area)

ASHA Disclosures:

Speakers

Financial:

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Non-financial:

Melanie Fried Oken has no non-Financial disclosures to report

Betts Peters' has no non-Financial disclosures to report

Michelle Kinsella has no non-Financial disclosures to report

Moderator

Financial:

Betsy Caporale has no financial disclosures to report

Non-financial

Betsy Caporale is the Director, Professional Affairs for USSAAC

To register for this Webinar please go to the following link:

https://us06web.zoom.us/webinar/register/WN_a3IUe-RASsu-FkFvRKjKbQ

PLEASE NOTE: Only the first 150 attendees to log into the webinar will be guaranteed spots.

USSAAC EDUCATION COMMITTEE:

Betsy Caporale, Richard Hurtig,
Wendy Quach, Sharon Redmon

about USSAAC

The United States Society for Augmentative and Alternative Communication (USSAAC) is the national chapter of the International Society for Augmentative and Alternative Communication (ISAAC). As the United States' only non-profit organization dedicated to supporting the entire AAC community, USSAAC provides an invaluable role, working to ensure that individuals who could benefit from AAC have access to the technology and services they need.

Benefits of membership include, but are not limited to:

- Free access to USSAAC webinar series with ASHA CEUs and USSAAC Twitter chats
- Advocacy for maintaining & expanding access to AAC systems and services
- Discount to 2018 ISAAC Conference – Australia
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- Information updates on USSAAC website & social platforms
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