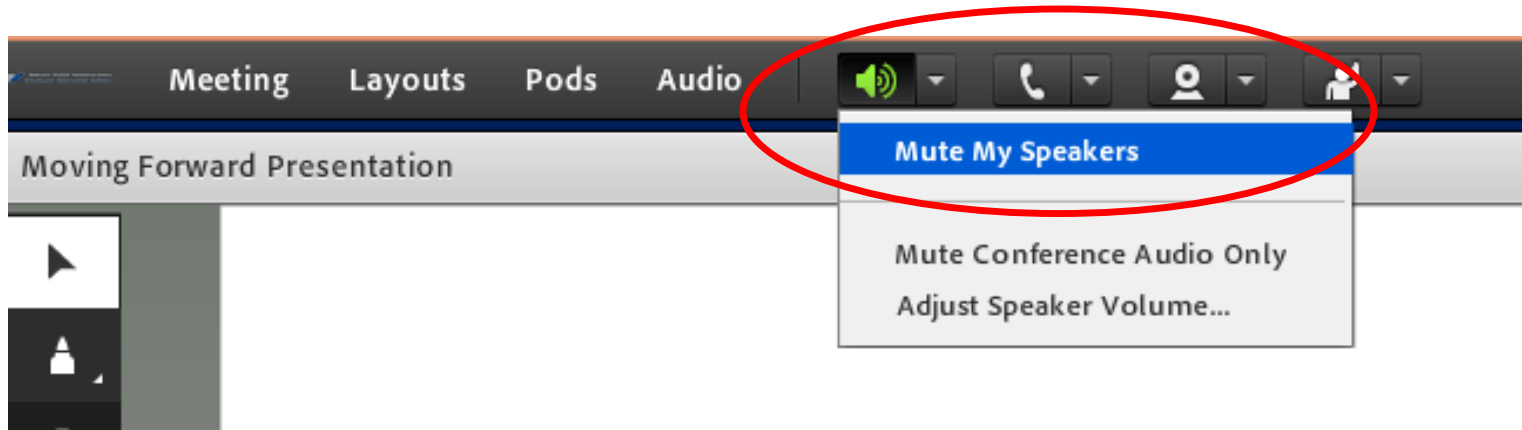


# Please remember to mute your speakers.



## VA Mobile Discussion Series

For audio, please dial in using VANTS:  
1-800-767-1750 pc: 32523#

Thank you for joining, we will begin shortly.



**U.S. Department of Veterans Affairs**  
Veterans Health Administration  
Office of Connected Care



## **HADFA – VA Mobile Discussion Series**

Hearing Aid Distance Fitting Application (HADFA)

Brian Stevenson, Innovation Consultant, VHA Innovation Program  
Dr. Chad Gladden, Audiology Telehealth Coordinator

# HADFA Integrated Project Team



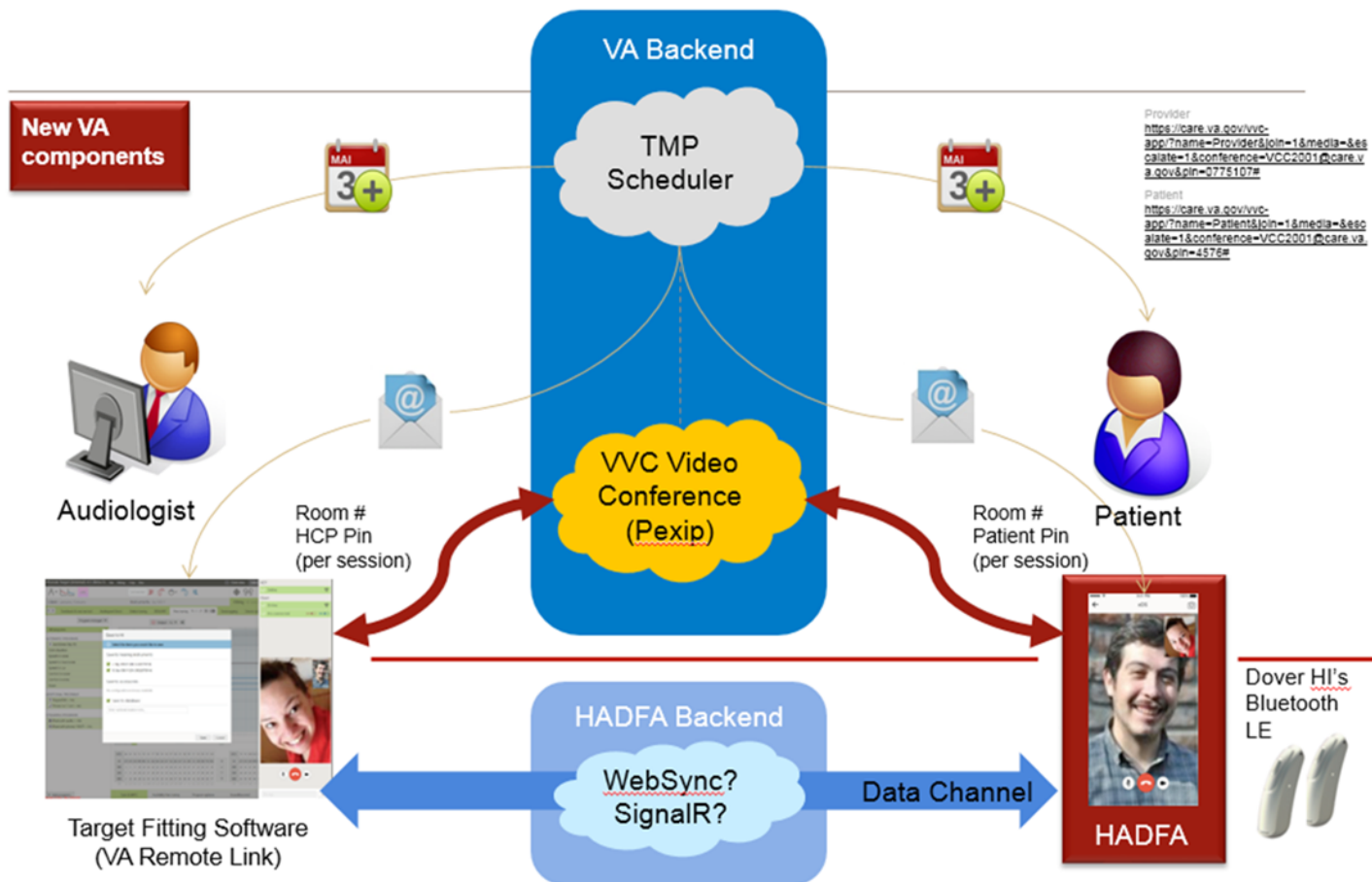
- **Clinical Business Owner:** Dr. Lucille Beck, Deputy Chief Patient Care Services Officer, Rehabilitation and Prosthetics Services
- **Clinical Lead:** Dr. Rachel McArdle, National Director, Audiology and Speech Pathology
- **Clinical Lead:** Dr. Chad Gladden, Audiology Telehealth Coordinator
- **Project Manager:** Brian Stevenson, Innovation Consultant
- **Connected Care Advisory Assistance:** Ms. Constance Bennett (VVC / TMP)
- **Telehealth Advisory Assistance:** Ms. Rhonda Johnston, Director, Development, Implementation and Quality
- **Clinical Champions:**
  - Darlene Moenter-Rodriguez, Audiology Service Chief, Cleveland, OH
  - Saralyn Gold, Audiology Service Chief, Miami, FL
  - Katherine Dong, Audiology Service Chief, Chicago, IL

# HADFA Overview



- **2012:** Driven by Industry Competition, VHA Innovation (10P8) and Rehabilitation and Prosthetics Services (10P4R) embark on joint effort to develop a Distance Hearing Aid Fitting Application (DISHAF)
- **2015:** DISHAF delivered field testing and prototype completion. DISHAF used an interim device that was rather large and cumbersome - signal loss became a single point of contention in the field.
- **2016:** VHA Innovation leveraged the CEVN Telehealth BPA to develop DISHAF into a mobile application for iOS and Android smartphones and became what we now call the Hearing Aid Distance Fitting Application (HADFA) expansion pilot
  - HADFA utilizes approved interface available on the ONE VA TRM
  - VA Video Connect (VVC/Pexip) provides Virtual Meeting Rooms (VMRs) whereby the Veteran and Provider may hold a video conference for an audiology encounter. The Provider uses Bluetooth to connect to the Veterans hearing aids in order to make adjustments
  - Telehealth Management Platform (TMP) will be capable of handling Dynamic VMRs in January 2017. Currently, HADFA uses Static VMRs for app building and testing. However, soon we will be able to utilize the power of TMP to schedule encounters in advance and/or adhoc
  - Pilot Sites include the following: Captain James A. Lovell Federal Health Care Center; Miami VA Healthcare System; Louis Stokes Cleveland VAMC
- **2017:** HADFA will be complete and disseminated from the Audiology Clinics

# HADFA Workflow



# HADFA

## DEMO 1

End of 1st fit session  
at local VA clinic

Setting up together  
the HADFA App



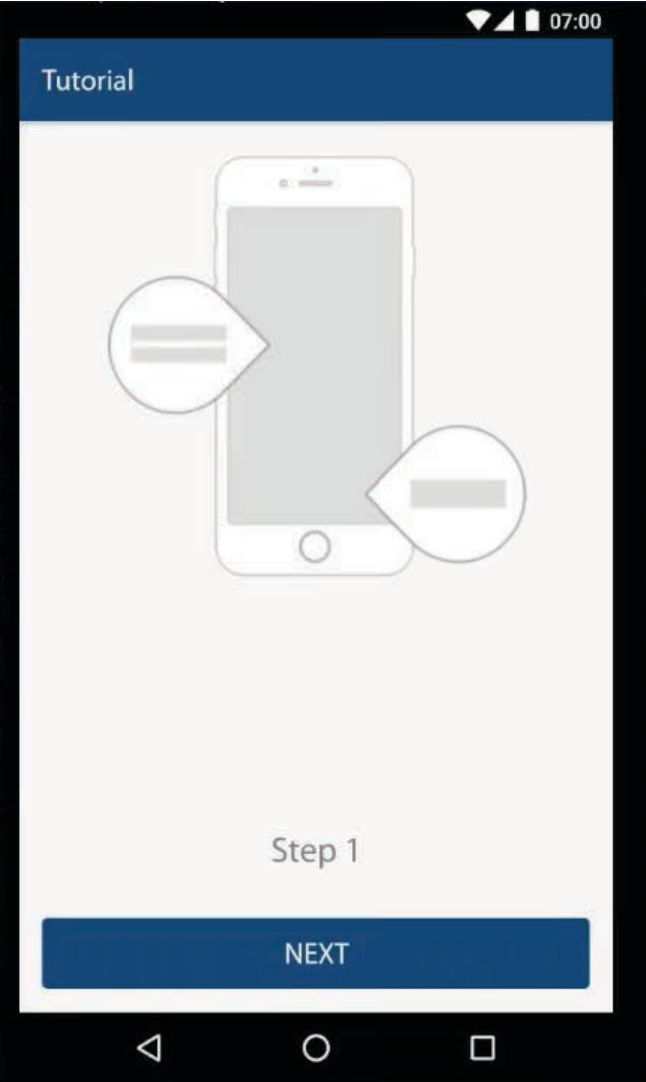
The Audiologist meets with the Veteran, in person, and helps the Veteran to install the HADFA on their respective smartphone, whether iOS or Android.

# HADFA

## DEMO 1

End of 1st fit session  
at local VA clinic

Setting up together  
the HADFA App



The HADFA tutorial begins and the Provider steps through the initial setup and installation of HADFA. Typically, this is done in person. However, it can also be done by the Veteran if they feel comfortable going it alone prior to their first HADFA encounter with the Provider.

# HADFA

## DEMO 1

End of 1st fit session  
at local VA clinic

Setting up together  
the HADFA App



Privacy policy

To improve our services we collect anonymous usage data. The collected data cannot be tracked to a person and will never be shared with anyone.

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Sonova may collect anonymous usage statistics about how individuals are using the app (such as the total number of users of the app and device models) to help us improve the app, and we won't collect any of your personal information. To collect usage statistics this app makes use of Google Analytics, an analytics service provided by Google, Inc. (Google). We may collect and store information locally on your device using mechanisms such as application data caches. The information generated by your use of the app will be transmitted to and stored by Google for compiling reports on app activity for app operators and providing other services relating to the app activity. Your IP address transmitted to a Google server will be abbreviated and will not be associated with other Google data. You may refuse the use of cookies by disabling the cookies option in your browser. For more information about data handling practices for this app, please visit: [https://www.sonova.com/privacy-policy](#)

☒ I agree with the privacy policy and...

BACK NEXT

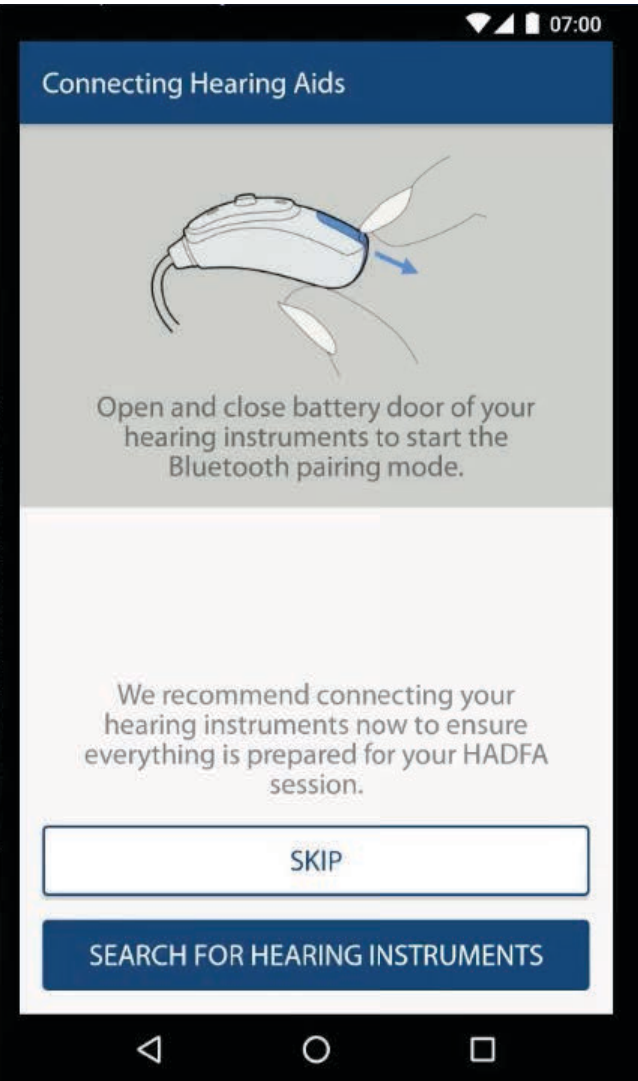
The Veteran must agree with the VA Privacy Policy before clicking NEXT, to complete the HADFA installation.

# HADFA

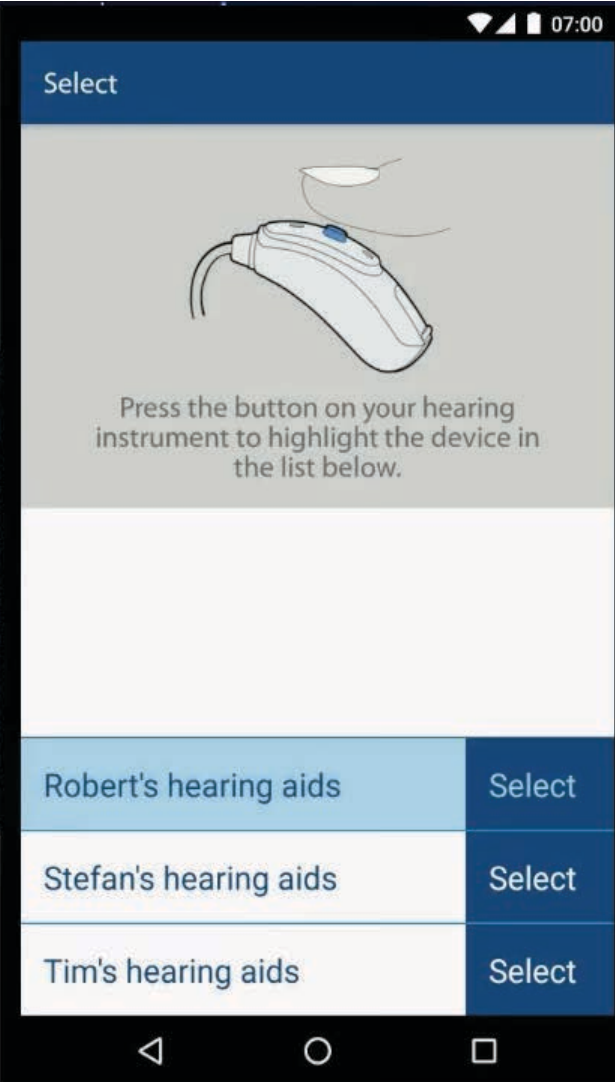
## DEMO 1

End of 1st fit session  
at local VA clinic

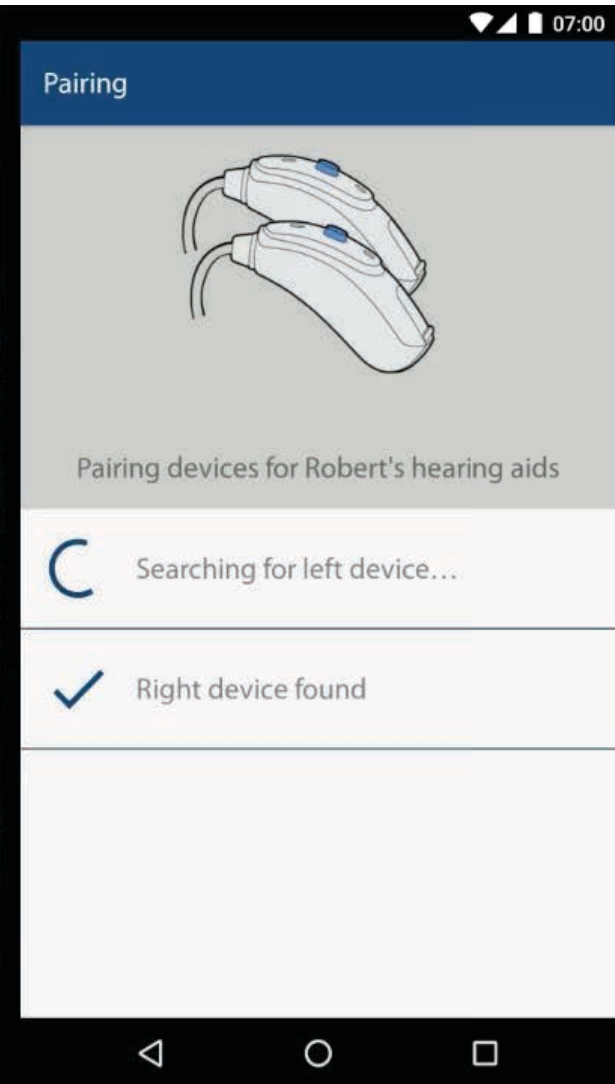
Setting up together  
the HADFA App



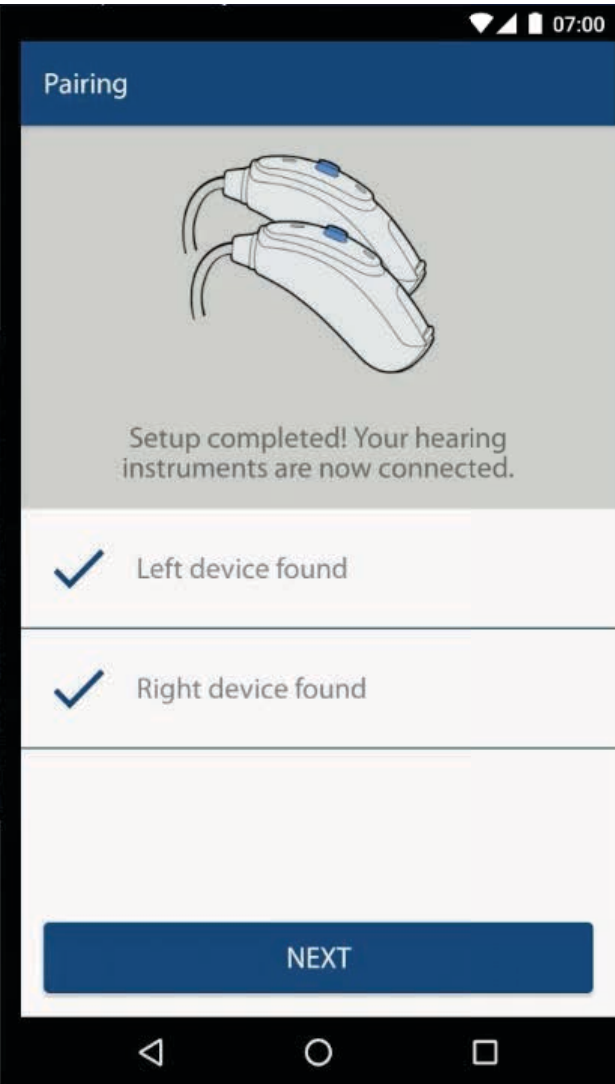
At this point the Veteran's Hearing Aids are connected to HADFA. The Veteran opens and closes the battery door on their hearing aids to start the Bluetooth pairing mode.



HADFA will begin searching for the Veteran's hearing aids.



HADFA indicates that the Right Hearing Aid has been found and...



that the Left Hearing Aid has been found by placing a check mark next to the left & right device on the HADFA screen.




Appointment setup

Room number

Enter a valid room number, e.g. VCC2001

Client PIN code

Enter the PIN code, e.g. 1234

 At the time of your appointment, enter the room number and PIN code from the reminder email.

Q W E R T Y U I O P

A S D F G H J K L

↑ Z X C V B N M ×

? ! @ , . English (US) →

HADFA is setup and ready to use! The Provider and Veteran determine a future date for the next HADFA encounter, by which the Veteran will receive an email that contains a CODE for the VMR or room number and a PASSWORD.

• 2 weeks later •

Follow-up appointment

Distance Fitting

HCP and Patient log in

at the same time on agreed date

Login credentials provided by email

Phonak Target 5.2 (Alpha 0) File Help

Clients & sessions

Search...

Client#	Last name
▼ 0000002	Robert
Session 1	11.11.2016

Phonak Target Fitting Software started from Noah logging in to VVC

Robert

Session 1 11.11.2016 09:34

11.11.2016

Login HADFA

Enter the login data to start the HADFA session:

Room number HAD9508

HCP pin code 0345251#

OK Cancel

New client...

Clients & sessions Demonstrator Media Tools Updates

Appointment setup

Room number  
HAD9508

Client PIN code  
234#

At the time of your appointment, enter the room number and PIN code from the reminder email.

1 2 3 -

4 5 6 \_

7 8 9 ✕

, 0 . ✓

To establish a connection to the Provider for the future encounter, the Veteran enters the VMR information into HADFA by logging into VVC with the information the Provider sent to the Veteran in an email.

Phonak Target 5.2 (Alpha 0) File Help

Clients & sessions

Search... Search Show all Robert

Client#	Last name	First name
▼ 0000002	Robert	
Session 1	11.11.2016	

Session 1 11.11.2016 09:34

11.11.2016

Login HADFA

Enter the login data to start the HADFA session:

Room number HAD9

HCP pin code 0345251#

OK Cancel

New client...

Clients & sessions Demonstrator Media Tools Updates

Connecting

Connecting

You

HADFA App  
Logging in to VVC

Connecting

HADFA logs into VVC.

Phonak Target 5.2 (Alpha 0) File Help

Clients & sessions

Search... Search Show all

Client#	Last name	First name
▼ 0000002	Robert	
Session 1	11.11.2016	

Robert

Session 1 11.11.2016 09:34

11.11.2016

Login HADFA

Enter the login data to start the HADFA session:

Room number HAD9508


HCP pin code 0345251

OK Cancel

New client...

Clients & sessions Demonstrator Media Tools Updates

Connecting



Incoming video call from your HCP.

Decline Accept

The Veteran is prompted to “Accept” the HADFA VVC encounter.

Clients & sessions

Search... Search Show all

Client#	Last name	First name
▼ 0000002	Robert	
Session 1	11.11.2016	

Robert

Session 1: 11.11.2016 09:34

11.11.2016

Login HADFA

Enter the login data to start the HADFA session:

Room number HAD9508

HCP pin code 03

OK Cancel

New client...

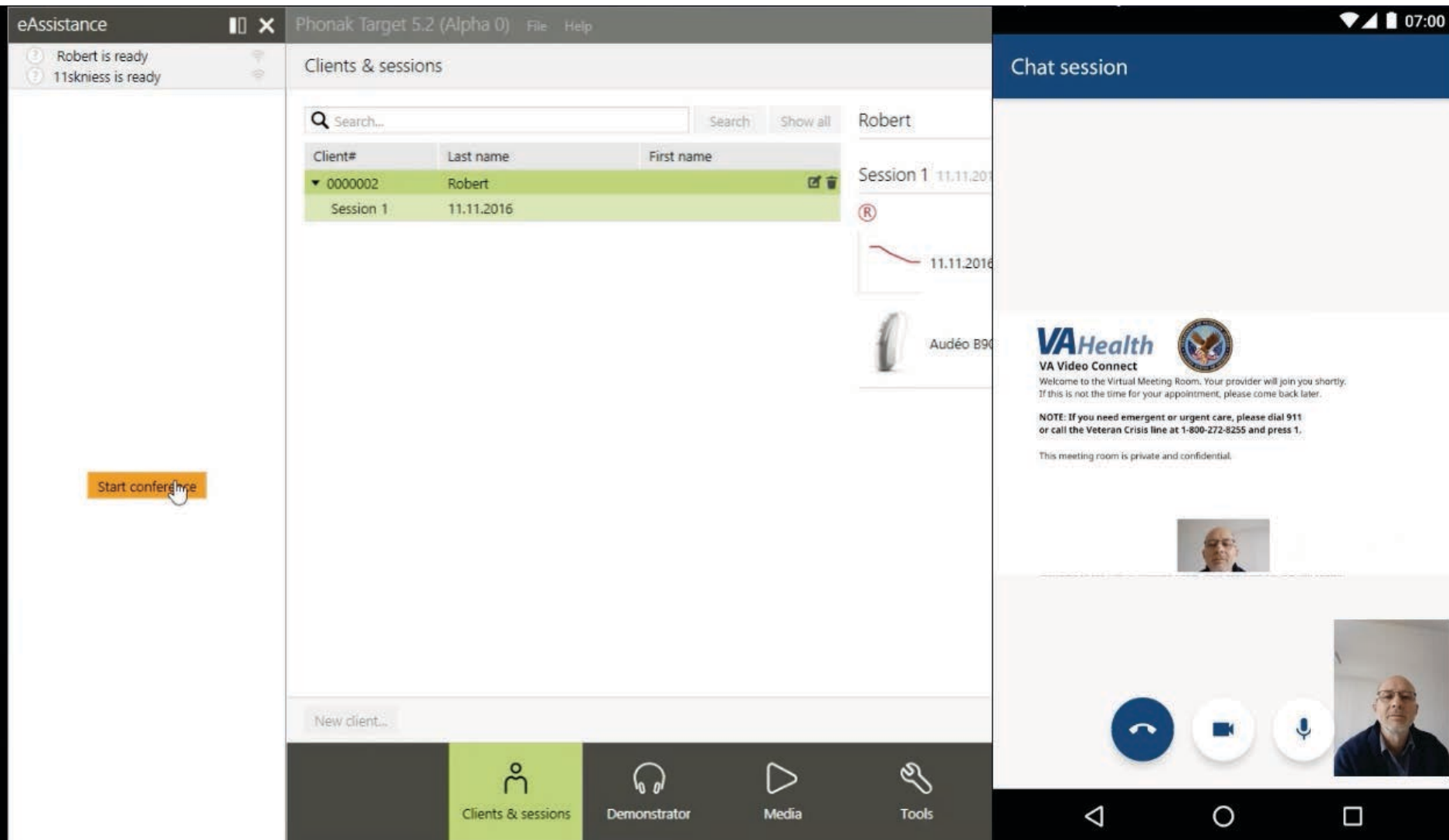
Clients & sessions Demonstrator Media Tools Updates

Chat session



Video encounter interface showing a man with glasses and a beard. Below the video are icons for phone, video, and microphone. At the bottom are navigation icons: back, home, and recent apps.


A first indicator that HADFA is working properly is that the Veteran will first see their own image in the Video encounter.



Subsequently, the Provider receives the chat session request on their provider-facing equipment and clicks the “START CONFERENCE” button to begin the encounter.

eAssistance

Robert is ready  
11skniess is ready



Welcome

Unmuted Unmuted

Phonak Target 5.2 (Alpha 0) File Help

Clients & sessions

Search... Search Show all

Robert

Client#	Last name	First name
0000002	Robert	
Session 1	11.11.2016	


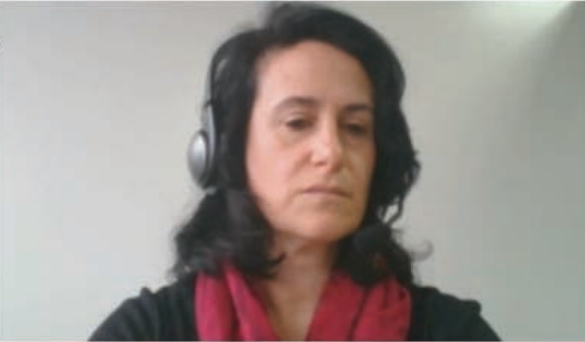
Session 1 11.11.2016

Audéo B90

New client...

Clients & sessions Demonstrator Media Tools

Chat session



Phone Video Microphone

The HADFA Audiovisual Encounter begins!



eAssistance Phonak Target 5.2 (Alpha 0) File Help

Robert is ready  
11skniess is ready

Clients & sessions

Search Show all

Robert

Session 1 11.11.2016

11.11.2016

Audéo B90

Unmuted Unmuted

New client...

Clients & sessions Demonstrator Media Tools

Real video stream using VA Pexip server

Chat session

07:00

11.11.2016

Audéo B90

Unmuted Unmuted

New client...

Clients & sessions Demonstrator Media Tools

For the purposes of this demonstration, let's assume the Veteran reported to the Provider that his daughter was complaining his television was too loud in the home. The Provider asks, "Some of the time, or all of the time?" The Veteran responds, "All of the time."

eAssistance Phonak Target 5.2 (Alpha 0) File Fitting Help Client view Select media... Save & print settings

Robert is ready 11skniess is ready

Client: Robert Instruments: Audéo B90-R Fitting: Calm situation

Feedback & real ear test AudiogramDirect Global tuning Fine tuning DataLogging Device options

Program manager >>

All programs

AUTOMATIC PROGRAMS

- AutoSense OS
- Calm situation
- Speech in noise
- Speech in loud noise
- Speech in car
- Comfort in noise
- Comfort in echo
- Music

ADDITIONAL PROGRAMS

- Acoustic phone

STREAMING PROGRAMS

- Bluetooth audio + mic
- Bluetooth phone / DECT + mic

Gain - Insertion gain

Not connected

Gain - Insertion gain

Not connected

3 6 10 20

Verification assistant

MPO	66	81	91	96	99	103	106	103	97	86
All	250	500	750	1k	1.5k	2k	3k	4k	6k	8k
G80	0	-1	1	6	8	9	11	12	12	10
G65	0	-1	5	10	14	16	18	19	19	18
G50	0	-1	8	14	17	19	21	22	21	18
CR	1.2	1.3	1.3	1.3	1.5	1.7	2	2	1.9	2.1

MPO	67	83	93	97	100	105	107	104	98	87
All	250	500	750	1k	1.5k	2k	3k	4k	6k	8k
G80	0	-1	3	8	10	11	12	13	13	12
G65	0	0	9	14	16	18	20	21	21	20
G50	0	2	12	17	19	21	24	24	23	20
CR	1.3	1.3	1.4	1.5	1.6	1.8	2.1	2.1	2	2.2

+ Add programs...

Gain & MPO Audibility fine tuning Program options SoundRecover2 TK/Gain 35 dB Automatic fine tuning Tinnitus balance

The Provider connects to the Veteran's hearing aid and makes a slight adjustment so the soft sounds of speech will be more available to the Veteran. The Provider then informs that he/she is making the adjustments and will return shortly to speak with the Veteran.

eAssistance Phonak Target 5.2 (Alpha 0) File Fitting Help Client view Select media... Save & close session

Robert is ready 11skniess is ready

Client: Robert Instruments: Audéo B90-R Fitting: < Calm situation

Feedback & real ear test AudiogramDirect Global tuning Fine tuning DataLogging Device options

Program

Close session

Some devices cannot be saved

Hearing instruments

L: Audéo B90-R (xS)

R: Audéo B90-R (xS)

Accessories

No configurable accessory

Database

Optional session note...

Gain

Cancel

Verification assistant

	All	250	500	750	1K	1.5K	2K	3K	4K	6K	8K		All	250	500	750	1K	1.5K	2K	3K	4K	6K	8K
G80	0	-1	1	6	8	9	11	12	12	10		G80	0	-1	3	8	10	11	12	13	13	12	
G65	0	-1	5	10	14	16	18	19	19	18		G65	0	0	9	14	16	18	20	21	21	20	
G50	0	-1	8	14	17	19	21	22	21	18		G50	0	2	12	17	19	21	24	24	23	20	
CR	1.2	1.3	1.3	1.3	1.5	1.7	2	2	1.9	2.1		CR	1.3	1.3	1.4	1.5	1.6	1.8	2.1	2.1	2	2.2	

+ Add programs...

Gain & MPO Audibility fine tuning Program options SoundRecover2 TK/Gain 35 dB Automatic fine tuning Tinnitus balance

Once the adjustments are made, the Provider saves the settings and returns to speak with the Veteran.

eAssistance

Robert is ready   
11skniess is ready

Phonak Target 5.2 (Alpha 0) File Help

Clients & sessions

Search...  Search Show all

Client#	Last name	First name
▼ 0000002	Robert	
Session 1	11.11.2016	
Session 2	11.11.2016	

Robert

Session 2 11.11.2016

11.11.2016

Audéo B90-R

New client...

Clients & sessions Demonstrator Media Tools

07:0

Chat session

In closing, the Provider sets up a follow-up HADFA encounter, to discuss with the Veteran whether or not the adjustments were good or require further augmentation.

# Testing and Moving Forward



## – **HADFA Phase 1:**

- Focuses on the patient-facing application only. Static VMRs will be used and encounters will be manually input into TMP
- Veteran Focused Integration Process (VIP) initial Epic is underway. VIP ID# is 1017
- VACO 508 Compliance application is underway
- Privacy: While the project does not transmit PHI or PII in anyway, the HADFA IPT has reached out to the Privacy Office for aid in assuring our assumptions are correct in this capacity

## – **HADFA Phase 2:**

- Focuses on the provider-facing application and integration into TMP using dynamic VMRs
- Mobile Device Application Review (Waivers, White-List, COTS Risk Assessment)
- HADFA available on Google Play and Apple App Store
- Socialization of HADFA to Providers and Veterans

# Questions?



# Thank you!

What future topics would you like to discuss?

Let us know by providing feedback  
at this link:

<https://www.surveymonkey.com/r/2WPBL38>