Beyond theory to practice: eAudiology Consensus Statement prepared by the Phonak Expert Panel in collaboration with Phonak

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Expert panel & Phonak collaboration
Purpose of the Consensus Paper on eAudiology

Recommendations for integrating eAudiology to reach new patients, enhance patient care and increase value of services
How technology has changed the way we do things
The Internet of Things

Refers to devices or objects that are connected to the Internet, like your smartwatch, Fitbit, or even your refrigerator. These devices are able to collect and transmit data via the Internet.

- Vehicle, Asset, Person & Pet Monitoring & Controlling
- Agricultural automation
- Energy consumption
- Security
- Building management
- Embedded mobile
- M2M & wireless sensor network
- Everyday things
- Smart homes and cities
- Telemedicine & Healthcare

Everyday things get connected for smarter tomorrow.
<table>
<thead>
<tr>
<th>Smart watches</th>
<th>Connected drones</th>
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<td><img src="image1" alt="Smart watches" /></td>
<td><img src="image2" alt="Connected drones" /></td>
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<table>
<thead>
<tr>
<th>VR Glasses</th>
<th>Smart Homes</th>
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<tr>
<td><img src="image3" alt="VR Glasses" /></td>
<td><img src="image4" alt="Smart Homes" /></td>
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IoT Analytics Global Overview 2016

**IoT segment**
- Smart city
- Connected industry
- Connected Building
- Connected Car
- Smart energy
- Other
- Connected Health
- Smart Supply Chain
- Smart Agriculture
- Smart Retail

**Global share of IoT projects**
- **Smart city**: 23%
- **Connected industry**: 17%
- **Connected Building**: 12%
- **Connected Car**: 11%
- **Smart energy**: 10%
- **Other**: 8%
- **Connected Health**: 6%
- **Smart Supply Chain**: 5%
- **Smart Agriculture**: 4%
- **Smart Retail**: 4%

**Details**

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<th>APAC</th>
<th>MEA</th>
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**Trend**
- **Americas**: Increase
- **Europe**: Decrease
- **APAC**: Increase
- **MEA**: Increase

N= 1,600 global, publicly announced IoT projects
Internet of Things

• Think of the changes we have experienced in just the past 10 years
THE FUTURE IS NOW
Audiology Headline

Audiologists adopt e tech!!
Audiologists’ Attitudes Toward Telehealth
Eikelboom, Swanepoel (2016)

- Surveyed 269 audiologists from 28 different countries
- Only 15.6% had used eAudiology
- Despite positive attitudes toward telehealth and associated technology, the low number of audiologists who have used eAudiology for services indicates limited clinical adoption
Defining eAudiology

The evolution of terminology used to describe remote delivery of health services
“eAudiology” encompasses technologies and services that enable remote provision of audiologic care at each stage along the patient journey

eHealth: Health and medical care with new technologies

A subset of eHealth that incorporates information, clinical implementation guidelines, resources related to hearing healthcare with new technologies and services

A suite of smart apps and solutions, is designed to seamlessly and securely connect HCPs with clients
## Barriers to eAudiology

### Patient barriers
- Lack of confidence in accessing services
- Fear of technology
- Fear of loss of personal connection

### HCP barriers
- Integration within day to day services
- Fear of technology
- Fear of loss of personal connection
Obstacles are addressed when care provided from FCC approach. Respectful and responsive care according to individual preference, needs and values.
Why FCC?

• Patients and families members prefer FCC approaches to Audiological care Singh, G. et al (2016)

• Provides support from others while trying to overcome technology fears

• Shared-goals create better outcomes Rathert, C. et al (2013)

• Family engagement increases confidence with managing hearing loss Singh, G. et al (2016)
How can eAudiology benefit patients
Benefits of eAudiology for Patients

- Overcome challenges of distance and access to care  
- May now be a preferred style of receiving services  
  Carr, G. (2017)
- Accommodate busy lifestyles
- Facilitate the inclusion of family in the hearing management process by removing geographic barriers and appointment conflicts

How can eAudiology benefit HCPs
Benefits to HCP

- Allows clinicians to re-evaluate traditional models of service delivery
- Proactive in finding the right solutions for patient individual needs
- Integrate new technological developments into the practice keeping current with changing lifestyles
- Increased flexibility for a better work/life balance
- Offer cost-effective options to patients improving quality of care and greater access
How can eAudiology benefit business practice
Benefits to the Business Practice

- Distinguish the business form competitive threats such as OTC, internet sales and hearable devices
- Elevate the value of audiology services
- Expand patient reach
- Expand hearing aid fitting solutions (patients in their everyday settings)
- Potential cost savings, increased efficiency, improved workflow and patient satisfaction

Ballachandra, B (2017)

Implementation of eAudiology services

Steps towards eAudiology implementation

Patient candidacy → Clinician education and training → Technology infrastructure → Regulatory environment
Patient Candidacy

- Determine if the patient can be a candidate for eAudiology services before implementation
- Age, lifestyle, education, experience with technology and family involvement may influence patient candidacy ASHA (2018)
Clinical Education and Training

- Behavior change for the audiologist
- Must assess which tasks are appropriate for eAudiology
- Communication behaviors will be different…. What will be interpreted from non-verbal communication?
- Ongoing education process as learning will continue and services are being initiated.
Technology Infrastructure

• Need to be aware of equipment needs and wireless services are necessary for delivery of remote care
• Bandwidth?
• Home-based equipment?
• Compatibility?
Regulatory Environment

- Licensure laws
- HIPAA
- Practice across borders
Future directions
Professional resources coming soon to our webpage.....

- eAudiology Consensus Statement
- Clinical implementation guidelines
- Patient profiling tool

#eaudiologyphonak
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Together, we change lives