

**Needs assessment in  
audiology: Rationale, tools,  
and implications in the clinic.**

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# Introduction

What is a needs assessment in audiology?

“A clinical procedure that identifies the adaptation or **rehabilitation needs** of a person with hearing loss, while considering the **functional impacts** of the hearing loss on the **individual and their significant others**, as well as **personal and environmental factors** that may influence their functioning.”



# Introduction

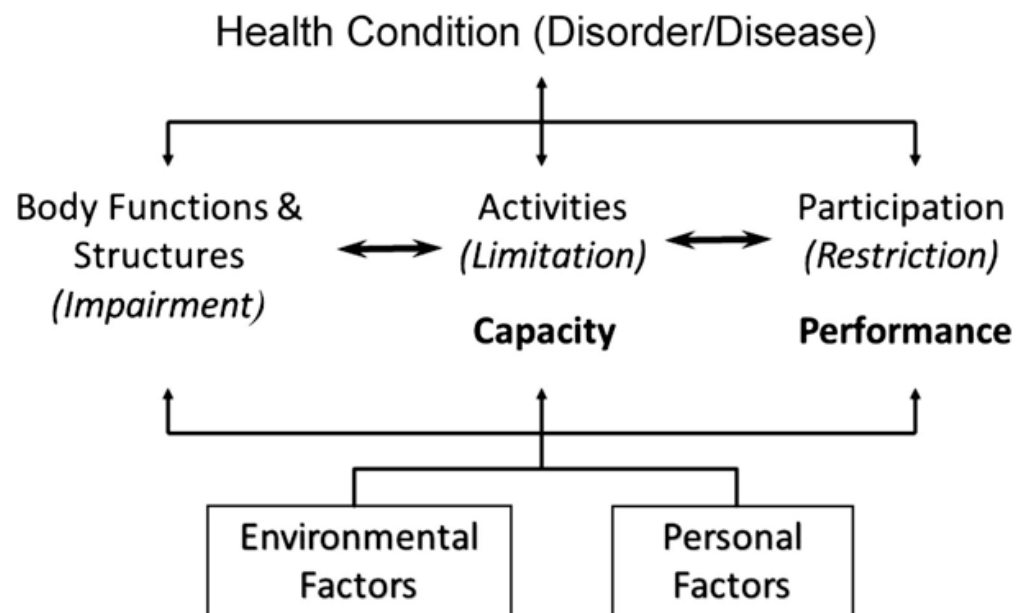
## Audiologic rehabilitation

“AR is a **client-centered approach** to assessment and management of hearing loss that encourages the creation of a therapeutic environment conducive to a **shared decision process**, which is necessary to explore and reduce the impact of hearing loss on **communication, activities, and participation.**” (Montano, 2019)

# Introduction

## Audiologic rehabilitation

International Classification of Functioning, Disability, and Health (WHO, 2001)



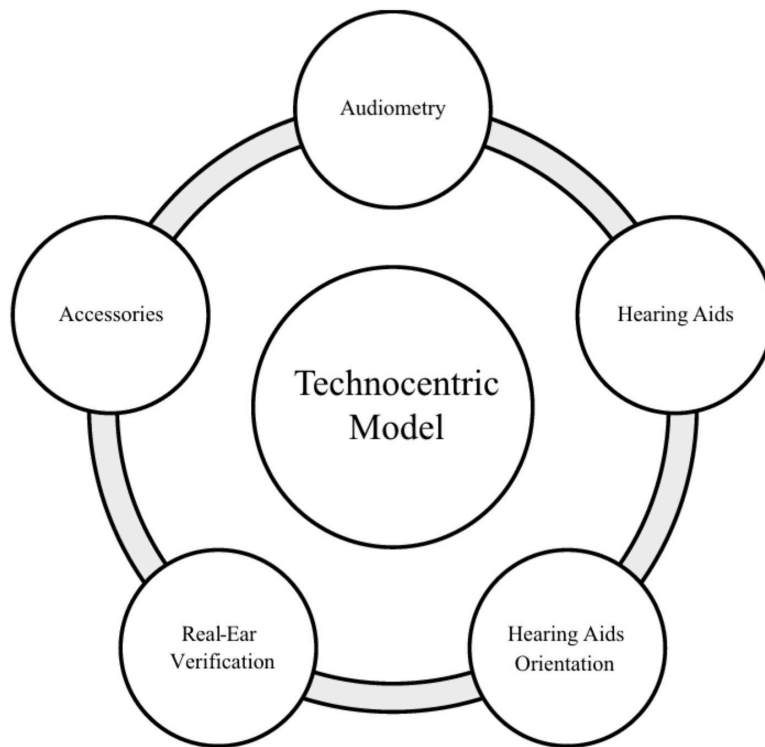


# Introduction

## Client-centered approach (Grenness et al. 2014)

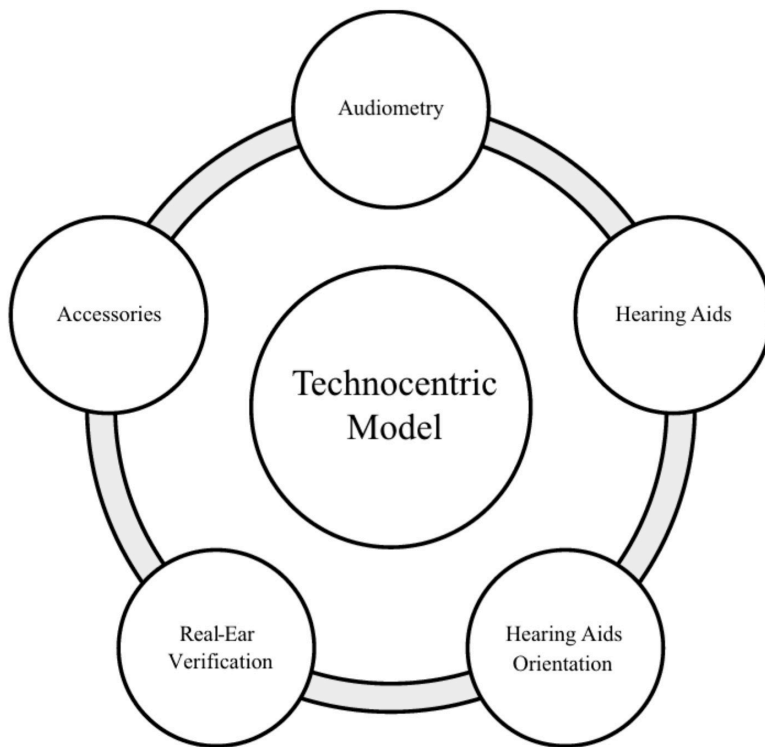
- Different from the traditional biomedical approach
- The client is considered as a full partner
  - Recognized by the professional as an expert of their own health condition
  - Involved in all stages of assessment and intervention
- Shared decision-making that respects the client's choices
- The relationship between the professional and the client is one of equality, with the professional acting more as a consultant or guide for the client.

# Introduction

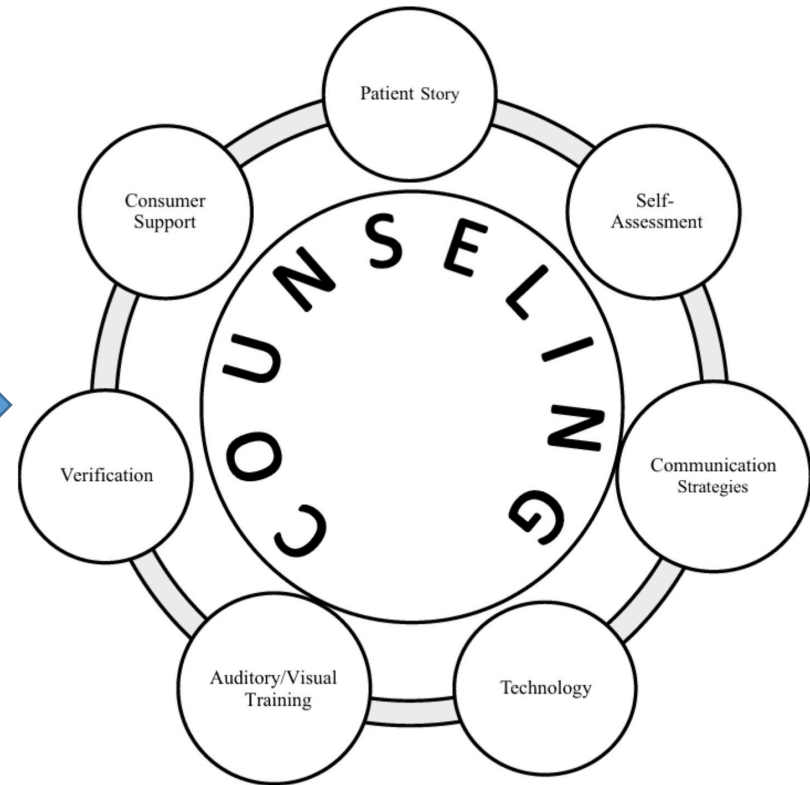


**Figure 2-1.** The technocentric model of audiology practice. *Source:* Montano, J. J. (2011). Adapted from "Building relationships: An important component to the aural rehabilitation process." *ENT and Audiology*, 20(4), 91-92.

# Introduction



**Figure 2-1.** The technocentric model of audiology practice. *Source:* Montano, J. J. (2011). Adapted from "Building relationships: An important component to the aural rehabilitation process." *ENT and Audiology*, 20(4), 91-92.



**Figure 2-2.** The person-centered model of audiology practice. *Source:* Montano, J. J. (2011). Adapted from "Building relationships: An important component to the aural rehabilitation process." *ENT and Audiology*, 20(4), 91-92.



# Introduction

How to conduct a comprehensive needs assessment and what should it contain?





# Introduction

## How to conduct a comprehensive needs assessment and what should it contain?

- There is no standard of practice in this area
  - Each audiologist approaches it in their own way.
  - Leads to issues of rigor, exhaustivity, and reproducibility.



# Introduction

## The Québec Audiological Assessment Protocol for Younger and Older Adults (QAAP-YOA) (Hotton & Gagné, 2021)

- Developed with the help of a committee of experts and experienced clinical audiologists, based on scientific literature.
- It provides audiologists with a method to conduct a comprehensive and thorough needs assessment.



# Learning objectives

After this presentation, participants will be able to:

- 1) Explain what an audiological needs assessment is.
- 2) Describe the main components of an audiological needs assessment protocol.
- 3) Explain the potential implications of using such a protocol in the clinic.



# Presentation outline

- The QAAP-YOA sections
  - 1) Audiological needs
  - 2) Living conditions
  - 3) Personal factors
  - 4) Discussion with the client concerning the goals of the treatment program and the intervention strategies retained
  - 5) Formulation of recommendations.
- The QAAP-YOA clinical tool
- Research results related to the QAAP-YOA
- Implications of, tools for using such a protocol in the clinic
- Conclusion
- Questions



# The QAAP-YOA

## 1) Audiological needs

- Explore the activity limitations and participation restrictions of the client in different areas of their life.
- For each area where a difficulty is identified, document the following:
  - A description of the difficulty and its context
  - The extent of the difficulty
  - The frequency of the difficulty
  - The significance of this difficulty
  - The strategies used by the person in this situation and their effectiveness
- Establish a priority order.



# The QAAP-YOA

## 2) Living conditions

- Social network
  - Does the person live alone or with others?
  - Support provided by close relatives
- Living environment
  - Does the person live in a house, an apartment, or a condo (how many floors, how many rooms), an independent or semi-independent seniors' residence, a long-term care facility, etc.



# The QAAP-YOA

## 3) Personal factors

- Personal factors that can influence rehabilitation (facilitators or obstacles)



# The QAAP-YOA

## 3) Personal factors

- Personal factors that can influence rehabilitation (facilitators or obstacles)
  - Dexterity, vision, comfort with technology, learning abilities, mobility, cognitive health, psychological state...





# The QAAP-YOA

## 3) Personal factors

- Personal factors that can influence rehabilitation (facilitators or obstacles)
  - Dexterity, vision, comfort with technology, learning abilities, mobility, cognitive health, psychological state...
- Interest and motivation regarding rehabilitation and proposed methods
- Audiometric results



# The QAAP-YOA

- 4) Discussion with the client concerning the goals of the treatment program and the intervention strategies retained
- Based on all the information gathered during the hearing and needs assessment, the audiologist recommends objectives and intervention methods.
  - The conclusions and recommendations are presented and discussed openly with the client. The final objectives and methods are established jointly, in partnership with the client.
    - Shared decision-making



# The QAAP-YOA

## 5) Formulation of recommendations

- Description of difficulties
  - List of difficulties identified by the user for which they seek intervention
  - Summarize the facilitating factors and obstacles
- For each difficulty selected for intervention, specify:
  - Intervention objective
  - Proposed method to achieve the objective
  - Expected timeline to reach the objective
  - Follow-up to be conducted to verify the achievement of the objective



# The QAAP-YOA

## 5) Formulation of recommendations

- Add a statement clearly indicating that:
  - The needs assessment has been completed;
  - The results, recommendations, and intervention plan have been presented and discussed with the client;
  - The client agrees with the recommendations made.



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# The QAAP-YOA clinical tool

- A form with open and closed-set questions and checklists
- Follows the structure and sections of the QAAP-YOA
- Intended to be used by the audiologist to guide the interview with the client and facilitate note taking
- Can be used to report the results of the needs assessment
- Its use is optional
- No score is computed (not a standardized questionnaire)
- Available as an Appendix in the Hotton & Gagné (2021) paper



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# Research related to the QAAP-YOA

Two research projects completed to address the applicability, relevance and usefulness of the QAAP-YOA and its clinical tool

- Hotton M, Chauvette L & Gagné JP. (2023). Pilot evaluation of a protocol and a clinical tool developed to assess the audiological needs of adults with hearing loss. *Int J Audiol*, 1-9.  
doi:10.1080/14992027.2023.2211737
  - In simulated settings
- Hotton M, Chauvette L, Poulin S & Gagné JP. (in preparation). Investigating the implementation of a new protocol and clinical tool designed to assess the audiological needs of individuals with hearing loss in primary care settings: A pilot study.
  - In real clinical settings





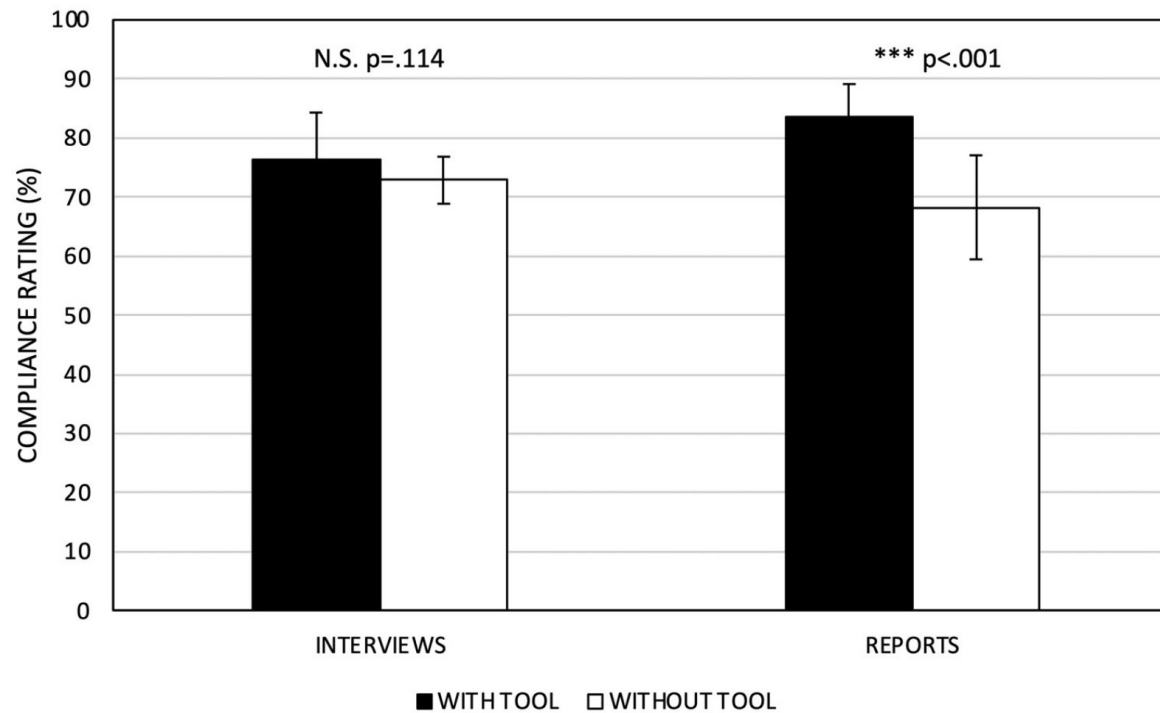
# Research related to the QAAP-YOA

Hotton M, Chauvette L & Gagné JP. (2023).  
(in **simulated** settings)

- 11 audiology students and 4 early-career audiologists (n=15) trained to the use of the QAAP-YOA and its clinical tool.
- 2 simulated clients (actors).
- Participants completed 2 needs assessments with simulated clients and wrote audiological reports, while applying the QAAP-YOA with and without the use of its clinical tool.
- Interviews were filmed, and reports collected. Both were scored by two independent evaluators and compliance rates to the protocol were computed.
- A qualitative analysis of reports was also conducted.

# Research related to the QAAP-YOA

Hotton M, Chauvette L & Gagné JP. (2023).  
(in **simulated** settings)



**Figure 1.** Mean compliance ratings to the protocol and standard deviations for interviews and written reports.



# Research related to the QAAP-YOA

Hotton M, Chauvette L & Gagné JP. (2023).  
(in **simulated** settings)

## Qualitative content analysis of reports

- For a same simulated client, participants generally produced similar recommendations regardless of whether they used the clinical tool or not.
- Prioritized difficulties, rehabilitation objectives, and treatment plans were generally consistent across participants and across experimental conditions.
- Without the use of the clinical tool
  - The number and the variety of difficulties targeted for intervention were higher
  - The intervention strategies selected to address the rehabilitation objectives were more varied.



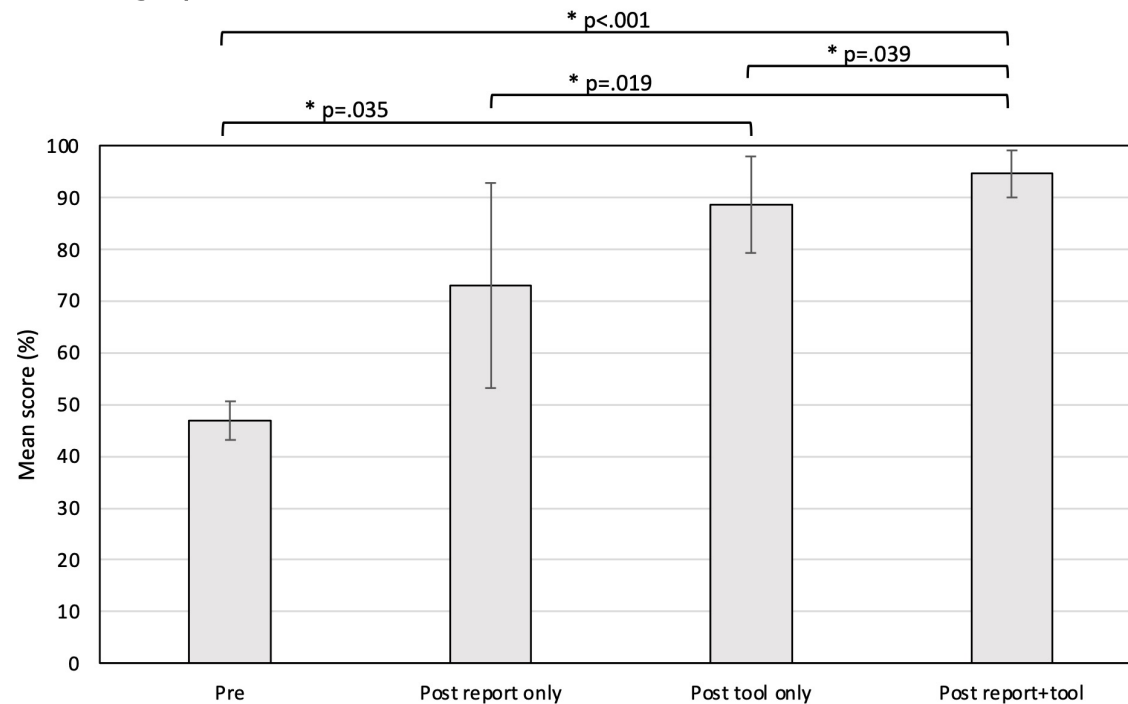
# Research related to the QAAP-YOA

Hotton M, Chauvette L, Poulin S & Gagné JP. (in preparation).  
(in **clinical** settings)

- 5 audiologists working in primary care audiology clinics
- 29 adults or seniors with hearing loss
- Audiologists were trained to use the QAAP-YOA and clinical tool, then they administered it to clients.
- We collected:
  - Needs assessment reports before/after the trial
  - Completed clinical tools after the trial
  - Data related to the audiologists' workflow before/after the trial
- Interviews with audiologists (n=5) and clients (n=6) after the trial.

# Research related to the QAAP-YOA

Hotton M, Chauvette L, Poulin S & Gagné JP. (in preparation).  
(in **clinical** settings)



**Figure 1.** Mean compliance scores in each condition.

# Research related to the QAAP-YOA

Hotton M, Chauvette L, Poulin S & Gagné JP. (in preparation).  
(in **clinical** settings)

**Table 3.** Time required to administer the QAAP-YOA as reported by participating audiologists.

<u>Participant number</u>	<u>Practice setting</u>	<u>Estimated time required to implement the protocol in the clinic (in minutes, per client)</u>	<u>Estimated time required to fill in the QAAP-YOA clinical tool (in minutes, per client)</u>
A01	<u>Private clinic</u>	5 to 10	5 to 10
A02	<u>Public hospital</u>	30	45
A03	<u>Private clinic</u>	10	10
A09	<u>Private clinic</u>	15 to 45	40 to 60
A12	<u>Public hospital</u>	15	30 to 40

Note. Audiologists mentioned that the time required to apply the QAAP-YOA and to fill in the clinical tool was more important at the beginning of the trial and that there was a reduction of this time with experience, after a break-in period.





# Research related to the QAAP-YOA

Hotton M, Chauvette L, Poulin S & Gagné JP. (in preparation).  
(in **clinical** settings)

## Qualitative content analysis of reports

- Audiologists judged the QAAP-YOA relevant and useful. It allowed them to perform more comprehensive and consistent needs assessments, and to formulate more adequate and personalized recommendations.
- Audiologists and clients were generally satisfied with the QAAP-YOA.
- Maybe not relevant for all clients (i.e., ENT cases, experienced HA users).
- Due to time constraints, it would be difficult to introduce the use of the QAAP-YOA in their current work schedule.
- Digitalizing the clinical tool may help reduce the time required to administer the procedure, facilitate its use and allow for possibility of adapting the protocol to specific clientele and work settings.



# Research related to the QAAP-YOA

Two research projects completed to address the applicability and usefulness of the QAAP-YOA and its clinical tool – **Global conclusions**

- The QAAP-YOA can be applied consistently after a short 2-hour training session, even by audiologists with few work experience.
- Its use was deemed relevant and useful in primary care audiology clinics.
- Leads to more comprehensive needs assessments and to recommendations that are more appropriate and in line with the client's needs and priorities.
- The use of the clinical tool does not impact the assessment process and allows for a better record keeping (more appropriate and consistent).
- Longer appointments and additional time for record keeping were required to implement it (may be shorter after a break-in period).
- Future work on the improvement of the QAAP-YOA should aim at reducing time required for implement it, at converting the clinical tool in a digital tool and improving its customization possibilities.





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# Implications and tools to facilitate the use of a needs assessment protocol in the clinic

- Time constraints
  - Number of appointments in a day
  - Length of appointments
  - Waiting lists
- Time is money
  - Impact on the clinic's revenue
  - Consultation fees for clients
  - Hearing aid sales

# Implications and tools to facilitate the use of a needs assessment protocol in the clinic

- Clearly identify the difficulties experienced by the client and the factors at play
- Better understand their journey regarding hearing aids and their expectations
- Client-centered approach



- Client engagement and receptiveness
- Better therapeutic relationship
- Produce more tailored recommendations
- Adherence to recommendations
- Success of the intervention





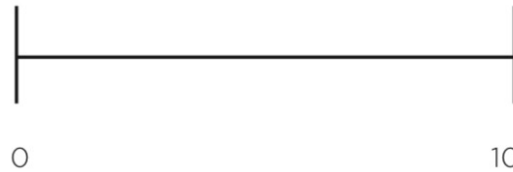
# Implications and tools to facilitate the use of a needs assessment protocol in the clinic

- Use the QAAP-YOA as a guide
  - Use (or not) the clinical tool
  - Adapt the QAAP-YOA and clinical tool to your specific clinical settings
- Review other clinical activities to make some space
- Question more about expectations, difficulties, interest, motivation, personal factors...
- Use more detailed case history questionnaires
- Standardized questionnaires on hearing disabilities
- Tools from IDA Institute
  - The Line, the Box, the Circle

# The Line

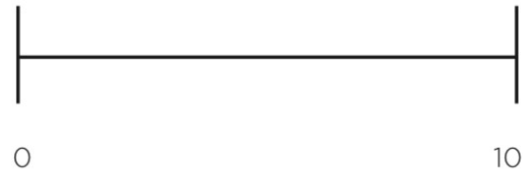
**1**

How important is it for you to improve your hearing right now?



**2**

How much do you believe in your ability to use...\*



The lines go from: 0 = not at all to 10 = very much.

(IDA Institute, 2009)



# The Box

## 1 ADVANTAGES

What are the advantages of continuing as you do today?

## 2 DISADVANTAGES

What are the disadvantages of continuing as you do today?

## 3 DISADVANTAGES

What are the disadvantages of taking action on your hearing?

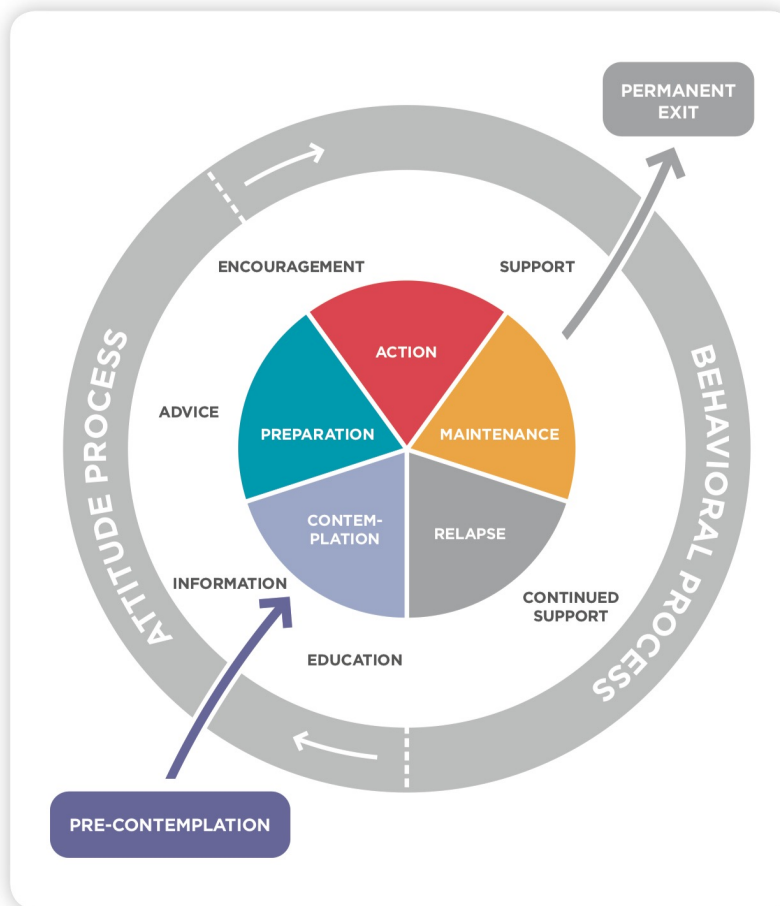
## 4 ADVANTAGES

What are the advantages of taking action on your hearing?

(IDA Institute, 2009)



# The Circle



(IDA Institute, 2009)





# Implications and tools to facilitate the use of a needs assessment protocol in the clinic

- Listen, listen, listen
  - Allow for exchanges and discussion
  - Openly negotiate the intervention plan with the client
- Make recommendations that respect the client's journey and willingness
- Spend more time with some clients?





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- Ministère de la santé et des services sociaux;
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- Centre de recherche de l'IUGM;
- Fonds de recherche du Québec – Santé;
- Unité de soutien SSA du Québec.



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# Merci de votre attention !

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