

ACE:

Active Communication *Education*

A program for adults with hearing loss

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Preface

Hearing loss has serious negative consequences for the person with the hearing loss and for those around them. It is associated with social isolation, withdrawal, poor quality of life, and depression. The Active Communication Education (ACE) Program was developed to help adults with hearing loss to become more effective communicators and to provide them with strategies to cope better in everyday life. It is a rehabilitation option for adults with hearing loss who do not want to wear hearing aids or who want more than hearing aids can provide. The majority of people with hearing loss do not wish to have a hearing aid fitted as they feel embarrassed about wearing such a visible sign of disability. For these people, the ACE program is an alternative to hearing aids and can be a starting point for taking some action to maintain and improve their communication. There are also many people who wear and accept hearing aids, but who still require further help with communication. For these people, the ACE program is a supplement to the hearing aids they are wearing.

ACE was developed from the program of research conducted in the Communication Disability Centre at The University of Queensland, Australia. The evaluation of the program was funded by Australia's National Health and Medical Research Council to address the fact that current hearing services for people with hearing loss were not meeting the needs of the majority of that population. ACE was evaluated with 178 older people with hearing loss and their significant others and the results of the evaluation are outlined in the Introduction. Although originally designed and evaluated with older adults in mind, the program could also be used with adults of all ages. Information is then provided about how to organise and run the ACE program. The remaining chapters contain all the content material necessary for each weekly session.

We are confident that both clients and clinicians will find the ACE program a rewarding experience. ACE is informative and fun – and the evidence shows that it does make a positive difference to the lives of older people with hearing loss!

We welcome any comments and questions that you may have. For further information, please visit <http://www.shrs.uq.edu.au/cdc>

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Introduction

The *Active Communication Education (ACE)* program is an evidence-based group communication awareness, education and training program for adults with acquired hearing loss and their significant others.

The aim of this book is to provide health professionals, working in the community (such as audiologists, speech & language therapists, nurses, and hearing therapists), with a step-by-step approach for running the ACE program. The focus of ACE is on the everyday consequences of hearing loss, rather than the hearing loss itself, although these issues are not ignored if they come up during group discussion.

What are the aims of ACE?

- To improve the communication abilities of people with hearing loss in everyday life;
- To reduce the communication and hearing difficulties experienced by people with hearing loss in everyday life; and
- To improve the quality of life and well-being of people with hearing loss and their significant others.

What are the features of ACE?

- It is a group program for between six and ten people.
- Family and friends are encouraged to attend.
- Group sessions are facilitated by a health professional (such as an audiologist, speech & language therapist, registered nurse or hearing therapist).
- It consists of five sessions of two hours per week.
- The program begins with a needs analysis of communication issues, thus the issues addressed in the ACE program are generated by group members.
- Sessions are structured to bring aspects of daily communication under the participants' conscious control via demonstrations, practical exercises, discussion, and problem-solving.

- Problem-solving strategies are directed towards the specific communication settings in which individual participants identify difficulties.

What happens in the sessions?

The ACE program consists of a series of six modules about everyday communication activities that have been found to be problematic for adults with hearing loss and their significant others, for example, using the telephone, listening to television, going to a restaurant, and conversing at the dinner table. The particular modules undertaken in each program will depend on the communication needs identified in the first session by the group members. The program is therefore less prescriptive than previous communication courses because the content varies depending on the communication difficulties described by the individual participants.

In the first module there is an introduction to the ACE program and a communication needs analysis, where participants discuss what communication difficulties they are experiencing in everyday life as a result of hearing loss. The needs identified by the participants in this module will determine the communication modules to be undertaken in subsequent weeks.

Within each module there is a detailed discussion of the communication activity itself, the sources of difficulty in the activity, possible solutions, practical exercises, home exercises, and written information. ACE sessions are structured to bring aspects of daily communication under the person's conscious control via demonstrations, practical exercises, discussion, and problem-solving. The ACE program aims to teach participants individual problem-solving skills which can be applied in a range of situations and also to discuss the use of communication strategies, lipreading skills, clarification skills, and assistive technology. In the period between each session participants are encouraged to use the newly learned strategies in their daily communication.

Communication Activity Modules

At the beginning of each module, the following should be identified through a standard process:

- What is involved in the communication activity? Who, what, when, where, why?
- What are the sources of difficulty in the activity? (For example, noise in the background, seating arrangements).
- What are some possible solutions? (For example, reducing background noise, moving position).
- What information is necessary to apply the solutions? (For example, effects of background noise on speech understanding, how to modify the environment to facilitate communication).
- What practical skills are necessary to apply the solutions? (For example, ability to ask for help, assertiveness to make changes in the environment).

The aim is for participants to understand this problem-solving process for themselves and apply it in everyday life. For each activity, likely sources of information and practical exercises are included. The ACE program includes modules on the following areas of communication difficulties:

- Conversation in Background Noise
- Conversation around the house.
- Communication with difficult speakers.
- Listening to other signals.
- Listening to public address systems.

Throughout the ACE program there are a number of core skills targeted within each module:

MODULE	CORE SKILL
1. Conversation in background noise	Requesting clarification
2. Conversation around the home	Using communication strategies
3. Communication with difficult speakers	Using communication strategies

4. Listening to other signals	Using assistive listening devices
5. Listening to public address systems	Using lipreading or speechreading

Following the first Module, facilitators select the four modules from the five provided based on the communication needs analysis. In this way, the modules covered will vary for different groups. Our research indicates that the most important core skills are:

1. Requesting clarification.
2. Using communication strategies.
3. Using Assistive Listening Devices (ALDs).
4. Using lipreading or speechreading.

It is important to ensure that these four most important core skills are covered within the selected modules. This may require some modifications of modules by the group facilitator. For example, if your group identifies “difficulty hearing in church” as a communication need, you will need to adapt the module on Listening to PA systems to the situation of church listening.

The concluding chapter contains some final words of advice to discuss with group participants in the last module. The facilitator should summarise the importance of participants using a problem-solving approach to future communication difficulties they experience and distribute the handout “ACE final words of advice” to participants at the end of the last module.

What are the research results of ACE?

The effectiveness of the ACE program has been evaluated as part of an Australian National Health and Medical Research Council (NHMRC) grant. Ethical approval for the research was obtained from the Behavioural and Social Sciences Ethical Review Committee of The University of Queensland. A summary of the research findings is provided here. More detail is available in Hickson, Worrall and Donaldson (2004); Hickson, Worrall and Scarinci (2006); Hickson, Worrall and Scarinci 2007 and from the authors upon request.

The total number of participants in the research was 178 (Mean age = 73.87years, Standard deviation = 8.29, Range = 53-94). Participants' mean pure-tone average hearing loss at 0.5,1,2 and 4 kHz in the better ear was 41.33dB (Standard Deviation = 12.21, Range = 13.75-87.50). Approximately half had been fitted with hearing aid/s in the past. In a double-blind randomised controlled trial, the 178 adults were randomly allocated to one of two groups. One group of participants (n = 78) undertook a placebo social program for the first five weeks, followed by the ACE program. They were assessed prior to the social program, immediately after it, and then again immediately post-ACE. The other group (n = 100) undertook the ACE program only and were assessed pre and post-ACE. In addition, 167 participants were reassessed six months after completing ACE. Assessments were all self-report and included two sets of measures:

1. Those administered both pre- and post-program - the Hearing Handicap Questionnaire (HHQ; Gatehouse & Noble, 2004), the Self-Assessment of Communication (SAC; Schow & Nerbonne, 1982), the Quantified Denver Scale of Communicative Function (QDS; Alpiner et al., 1974), the condensed version of the Ryff Psychological Well-Being Scale (Ryff; Hoen, Thelander, & Worsley, 1997), the Short-Form 36 health-related quality of life measure (SF-36; Ware & Sherbourne, 1992).
2. Those administered post-program only - the Client Oriented Scale of Improvement (COSI; Dillon, James, & Ginis, 1997), the International Outcome Inventory - Alternative Interventions (IOI-AI; Noble, 2002; Hickson et al., 2006), and a qualitative questionnaire.

All assessments were conducted by a researcher blind to participants' group membership. The relationships between participant response to the ACE program and a number of client-related factors were also investigated. These factors were the participants' age, gender, hearing loss, hearing aid use, attitudes to hearing loss (as measured using the Hearing Attitudes to Rehabilitation Questionnaire; HARQ; Hallam & Brooks, 1996), and the involvement of significant others.

The results showed that for those participants who completed the social program initially, significant improvements were found on the Quantified Denver Scale of Communicative Function and on the Mental Component Score of the Short-Form 36 only, when pre- and post-program scores were compared. For those who completed the ACE program, there were significant pre-to-post improvements on the Hearing Handicap Questionnaire, the Self-Assessment of Communication, the Quantified Denver Scale of Communicative Function and the Ryff Psychological Well-Being Scale. These improvements following ACE were maintained at six months. The inter-group comparison showed a trend towards a significant difference on the Hearing Handicap Questionnaire. Higher scores on the Hearing Attitudes to Rehabilitation Questionnaire prior to the ACE program were associated with greater positive change on a number of the pre-post program measures. This suggests that participants who have a greater awareness of their hearing difficulties will achieve the greatest benefit from ACE.

Using the Client Oriented Scale of Improvement, 75 per cent of participants reported some improvement on the primary goal they wished to achieve with the ACE program. Positive outcomes were also recorded with the International Outcome Inventory – Alternative Interventions, and these were more positive than those obtained for hearing aid fitting in a number of areas (see Hickson et al., 2006).

The research study provides evidence for both the efficacy and effectiveness of the ACE program and indicates that such communication programs have an important place in the audiological rehabilitation of adults with hearing loss.

Running an ACE program

Who should participate in the program?

- Participants should be adults living in the community (the ACE program was originally developed for people over the age of 50 however it does not exclude younger people). This program was not designed for adults living in residential care facilities.
- Participants should identify themselves as experiencing hearing difficulties in everyday situations.
- Participants should be able to function effectively in a group situation (that is, participants with dementia or with severe hearing loss would have difficulty participating).
- ACE is designed for those fitted with hearing aids, and for those who choose not to use hearing aids.
- Participants should be willing to attend all five sessions.
- Family members or significant others are strongly encouraged to participate.

How can you recruit group members?

Participants in the research project in which the ACE program was evaluated were almost all recruited from the general community and not from the clinic population. This is not to say that it would not be possible to recruit from a clinical group, in fact it would probably be more straightforward. We simply did not have access to such clients in our research. When recruiting adults from the general community, we found the best approach was to advertise that the program was for adults who are “hard-of-hearing”. In our experience, potential group members did not appreciate the term “hearing impairment” and did not always identify themselves as “hearing impaired”, nor did they respond positively to being referred to as “old” or “elderly”. Many potential group participants will be very active members of the community and can be accessed by advertising through local newspapers and local community organisations (for example, seniors groups). An example of a recruitment flyer is included as Appendix A. You may also find it helpful to use the handout (which can be photocopied) found in Appendix B which provides quotes from people who have

already participated in an ACE program. For those people who are less active in the community it may be necessary for a health professional or family member to identify that the person may benefit from such a program. A personal invitation could then be sent directly to the potential participants.

If, after meeting a potential participant, we felt that the person did not meet the criteria for inclusion, we explain to them that an individual program for rehabilitation was likely to be more beneficial for them and referred them to a clinic or community organisation for people with hearing loss that could provide such a service.

Who can be a group facilitator?

- Facilitators should be health professionals working in the community (such as audiologists, speech and language therapists, nurses, hearing therapists, or assistants trained by these health professionals).
- Facilitators should have well developed communication skills. They should be friendly, non-judgmental and caring.
- Facilitators should have experience working with adults.
- Facilitators should be good listeners. They are there to facilitate group discussion, not necessarily to lead the group.

What do group facilitators need to do before the ACE program can begin?

- Arrange a venue and meeting time for the five weekly sessions. Consecutive sessions are recommended, however this can be flexible depending on the nature of the group.
- Ensure the venue has good acoustic conditions – a quiet room with soft floor covering. This is especially important for the ACE program as people with hearing loss need to be able to hear well enough to join in the group discussions. Small group rooms in community locations such as senior centres or public libraries are ideal.
- Prepare and distribute letters to all participants clearly stating the dates, times, and venue of all sessions.
- Read through the module plans to make sure you understand all the activities.

- Prepare materials for each module beforehand. The materials needed are listed at the start of each module.
- Obtain a folder for each participant to hand out at the beginning of the first session. The folders are for carrying the handouts.
- Ensure access to tea and coffee making facilities. Each module includes a tea break and this socialisation is an important aspect of the program.

Tips for running ACE groups

- Follow the session plans in the program, without being too rigid.
- Give all participants an opportunity to join equally in the discussions.
- Note the attendance of each participant. It is a good idea to keep track of who is attending the groups and which sessions were missed, so that you can be aware of each participant's involvement.
- Each session is planned to last approximately two hours. Timing of activities is given in the program as a guide only, although it can be useful to try and keep to the time allocated so that you get through all the materials.
- It is important to try to avoid discussing one topic for too long or not following the program. It is easy for participants to get off track in their discussions.
- Give out the handouts one at a time during the session as they come up. It is not a good idea to give all the handouts out at once at the beginning of the session.
- The timing of the tea break is up to the group facilitator. Just choose an appropriate time to take a 15 minute break.
- Attempt to dominate discussions although the processes used in ACE mean that this is not very common. If it is still a problem, one good rule of thumb in copying with them is to avoid arguing with them. If they are disruptive, suggest that you defer the discussion until the end of the session. Except where small group discussions are specifically included in the program, discourage smaller discussions within the larger group as this can become very distracting for other participants, especially for those with hearing loss.
- Establish group rules at the end of the first ACE session, asking all participants to contribute to the group rules. Some examples of rules are: The group will start at the scheduled time, everyone should be given an opportunity to talk, group

members should make sure that they talk one at a time, discussions in the group should remain confidential.

Measuring Outcomes from the ACE

Evidenced Based Practice is an important principle to follow in the ACE program. The use of outcome measures to evaluate the program is encouraged. Outcome measures recommended for use in the ACE program include:

1. A Modified Version of the Client Oriented Scale of Improvement (COSI; Dillon et al., 1997). This can be completed separately by both the participant and their significant other. See Appendix C.
2. International Outcomes Inventory: Alternative Interventions (IOI-AI; Noble, 2002; Hickson et al., 2006). See Appendix D.
3. International Outcomes Inventory: Alternative Interventions – Significant Others (IOI-AI-SO; Noble, 2002; Hickson et al., 2006). See Appendix E.

These measures are simple and easy to use. In the COSI, participants identify goals they wish to achieve for homework following the first session (see Handout 4) and then score the outcomes in the final session (see Appendix C for modified version of the COSI). The IOI-AI and IOI-AI-SO are administered at the end of the program (see Appendices E and E). Results can then be compared with data published on the ACE program by the authors (Hickson, et al., 2006; Hickson et al., 2007).

We also recommend getting feedback from participants at the end of each session and at the end of the program. Feedback sheets are included as Handouts in each of the modules.

Module One – Communication Needs Analysis

The objectives of this session are:

1. To welcome participants and enable them to get acquainted with the other people in the group.
2. To explore the communication difficulties that the participants experience in everyday life.
3. To identify and prioritise their communication needs so that these can be the focus of the remaining sessions.
4. For participants to understand the aims of the ACE program.

Materials:

- Folders for members to carry handouts
- Handouts:
 - Handout 1: Introduction to the ACE program
 - Handout 2: How has hearing loss affected you?
 - Handout 3: How has your friend or family member's hearing loss affected you?
 - Handout 4a: Where are you having difficulty hearing and communicating?
 - Handout 4b: What are your hearing and communication goals?
 - Handout 5: Feedback Sheet – Introduction to the ACE program.
- Whiteboard or butcher paper and whiteboard marker pen
- Pencils or pens
- Post-it notes
- Name tag labels
- Tea and coffee

Session outline:

1. Introduction and welcome to the group (15 minutes)

Facilitators introduce themselves and describe the program, its aims and how it will run. Distribute Handout 1.

Each participant is invited to say who they are, what they have done in the past about their hearing problems and why they have come along to the ACE program.

2. Communication needs analysis (20 minutes)

Ask the group to think to themselves ... *What communication difficulties do you experience in everyday life as a result of your hearing loss?* Encourage significant others to brainstorm difficulties they experience as a result of their partner's hearing loss.

Go around the group asking the participants to give *one difficulty at a time* until all possibilities are exhausted. It is important to keep this activity moving and not allow participants to discuss difficulties in depth at this stage. List all difficulties on the whiteboard and link any that are similar. For example, a number of participants may describe problems hearing some speakers with soft voices or with accents or speakers who mumble – these could all be linked under a heading of “problems hearing difficult speakers”.

3. Nominal Group Technique (15 minutes)

In order to prioritise the most important communication difficulties, each participant is given three Post-it notes labelled 1, 2 and 3. They are asked to come up to the board and put a sticker next to the most important communication difficulty (label 1) to the least important communication difficulty (label 3).

4. Tea break (15 minutes)

During the tea break, the group facilitator should calculate the Nominal Group Technique Scores in order to come up with the four most important communication difficulties prioritised by the group. The facilitator should attribute a score of “3” for

the difficulties labelled “1”, a score of “2” for the difficulties labelled “2” and a score of “1” for the difficulties labelled “3”. The four communication difficulties with the highest scores will make up the subsequent four ACE modules for this group.

5. Establishment of ACE goals (15 minutes)

Distribute Handouts 4a and 4b. Explain to participants how to complete these handouts and assist where necessary.

The goal sheet will be used at the end of the program to record outcomes using the Client Oriented Scale of Improvement (COSI). The significant other should record what they want to achieve during the program, not what they want their partner to achieve.

6. Problem-solving process (25 minutes)

Take a communication difficulty that was not prioritised during the Nominal Group Technique and introduce the problem-solving process that will be applied in subsequent modules. Steps in the process are:

- What is involved in the communication activity? Who, what, when, where, why?
- What are the sources of difficulty in the activity?
- What are some possible solutions?
- What information is necessary to apply the solutions?
- What practical skills are necessary to apply the solutions?
- How can you test the solutions?

7. Conclusion and establishment of group rules (15 minutes)

Discuss potential “group rules” with participants. Discuss the modules that will be covered in the following sessions and distribute the following handouts:

- Handout 2: How has hearing loss affected you?
- Handout 3: How has your friend/family member’s hearing loss affected you?
- Handout 5: Feedback sheet: Introduction to the ACE program.

Ask participants to complete these handouts for homework.

Handout 1: Introduction to the ACE Program

Active Communication Education (ACE) is a communication awareness and training program for adults who have hearing loss and their friends and family.

What are the aims of ACE?

- To reduce hearing difficulties experienced in everyday life.
- To improve communication abilities.
- To improve the quality of life and well-being of participants.

What are the features of ACE?

- It is a group program for between six and ten people.
- Friends and family are encouraged to attend.
- It consists of five sessions that run for two hours per week.
- It is designed for people both with and without hearing aids.

What is involved in the sessions?

- The sessions focus on everyday communication activities in which group members have found to be problematic (For example: understanding conversation in background noise or using the telephone).
- Each session covers a different communication activity and includes discussion of the communication activity itself, the sources of difficulty in the activity, possible solutions, and practical exercises.

Written information and activities to do at home are provided. Participants are encouraged to practise the newly learned skills and strategies in the period between each session.

Handout 2: How has Hearing Loss Affected You?

The aim of this activity is for you to think about how hearing loss has affected you and how you have coped with it. It is a good idea to write your thoughts down. It may help to answer the questions written below:

- 1. When did you first start noticing your hearing loss? What impact has it had on you? What does your family say about your hearing loss? How do you feel about your hearing loss?**

- 2. How well have you coped with your hearing loss? Have you developed any strategies to deal with it? What strategies have worked and what have not worked?**

Handout 2: How has Hearing Loss Affected You? (continued)

3. Describe an incident when you used a strategy that worked.

4. Describe an incident when you used a strategy that did not work.

5. If you had some advice for a person who also has a hearing loss, what would it be?

Handout 3: How has your Friend or Family Member's Hearing Loss Affected You?

The aim of this activity is for you to think about how your partner's hearing loss has affected **you** and how **you** have coped with it. It is a good idea to write your thoughts down. It may help to answer the questions written below:



1. **When did you first start noticing your partner's hearing loss? What impact has it had on you? How do you feel about your partner's hearing loss?**

2. **How well have you coped with the changes associated with your partner's hearing loss? Have you developed any strategies to deal with it? What strategies have worked and what have not worked?**

Handout 3: How has your Friend or Family Member's Hearing Loss Affected You? (continued)

3. Describe an incident when you used a strategy that worked.

4. Describe an incident when you used a strategy that did not work.

5. If you had some advice for someone whose partner also has a hearing loss, what would it be?

Handout 4a: Where Are You Having Difficulty Hearing and Communicating?

Think about the situations where you are having trouble hearing. Write them below and try to be as specific as possible. For example: "Cannot understand my daughter who has a soft voice"

Name: _____ Date: _____

1. _____

2. _____

3. _____

4. _____



Handout 4b: What Are Your Hearing and Communication Goals?

Look back at the list of your communications difficulties. Prioritise the communication difficulties below. Think about where you would most want your hearing and communication improved.

Name: _____ Date: _____

1st most important communication difficulty:

2nd most important communication difficulty:

3rd most important communication difficulty:

4th most important communication difficulty:



Handout 5: Feedback Sheet - Introduction to the ACE Program

1. What did you like about the session?

2. How could the session be improved?

Module 2 – Conversation in Background Noise

The objectives of this session are:

1. To work through the problem-solving process as applied to an example situation of conversation in background noise.
2. To identify component skills necessary for better communication in noise.
3. To practice the core skill of how to ask for things to be clearer (requesting clarification).
4. To work through the problem-solving process as applied to a situation unique to each participant.

Materials:

- Handouts
 - Handout 6: Example of a noisy situation
 - Handout 7: Conversation in background noise activity sheet
 - Handout 8: Strategies for managing background noise
 - Handout 9: Clarification skills exercise (*x2 copies*)
 - Handout 10: Conversation in background noise home exercise
 - Handout 11: Improving the communication skills of people with hearing loss
 - Handout 12: Feedback sheet: Conversation in background noise
- Whiteboard or butcher paper and whiteboard marker pen
- Pencils or pens
- Blank sheets of paper
- Name tag labels
- Tea and coffee

Session outline:

1. Introduction and outline of agenda for this session (15 minutes)

Collect feedback forms from the last session. Discuss the home exercises from the last session – discuss strategies that worked and those that did not. Have the group help others to problem-solve if strategies did not work.

2. Example of a noisy situation (30 minutes)

Distribute Handout 6 and Handout 7. Ask each participant to look at the situation and complete the activity sheet in order to suggest ways to improve their ability to communicate in that setting. Allow 10-15 minutes for participants to complete the activity sheet.

While participants are completing the activity sheet, draw the noisy situation on the whiteboard for later discussion.

After all participants have completed the activity sheet, list on the board all the ideas participants have to improve the listening environment and optimise their chances of communicating well in that situation.

Distribute Handout 8 and ask participants to read the handout for homework.

3. Identify necessary component skills (15 minutes)

After making the modifications to the environment to optimise chances of communicating well in that situation, breakdowns in communication will still occur. Ask the group to think of ways to repair these communication breakdowns. Discuss the need to practice these repair strategies as research has shown that there is a difference between what people say they will do and what they actually do.

4. Tea break (15 minutes)

5. Practice clarification skills (20 minutes)

Divide the group into two and distribute a copy of Handout 9 to each group. Ask the two groups to complete the exercise as a group. Allow 10 minutes for the groups to complete the exercise. Discuss the answers as a whole group (answers are included at end of the handout).

6. Discussion of individual noisy situations (15 minutes)

Have each group member draw a noisy situation which regularly presents them with difficulties in communication. Work through the problem-solving process and ask them to consider ways to repair likely breakdowns in communication.

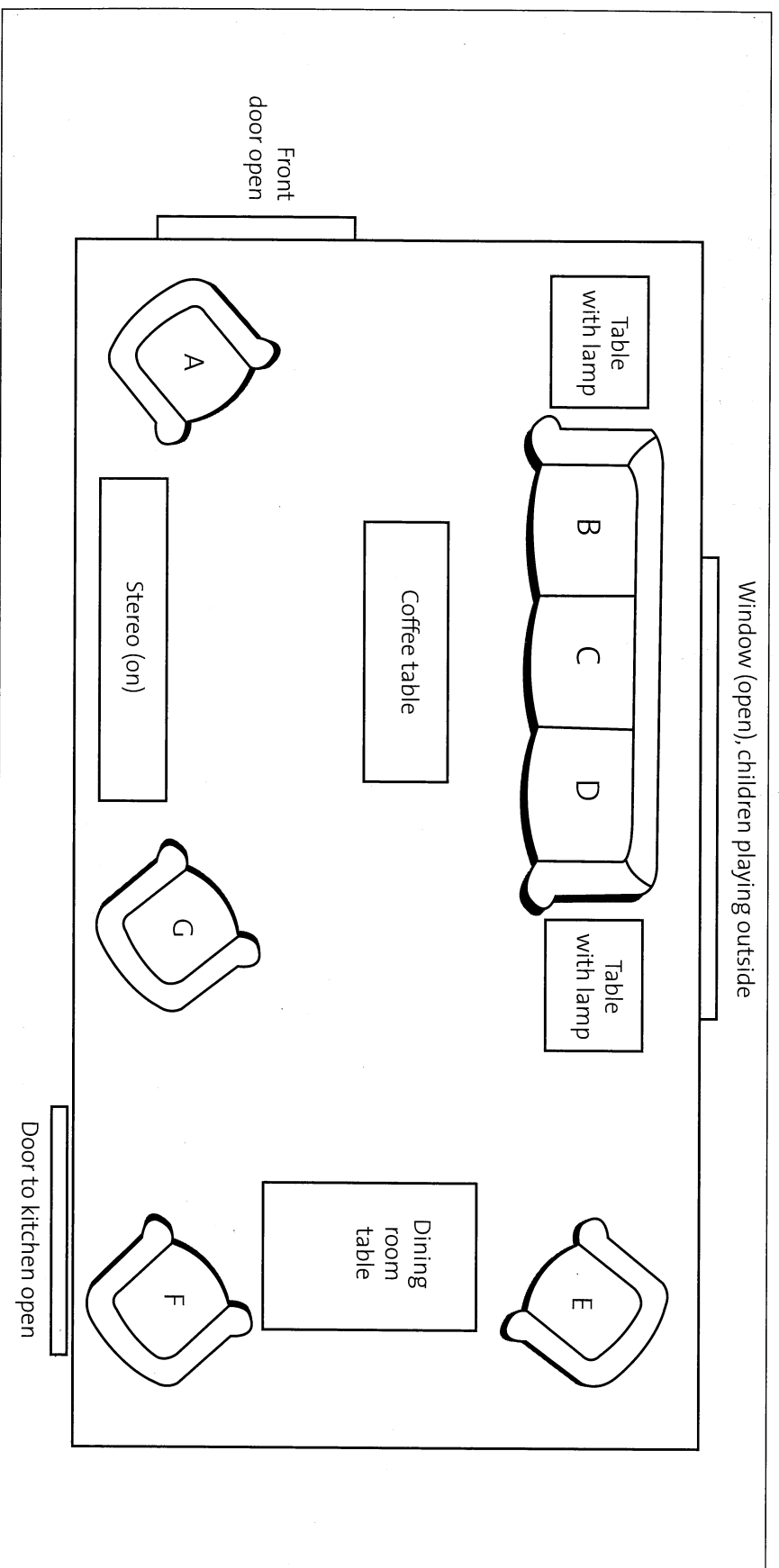
7. Conclusion of session and discussion of the next module (10 minutes)

Discuss the module that will be covered in the following session and distribute the following handouts:

- Handout 10: Conversation in background noise home exercise;
- Handout 11: Improving the communication skills of people with hearing loss;
- Handout 12: Feedback sheet: Conversation in background noise.

Ask participants to complete/read these handouts for homework. Encourage group to try out strategies before the next session.

Handout 6: Example Of A Noisy Situation



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Handout 7: Conversation in Background Noise - Activity Sheet (Part A)

Refer to Handout 6. You are sitting in position A with a group of people at a friend's house. You are having difficulty hearing and communicating because of the amount of noise in the room.

List the likely sources of noise and what you could do about them: complete columns 1 and 2. After finishing, place a tick next to the action/s you would prefer to take in column 3).

Source of noise	What can you do about this?	<input checked="" type="checkbox"/>

Handout 7: Conversation in Background Noise - Activity Sheet (Part B)

1. Would your actions be any different if this was not the home of a friend?

If yes, why?

2. You try to have a conversation with the person in position G, but you find this difficult. What would you do to improve the situation?

3. You decide to change places with someone else so that you can join in the group conversation better. Who would you change with?

4. You decide to move your chair to another position in the room so you can join in the group conversation better. Where would you move it to?

5. You are asked to take a seat around the table for dinner. Mark on the sheet the best position for you to sit.

Handout 8: Strategies for Managing Background Noise

The presence of noise, reverberation, distance, and/or visual distraction is likely to reduce your ability to understand speech in everyday life. Each will be discussed.

A: Noise

Everyone has difficulty conversing in noisy environments. For example: restaurants, in a car or bus, on a noisy street. People with a hearing impairment have even more difficulty distinguishing the speech from the noise.

A common source of background noise in group gatherings is the people themselves. The accumulation of noise from every whisper, cough, footstep, and creak of a chair can create a lot of background noise. This type of background noise is difficult to control as you cannot insist that everybody stops moving!

Some strategies to help in this situation are:

- Watch people's gestures and mouth movements.
- Move closer to your communication partner.
- Ask your communication partner to speak a little louder.
- Ask your communication partner to use a remote microphone or FM system.
- Use a wireless amplification system.
- Move somewhere that is quieter.

Handout 8: Strategies for Managing Background Noise (continued)

Other types of background noise are easier to control. For example: reduce the noise from the street or neighbours by shutting doors and windows.

Remember that even a small opening can let in a large amount of noise.

Noise from cooking, eating, serving food, and washing dishes is another source of difficulty.

To reduce this noise, try the following:

- Use plastic foam placemats on the table.
- Put a rubber mat in the sink to reduce the amount of noise when washing up.
- Use plastic plates and wooden utensils (particularly for serving).



The effects of background noise are worse when you are closer to the noise source. For example: a man with a hearing loss and his wife take turns washing dishes every night. When the woman washes the dishes and her husband stands across the room, he may experience no difficulty hearing the conversation. However, when it is his turn to wash the dishes, there are frequent breakdowns in communication. Why does this happen? It is because he is now very close to the noisy sink.

In the home, noise from TVs, vacuum cleaners or dishwasher can create communication difficulties. More intense sounds, such as lawn mowers, power tools, or hedge trimmers can also cause hearing loss.

Handout 8: Strategies for Managing Background Noise

(continued)

Some ways to reduce background noise in the home:

- Install walls that transmit less sound (e.g., specially designed gypsum plaster board).
- Attach rubber seals or plastic foam strips to windows and doors. This reduces the sound from coming through.
- Use double glazing in windows that face a noisy street.
- Enclose machinery. This reduces noise as its source.
- Find a quiet location away from the source of the noise, leave the area, or postpone the conversation.

B: Reverberation

Reverberation occurs when sounds reflect off hard surfaces such as walls, ceilings, and furniture. These 'echoed' sounds arrive just after the 'direct' sound and combine to form a 'blurred' combination of the two sounds. This can cause considerable difficulty for people with hearing impairment.

Common places where reverberation occurs include:

- Kitchen.
- Bathroom and toilet.
- Stairwell.
- Shopping centre.
- Pedestrian tunnels.
- Cafes and restaurants.

These places are characterised by hard surfaces. For example: tiles, plaster, metal, concrete or glass. Sound tends to bounce off hard surfaces.

Handout 8: Strategies for Managing Background Noise (continued)

Reduce reverberation by covering hard surfaces with soft materials. For example:

- Cloth curtains over windows and walls
- Rubber mats or carpet on hard floors.

C: Distance

Distance can affect communication, even if the room is quiet and free from distractions.

Example: A woman and her husband are sitting next to one another in a quiet location. The husband is describing his plans for the day. He walks across the room several times to get the newspaper, pour a cup of coffee and get his glasses. Whenever he does, his wife cannot hear him and asks him to repeat what he has said.



Why does the conversation break down so many times in this way?

Whenever the husband walks across the room he changes the distance between himself and his wife from about 1 metre to perhaps four or five metres. The change in distance can significantly reduce the level of his speech as the sound spreads throughout the room. The distance will also interfere with lip reading.

Handout 8: Strategies for Managing Background Noise

(continued)

A small distance may not affect a conversation for people with normal hearing. However, when one has a hearing impairment, a loss of conversation fluency typically results.

The following strategies can be used when distance is a problem:

- Raise the voice level (not a long-term solution as shouting becomes exhausting).
- Speak very clearly.
- Use a remote microphone or portable amplifier. This may consist of a wireless system with a small transmitter held or worn by the communication partner.

D: Visible Distractions, Illumination, and Glare

Most people with hearing impairment rely on lip reading and other visual clues like facial expressions. Therefore, visual orientation to the communication partner is very important. For example: lip reading can be difficult if the speaker is difficult to see around a large table or the speaker is a long distance away in a lecture hall.

Intense overhead lighting in a room where there is no other light source can produce dark shadows over a person's mouth. Bright sunlight through a window or from a light can be glaring, especially if it is behind or near the speaker.

Handout 8: Strategies for Managing Background Noise (continued)

Strategies to use when lighting is a problem:

- Position person with normal hearing to face the light.
- Adapt window coverings (curtains and blinds) to minimise glare.
- Take away objects such as mirrors and shiny table tops.
- Use diffuse room lighting. A softly lit room is better than a sharply lit room.



Handout 9: Clarification Skill Exercise

Using repair strategies in conversation

For each situation one or more of the following strategies may be appropriate to use.

Ask your communication partner to:

- A. **Repeat** the sentence
- B. **Clarify** or **confirm** what you thought you heard
- C. **Rephrase** the conversation
- D. **Spell** the word/phrase
- E. Use **gesture** or **mime**
- F. Tell you the **key word**
- G. Show you the number of **digits**
- H. **Write** the word/phrase

In the blank before each situation, write the letter of the strategy or strategies which you would use.

- XXX indicates words or phrases that you are unable to understand
- ??? indicates words or phrases of which you are unsure.

_____1 The receptionist at your hearing clinic tells you “Your appointment will be next Thursday at XXX in the afternoon”.

_____2 The information desk at the bank tells you “Go to see Miss XXX in room 205 to help you solve your problem with your account”

Handout 9: Clarification Skill Exercise (continued)

- _____3 You have given the man at the movies the money for your ticket. However, he does not give you the ticket for some reason. He says, “XXX XXX XXX”.
- _____4 You have always taken the 09.15 train to the city. You want to be sure that it is leaving on time. The ticket seller says, “Your train leaves at XXX”.
- _____5 You are reporting for an appointment in the city. The secretary says, “See Mr Kusovich (???) in Room 114”.
- _____6 You are in a shop and are asking the price of a gold chain. The shop assistant says, “It normal costs \$100, but there is a XXX discount today”.
- _____7 You are standing on a street corner as a friend gives you directions to the nearest post office. A truck passes by. You hear your friend say, “The post office XXX XXX XXX left at XXX”.
- _____8 You are looking at some shoes in a shop window trying to decide if you should buy them. Your friend says, “Those shows are really XXX”.
- _____9 You are visiting your friend. Your friend’s son asks you, “May I have some XXXs?”
- _____10 Your grandson is telling you about a fish he caught. He tells you it was bigger than a salami (???)

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Handout 9: Clarification Skill Exercise (continued)

Answers and discussion

The appropriate responses for this exercise are listed in order of priority. For most situations more than one strategy may work. If you select any of these, you are on the right track.

Responses

- | | |
|-----------------|---------------|
| 1. C, G or H | 6. A, C or H |
| 2. A, C, D or H | 7. A |
| 3. A or C | 8. C or F |
| 4. B or A | 9. B, D or F |
| 5. A or D | 10. B, C or E |

Handout 10: Conversation in Background Noise Home Exercise

Complete this table about noisy communication situations before the next session. We will begin the next session with a discussion about it.

Situation	What was the problem?	What strategies did you use?	How successful were the strategies?

Handout 11: Improving the Communication Skills of People with Hearing Loss

Communication tactics can help people overcome many of their hearing difficulties. There are three types of communication tactics:

1. Repair tactics

- Asking the other person for a repeat or rephrase



2. Corrective tactics

- Tell the person you have a hearing problem. Ask them to speak slower or to look at you when they are speaking.

3. Anticipatory tactics

- Thinking in advance of the words that will most likely be used in the situation. For example: asking for a meeting agenda prior to a meeting.

Think about the conversations you have had in the past week. Which communication tactics did you use?

Handout 11: Improving the Communication Skills of People with Hearing Loss (continued)

Research shows that people with a hearing impairment think they use a variety of communication tactics (for example: telling the other person about their hearing loss, pausing, requesting a reduction in background noise etc).

However, when they do experience difficulties in real-life situations, they tend to mainly ask for a repeat. This tactic is used approximately 60% of the time (Wilson, Hickson, and Worrall, 1998).

Why do people mainly ask for a repetition when they fail to hear?

Often it is out of habit or is the easiest tactic to use. There is nothing wrong with asking for a repeat but other communication tactics can also be useful.

Use of Maladaptive Tactics

Some people with hearing impairment commonly use 'maladaptive' tactics such as dominating conversation, guessing, or ignoring what the other person is saying. It is important to be conscious of doing these things.

Practise, Practise, Practise

Practising different communication tactics is the best way to improve your use of them and in turn reduce your hearing difficulties. Remember, practice makes perfect! Try different communication tactics over the next week.

Record them in the section below, including where you used them

Handout 12: Feedback Sheet - Conversation in Background Noise

1. What did you like about the session?

2. How could the session be improved?

Module 3 – Conversation Around The House

The objectives of this session are:

1. To work through the problem-solving process as applied to an example situation of conversation around the house.
2. To identify component skills necessary for better communication around the house.
3. To practice the core skill of asking others to speak so that you can hear them (using communication strategies).
4. To work through the problem-solving process as applied to a situation unique to each participant.

Materials:

- Handouts:
 - Handout 13: Conversation around the house activity sheet
 - Handout 14a: Communication strategies
 - Handout 14b: Group situations
 - Handout 15: Conversation around the house home exercise
 - Handout 16: Feedback sheet: Conversation around the house
- Whiteboard or butcher paper and whiteboard marker pen
- Pencils or pens
- Blank sheets of paper
- Name tag labels
- Tea and coffee

Session outline:

1. Introduction and outline of agenda for this session (20 minutes)

Collect feedback forms from the last session. Discuss the home exercise from the last session – consider strategies that worked and those that did not. Encourage the group help others to problem-solve strategies that did not work.

2. Example of a situation around the house (30 minutes)

Distribute Handout 13. Ask each individual to look at the situations on the handout and suggest ways to improve their ability to communicate in that setting. What can be done about the environment? What can they do? What can their communication partner do? Allow 10-15 minutes for participants to complete the activity sheet individually.

List on the board all the ideas participants have to improve the situations and optimise their chances of communicating well in that situation. Discuss.

3. Tea break (15 minutes)

4. Identify and practise component skills (20 minutes)

Ask participants to identify what makes a speaker clear to them – features of the speaker and of the environment. How would they go about asking someone to speak more clearly to them? Participants should suggest ideas such as: asking the person to speak more slowly, asking the person to speak louder, and asking the person to face them when they are speaking. Discuss the carry-on effects of asking a person to speak more slowly (that is, when a person speaks slowly, they will improve their articulation and often increase the volume of their voice slightly).

5. Discussion of individual at-home situations (20 minutes)

Get each group member to draw a situation at home which regularly presents them with difficulties in communication. Work through the problem-solving process and ask them to consider ways to repair likely breakdowns in communication.

6. Conclusion of session and discussion of the next module (15 minutes)

Discuss the module that will be covered in the following session and distribute the following handouts:

- Handout 14a: Communication strategies,
- Handout 14b: Group situations
- Handout 15: Conversation around the house home exercise
- Handout 16: Feedback sheet: Conversation around the house.

Ask participants to complete/read these handouts for homework. Encourage the group to try out strategies before the next session.

Handout 13: Conversation Around the House Activity Sheet

In each of these example situations, imagine you are at home with one other person:

Situation 1: You are sitting in the lounge room watching TV. You hear the other person say something from the next room. You do not know what they said. What can be done about this?

Situation 2: You are in the bedroom. You hear the other person speak from another room at the front of the house. You do not hear what they said. What can be done about this?

Handout 13: Conversation Around the House Activity Sheet (continued)

Situation 3: You start a conversation while sitting at the dining table. The other person gets up and starts doing other things in the room (e.g., washing up), and tries to keep the conversation going. You cannot follow the conversation any more. What can be done about this?

Situation 4: You are sitting watching TV. The other person makes a comment about the program. You cannot hear the comment they make and when they speak you cannot hear what is said on the TV. What can be done about this?

Handout 14a: Communication Strategies

1. Be honest and upfront about your hearing difficulties.
2. Be assertive – ask for help from your communication partner.
3. Always think how you can keep the conversation flowing.

Be Assertive!

To use communication strategies successfully, you need to be assertive. For example:

- Be willing to admit to a hearing problem.
- Be willing to explain the problem to other people.
- Be able to suggest ways they can help.

It is common for people with a hearing impairment to want to 'hide' it from others. This may lead to problems when you misunderstand something. The person you are talking to may think you are not interested, not paying attention, or not very intelligent.

One solution is to tell the person you have hearing problems. For example: *"I'm sorry, I didn't understand what you said because of my hearing loss. It would help if you would speak just a little slower"*.

Difficult speakers

Many people with hearing impairment have difficulty understanding people who don't speak clearly. For example:

- people with accents
- softly spoken people
- people who speak quickly
- people with high-pitched voices, such as children

Handout 14a: Communication Strategies (continued)

Strategies for understanding difficult speakers

1. Anticipatory strategies

Think about potential problems before you enter a situation. Think about ways you can deal with them. For example:

- Ask the person to speak a little more slowly. This makes speech easier to understand.
- Ask people who shout to speak a little more softly.
- Avoid people you know are difficult to understand (e.g., a particular teller at the bank).

2. Maintenance strategies

There are some things you can do to help prevent communication from breaking down. Some ideas are:

- Confirm information as you go along.
- Ask questions that limit the number of different responses. E.g., what day are you going on your trip? – limits answer to 7 days of the week. A more general question “when are you going on your trip” could be answered with day, date, time, month or year. Yes and no questions are also good.
- Give yourself a break. Communication can be exhausting. When you feel tired maybe go on a short walk.
- Use reminder gestures with people you know well. For example: palm down to indicate “slow down”.



Handout 14a: Communication Strategies (continued)

3. Repair strategies

There will be times when you need to use repair strategies when you miss parts of the conversation. Repair strategies include:

- Ask for a repetition. Think of a few key phrases to use. E.g., “Please forgive me, I may have misunderstood you”.
 - It is fine to use this strategy but don’t overuse it.
 - You should not ask a person to repeat more than once or twice as this will frustrate them.
 - Avoid phrases such as “What?” or “Huh?”
 - If you have understood part of the conversation, only ask for the part you misunderstood to be repeated e.g, “I’m sorry I didn’t catch where you said you went on holiday.”
- Ask for rephrasing. e.g., “I don’t understand what you are saying. Can you please say it in a different way?” Another way is to ask your partner to “tell me a little more about that”.
- Ask for confirmation when you want to be sure you understood correctly. e.g., “Did you say.....”.
- Ask for spelling - e.g., ask the person to spell the keyword.
- Ask for written information – e.g., ask for the the appointment time and date to be written down.



Handout 14b: Group Situations

Group situations are difficult because:

- There is more than one speaker.
- Conversation often jumps quickly from one person to the next.
- Topics tend to change quickly.



Strategies to use in group situations:

- If you are familiar with the group: ask members to raise a finger before they speak.
- Ask someone to act as your 'cuer' – to tell you when the topic has changed and what the new topic is.
- Sit at the head or foot of the table. This provides the best view of others.
- At a formal gathering such as a meeting: ask for the agenda, notes, or minutes from the previous meeting, ahead of time.

Listening strategies:

- Ask people to face you when they are speaking.
- Ask people to speak clearly and naturally. Ask people NOT to shout or exaggerate their speech.
- If the speaker is standing far away, move closer.
- If hearing is better for one ear, keep your good ear facing the speaker.
- Arrive early to meetings so you can sit close to the speaker.

Handout 15: Home Exercise - Conversation Around the House

The aim of this homework task is to practise some of the strategies you have learnt in the ACE program in real-life situations.

1: Describe a situation in which you felt there was a 'breakdown' in conversation around the house. You can draw it and/or describe it in words.

(draw here if you wish)

Handout 15: Home Exercise - Conversation Around the House

(continued)

2: Were you having difficulties? What were they?

3: If you were having difficulties, describe what you did to improve the situation.

4: Did your strategies work? Which strategies worked and which did not work?

Handout 16: Feedback Sheet - Conversation Around the House

1. What did you like about the session?

2. How could the session be improved?

Module 4 – Communication with Difficult Speakers

The objectives of this session are:

1. To work through the problem-solving process as applied to an example situation of communication with a speaker who is difficult to understand.
2. To identify component skills necessary for better communication with difficult speakers.
3. To practice the core skill of asking others to speak so you can hear them (using communication strategies).
4. To work through the problem-solving process as applied to a situation unique to each participant.

Materials:

- Handouts
 - Handout 17a: “Communication with difficult speakers” - activity sheet
 - Handout 17b: “Communication with difficult speakers” – answer sheet
 - Handout 18: Communication tactics questionnaire
 - Handout 19: “Communication with difficult speakers” - home exercise
 - Handout 14a & 14b: Communication strategies and Group situations (if not distributed during previous module)
 - Handout 20: Feedback sheet: Communication with difficult speakers
- Whiteboard or butcher paper and whiteboard marker pen
- Pencils or pens
- Blank sheets of paper
- Name tag labels
- Tea and coffee

Session outline:

1. Introduction and outline of agenda for this session (25 minutes)

Collect feedback forms from the last session. Discuss the home exercise from the last session – consider strategies that worked and those that did not. Get the group help others to problem-solve if strategies did not work.

2. Example of communication situations with difficult speakers (30 minutes)

Distribute Handout 17. Ask each individual to look at the situations on the handout and suggest ways to improve their ability to communicate in that setting. What can they do? What can their communication partner do? Allow 10-15 minutes for participants to complete the activity sheet individually.

List on the board all the ideas participants have to improve the situations and to optimise their chances of communicating well in that situation.

3. Tea break (15 minutes)

4. Identify and practise component skills (20 minutes)

Ask participants to identify what makes a speaker clear to them – features of the speaker and of the environment. How would they go about asking someone to speak more clearly to them? How would they go about changing the environment?

5. Discussion of individual situations (20 minutes)

Have each group member describe one person they consider difficult to understand and who regularly presents them with difficulties in communication. Work through the problem-solving process and ask them to consider ways to repair likely breakdowns in communication with this particular person.

6. *Conclusion of session and discussion of the next module (10 minutes)*

Discuss the module that will be covered in the following session and distribute the following handouts:

- Handout 18: Communication Tactics Questionnaire
- Handout 19: Communication with difficult speakers home exercise,
- Handout 14: Communication strategies (if not distributed in previous module)
- Handout 20: Feedback sheet: "Communication with difficult speakers" module.

Ask participants to complete/read these handouts for homework. Encourage group to try out strategies before the next session.

Handout 17a: Communication with Difficult Speakers - Activity Sheet

1. You are at a friend's house and a lot of people are talking at once. A person you have just been introduced to keeps trying to talk to you from across the room. All you hear is a mumble. **What can be done about this?**

2. You regularly meet up with this person at the post office and she always stops for a chat. You struggle to understand her because she has a soft voice and speaks very quickly. **What can be done about this?**

Handout 17a: Communication with Difficult Speakers - Activity Sheet (continued)

3. You ask a teenage boy at the shops for some information about something you want to buy. He mumbles something back at you while turning his head and pointing down one of the aisles in the shop. You do not know what he said. **What can be done about this?**

4. You find one member of your family much harder to understand than anyone else. He has a beard and always sounds like he is mumbling into it. **What can be done about this?**

Handout 17b: Communication with Difficult Speakers – Answer sheet

- 1. You are at a friend's house and a lot of people are talking at once. A person you have just been introduced to keeps trying to talk to you from across the room. All you hear is a mumble. What can be done about this?**

Answer: Move closer to the person, lip read, gestures, move to another area together (remove yourself from the noisy situation).

- 2. You regularly meet up with this person at the post office and she always stops for a chat. You struggle to understand her because she has a soft voice and speaks very quickly. What can be done about this?**

Answer: Explain you have a hearing loss, talk about options that help (e.g., speak more slowly), move outside (say “it is very noisy and I am having trouble hearing”).

- 3. You ask a teenage boy at the shops for some information about something you want to buy. He mumbles something back at you while turning his head and pointing down one of the aisles in the shop. You do not know what he said. What can be done about this?**

Answer: Ask someone-else, seek clarification, see written lists in supermarket (at end of aisles), let him know you have a hearing loss and suggest how they can speak, get him to lead you to the aisle, ask him to write it down.

4. You find one member of your family much harder to understand than anyone else. He has a beard and always sounds like he is mumbling into it. What can be done about this?

Answer: Put aids on (anticipate), ask for repeat of part you didn't hear, humour, have a gesture that indicates you are having difficulty.

Handout 18: Communication Tactics Questionnaire

For each question, select the answer that most appropriately reflects the way you would react. You can select more than one answer per question.

1. You are talking to a new neighbour who has a strong accent. As a result you do not clearly understand what the neighbour said. **What do you do?**

- a) Ask the neighbour to repeat what they said.
- b) Ask the neighbour to speak more slowly.
- c) Ask the neighbour to say it another way.
- d) Pretend to understand what the neighbour said.
- e) Tell the neighbour you are busy and have to go.
- f) Other _____



2. You are sitting at the back of a car and the driver speaks to you. You cannot see the driver's face. As a result you do not clearly understand what the driver said. **What do you do?**

- a) Ask the driver to repeat what they said.
- b) Ask the driver to speak more loudly.
- c) Ask the driver to say it another way.
- d) Pretend to understand what the driver said.
- e) Ignore what the driver said.
- f) Other _____

Handout 18: Communication Tactics Questionnaire (continued)

3. You are at the dentist. The dentist asks you a question while wearing a facemask. As a result you do not clearly understand the dentist's question.

What do you do?

- a) Guess the dentist's question and answer accordingly.
- b) Explain your hearing problem to the dentist.
- c) Ask the dentist to repeat the question.
- d) Ignore the dentist's question.
- e) Politely ask the dentist to remove their mask while talking to you.
- f) Other _____

4. You are speaking to a young child who is telling you about their day at the zoo. Excited, the child is constantly moving and is not speaking clearly. As a result you do not clearly understand what the child said. **What do you do?**

- a) Ask the child to look up when speaking to you.
- b) Ask the child to repeat what they said.
- c) Guess what the child said.
- d) Ask the child to take their time when talking to you.
- e) Say 'That's good' and let the child continue their story.
- f) Other _____

Handout 18: Communication Tactics Questionnaire (continued)

5. You are at a cocktail party and decide to join a small group chatting. After a few seconds you realise you cannot pick up enough words to know what the topic of conversation is. Therefore you cannot take part in the conversation. **What do you do?**
- a) Ask the group members to repeat what they said.
 - b) Ask the group members to speak more loudly.
 - c) Guess what the group members said.
 - d) Ask one group member to tell you what the topic of conversation is.
 - e) Walk away from the group.
 - f) Other _____



Handout 19: Communication with Difficult Speakers Home Exercise

The aim of this homework task is to practise some strategies you have learnt in the ACE program in real-life situations.

- 1. Describe a situation in which you felt that there was a 'breakdown' in conversation because of something that the speaker was doing.**

You can either draw it or describe it in words or both.

(draw here if you wish)

Handout 19: Communication with Difficult Speakers Home Exercise (continued)

2. What difficulties were you having? What was the other person doing?

3. If you were having difficulties, describe what you did to improve the situation.

4. Did your strategies work? What worked and what did not work?

Handout 20: Feedback Sheet- Communication with Difficult Speakers

1. What did you like about the session?

2. How could the session be improved?

Module 5 – Listening To Other Signals

The objectives of this session are:

1. To work through the problem-solving process as applied to situations of listening to other signals – for example, television, telephone.
2. To identify requirements for better listening ability for these signals.
3. To introduce the core skill of accessing and using Assistive Listening Devices (ALDs).
4. To identify skills and resources necessary to solve problems with these other signals.

Materials:

- Handouts:
 - Handout 21: Listening to other signals activity sheet
 - Handout 22: Places to obtain information on Assistive Listening Devices (ALDs) and self-help groups
 - Handout 23: Assistive Listening Devices (ALDs)
 - Handout 24: Telephone Communication
 - Handout 25: Feedback Sheet – listening to other signals module
- Whiteboard or butcher paper and whiteboard marker pen
- Pencils or pens
- Blank sheets of paper
- Name tag labels
- Tea and coffee

Session outline:

1. Introduction and outline of agenda for this session (20minutes)

Collect feedback forms from the last session. Discuss the home exercises from the last session – consider strategies that worked and those that did not. Get the group to help others to problem-solve any strategies that did not work.

2. Exploration of difficulties listening to other signals (35 minutes)

Ask participants to list other signals, apart from people's voices, that present them with difficulties at times – write a list on the board (for example, television, telephone ring, mobile telephone, doorbell). Ask the group for their ideas to improve their ability to hear and understand these signals. List on the board all the ideas participants have to improve the situations.

Distribute Handout 21. Ask each individual to look at the situations on the handout and suggest ways to improve their ability to communicate in these settings. What can they do? What can their communication partner do? Allow participants 10-15 minutes to complete the activity sheet individually.

List on the board all the ideas participants have to improve the situations and optimise their chances of communicating well in that situation.

3. Tea break (15 minutes)

4. Identify the resources necessary to improve listening for other signals (40 minutes)

Ask participants about where they have gone to seek help in the past – list resources. Discuss resources available for the telephone and other signals. Distribute the information sheets (Handouts 22-24) and discuss as a group.

5. Summary and conclusion of session (10 minutes)

Discuss the module that will be covered in the following session. Distribute handout 27: Feedback sheet.

Ask participants to complete/read their handouts for homework. Encourage the group to try out strategies and/or access resources before the next session.

Handout 21: Listening to Other Signals - Activity Sheet

Try and imagine what you would do in each of the situations below:

Situation 1: You are watching TV with another person. They make a comment about the program. You cannot hear the comment they make and when they speak you cannot hear what is being said on the TV. **What can you do about this?**

Situation 2: You are sitting in the lounge room watching TV. A person is in the kitchen preparing dinner and speaking on the phone. You cannot hear the TV due to the amount of noise coming from the kitchen. **What can be done about this?**

Handout 21: Listening to Other Signals (continued)

Situation 3: You answer the phone. You missed the name of the person on the other end when they introduced themselves. Now they are talking but you do not know what they are saying. **What can be done about this?**

Situation 4: You enjoy going to the theatre. Lately you notice that you are having difficulty hearing what is being said on stage. What can be done about this?

Handout 22: Places to Obtain Information on Assistive Listening Devices (ALDs) and Self-Help Groups

1. Contact an **Audiologist.**

2. **Phoenix Hearing Instruments**

Unit 6 / 49 Butterfield St, Herston

www.phoenix.hearing.com.au

Ph: (07) 3852 4622



- Supplies ALDs including TV amplifiers, alerting systems (e.g. for doorbell), infrared systems, hearing aid accessories, telephone amplifiers, and Bluetooth amplification devices for mobile phones.
- Owned and run by audiologists.
- Can trial the devices in store.

3. **Telstra Disability Equipment Program**

www.telstra.com.au

Ph: 1800 068 424

- Supplies phones with features for people with a hearing impairment.

4. **Better Hearing Australia**

21 Vulture St, Westend

www.bhabrisbane.org.au or www.betterhearing.org.au

Ph: (07) 3844 5065

Handout 22: Places to Obtain Information ALDs and Self-Help Groups (continued)

Better Hearing Australia (cont)

- Self-help organization for people with hearing impairment, their families and friends.
- Provides information on ALDS.
- Also runs hearing loss management and information training sessions and social activities.

5. SHHH (Self-Help for Hard of Hearing) Australia

www.shhaust.org

Ph: (02) 9144 7586

- Voluntary non-profit organization for people with a hearing impairment.
- Provides information and advice.
- Quarterly journal called “Hearing Matters”.
- Information sheets on website covering a wide range of topics including ALDs and captioning services.

6. Australian Communication Exchange (ACE)

www.aceinfor.net.au

Ph: (07) 3815 7600

- Supplies a telephone with captions.
- Provides relay component of the National Relay Service (NRS).

Handout 22: Places to Obtain Information ALDs and Self-Help Groups (continued)

7. Media Access Australia

www.mediaaccess.org.au

Ph: (02) 9212 6242

- Provides information on captions for the TV, DVDs, theatres and cinemas.

8. Conexu Foundation

www.conexu.com.au

Ph: 1300 077 321

- Provides smart phone apps for people who are deaf or have a hearing impairment. For example: a smart phone app that provides information at museums, art galleries and culture venues in a variety of formats such as audio with captions.

Handout 23: Assistive Listening Devices (ALDs)

What are Assistive Listening Devices (ALDs)?

ALDs are designed to reduce the effects of distance, background noise and reverberations. They reach out and grab the desired sound and send it directly to the listener's ear.

There are Assistive Listening Devices (ALDs) to assist with the following:

1. Face-to-face conversation (1 to 1 and small group)
2. Television and radio
3. Alarms and alerting signals
4. Theatres, halls, cinemas, and public places
5. Telephone (see handout 24)

Types of Assistive Listening Devices (ALDs)

1. Hardwired systems

- There is a physical connection (e.g., a cable) between the listener and the sound source. The sound source may be a person talking, the TV, or radio.

For examples: headphones plugged directly into a socket in the TV.

2. Wireless systems

- Transmitter sends the signal directly to the hearing aid or receiver without the need for a cable.
- Available for use in one-to-one conversation, small group conversation, TV etc
- Some can be used with hearing aids and some can be used without hearing aids.
- They include loop systems, infrared systems and FM systems.

Handout 23: Assistive Listening Devices (continued)

Examples of Assistive Listening Devices (ALDs)

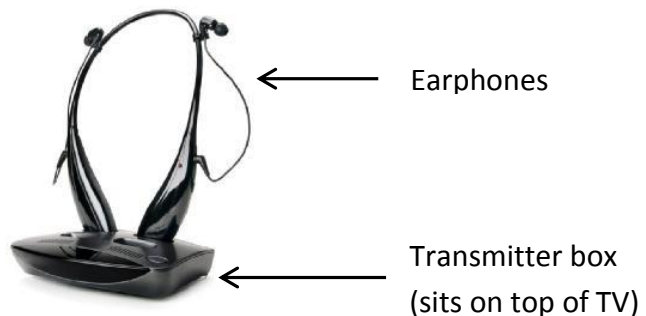
1. Face-to-face conversation



Clip-on microphone worn by speaker

A small clip-on microphone is worn by the speaker. It transmits the speech directly to the hearing aid via a special neckloop (Not all require a neckloop). This type of device is designed to improve the clarity of speech in noise and/or over distance. They are available through Audiology Clinics.

2. TV, radio, and other amplified sound



Earphones

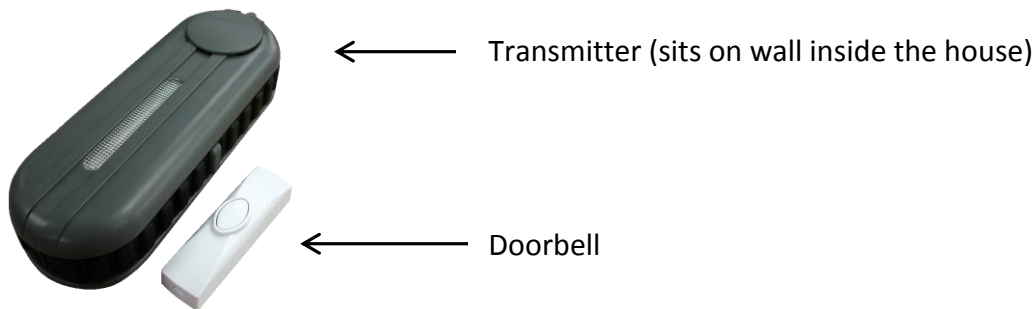
Transmitter box
(sits on top of TV)

The transmitter box plugs directly into the TV. The listener wears the lightweight earphones.

The sound of the TV is transmitted directly to your ear. Hearing aids are not required for this device. Similar devices are available that can be used with hearing aids.

Handout 23: Assistive Listening Devices (continued)

3. Alarms and Alerting Signals



This doorbell transmitter lets you know when the doorbell rings even if you are several rooms away. It notifies you with your choice of sounds, vibrations or lights.

4. Theatres, halls, cinemas, and public places



Many public places have a loop system installed (a wireless ALD). The loop picks up the sound source and sends it directly to the hearing aid without the interference of background noise or distance. The hearing aid must be on the telecoil setting. The presence of a loop system is indicated by the above sign.

Handout 24: Telephone Communication

Examples of phones with features for people with hearing impairment

Telstra T1000 Standard Phone



- Available from Telstra
- Adjustable hearing volume control
- Adjustable ring volume
- Hearing aid compatible (telecoil)
- Annual rental fee
- Other models available.

Uniden SSE 35 Cordless Phone



- Answering machine with slow playback function
- Hands free speaker
- Hearing aid compatible (telecoil)
- Hearing volume control
- Visual ring indicator
- This and other models available from Phoenix Hearing Instruments and Word of Mouth.

Handout 24: Telephone Communication (continued)

Telephone with inbuilt captions



- Displays every word the speaker says
- Uses voice recognition technology
- Can be rented through ACE

Extension Ringer – if you have difficulty hearing the phone ring



- Adjustable ring pitch and volume
- Plugs into phone socket
- Flashing light
- Available from Telstra

Handout 25: Feedback Sheet - Listening to Other Signals

1. What did you like about the session?

2. How could the session be improved?

Module 6 – Listening To The Public Address (PA) Systems

The objectives of this session are:

1. To work through the problem-solving process as applied to situations involving listening to a Public Address (PA) System.
2. To identify component skills necessary for better concentration and listening in situations when listening to a PA System.
- 3.
4. To identify skills and resources necessary to solve problems related to concentration.
5. To practice the core skill of lipreading or speechreading.

Materials:

- Handouts:
 - Handout 26 – Speechreading
 - Handout 27 – Speechreading and hearing loss
 - Handout 28 – Feedback sheet: Listening to PA systems
- Whiteboard or butcher paper and whiteboard marker pen
- Pencils or pens
- Blank sheets of paper
- Name tag labels
- Tea and coffee

Session outline:

1. Introduction and outline of agenda for this session (15 minutes)

Collect feedback forms from the last session. Discuss the home exercises from the last session – consider strategies that worked and those that did not. Get the group to help others to problem-solve if strategies did not work.

2. Exploration of difficulties experienced listening to a PA System (15 minutes)

Ask the group to brainstorm about what difficulties they have when listening to a PA System or when they are in a group listening to someone speak. List all the difficulties on the board. Ask each individual to look at the difficulties listed on the board and suggest ways to improve these difficulties.

3. Exploration of concentration and understanding when listening to a PA System (10 minutes)

Discuss with participants the differences between hearing and understanding and the need for concentration for understanding. Ask individual participants to think about *when* it is important for them to concentrate to understand and in which situations. Discuss with the group the processes of internal and external prompting:

Internal = knowing themselves they have to concentrate – how do you plan for this?

External = having someone else tell them they have to concentrate – what would be a good external prompt?

4. Tea break (15minutes)

5. Lipreading exercise (30 minutes)

Use the SPIN test exercise to demonstrate the visual advantage.

Discuss the importance of watching the person's face as well as listening and the importance of knowing the topic of conversation so you can use context to fill in any missing gaps. Highlight the differences in scores participants received for the

auditory only and auditory-visual presentation to demonstrate the advantage of using visual information and hearing.

6. Speechreading (25 minutes)

Distribute Handouts 26 and 27. Discuss these as a group (emphasise why speechreading is better than just focusing on the auditory signal). Have participants discuss strategies they intend to try out over the next week in pairs. :

7. Conclusion of session (10 minutes)

Ask participants to think about their concentration patterns over the next week and decide what type of “concentrator” they would like to be. A marathon runner or a person who switches on and off? Distribute Handout 30: Feedback sheet.

Ask participants to complete/read their speechreading handouts for homework. Encourage the group to try out speechreading before the next session.

SPIN Test Exercise

1. Sit in front of the group.
2. Ask participants to write down the last word they hear in each sentence (emphasise that they only have to write down the last word in the sentence, not the entire sentence).

Say: “I am going to read some sentences and I want you to write down the last word. For example, if I say, “The boy was stung by a bee”, you would write down, “bee”. This word is easy to guess because the rest of the sentence gives you clues. However, sometimes it is difficult to guess the word. For example, if I say, “The girl will consider the hill”, you would say, “hill”. This word is not as easy to guess. If you are not sure of a word please make a guess. I will only read each sentence once. For the first 10 sentences you will not be able to see my lips because I will be sitting with a piece of paper in front of my face.”

3. Hold a piece of paper so it is covering your face. Present the first 10 sentences auditory only (so the participants cannot see your face and can only hear the sentences).
4. Take away the piece of paper and present the next 10 sentences auditory-visually (so the participants can see your face and hear the sentences).
5. Repeat any items that participants had difficulty with in the auditory alone condition with visual cues (auditory-visually)

Spin Test Sentences

The watchdog gave a warning growl.	My TV has a twelve-inch screen.
The watchdog gave a warning growl.	They might have considered the hive.
She made the bed with clean sheets.	David has discussed the dent.
The old man discussed the dive.	The sandal has a broken strap.
Bob heard Paul called about the strips.	The boat sailed along the coast.
I should have considered the map.	Crocodiles live in muddy swamps.
The old train was powered by steam.	He can't consider the crib.
He caught the fish in his net.	The farmer harvested his crop.
Miss Brown shouldn't discuss the sand.	All the flowers were in bloom.
Close the window to stop the draught.	I am thinking about the knife.
David does not discuss the hug.	

Handout 26: Speechreading

Lipreading versus speechreading

Lipreading and speechreading are not the same. Lipreading is understanding speech by observing movements of the lips, tongue, and teeth. However, understanding what others say involves more than looking at their mouth. The term 'speechreading' is used to reflect this. Speechreading is "the ability to understand what a speaker is saying by watching the movements of the face and body and by using information provided by the situation and the language" (Bally, 2007).

Speech reading involves:

- Observing facial expressions.
- Observing gestures.
- Observing body language.
- Obtaining cues from the situation.
- Using knowledge about the language.
- Using hearing to supplement what is seen.



Components of speech reading

1. Gestures and body language

Gestures include the movements of the hands, arms, head, and other body parts.

Many gestures are used to complement speech. For example: hand movements to emphasize a point. Other gestures are used to replace speech. For example:

- Nod of the head = 'yes' or 'I agree'.
- A beckoning movement of the hands or fingers = 'come here'.

Body language is another form of gesture. It refers to how people sit, stand, or move. One can often identify a person's mood by their body language. For

example: a tired, unhappy, or bored person may slump their shoulders; a sad person may lower their head; or a happy person may hold their head high and stand upright.

2. Facial expressions

Facial expressions can help you when you are speechreading. For example:

- A smiling face indicates happiness.
- A puzzled facial expression may indicate a lack of understanding.
- Raised eyebrows may indicate questioning.

3. Situational cues

Situational cues assist in speechreading. These include:

- The place of conversation. This will help you predict the type of language and the topic of conversation. For example: the type of conversation occurring in a bank, restaurant, classroom, or a doctor's office will vary greatly.
- The roles of the people communicating. For example: a doctor might tell you to lose weight, while your friends might not be so direct.
- The reason for communication. For example: If the reason is a visit to the tax auditor, the topic is likely to be about taxes (Bally, 2007).

4. Linguistic factors

There are many clues to understanding conversation based on the structure of the language. For example: Consider the phrase: "I am the teacher in this class". You might understand the key word (teacher) based on:

- The way it looks on the lips.
- The way it sounds.
- The context of the phrase.



Some rules to remember when speechreading are:

- There are 38 sounds in English and all spoken messages only contain these sounds.
- Sounds have certain combinations. For example: the sounds 'pr' as in 'pretty' can be combined. Other combinations such 'sr' or 'gt' are not possible.
- Prefixes and suffixes are the beginnings and ends of words (for example: 'de-' {**d**ecrease}, '-er' {big**g**er}) They can only be combined with words in certain ways. For example: 'un-' can be combined with 'happy' – {**un**happy}. But 'un-' cannot be combined with 'sad' – {**un**sad}.
- Words can be combined into sentences only in certain ways. For example: in English the subject often comes first, followed by the verb and then object. For example: 'He is going to the store' is possible. 'Going to the store he' is not possible.
- People often emphasize certain words to give meaning to what they say. Inflection also provides important clues to meaning. For example: raising voice at the end of a sentence indicates a question.

Handout 27: Speechreading and Hearing Loss

The Relationship between Speechreading and Hearing

Most people with hearing loss communicate best with a combination of speechreading and hearing. Even people with normal hearing rely on speechreading at certain times (for example: in a noisy café).

The more severe a person's hearing loss, the more they will rely on speechreading. People with a mild or moderate hearing loss usually depend more on hearing than vision. This is because they generally understand speech, especially if they are wearing hearing aids (Bally, 2007). However, there are certain situations in which hearing aids are not adequate and the person will need to rely on speechreading. For example:

- In the presence of background noise.
- In large groups.
- Talking to a person who mumbles or has a strong accent.
- Talking to young children.
- To identify certain sounds which are soft such as /s/, /f/, /th/, /p/, and /t/. Many of the sounds that are difficult to hear are relatively easy to see on the lips and mouth.

What makes a good speechreader?

Most people can improve their speechreading through learning and practise. However, some people are naturally good speechreaders. These people have good synthetic ability. This is the ability to take information from the face and fill in the gaps using other information from the situation to correctly understand the spoken message.

Other people use analytic ability. The person with analytic ability tries to identify each sound movement before identifying the meaning of the sentence. This makes speechreading difficult. This is because speech moves too quickly to analyse every sound:

Handout 27: Speechreading and Hearing Loss (continued)

Other factors which do effect speechreading are:

- Training. The more training a person receives, the more their speechreading skills will improve. Constant practise is important to maintain the skills.
- Understanding of the language. This is important for good speechreading because so much of speechreading involves the use of context.
- Motivation. Successful speechreaders are often highly motivated and are self-confident.
- Visual skills. Good speechreaders much be visually alert and attentive to the speaker's face.
- State of mind. A person who is tired, unwell, or has recently experienced a negative event is less likely to be able to focus on speechreading (Bally, 2007).
-

Factors that don't effect speechreading are:

- Duration of hearing loss. The length of time a person has a hearing loss does not affect their speechreading skills.
- Degree of hearing loss. The degree of hearing loss does not influence a person's speechreading skills. It does influence how much they depend on speechreading (Bally, 2007).

Summary

Speechreading is an important addition to hearing. People with a hearing loss will do best with a combination of hearing and speechreading (Bally, 2007).

Adapted and reprinted by permission from Speechreading: A Way to Improve Understanding, 2nd edn by Harriet Kaplan, Scott J Bally and Carol Garretson (Washington, DC: Gallaudet University Press, 1995), pp1-7. Copyright 1995 by Gallaudet University.

Handout 28: Feedback Sheet - Listening to PA Systems

1. What did you like about the session?

2. How could the session be improved?

Final Words of Advice

In the concluding ACE session, in addition to completing the final module identified from the communication needs analysis, it is important to summarise the main concepts of the ACE program with participants, in particular, highlighting the problem-solving approach to resolving communication difficulties.

Discuss with participants the various strategies explored during the ACE program and the importance of using a problem-solving approach to resolving any difficulties they may face in the future.

Distribute Handouts 29 and 30. Ask the participants to complete the feedback sheet on the ACE program.

Administer the relevant outcome measures within 2-3 weeks after the completion of the program (that is, COST, IOI-AI, IOI-AI-SO, see Appendices C-E)

Before completing the COSI (Appendix C) ask participants to refer back to Handout 4b titled "What are your hearing and communication goals?" Here the participants listed their goals at the beginning of the program. Ask participants to write the same goals on the COSI sheet, according to their level of importance. Participants should then be instructed to evaluate the degree of change by putting a tick in the most appropriate column.

Handout 29: ACE Final Words of Advice

Over the past five weeks we have discussed many strategies to reduce your hearing difficulties in everyday life.

It will be beneficial to practise and use these strategies on a day-to-day basis. When you are in a situation in which your hearing loss causes difficulty, remember to use a problem solving approach. Remember to ask yourself:

1. What is involved in the communication? Who, what, when, where, why?
2. What is causing the difficulty for you? (For example: noise, distance).
3. What are some possible solutions? (You might want to look back at your ACE program notes).

Now go ahead and try out your solutions – and do not give up. If something does not work, try something else – keep note of things that work and things that do not.

You may want to do this in the space below.

Handout 30: Final Feedback on the ACE Program

1. What did you like the program?

2. How could the program be improved?

3. What action have you taken as a result of attending the program?

Appendices

- Appendices A:* ACE recruitment flyer and letter
- Appendix B:* Feedback from participants about the ACE program
- Appendix C:* Modified version of the Client Oriented Scale of Improvement (COSI)
- Appendix D:* International Outcome Inventory – Alternative Interventions (IOI-AI)
- Appendix E:* International Outcome Inventory – Alternative Interventions – Significant Other (IOI-AI-SO)

Appendix A: Ace Recruitment Flyer

Do you have a hearing loss?

Would you like to improve your hearing in everyday situations?

You are invited to attend a fun hearing program.

You can attend regardless of whether you do or don't wear hearing aids.

TO: People over 50 years of age with hearing difficulties.
You can bring along a family member or friend if you wish.

DATE: _____

WHAT: Active Communication Education (ACE) ... a program about learning new communication skills and managing hearing loss in everyday situations.

WHERE: _____

TIME: Weekly 2-hour group meetings for 5 weeks.

COST: _____

If you would like to participate, please contact:

Name: _____

Phone: _____

Email: _____

Appendix A – Ace Recruitment Letter

Dear Sir or Madam,

_____ are running a new innovative group program for adults who are hard of hearing.

The program is known as “Active Communication Education” (ACE) and has already been run in a number of locations with great success! The program is targeted at those over 50 years of age who have a mild to moderate hearing loss, and as a result have difficulty listening and communicating in different situations (for example, hearing in background noise, hearing the television/radio). The program is aimed at assisting participants to develop strategies to improve their communication. Spouses or significant others are also encouraged to attend.

The overall aim of the program is to improve the communication abilities of adults with a hearing loss in everyday life.

We are running the program at community locations in your area for 5 weeks. It will involve meeting weekly in groups of 6 – 10 people for approximately 2 hours each week.

If you, or someone you know, would like to find out more information about the ACE or are interested in participating, please complete the attached form. We will then contact you to discuss the program in more detail.

If you have any further questions about the program please contact

_____.

We hope that you will be able to join us!

Appendix B – Feedback From Participants About The Ace Program

“Every session was informative and entertaining”

“So many of my friends would love to take part in lectures such as these”

“I liked the friendly approach and the giving of such varied information about so many aspects of this problem”

“It was very interesting to find out how much help is available”

“It led to great cohesion amongst the group and gave so many shared discoveries and strategies”

“I greatly enjoyed the way everyone participated – with fun and focus”

“Everyone was made to feel comfortable”

“Everyone’s opinion was invited equally, and respect for all was evident”

“The trigger’s to promote one’s own thinking are vitally helpful”

“It made me realise other people are in the same boat as myself”

“A lot of ground was covered in a very pleasant atmospher

Appendix C: Modified Version of the Client Oriented Scale of Improvement (COSI)

Modified with permission from H Dillon, A James and J Ginis, 1997, 'Client Oriented Scale of Improvement (COSI) and its relationship to several other measures of benefit and satisfaction provided by hearing aids', Journal of the American Academy of Audiology, 8(1), p27-43.

Name: _____

Date: 1. Needs Established _____

2. Outcome Assessed _____

Communication Goals

*Indicate Order of Importance

<input style="width: 20px; height: 20px; border: 1px solid green;" type="checkbox"/>	<hr style="border-top: 1px dashed black;"/> <hr style="border-top: 1px dashed black;"/>
<input style="width: 20px; height: 20px; border: 1px solid green;" type="checkbox"/>	<hr style="border-top: 1px dashed black;"/> <hr style="border-top: 1px dashed black;"/>
<input style="width: 20px; height: 20px; border: 1px solid green;" type="checkbox"/>	<hr style="border-top: 1px dashed black;"/> <hr style="border-top: 1px dashed black;"/>
<input style="width: 20px; height: 20px; border: 1px solid green;" type="checkbox"/>	<hr style="border-top: 1px dashed black;"/> <hr style="border-top: 1px dashed black;"/>
<input style="width: 20px; height: 20px; border: 1px solid green;" type="checkbox"/>	<hr style="border-top: 1px dashed black;"/> <hr style="border-top: 1px dashed black;"/>

Degree of Change				
Worse	No Difference	Slightly Better	Better	Much Better

Appendix D: International Outcomes Inventory – Alternate Interventions (IOI-AI)

Participant Name: _____ Date _____

Circle your response to each question.

1. Think about how much you used the ACE strategies over the past 2 weeks. On an average day, how many hours did you use them?

none *Less than 1* *1-4 hrs/day* *4-8 hrs/day* *More than 8*
hr/day *hr/day* *hr/day*

2. Think about the situation where you most wanted to hear better, before doing the ACE. Over the past 2 weeks, how much has the ACE helped in that situation?

Helped not at all *Helped slightly* *Helped* *Helped quite a* *Helped very*
moderately *lot* *much*

3. Think again about the situation where you most wanted to hear better. When you use the strategies talked about in the ACE, how much difficulty do you STILL have in that situation?

Very much *Quite a lot of* *Moderate* *Slight difficulty* *No difficulty*
difficulty *difficulty* *difficulty*

4. Considering everything, do you think doing the ACE was worth the trouble?

Not at all worth *Slightly worth it* *Moderately* *Quite a lot* *Very much*
it *worth it* *worth it* *worth it*

5. Over the past 2 weeks using the ACE strategies how much have your hearing difficulties affected the things you can do?

Affected very *Affected quite a* *Affected* *Affected slightly* *Affected not at*
much *lot* *moderately* *all*

6. Over the past 2 weeks using the ACE strategies, how much were other people bothered by your hearing difficulties?

Bothered very much *Bothered quite a lot* *Bothered moderately* *Bothered slightly* *Bothered not at all*

7. Considering everything, how much has using the ACE strategies changed your enjoyment of life?

Worse *No change* *Slightly better* *Quite a lot better* *Very much better*

Hickson, Worrall, & Scarinci (2006). Measuring outcomes of a communication education program for older people with hearing impairment using the International Outcome Inventory. The International Journal of Audiology, 45(4), 238-246. <http://www.tandf.co.uk>.

Reproduced with permission.

Appendix E: International Outcomes Inventory – Alternate Interventions – Significant Other (IOI-AI-SO)

Participant Name: _____ Date _____

Circle your response to each question.

1. Think about how much your partner used the ACE strategies over the past 2 weeks. On an average day, how many hours did your partner use them?

none	Less than 1 hr/day	1-4 hrs/day	4-8 hrs/day	More than 8 hrs/day
------	-----------------------	-------------	-------------	------------------------

2. Think about the situation where you most wanted your partner to hear better, before doing the ACE. Over the past 2 weeks, how much has the ACE helped in that situation?

<i>Helped not at all</i>	<i>Helped slightly</i>	<i>Helped moderately</i>	<i>Helped quite a lot</i>	<i>Helped very much</i>
--------------------------	------------------------	------------------------------	-------------------------------	-----------------------------

3. Think again about the situation where you most wanted your partner to hear better. When your partner uses the strategies talked about in the ACE, how much difficulty does he or she STILL have in that situation?

<i>Very much difficulty</i>	<i>Quite a lot of difficulty</i>	<i>Moderate difficulty</i>	<i>Slight difficulty</i>	<i>No difficulty</i>
---------------------------------	--------------------------------------	--------------------------------	--------------------------	----------------------

4. Considering everything, do you think doing the ACE was worth the trouble?

<i>Not at all worth it</i>	<i>Slightly worth it</i>	<i>Moderately worth it</i>	<i>Quite a lot worth it</i>	<i>Very much worth it</i>
--------------------------------	--------------------------	--------------------------------	---------------------------------	-------------------------------

5. Over the past 2 weeks using the ACE strategies how much have your partner's hearing difficulties affected the things you can do?

Affected very much *Affected quite a lot* *Affected moderately* *Affected slightly* *Affected not at all*

6. Over the past 2 weeks using the ACE strategies, how much were you bothered by your partner's hearing difficulties?

Bothered very much *Bothered quite a lot* *Bothered moderately* *Bothered slightly* *Bothered not at all*

7. Considering everything, how much has using the ACE strategies changed your enjoyment of life?

Worse *No change* *Slightly better* *Quite a lot better* *Very much better*

Hickson, Worrall, & Scarinci (2006). Measuring outcomes of a communication education program for older people with hearing impairment using the International Outcome Inventory. The International Journal of Audiology, 45(4), 238-246. <http://www.tandf.co.uk>.

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