



**WORKING TO MAKE A DIFFERENCE**

**Hearing Aid Program**

**Clinical Reference Manual**

**March 1, 2012**

# Hearing Aid Provider Reference Manual

## Clinical

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### 1.0 Introduction

This Reference Manual contains the clinical standards for assessing and fitting hearing aids on WorkSafeBC Injured Workers. It is not intended to replace the Hearing Aid Service Provider Agreement, but rather to assist with the clinical requirements when providing services to Injured Workers.

This manual must be read and clinical practices followed by all clinical staff providing services to WorkSafeBC injured workers.

### 2.0 Clinical Standards

This section outlines the standards of service to be applied to Injured Workers by Contractors and Service Providers with respect to all clinical services provided to Injured Workers receiving Hearing Aid(s) under the WorkSafeBC's Hearing Aid Program.

The following standards are minimum requirements for Injured Worker services in which the Service Provider must investigate and accurately identify the presence, nature and extent of the Injured Worker's hearing problem, recommend appropriate amplification Hearing Aid(s) and provide aftercare service. The Service Provider must be compliant with current legislative requirements governing hearing assessment and Hearing Aid dispensing.

All the elements of a successful Hearing Aid fitting must be addressed with each Injured Worker according to their individual needs. The elements are not necessarily in sequential order or intended to imply a particular appointment structure.

### 3.0 Test Environment

All hearing aid services must be conducted in a sound treated room meeting the current ANSI Standard for Maximum Permissible Ambient Noise Levels for Audiometric Test Rooms. In situations where testing is conducted outside the clinic (ie: hospital bound worker), please indicate on the audiogram that testing was not conducted in a booth.

### 4.0 Assessment For Hearing Aid Fittings

***This section refers specifically to the criteria for assessments for hearing aid fittings. The clinical criteria for the Audiologist Diagnostic Assessments is outlined in section 6.0.***

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### 4.1 Clinical History

The Service Provider must identify the Injured Worker's specific hearing and medical history, the workers hearing needs including social and communication needs, the degree of current problems, and the level of the Injured Worker's expectations and goals regarding amplification. This information must be recorded in the workers file in either the chart notes and/or case history form.

### 4.2 Otoscope Examination

Results of an otoscopic examination must be recorded.

### 4.3 Audiometric Assessment

When hearing tests are required for Hearing Aid recommendations (for both first time and replacement fittings), complete and accurate audiometric tests are required. The assessment must include:

- Air conduction thresholds at 250, 500, 1000, 2000, 3000, 4000, 6000 and 8000 Hz and inter-octave frequencies where the difference between adjacent octave frequencies is 20 dB or greater;
- Bone conduction thresholds when abnormal air conduction thresholds exist at any frequency from 500 Hz to 4000 Hz;
- Appropriate masking must be used in all situations where interaural attenuation levels have been exceeded;
- Speech reception thresholds and word recognition testing
- Description of the audiogram indicating the degree, type and configuration of any hearing loss
- Any other test required for the Hearing Aid selection procedure.

### 4.4 Red Flag Conditions/Medical Conditions

Should a WorkSafeBC Injured Worker have any of the following conditions, commonly referred to as "red flag conditions", medical clearance prior to Hearing Aid fitting is mandatory and he/she must be referred to a physician. If the condition is found to be non-compensable, WorkSafeBC is not liable for the medical costs and they should be billed through the Injured Worker's medical plan.

Red Flag Conditions:

- Visible congenital or traumatic deformity of the ear;
- History of active drainage from the ear within the previous one (1) year;
- History of sudden or rapidly progressive hearing loss;
- Acute or chronic dizziness;
- Asymmetrical hearing loss of greater than 30 dB at any frequency;

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- Audiometric air-bone gap equal to or greater than 15 dB at 500, 1000, and 2000 Hz;
- Visible evidence of significant cerumen accumulation or a foreign body in the ear canal; and,
- Pain or discomfort in the ear.

### **5.0 Injured Worker Involvement in Hearing Aid Selection**

The Injured Worker and, whenever possible, family members, should be advised about the reasonable expectations of Hearing Aid benefits. As part of this process Injured Workers must be given relevant information to assist them to:

- Decide if a Hearing Aid will help them, and whether they wish to be fitted with a Hearing Aid;
- Decide what is the most appropriate type of Hearing Aid to meet their needs. Careful consideration must be given to the degree of hearing loss versus purely cosmetic consideration;
- Recognize the benefits and/or limitations of the Hearing Aid;
- Recognize the potential benefits of various features including a telecoil, and/or directional microphone; and
- Reach an agreement regarding the action to be followed, guided by the specific needs identified in the history. Realistic goals should be set with an indication of the improvement likely to result from the action agreed to.

### **6.0 Hearing Aid Selection**

When a Hearing Aid has been recommended the following components must be included and the Injured Worker's records should contain the rationale for hearing aid choice.

#### **6.1 Consideration of Hearing Aid Type, Style and Features**

- Appropriate style for the individual Injured Worker (e.g. BTE, RIC, ITE, ITC, CIC aid);
- Appropriate acoustic features to meet Injured Worker needs taking account of hearing loss and manageability; and
- Telecoil and/or directional microphone requirements.

#### **6.2 Earmold and Hearing Aid Shell Selection and Fitting**

- The earmold and Hearing Aid shell must be made from accurate individual ear impressions using appropriate techniques. Due regard must be given to the safety of the Injured Worker in taking impressions;
- The earmold or Hearing Aid shell must be comfortable for the Injured Worker and appropriate adjustments made where necessary;

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- The earmold or Hearing Aid shell must be properly fitted to eliminate feedback under normal conditions of use;
- Appropriate venting and plumbing options must be available and applied as required;
- A range of earmold and Hearing Aid shell styles and materials must be available to meet individual needs and particularly to overcome any allergic reactions an Injured Worker may have to a particular material and
- For open fittings, selection of appropriate dome
- For receiver in the canal hearing aids, appropriate selection of dome versus custom mold.

### **6.3 Selection of Electroacoustic Characteristics**

- The electroacoustic characteristics of the Hearing Aid must be selected and fitted according to a recognized prescriptive method;
- Two-cc coupler gain should be determined which will yield desired real-ear aided gain (REAG)/real ear insertion gain (REIG);
- Maximum Power Output: An accepted type of supra-threshold judgment (frequency specific) must be used to determine an appropriate maximum output of the Hearing Aid. If the Injured Worker is unable to perform such judgments, a research based predictive method should be used to determine the MPO setting; and
- Any other Hearing Aid selection tests as appropriate: e.g. most comfortable listening level.

## **7.0 Hearing Aid Verification**

Upon receipt of the Hearing Aid and prior to fitting the Injured Worker, electroacoustic measurements according to current ANSI standards must be completed to verify that the hearing aid functions according to the manufacturer's specifications.

## **8.0 Performance Assessment of Hearing Aid Characteristics on the User: To Be Conducted at Initial Hearing Aid Fitting**

The fitting of the Hearing Aid (including the earmold) should be evaluated to determine if the Hearing Aid and settings selected for the Injured Worker optimize Injured Worker benefit. This must include the following:

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### 8.1 Comfort

The Service Provider must ensure that the Hearing Aid is comfortable and make any necessary modifications to achieve this. Modifications to improve comfort during the trial period must be documented

### 8.2 Operational Proficiency

The Service Provider must ensure that the Injured Worker is able to operate the Hearing Aid.

### 8.3 Real Ear Measures

The service provider must perform real ear measures in situ whenever possible. Simulated real ear measures using RECD will be accepted if a reasonable explanation is provided as to why in situ measures could not be obtained.

- A minimum of two input levels must be measured:
  - i. **SPEECH** at a conversational level (i.e. 65 dB). This response must show that the hearing aid is capable of meeting the prescribed targets within 5 dB.
  - ii. A signal capable of assessing the hearing aid in saturation. The real ear saturation response (RESR) must verify that the selected maximum power output level does not exceed the Injured Worker's tolerance.
- With open fittings, calibration/equalization must be performed as part of the real ear measurement.
- When sending in real ear measures to WorkSafeBC, make sure to send in real ear measures showing that the hearing aid is capable of meeting prescribed targets **THEN** adjust to client comfort.
- As a guideline, hearing aids should have stable reserve gain of approximately 10 dB at the time of first fitting. This is to accommodate expected changes in hearing over the life of the hearing aid.
- Verification measures must be labeled appropriately (multiple levels and multiple programs must be identified). The worker's name, claim number, make, model, style and serial number of the hearing aid must be accompany each verification measure. **All real ear measures must be clear and legible.**

### 8.4 Telecoil Assessment

The Service Provider must ensure adequate telecoil strength for use with the telephone

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### 8.5 Directional Microphone Assessment

For each Hearing Aid with directional microphone(s), it is recommended that the Service Provider confirm that directionality is present. This measure can be obtained by documenting REAG or REIG measured with sound source in front of Injured Worker at 0 degrees (standard verification response) and measured with sound source in back of Injured Worker at 180 degrees (response with Hearing Aid in directional mode). The directional mode verification measure (180 degrees) should be labeled and submitted with the standard REAG or REIG verification measure.

## 9.0 Counseling and Follow-up

- 9.1 Information both verbal and written, (including the Educational Pamphlet) on hearing loss, Hearing Aids, and listening and communication tactics should be provided to the Injured Worker, their family and/or friends. The Injured Worker shall be made aware of local services, the existence and location of local support groups and their relevance to Injured Workers with hearing loss.
- 9.2 The appropriate operation, limitations and use of the Hearing Aid (including the earmold) must be explained, demonstrated and practiced. Where the Injured Worker is not able to manage the Hearing Aid independently, instruction must be provided to a caregiver whenever possible.
- 9.3 The effective operation of all user controls, must be explained, demonstrated and practiced. Re-instruction and retraining on any issues identified during the initial fitting and trial period must be given by the Contractor as necessary. During the trial period any further evaluation and follow-up must be documented, including measures of subjective and objective benefit.
- 9.4 Telephone instruction should explore appropriate options with the Injured Worker including information, demonstrations and training with telephone products and the use of Hearing Aid alone.
- 9.5 Client related information should be explained including but not limited to, acclimatization/adjustment period, realistic goals and expectations, environmental issues such as listening in restaurants, groups and other noisy environments and effective listening strategies.
- 9.6 The use of subjective and objective outcome measures is encouraged.

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- 9.7** Hearing Aids and Hazardous Noise: Due to potential risk to hearing, Injured Workers must be instructed against wearing Hearing Aids in hazardous noise. Any inquiries or additional information on hearing protection selection, are to be directed to an Occupational Audiologist at WorkSafeBC.
- 9.8** The Educational Pamphlet must be distributed to all Injured Workers who have received a Hearing Aid Fitting. The goal of the Pamphlet is to provide additional communication, improve consistency of education, and improve Injured Worker's expectation regarding Hearing Aid rehabilitation.
- 9.9** The Educational Pamphlet contains a Personal Information Release Form which is to be detached, signed by the Worker and included in the Worker file. The release form only needs to be signed once, but must be signed by each Injured Worker before any information is provided to Hearing Aid Manufacturers (including orders for repairs or new hearing aids) and kept in the Worker's file. If the Worker declines to sign the form, please contact Health Care Services prior to sending information to the manufacturers.
- 9.10** The Educational Pamphlet will be provided by WorkSafeBC, at no cost to the Contractor including shipping. In return it is the Contractor's responsibility to ensure an adequate stock of the Education Pamphlet is maintained to mirror the average pattern of patient volume per location. The Educational Pamphlet is the property of WorkSafeBC and must be returned to WorkSafeBC when requested.

## **10.0 Audiologist Diagnostic Assessment**

WorkSafeBC occasionally refers injured workers to an Audiologist for a diagnostic assessment which is intended to assist in the adjudication process of a claim. These assessments must be conducted by an Audiologist with a minimum of one (1) year experience who works in a clinic with a current WorkSafeBC Hearing Aid Provider Agreement.

This assessment is not part of the Hearing aid fitting and should not include any discussion regarding the fitting of hearing aids.

The Audiologist Diagnostic Assessment must include the following:

- Otoscopy:
  - A statement of whether ear canals are clear, no abnormality detected (NAD), or Tympanic Membrane unobservable due to wax, and;
  - Description of Tympanic Membranes if not normal.
- Immittance Audiometry:
  - Tympanograms

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- Ipsilateral and contralateral reflex thresholds
- Air conduction thresholds at .25, .5, 1, 2, 3, 4, 6, and 8kHz:
  - If masking is required, masked thresholds, unmasked thresholds and masking levels must be recorded;
  - Note sensorineural pure tone average of .5, 1, 2 kHz;
  - Note type of earphone (inserts vs. supra-aural) used.
- Bone conduction thresholds at all relevant frequencies, including 250 Hz:
  - If masking is required, masked thresholds, and masking levels must be recorded.
- Word recognition scores:
  - Including presentation levels and masking levels, if required.
- Statement of reliability:
  - All Audiologist Diagnostic Assessments must be submitted using the 51D4 form and must be received within 5 business days.

Once a decision has been made on a claim, the Injured Worker is notified by WorkSafeBC in writing indicating the benefits, if any, to which the worker is entitled. Therefore, the Audiologist must not assume that if a WorkSafeBC Injured Worker is referred to their clinic for a diagnostic assessment that he/she will return for a Hearing Aid fitting. Ear mold impressions should not be taken at these appointments, nor should any discussion be entered into with the injured worker regarding amplification on WorkSafeBC's behalf.

## 11.0 Request for Hearing Aid Replacement

- When requesting replacement hearing aids, current, labeled REM's must be sent in that document the reason for replacement.
- When requesting replacement hearing aids, the following must be documented to allow WorkSafeBC to make a decision regarding approval or denial of the hearing aid replacement:
  - the problem (eg: feedback, inadequate gain)
  - trouble shooting that has been attempted to rectify the problem
  - solution including recommendations for a new hearing aid
- All required documentation is outlined in the Reference Manual Administration

### 11.1 Criteria for Replacement

All hearing aids that are replaced regardless of age must meet the following criteria. Hearing aids are not replaced just because they are older than 5 years.

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- The hearing aid is not functioning properly and the cost of repair is no longer considered cost effective;
- The hearing aid fit is inappropriate and the cost of a new shell is no longer considered cost effective;
- The hearing aid circuitry is inappropriate and the cost of replacing the circuit is no longer considered cost effective;
- There have been significant changes in hearing. That is, audiometric test results show that the worker's hearing has changed by a minimum of 20 dBHL in three or more of the octave frequencies 500 Hz - 4000 Hz, such that audibility has been affected. The initial hearing aid fitting should be able to accommodate any changes less than this.
- Hearing aid is not under manufacturer or repair warranty, unless authorized by WorkSafeBC

## 12.0 Injured Worker Clinic Notes

The Contractor shall include details of referrals and procedures carried out, clinical histories, and reports. It should be clear what product and or service was provided to the Injured Worker. The Contractor shall document all Hearing Aid Services provided.

- Clinic chart notes must be dated and initialed by the individual who provided services. Fact and expression of opinion are to be clearly differentiated.
- Any form, chart notes, photocopy or reports that are submitted by the Contractor to WorkSafeBC must be legible and have all mandatory fields completed. WorkSafeBC will not reimburse the Contractor for illegible and/or incomplete documentation.

For further information on effective and comprehensive guidelines for fitting of hearing aids, you can refer to the document "Hearing Instrument Fitting For Adults" on the College of Speech and Hearing Health Professionals of British Columbia's web site [www.cshhpbcc.org](http://www.cshhpbcc.org)