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## Acoustics — Hearing aid fitting management (HAFM)

*Acoustique — Gestion des appareils de correction auditive*



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## Contents

	Page
<b>Foreword</b> .....	<b>v</b>
<b>Introduction</b> .....	<b>vi</b>
<b>1 Scope</b> .....	<b>1</b>
<b>2 Normative references</b> .....	<b>1</b>
<b>3 Terms and definitions</b> .....	<b>2</b>
<b>4 Service preconditions</b> .....	<b>4</b>
4.1 General.....	4
4.2 Educational requirements.....	4
4.2.1 General.....	4
4.2.2 Requirements for hearing aid professionals.....	4
4.2.3 Maintenance of competencies and skills of hearing aid professionals.....	5
4.3 Facility requirements.....	5
4.3.1 General.....	5
4.3.2 Room requirements.....	5
4.4 Equipment requirements.....	5
4.4.1 General.....	5
4.4.2 Audiometric equipment.....	6
4.4.3 Equipment for otoscopy and earmould impressions.....	6
4.4.4 Hearing aid programming equipment.....	6
4.4.5 Electroacoustic measurement equipment.....	6
4.4.6 Maintenance tools.....	6
4.4.7 Demonstration samples.....	7
4.5 Ethical requirements.....	7
4.5.1 General.....	7
4.5.2 Professional competence.....	7
4.5.3 Relationship with clients.....	7
4.5.4 Conflict of interest.....	7
4.5.5 Relationship with medical and other health practitioners.....	7
4.5.6 Relationship with colleagues.....	8
4.5.7 Advertising.....	8
<b>5 General stages of HAFM</b> .....	<b>8</b>
5.1 General.....	8
5.2 Client profile.....	9
5.2.1 General.....	9
5.2.2 General assessment.....	9
5.2.3 Audiological assessment.....	10
5.2.4 Medical referral.....	11
5.3 Counselling.....	11
5.3.1 General.....	11
5.3.2 Selection of hearing aid system.....	11
5.4 Hearing aid fitting.....	11
5.4.1 Ear coupling elements.....	11
5.4.2 Pre-setting of hearing aids.....	12
5.4.3 Setting and fine-tuning of hearing aids.....	12
5.5 Verification and validation.....	12
5.6 Post-fitting counselling.....	13
5.7 Follow-up.....	13
<b>6 Quality of service</b> .....	<b>14</b>
6.1 General.....	14
6.2 Documentation.....	14
6.3 Client evaluation of services.....	15
6.4 Customer complaint handling.....	15

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6.5	Corrective actions.....	15
<b>Annex A</b>	<b>(informative) Minimum competencies of the hearing aid professional (HAP).....</b>	<b>16</b>
<b>Annex B</b>	<b>(informative) Recommendation for organisation of education and training for hearing aid professionals (ISCED level 5).....</b>	<b>19</b>
<b>Annex C</b>	<b>(informative) Fitting room example.....</b>	<b>21</b>
<b>Annex D</b>	<b>(informative) Recommendation on the referral of clients for medical or other specialist examination and treatment.....</b>	<b>23</b>
<b>Annex E</b>	<b>(informative) Informational counselling to support hearing aid fitting management.....</b>	<b>24</b>
<b>Annex F</b>	<b>(informative) Terminology.....</b>	<b>27</b>
<b>Bibliography</b>	<b>.....</b>	<b>41</b>

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## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see [www.iso.org/directives](http://www.iso.org/directives)).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see [www.iso.org/patents](http://www.iso.org/patents)).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

This document was prepared by Technical Committee ISO/TC 43, *Acoustics*.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at [www.iso.org/members.html](http://www.iso.org/members.html).

## Introduction

The World Health Organisation (WHO) estimates that there are 360 million people with hearing impairment, approximately 5,3 % of the world population<sup>[22]</sup>. Hearing aids (HAs) are one of the most widely-used treatment options for people with a hearing loss<sup>[39][40]</sup>. For the proper use of HAs, hearing aid fitting management (HAFM) is a crucial issue for manufacturers, practitioners, hearing aid professionals and especially for HA users<sup>[39][42][43]</sup>. Individually optimized outcome of HA use is supported by comprehensive HA fitting protocols<sup>[42]</sup> and the impact of “poor fit and comfort” can lead to non-compliance, HA return<sup>[43]</sup> and additional hearing loss with over-amplification. Accordingly, the whole process of HA fitting should be optimized to achieve functional benefits, user satisfaction and cost-effectiveness.

Two observations are important to take into account when developing an HAFM standard. Firstly, the term “hearing aid fitting” is widely used<sup>[16][44]-[46]</sup> among service providers and industry sectors. Secondly, it has potentially conflicting interpretations: while guidelines for HA fitting have been written to tackle these issues by various national and professional bodies<sup>[17][18][23]-[32][34]-[37][47][48]</sup>, many jurisdictions are still not covered worldwide and there is a need to promote a more common understanding of the HA fitting process. It is likely that different understanding of fitting has led to non-uniform care, outcome variability and, in many cases, dissatisfaction with the use of HAs.

The main purpose of this document is thus to provide a general framework for HAFM including the pre- and post-fitting stages to make it more explicit and transparent so that all related tasks, including professional services, administration and financial aspects can be systematized. The overall objective is to achieve the best possible hearing rehabilitation, which can only be accomplished through adequate knowledge, training and skills of the professional and a systematic approach to HA fitting in close collaboration with the client. The general framework of HAFM in this document is divided into six stages (client profile, counselling, hearing aid fitting, verification and validation, post-fitting counseling, and follow-up) based on the common practices of hearing aid professionals, and as recommended by various pre-existing guidelines.

By dividing the hearing aid fitting process into stages, HAFM service providers can systematically identify and administer the service components needed for high service quality, user satisfaction, client-centered services, client self-efficacy and compliance rates with HAs (e.g. consistently using HAs and attending follow-up appointments). The stages focus on the components of the framework to achieve high rehabilitation outcomes such as communication skills, speech intelligibility, perception of the acoustic environment, comfort for the HA users and sound quality. In addition, this document can be a basis for making cost assessments for each stage or component, which can help improve public health funding systems. Another possible application is to use this document as a minimum basis for the development of professional training programs in HAFM.