

■ **The 2003 survey of Canadian audiologists regarding the professional doctorate in Audiology (Au.D.): A baseline for evaluating change**

■ **Sondage 2003 mené auprès des audiologistes du Canada concernant le doctorat professionnel en audiologie (Au.D.): un point de référence pour évaluer le changement**

Josée Lagacé¹
M. Kathleen Pichora-Fuller¹

Abstract

The purpose of this work is to establish a historical baseline to be used as a reference for evaluating change in the opinions of Canadian audiologists regarding training options for entry into the profession. In 2003, a landmark survey of Canadian audiologists was undertaken in order to gauge the degree of support for the professional Doctorate of Audiology (Au.D.) as the minimum credential required for entry into practice as an audiologist in Canada. Responses were received from 435 audiologists and audiology students, with the estimated response rate being about 35%. Information was gathered about the respondents, including their province, practice setting, training, years of education, age, salary, and memberships in associations. The profile of the respondents is described, followed by a report of their views on existing training options, and then by their views on options for improving the education of audiologists and on the Au.D.. The majority of respondents (about 85%) felt that the education of audiologists in Canada should be improved. However, the respondents were split as to how they thought improvements could best be achieved. Overall, about a third supported the Au.D. option and about half did not, with a fifth being undecided. There were no factors that seemed to distinguish the respondents who favoured the Au.D. option from those who did not. The question of whether or not to adopt the Au.D. is framed in the historical context of the development of the profession of audiology in Canada and related issues are explored. Finally, recommendations are made regarding the education for credentialing of Canadian audiologists in the short and long-term.

Abrégé

Ce travail vise à établir un point de référence qui servira à évaluer l'évolution de l'opinion des audiologistes canadiens concernant les options de formation pour pratiquer la profession. En 2003, un sondage repère mené auprès des audiologistes canadiens a été réalisé pour évaluer le degré de soutien à un doctorat professionnel en audiologie (Au.D.) comme diplôme minimal pour exercer la profession d'audiologiste au Canada. Le taux de réponse du sondage est évalué à 35 %, soit 435 audiologistes et étudiants en audiologie. Des renseignements ont été recueillis au sujet des répondants, y compris leur province, leur milieu de pratique, leur formation, leurs années de scolarité, leur âge, leur salaire et leur adhésion à des associations. Le profil des répondants y est décrit, suivi d'un rapport sur leur point de vue concernant les options de formation actuelles, les façons d'améliorer l'éducation des audiologistes et le niveau du Au.D. La majorité des répondants (environ 85 %) était d'avis qu'il faut améliorer l'éducation des audiologistes au Canada. Toutefois, les répondants étaient divisés quant à la façon d'améliorer la situation. Dans l'ensemble, le tiers appuie le niveau du Au.D. et la moitié ne l'appuie pas; le cinquième des répondants sont indécis. Aucun facteur ne semble distinguer les répondants en faveur des autres. La question de l'adoption de ce niveau de formation s'inscrit dans le contexte historique de l'évolution de la profession au Canada et des questions afférentes. Enfin, des recommandations sont formulées pour l'établissement d'un titre pour les audiologistes du Canada à court et à long terme.

Key Words: Au.D., audiology education, professional credential, curriculum, training

M. Kathleen Pichora-Fuller, PhD, Aud(C)
Department of Psychology
University of Toronto at
Mississauga
Mississauga, Ontario
Canada

Josée Lagacé, MOA,
Aud(C)
Canadian Association of
Speech-Language
Pathologists and
Audiologists
Ottawa, Ontario Canada

Introduction

Over the last three decades, there has been a remarkable expansion in the scope of practice for audiologists in Canada and worldwide. Much of the expansion is the result of developments within the professional practice of audiology. These developments have been driven by scientific discoveries (e.g., understanding the function of the outer hair cells in the cochlea), and by technological advances in diagnostic tools (e.g., otoacoustic emissions and evoked response testing), and in rehabilitative devices (e.g., cochlear implants and digital signal processing hearing aids). Some of the expansion in audiological practice parallels changes in other health professions. These changes are the result of widespread reforms in health care delivery (e.g., a shift from hospital-based to community-based services and from public to private practice) and new social policies (e.g., accessibility for people with disabilities). Accordingly, most health care professions are reviewing issues related to the changing nature of practice and professional education (Lall, Klein, & Brown, 2003). Likewise, the implications of changes in practice for the training of audiologists have resulted in recommendations for new standards of education by the American Academy of Audiology in 1991 (<http://www.audiology.org/professional/positions/aud.php>), the American Speech-Language Hearing Association in 1993 (http://www.asha.org/about/membership-certification/certification/aud_standards_new.htm), and the European Federation of Audiological Societies (<http://www.efas.ws/general%20audiologists/02.htm>). Importantly, deliberations about the need to change entry-to-practice credentials are based on the assumption that this type of change in clinical education would provide health professionals with better preparation to meet the increasingly higher level of knowledge and skill required for competent basic practice, to protect consumers, and to promote quality services that meet social needs.

Clearly, it is important that the educational training of audiologists in Canada evolve to meet the demands associated with these profession-internal and profession-external conditions. The purpose of this report is to provide a snap-shot at one point in time that captures the views of Canadian audiologists about how professionals should be trained. These views were gathered in a survey conducted in 2003 as an initiative of the Canadian Association of Speech-Language Pathologists and Audiologists (CASLPA) in collaboration with the Canadian Academy of Audiology (CAA), the provincial associations and colleges, and faculty members from the five Canadian universities offering programs in audiology. The results are situated in the context of the history of audiology in Canada. We hope that the report will engage our national professional community in proactive efforts to shape future training initiatives at universities and to guide provincial regulatory bodies. Importantly, this

baseline can be used to evaluate change in views on this topic as further evolution in professional training occurs.

Background

At the time of the survey in 2003, five Canadian university programs graduated audiologists with a Master's degree. The first Canadian educational training program to produce graduates entering practice as audiologists and speech-language pathologists began at the Université de Montréal (U of M) in 1956. In the 1960s, programs that produced audiologists and speech-language pathologists were established at McGill in 1964, the University of British Columbia (UBC) in 1969, and the University of Western Ontario (UWO) in 1970. The program at Dalhousie followed in 1976, and almost two decades after the establishment of the Dalhousie program, the University of Ottawa (U of O) program was established in 1994. The audiology program at McGill was suspended in 1994 and terminated in January 2003. Over the ten years prior to the survey, the number of students admitted to audiology programs expanded, but the programs became stressed by shortages of key resources such as faculty, space, and other infrastructure. No new audiology programs have opened since 1994. At the meetings jointly held by CASLPA and CAA that prompted the survey, some leading academic audiologists even questioned whether or not there should be fewer programs in the future.

The programs established since 1970 (UWO, Dalhousie University, and U of O) have offered direct admission into their audiology programs from their inception; however, at the time of the survey in 2003, direct admission into audiology had just become possible at U of M, and it was still not possible at UBC. The differentiation of training for audiologists and speech-language pathologists in Canada has evolved slowly over about four decades. Even up until the late 1970's, in some programs, the curriculum was not differentiated and all graduates earned dual qualifications so that they could practice either as audiologists or speech-language pathologists. In 2003, more than 25 years after differentiation started, it was still ongoing in Canada. It is noteworthy that in North America early programs did not differentiate the curriculum for speech-language pathologists and audiologists, whereas elsewhere in the world, notably in Europe and Australia, audiologists and speech-language pathologists have usually been trained in separate programs. In North America, differentiation in the educational programs for audiologists and speech-language pathologists has advanced more slowly in Canada than in the United States, perhaps because American programs began earlier than those in Canada. The age of the professions in the two countries is reflected in the age of the national associations: CASLPA was founded in 1964 whereas ASHA was founded in 1925. ASHA first certified audiologists in 1952. In 1987, when CASLPA implemented national certification, after great

debate among leaders and members of the profession, distinct certificates were issued to those practicing as audiologists, Aud(C), and those practicing as speech-language pathologists, S-LP(C), with relatively few individuals seeking dual certification (in 2004, only 11 members out of 4,762 held dual certification). Therefore, the need for differentiation of the educational programs for audiologists and speech-language pathologists is recognized by profession-specific certification and corresponding profession-specific designations by regulatory bodies in Canada, despite the slow differentiation of the professions that has been reflected in curricular change.

In 2003, the minimum qualification for entry into practice as an audiologist in Canada was a Master's degree in audiology or equivalent. Although a Master's degree is common across the programs, the names of the degrees vary from university to university. At UBC, all graduates obtain the M.Sc. (Master of Science in Audiology and Speech Sciences). At Dalhousie, the degree conferred is also the M.Sc. (Master of Science in Human Communication Disorders)². At U of O, all graduates obtain the M.Sc.S. (Maîtrise en sciences de la santé). At UWO, there are two degrees, the M.Cl.Sc. (Master of Clinical Science – Communication Sciences and Disorders (Audiology)), designed for students who have a strong interest in clinical work and who do not intend to pursue a research career or doctoral studies, and the M.Sc. (Master of Science - Communication Sciences and Disorders (Audiology)) for those who complete thesis research with the possibility of further research training. At U of M, until 2003, all graduates received the MOA (Maîtrise en orthophonie et audiologie); however, as a result of curriculum revisions, as of 2003 graduates in audiology receive the MPA (Maîtrise professionnelle en audiologie) whereas graduates in speech-language pathology receive the MPO (Maîtrise professionnelle en orthophonie). Across the handful of audiology training programs in Canada, the variants in the names of the degrees reflect differences in how professional versus research-oriented degrees are identified. In addition, the recent creation of new degree categories has changed how audiology and speech-language pathology graduates holding those degrees are identified. A central argument put forward in the U of M proposal to create new degree categories (M.P.A., M.P.O.) was that it would be less confusing for governments and the public if the name of the academic degree more transparently indicated that the content of the program will prepare graduates for practice in audiology (or in speech-language pathology). The lack of a clear correspondence between the name of the degree and the content of the degree makes it necessary for those evaluating the credentials of audiologists to review records of clinical practica, transcripts, and the calendar course and program descriptions for each case. For the purpose of CASLPA certification, the academic requirements are based on the curricular content, including classroom instruction and clinical practica, rather than the name of

the degree. Indeed, the evaluation of the qualifications of internationally trained audiologists is based solely on a careful examination of the curricular content, with CASLPA's evaluation of these qualifications being used by many provincial associations and regulatory bodies to determine whether or not internationally trained audiologists will be allowed to practice.

In the United States, from its inception in 1988, the AAA has promoted the Au.D. as the minimum qualification for entry into the practice of audiology. Although the idea of a doctorate degree had been discussed as early as the 1960's, the position taken by the AAA triggered the widespread debate regarding how to educate audiologists and that was the catalyst for changes that began in the United States starting in the 1990's. In 1992, ASHA made a decision to endorse the Au.D. as the minimum qualification for entry to practice in audiology. ASHA's 2007 Standards for the Certificate of Clinical Competence in Audiology are intended to make the scope and level of professional education in audiology consistent with the scope of practice of the profession (ASHA, 2003). The new standards address the significant discrepancies that were found between the level of preparation of audiologists and the requirements for practice that were identified in their peer-reviewed skills validation study in 1996 (ASHA, 1996, 2003). As of January 1, 2007, the 1993 ASHA standards will be superseded by the higher 2007 standards. Until January 1, 2012, those who meet the content requirements of the new standard, regardless of the name of the degree, will be awarded certificates, and afterwards only those with a doctorate degree in audiology, either an Au.D. or a Ph.D., will be certified. The Au.D. is designed to be the highest university degree in audiology required to complete the academic preparation and the development of clinical proficiency necessary for entry into professional practice as an audiologist in the United States. It does not require a dissertation for its completion and is not intended to prepare people for research careers. In contrast, the academic doctorate degree (Ph.D.) requires a dissertation and is the highest degree to prepare people for creative scholarship and research and for careers as researchers and/or as professors in universities.

Given the ongoing evolution of audiology curricula across Canada and internationally, and given the variations in the names of the degrees obtained by Canadian audiologists, it is not surprising that the professional doctorate degree in audiology, the Au.D., has been identified as a priority topic during the strategic planning exercises of both the Canadian Association of Speech-Language Pathologists and Audiologists (CASLPA) and the Canadian Academy of Audiology (CAA) at the national level, as well as by a number of provincial regulatory bodies (e.g., College of Audiologists and Speech-Language Pathologists of Ontario or CASLPO). Over the last decade, the Au.D. has been the topic of panel discussions and presentations at the annual conferences of CASLPA, CAA, and provincial associations. At the same time, Canadian university programs became aware

of the need to consider the Au.D. as a possible future direction³. Many who were concerned with the education of audiologists in Canada have questioned whether or not the university programs were training students for the realities of practice that they face upon graduation. Would an Au.D. better prepare audiologists?

Recognizing the importance of a collaborative approach in considering the Au.D. as a possible degree for entry into practice as an audiologist in Canada, CASLPA invited representatives from CAA to join in the CASLPA strategic planning meeting held in Toronto at the Tri-Joint Congress in 2000. Both associations resolved to continue to collaborate on this issue and a sequel meeting involving both associations was held in conjunction with the CAA meeting in Toronto in 2001. Representatives from the university programs also participated in the 2001 meeting. In 2002, a taskforce on the Au.D.⁴ was formed by CASLPA. A draft survey on the Au.D. was developed by the taskforce and presented during the May 2003 CASLPA conference in St. John's at a meeting attended by representatives of CASLPA and CAA, the university programs, and also provincial regulatory bodies. The enlarged set of stakeholders reviewed the draft survey, recommended modifications, and agreed that the survey be conducted. They resolved that responses should be invited from all audiologists practicing in Canada, whether or not they were members of CASLPA and/or CAA. All stakeholders agreed to help make audiologists across Canada aware of the survey. Upon completion of the survey, the basic results were posted on the CASLPA website and a focus group of stakeholders, including representatives from the same groups that had been invited to the May 2003 meeting, discussed the results at the October 2003 CAA meeting in Vancouver. The present paper reports further analyses and background information following suggestions made by members of the stakeholder focus group.

Pilot Test of the Questionnaire

After consultations with representatives of the academic programs, the Canadian regulatory bodies, CAA and CASLPA, the revised questionnaire (in English or French) was faxed or e-mailed to 12 audiologists. These experts had graduated from different universities and worked in different provinces in a range of practice settings (e.g., hospitals, universities, private practice). The experts were asked to complete the questionnaire and provide their suggestions and comments directly on the questionnaire. While there were some suggestions regarding possible minor changes in the wording of some questions, there was no consistency in the particular suggestions. Because the wording had been reviewed several times by the taskforce, it was decided to make no further changes to the wording of the questions and the questionnaire was finalized (CASLPA Task Force on the Au.D., 2003; see Appendix A).

Questionnaire

In July 2003, the questionnaire was sent to as many audiologists in Canada as possible. The questionnaire was posted on the CASLPA website. CASLPA e-mailed the web link to all audiologist members with an e-mail address and those without an e-mail address were sent a copy of the questionnaire by regular mail (N = 785). CAA, the provincial colleges and associations, and university programs were invited to post the link on their website and to ask their members to complete the questionnaire. Many audiologists belong to more than one of the groups who issued invitations to participate, but the number of audiologists who received multiple notifications is not known. Audiologists were asked to complete the survey only once, and it is assumed that this request was honoured.

All audiologists in Canada were welcomed to participate, but it is still possible that not all Canadian audiologists were aware of the questionnaire. In estimating the response rate we assume that all audiologists in Canada had the opportunity to respond. However, it is difficult to know the exact number of audiologists in Canada. In 2003, only six provinces (Alberta, Manitoba, New Brunswick, Ontario, Quebec, and Saskatchewan) had a licensing body to which audiologists were required to belong to in order to have a license to practice. In the provinces and territories without a licensing body, there is no mandatory membership in any association, organization, or college. At the time of the survey, those who opted to belong to a provincial association were automatically members of CASLPA in the seven provinces and two territories in the Joint Alliance under the 2003 terms of that agreement (Alberta, British Columbia, Newfoundland, Nova Scotia, Ontario, Prince Edward Island, Saskatchewan, Yukon, Northwest Territories)⁵, but for those in other provinces, membership in CASLPA was not tied to membership in the provincial association. Many audiologists are members of both national associations. Membership in CAA is not linked to membership in any other organization. This situation challenges comprehensive data collection. Our estimates of the number of audiologists in Canada are based on the number who are licensed (six provinces) and the number who belong to CASLPA or CAA (the remaining provinces and territories). Note that the first directory was published by the Canadian Speech and Hearing Association (CSHA)⁶ in 1965 (CSHA, 1965). There were subsequent publications of the directory by CASLPA in 1975, 1986, 1988, and 1991, and a demographic study of CASLPA members in 1990 (CASLPA Standing Committee on Demographics, 1990), but these studies were not specific to audiology. In addition to the information obtained about the views of Canadian audiologists on the Au.D., the present survey also provides an unprecedented profile of audiologists in Canada regardless of their membership in particular organizations.

Profile of Respondents

The profile of the respondents is first described, followed by a report of their views on the existing

audiology programs in Canada, and then by their views on options on the optimal future education of audiologists and on the Au.D.

The respondents

Using the inclusive approach described above, 435 responses were received, including 41 from students, making this the largest survey of audiologists in Canada to date. Assuming that there were approximately 1,100 audiologists and about 100 audiology students (total number of students enrolled in audiology in the five university programs), the response rate was over 35%.

Geographical distribution

The number of audiologists in each province was estimated based on the number belonging to a provincial association and/or college. Table 1 provides the number of responses received per province. The distribution of audiologists by province is consistent with the distribution of the Canadian population in general at the time of the survey (<http://www.statcan.ca/english/Pgdb/demo31a.htm>). Accordingly, the majority of audiologists worked in Ontario and Quebec, followed by British Columbia and Alberta, with the other six provinces and

Table 1

Responses to the survey by province

Province	% of Canadian population	Estimated number (%) of audiologists by province	Number responding (%) by province	% responding (of 394) - % estimated (of 1084)	Provincial response rate
ON	38%	457 (42%)	195 (50%)	+8%	43%
QC	24%	174 (16%)	20 (5%)	-11%	12%
BC	13%	154 (14%)	56 (14%)	-	36%
AB	10%	108 (10%)	42 (11%)	+1%	39%
NS	3%	54 (5%)	18 (5%)	-	33%
MB	4%	45 (4%)	11 (3%)	-1%	24%
NB	2%	40 (4%)	22 (6%)	+2%	55%
SK	3%	29 (3%)	10 (3%)	-	35%
NF & LB.	2%	16 (2%)	7 (2%)	-	44%
PEI	.5%	3 (.3%)	2 (.5%)	+2%	67%
YK	.1%	2 (.2%)	1 (.3%)	+1%	50%
NWT	.1%	2 (.2%)	1 (.3%)	+1%	50%
NUNAVUT	.1%	-	1 (.3%)		
Not working			7 (2%)		
Unknown			1 (.3%)		
Total		1084	394		

Note: The first column names the provinces. The second column shows data on the distribution of the Canadian population by province (Statistics Canada, 2004). The third column shows the estimated number of audiologists in each province based on membership information as well as the estimated percentage of audiologists in each province calculated as the estimated number of audiologists divided by the total number estimated to be in Canada (N = 1084) multiplied by 100. The fourth column shows the number of respondents by province as well as the percentage of respondents per province calculated as the number of questionnaires received per province divided by the total number of responses (N = 394 non-students) multiplied by 100. The fifth column shows the difference between the fourth column and the third column. The sixth column shows the provincial response rate to the survey calculated as the number of questionnaires received from each province divided by the estimated number of audiologists in each province multiplied by 100.

the territories being the home of less than 20% of Canadian audiologists.

The percentage of the audiologists in each province who responded varied, with a low of 12% in Quebec. Comparing the percentage of responses obtained in each province to the percentage of the audiologists in Canada living in each province, the results were proportionally representative, with exceptions being an over-representation of audiologists in Ontario and an under-representation of audiologists in Quebec.

Current job setting and practice status

Of the 435 respondents, 193 (44%) reported that their primary job setting was in a public or non-profit institution (e.g., hospital, rehabilitation centre). The second largest group was composed of respondents who reported working in private practice (N = 147; 34%); about half working in private practice as the owner and the other half working in private practice as an employee. Other settings included manufacturing (N = 20; 5%), schools (N = 7; 2%), government (N = 4; 1%), and consulting (N = 3; 1%). Twelve percent of the respondents were from university settings: 41 students, 6 faculty, and 4 research associates. Setting was not given by 8 (2%) respondents, about half of whom were retired or non-practicing.

Of the 435 respondents, 309 (71%) were working full-time, 72 (17%) were working part-time or on contract, and 41 (10%) were students. Of the remaining 11 (3%), more than half were on maternity or other leaves, and less than half were retired or non-practicing. It is interesting that almost half (N = 169; 41%) had held only one position in the last ten years; however, over a quarter (N = 107; 26%) had held two positions, and almost a fifth (N = 72; 18%) had held three positions, with the remainder having held four or more positions (N = 60; 15%). Consistent with the number of positions held, most audiologists (N = 334; 81%) had lived in only one province in the last ten years, but some had lived in two provinces (N = 59; 14%), and others had lived in three or more different provinces (N = 20; 5%).

Years of work experience and age

Table 2 shows the distribution of the 435 respondents according to years of work experience and age. Three-quarters of those who responded were under 45 years of age, and more than half of those under 45 were also under 35 years of age. About half of the sample were in the early stages of their careers (N = 200), with less than 10 years of experience working as audiologists; of these, about 1 in 5 were students (33 students out of 41 students reported having some work experience in audiology), 2 in 5 had worked less than 5 years, and 2 in 5 had worked between 6 and 10 years. For the half of the sample with more than 10 years of experience (N = 227), about half (N=118) were in the 36 to 45 year age range, about a third (N= 80) were in the 46-55 year age range, and about a tenth (N=22) were older.

Table 2

Age and years of experience

Years of Age (N)	Years of experience				
	NR*	<1	1-5	6-10	>10
<25 (34)	4	28	1	1	-
26-35 (139)	2	12	64	54	7
36-45 (151)	-	1	9	23	118
46-55 (85)	1	-	1	3	80
>55 (23)	-	-	-	1	22
NR (3)	1	-	1	1	-
Total (435)	8	41	76	83	227

* no response.

Annual salary ranges

Annual income based on full-time work is presented in Table 3. Table 3 also presents, for each income category, the number of respondents working in public or private clinical settings, either as employees or employers. Overall, about half of the respondents earned less than \$60,000 per year. Of the 80 individuals who earned \$70,000 or more, over half were owners of private practices, about a quarter were employed in public or private clinics, and the remainder worked in non-clinical positions in industry, government, or university settings. It is interesting that few high earners, either in public or private clinics, were employees.

Overall, audiologists owning and practicing in private practice had higher incomes than those in public clinics. Table 3 shows that the majority (56%) of audiologists who owned private practices earned an income of \$70,000 and over, but fewer working as employees in private practices (13%) or in the public sector (7%) earned as much. Furthermore, as shown in Table 4, of the audiologists who dispensed hearing aids (N = 221), over a quarter (26%) reported an annual income of \$70,000 or more compared to only 11% who did not dispense hearing aids. The striking differences in salary associated with setting might be explained by provincial differences in the system of delivering hearing aids, or by differences in the ages of those who were private practice owners. We examined the possibilities that salary might vary with province or age.

Annual income based on full-time work by province is presented in Table 5 for provinces with at least 10 respondents. In most provinces, the most common salary range was between \$51,000 and \$70,000. The province with the most respondents reporting the highest salary

Table 3*Annual salary ranges by types of employment*

Annual salary range	All responses (% of 435)	Public service (% of 193)	Private practice employee (% of 72)	Private practice owners (% of 75)
\$35,000 and under	25 (6%)	1 (.5%)	-	1 (1%)
\$35,000 - \$42,000	12 (3%)	5 (2%)	4 (6%)	1 (1%)
\$43,000 - \$50,000	50 (12%)	28 (15%)	14 (19%)	5 (7%)
\$51,000 - \$60,000	134 (33%)	75 (39%)	33 (46%)	14 (19%)
\$61,000 - \$70,000	110 (27%)	69 (36%)	12 (17%)	10 (13%)
\$70,000 and over	80 (20%)	13 (7%)	9 (13%)	42 (56%)
Not applicable	17	-	-	-
Did not answer	7	2	-	2
Total	435	193	72	75

Note: Excludes respondents who were not yet working or retired/inactive.

Table 4*Annual salary ranges and hearing aid dispensing*

Annual salary range	All responses (% of 435)	Hearing aid dispenser (% of 221)	Not hearing aid dispenser (% of 214)
\$35,000 and under	25 (6%)	2 (1%)	23 (11%)
\$35,000 - \$42,000	12 (3%)	7 (3%)	5 (2%)
\$43,000 - \$50,000	50 (12%)	28 (13%)	22 (10%)
\$51,000 - \$60,000	134 (33%)	80 (36%)	54 (25%)
\$61,000 - \$70,000	110 (27%)	42 (19%)	68 (32%)
\$70,000 and over	80 (20%)	57 (26%)	23 (11%)
Not applicable	17	-	17 (8%)
Did not answer	7	5 (2%)	2 (1%)
Total	435	221	214

Note: Excludes respondents who were not yet working or retired/inactive.

category was Ontario, where 29% reported an annual income of \$70,000 or more. Ontario was also the province with the most audiologists in private practice (N=84). Of the Ontario respondents (N=194), almost half (N=84, 43%) worked in private practice (as the owner or employee), just under half (N=79; 41%) worked in the public sector, and the remainder worked in other settings, including 15 (8%) who worked for hearing aid manufacturers, 4 (2%) who worked in a university (as faculty members or research associates), with the others (N=12) working in other sectors of employment such as government, schools, and so forth. The other three provinces where more than one respondent earned a salary in the highest category were also provinces where private practice is common (British Columbia, Alberta, and Nova Scotia). One possibility is that incomes were higher in these provinces because the cost of living was higher. According to Statistics Canada (website), in 2002, the annual expenditure per household was higher than the national average (\$60,090) in three provinces: Alberta (\$67,727), Ontario (\$67,538), and British Columbia (\$60,596). However, household expenditures were higher in Alberta than in Ontario and of ten provinces, household expenditures in Nova Scotia (\$51,243) ranked only 6th; therefore, the provincial cost of living seems to account only partially for provincial differences in the salaries of audiologists. Nevertheless, there seems to be an interesting connection between salary and practice setting.

Another interesting comparison is the salary distribution by age as shown in Table 6. In the 26 to 35 year old group (N=34), only 3 reported an annual income less than \$35,000. Not surprisingly, annual income increased with age. As shown in Table 7, in each age category, about half of the

Table 5*Annual salary ranges by province*

Province	Number of responses	Annual salary range (% province-wide)					
		< \$35 k	\$35-42 k	\$43-50 k	\$51-60 k	\$61-70 k	>\$70 k
ON	194	5 (3%)	4 (2%)	23 (12%)	54 (28%)	51 (26%)	57(29%)
QC	19	-	4 (21%)	4 (21%)	5 (26%)	5 (26%)	1 (5%)
BC	54	1 (2%)	1 (2%)	5 (9%)	20 (37%)	20 (37%)	7 (13%)
AB	42	-	-	4 (10%)	18 (43%)	15 (36%)	5 (12%)
NS	18	-	1 (6%)	3 (17%)	2 (11%)	8 (44%)	4 (22%)
MB	11	-	-	2 (18%)	8 (73%)	1 (9%)	-
NB	22	-	1 (5%)	4 (18%)	14 (64%)	2 (9%)	1 (5%)
SK	10	-	-	2 (20%)	4 (40%)	3 (30%)	1 (10%)
Total in 8 provinces	370	6	11	47	125	105	76

Note: Salary ranges are based on full-time work. Newfoundland and Labrador, Prince Edward Island, the Yukon, the Northwest Territories and Nunavut are not included because there were less than 10 respondents in these locations.

Table 6*Annual salary ranges by age*

Annual salary range	Age					
	< 25 yrs	26-35 yrs	36-45 yrs	46-55 yrs	56-65 yrs	> 65 yrs
\$35,000 and under	20	3	2	-	-	-
\$35,000 - \$42,000	1	6	1	4	-	-
\$43,000 - \$50,000	1	33	11	3	2	-
\$51,000 - \$60,000	-	53	55	22	2	1
\$61,000 - \$70,000	-	28	50	22	8	-
\$70,000 and over	-	11	29	31	8	1
DNA / NA*	11	5	3	3	1	-

*did not answer/not applicable

Table 7

Age by practice setting

Years of age	Number in total sample	Public service (% age-wise)	Private practice employee (% age-wise)	Private practice owners (% age-wise)
< 25	34	3 (100%)	-	-
26-35	139	61 (44%)	38 (27%)	16 (12%)
36-45	151	76 (50%)	22 (15%)	26 (17%)
46-55	85	43 (51%)	8 (9%)	26 (31%)
>55	23	9 (39%)	4 (17%)	6 (26%)
NR	3	-	-	-
Total	435	193	72	74

audiologists were employed in the public sector and over a third worked in private settings. Therefore, not all of the increase in salary with age can be explained by shifts in the type of work setting with age. As expected, both work setting and age seem to be associated with salary.

Membership in professional associations

Two associations represent Canadian audiologists, namely CAA and CASLPA. CASLPA, the older association, has existed for 40 years. As its name suggests, it was created to represent both speech-language pathologists and audiologists, and in 2003 it had 785 audiology members. Because of the maturity of CASLPA, the number of audiology members had been relatively stable over at least the last five years. The newer association, CAA, was founded in 1996 to represent Canadian audiologists (Noel, 2002), and its membership continued to grow such that with a 25% increase in membership from 2002 to 2003 it had reached a membership of 302 audiologists. Many audiologists belong to both organizations: 331 (76%) of the respondents were members of CASLPA and 141 of them (43%) were also members of CAA; 184 (42%) of the respondents were members of CAA and of them 141 (77%) were members of CASLPA as well. Considering all 435 respondents, there were 141 (32%) who were members of both organizations, 190 (44%) who were members of only CASLPA, 43 (10%) who were members of only CAA, and 61 (14%) who were members of neither organization. It is noteworthy that the respondents to the survey represented a higher proportion of the membership of CAA ($184/302 = 61\%$) compared to the proportion of the CASLPA audiology membership represented ($331/785 = 42\%$). The breakdown of responses according to association membership by province is shown in Table 8.

Some Canadian audiologists were also members of international professional associations for audiologists:

65 (15%) were members of the American Academy of Audiology (AAA), 60 (14%) were members of ASHA, 11 (3%) were members of the American Auditory Society (AAS), and 7 (2%) were members of the Educational Audiology Association (EAA).

Audiologists working in the six provinces with provincial regulatory bodies (Alberta, Manitoba, New Brunswick, Ontario, Quebec, and Saskatchewan) were required to be members of the provincial regulatory body (association or college). Of the six provinces with regulatory bodies, the provincial associations of three (Alberta, Ontario, Saskatchewan) had joint agreements with CASLPA at the time of the survey⁵. At the time of the survey, CASLPA also had a reciprocal agreement with ASHA whereby a CASLPA certified member could become a certified ASHA member without having to write the national exam in both countries (the reciprocal would be true for an ASHA certified member wanting to become a CASLPA certified member). This agreement was signed in 1997 when both countries had the same entry level credentials. As stated earlier, ASHA plans to change their minimum credential required for entry into practice to a doctorate degree (Ph.D., Au.D. or equivalent) effective 2012. At that time, the 1997 reciprocity agreement between CASLPA and ASHA for audiology certified members will no longer apply⁷. The present survey explored how important reciprocity with ASHA was for Canadian audiologists in 2003. Overall, 198 (46%) reported that the ASHA/CASLPA reciprocity agreement was not important for them, 122 (28%) reported that it was important, and 95 (22%) reported that it was only "somewhat" important, with an additional 20 respondents not responding or responding "do not know". It is interesting that, although only a small percentage (14%) of the Canadian audiologists who responded to the survey were members of ASHA, twice as many (28%) felt that the reciprocity agreement was important. Nevertheless, the majority of respondents reported that they did not feel that the reciprocity agreement was very important.

Educational preparation

The highest academic degree obtained by most respondents was the Master's degree ($N = 396; 91\%$). A small number had only a Bachelor's degree ($N = 18; 4\%$), and a few had a Ph.D. ($N = 9; 2\%$), or an Au.D. ($N = 8; 2\%$). The majority of respondents were trained in Canadian programs ($N = 277; 64\%$). The relatively short history and the small number of Canadian training programs are no doubt factors contributing to the finding that almost a third of the audiologists who responded were educated in programs in other countries. Half of the respondents ($N = 217$) had completed a two-year Master's degree, and just over a quarter ($N = 116; 27\%$) had completed a three-year Master's degree. Almost a fifth ($N = 77; 18\%$) had completed both a Bachelor's

Table 8

Memberships by province

Province (N)	Number of members in both CASLPA and CAA (% province-wise)	Number of members in CASLPA only (% province-wise)	Number of members in CAA only (% province-wise)	Number who are members in neither CASLPA nor CAA (% province-wise)
ON (209)	78 (37%)	70 (33%)	28 (13%)	33 (16%)
QC (36)	7 (19%)	10 (28%)	7 (19%)	12 (33%)
BC (58)	20 (34%)	35 (60%)	1 (2%)	2 (3%)
AB (42)	14 (33%)	21 (50%)	5 (12%)	2 (5%)
NS (20)	8 (40%)	12 (60%)	-	-
MB (11)	3 (27%)	7 (64%)	-	1 (10%)
NB (23)	1 (4%)	17 (74%)	1 (4%)	4 (17%)
SK (10)	4 (40%)	4 (40%)	-	2 (20%)
NF & LB. (7)	4 (57%)	3 (43%)	-	-
PEI (2)	1 (50%)	1 (50%)	-	-
YK (2)	-	1 (50%)	1 (50%)	-
NWT (1)	-	1 (100%)	-	-
NUN (1)	1 (100%)	-	-	-
DNA/NA* (13)	-	8 (62%)	-	5 (38%)
Total (435)	141	190	43	61

*did not answer/not applicable

and a Master's degree in audiology. The remainder (N = 25; 6%) had completed other programs, such as international programs.

Views on the education of audiologists

The survey provides important information on the views of Canadian audiologists regarding their own education, their perception of the education of students as of 2003, their suggestions for improving audiology education, and their degree of support for the Au.D. as the credential for entry into practice.

Adequacy of training: Personal perspectives.

Just over half of the respondents (N = 254; 59%) felt that their own education had provided adequate preparation to enter the profession of audiology, but about a third (N = 130; 30%) felt that they had received only "somewhat" adequate training. Furthermore, almost 1 in 10 (N = 37; 9%) felt that they had not been adequately prepared for the profession. Factors that

might be related to these personal perspectives on the adequacy of training might be the duration of training, years of work experience, or involvement as clinical educators.

A further examination of the group who responded that their program did not provide adequate preparation revealed that 21 (57%) had attended a two-year Master's program, 10 (27%) had attended a three-year Master's program, 5 (14%) had received both a Bachelor's as well as a Master's degree, and 1 had been trained in another type of program. However, the distribution of responses by duration of training is similar for respondents in the group who reported feeling that their training program had provided adequate preparation for the profession: 120 (59%) had attended a two-years Master's program; 63 (24%) had attended a three-year program; 48 (19%) had completed both a Bachelor's and Master's degree in audiology; the remainder had attended other types of training programs. Therefore, the reports of adequacy

of training seem to be unrelated to the duration of training that the individual had received.

The reports regarding the adequacy of training do not seem to be directly related to years of work experience. From respondents with only 1 to 5 years of experience (N = 76), just over half (N = 40; 53%) reported adequate preparation, 31 (41%) reported being "somewhat" prepared, and 5 (7%) reported inadequate preparation. In comparison, from the group with 6 to 10 years of experience, again just over half reported adequate preparation (N = 43; 52%), but the proportion who felt they had only been "somewhat" adequately prepared was a little smaller (N = 29; 35%), and the proportion reporting inadequate preparation was a little larger (N = 11; 13%). Finally, for the group with more than 10 years of experience, about two thirds felt they had been adequately prepared (N = 150; 67%), with 50 (22%) feeling that they had only been "somewhat" prepared, and 20 (9%) reporting inadequate preparation. Overall, the distribution is about the same regardless of the years of work experience, with the most experienced being the most satisfied with their training, followed by the least experienced, and with those in the intermediate experience category being the least satisfied. The intermediate group, with 6 to 10 years of work experience, may be the least satisfied because they are over the "honeymoon" phase of their career and the novelty of entering the workforce and they are now seeking career advancement but not yet anticipating retirement.

It is extremely important to note that 255 (59%) of the respondents had experience as clinical educators. Of this large and special group of respondents, who brought both the learner and the teacher perspectives to the survey, most (N = 197; 77%) judged that the current programs provided adequate preparation, but 41 (16%) reported that current programs did not provide adequate preparation. It is striking that those who have had ongoing involvement with the training of students reported that the current programs were inadequate almost twice as often as the general pool of respondents (16% vs 9%)!

When asked about the adequacy of audiology training in Canada, 59 of all respondents (14%) felt that it was inadequate. Apparently, even some of those who felt that their own training had been adequate believed that training was no longer adequate for new graduates entering the workforce.

Views on the future education of audiologists and the Au.D.

Of those who felt that training was inadequate, some felt that an alternative type of program would be better. The most popular alternative, favoured by about half (N = 31; 54%), was a post-baccalaureate doctorate of 4 years. Almost a fifth of the respondents favoured a three-year degree, either a post-Master's doctorate degree of 3 years (N = 7; 11%), or a three-year Master's program (N = 9; 15%). Some (N = 5; 8%) favoured a combination

of a Bachelor's and a Master's degree in audiology for a total of four to five years of training in the profession. Others (N = 6; 10%) felt there should be some "other" type of training program.

The Au.D. option

Importantly, not quite half of the respondents (N = 205; 47%) reported that existing programs should be improved but that the Master's degree should remain the credential for entry to practice (Question 24, Appendix A). Over a third (N = 157; 36%) reported that the professional doctorate degree (Au.D) should be offered. Taken together, over 80% of the respondents favoured change to improve the quality of audiology education, either by implementing the Au.D. or modifying the Master's degree. Far fewer (N = 60; 14%) felt that no change was needed. A small portion 13 (3%) did not answer the question.

Question 24 asked respondents to make specific suggestions regarding how improvements might be achieved either by modifying existing programs or implementing the Au.D. Comments were received from 185 respondents and some respondents made multiple suggestions. More than half of those who made comments (N = 97) suggested that the practicum component of the educational programs be enhanced or increased. Other dominant themes in the responses included the need to provide more content about hearing aids (N = 30), and preparation in running a business (N = 23). In addition to the comments that concerned hearing aid dispensing and private practice, there were a variety of comments about other desirable changes to classroom course content (N = 30), as well as comments suggesting changes to the organization of the programs (N = 14). Many of these comments fell into the following four general categories:

1. There was a perceived need to strengthen the connection between the university classroom and clinical practicum education to achieve more effective and efficient learning experiences (e.g., "increase diagnostic practice and application of material learned"; "the coursework should be more focused on practical applications"; "establish better contact, relationships with private and public facilities for more effective practicum opportunities"; "more clinical focus from day one"; "incorporate practicums continuously throughout the program"; "improve theoretical and practical teaching in issues that are often encountered in daily practice such as tinnitus management"; "more focused instruction and hands-on learning"; "get good places for clinical practicums"; "more private practice practica"; "clinics with expert clinical practitioners"; "more clinical experiences especially in places that emphasize research evidenced practices based on current research rather than clinical placements that do audiology as it was done 20 years ago"; "practicum supervisors are often not the most informed, the most up to date, or the best teachers").

2. There was a perceived need to increase final year options for specializations (e.g., “in the second year the student could choose a ‘specialization’ in the area they like more”; “mandatory internships in all specialized areas rather than optional courses”; “specialization in the third year”; “more specialized areas such as cochlear implants”; “a 3-year Masters could be implemented in which a student ‘specializes’ in their specific chosen field”).

3. There was a perceived need to reduce what was considered to be speech-language pathology content (e.g., “fewer S-LP courses”; “less time learning how to be S-LPs”; “less time spent on speech-language issues”).

4. There was a perceived need for better cooperation between different universities and with the professional associations (e.g., “CASLPA should also have a stronger role in determining what audiology programs should cover and the structure of the various programs so students across Canada are more or less equally prepared”; “there needs to be a more consistent curriculum between provinces”; “practicums should be a standard number across the country”; “cooperation between universities to increase the amount of material that is common to all programs”; “standardize curriculum and practica”; “better regulation to ensure all students have the same education”).

Although the majority of respondents felt that the education of audiologists should be improved, when asked about whether or not they would support the move to the Au.D. as the minimum requirement for entry into practice in audiology (Question 27, Appendix A), under half (N = 195; 45%) were not in favor, over a third (N = 151; 35%) were in favor, and almost a fifth (N = 83; 19%) answered that they did not know. Evidently, Canadian audiologists were about equally divided into those who wished to move to the Au.D. and those who did not; of the 346 who responded ‘yes’ or ‘no’, slightly fewer were in favor of the Au.D. than were not (44% vs. 56%). A less evenly divided response pattern was observed when the question was posed regarding which option would be in the best interest of the public (Question 28, Appendix A), with 219 (50%) not supporting the Au.D. as the minimum entry level to practice audiology in Canada, while 132 (30%) did support it, and 80 (18%) did not know (another 1% of the group did not respond). Of the 351 who responded ‘yes’ or ‘no’, more (62%) did not support it.

If the Au.D. becomes mandatory for practice as an audiologist in Canada, the majority of the respondents (N = 298; 69%) felt that practicing audiologists already in the workforce should be allowed to continue without extra training. Sixty-seven (15%) “somewhat” felt those already practicing should be allowed to continue without extra training, and only 52 (12%) indicated that they thought that audiologists should not continue to practice without extra training. A small group (N = 18; 4%) did not know or did not respond. It is

interesting to note that, when asked if they would seek an Au.D. if it became the entry-level requirement, most (N = 231; 53%) reported that they would upgrade their qualifications either by going back to university (N = 17; 4%) or taking on-line programs (N = 214; 49%), whereas 169 (39%) said they would not undertake further training, and some (N = 31; 7%) reported that they would even consider changing their career. It is noteworthy that 8 (2%) of the 435 respondents already held an Au.D. degree and another 21 (5%) were enrolled in an Au.D. program, bringing the number of early adopters of the Au.D. to 29 (7%).

Hopes and fears concerning the Au.D.

Respondents were asked to rank seven possible advantages of implementing the Au.D. Better job preparedness was ranked first by the most respondents (N = 125). The next most common options that were ranked first were better recognition by allied health professions (N = 66) and being able to bill through governmental agencies or private insurances (N = 65). It has been suggested that there might be advantages in using the title “doctor”; however, when respondents ranked the benefits they thought would be achieved if the Au.D. became the minimum qualification for entry into practice, most of the respondents (N = 128) ranked use of the title “doctor” last.

Increased income is another possible benefit; however, the majority of respondents (N = 258; 59%) reported that they believed that this qualification would not result in increased income, while only 66 (15%) reported that they thought that it would, and 49 (11%) reported that they thought it would only “somewhat” increase income. In the group who reported that there would be an increase in income associated with holding a professional doctoral degree (N = 66; 15%), about a third (N = 23; 35%) thought that the change in income would occur immediately after national implementation of the Au.D. as the minimum qualification for entry into the profession, but most of them (N = 43, 65%) did not expect it would not occur immediately. A related concern might be that an increase in the income of audiologists might result in more pervasive hiring of less expensive supportive personnel; however, the respondents were split on what they expected would happen in this regard. About a third of the respondents (N = 145; 33%) thought that employers would hire more supportive personnel if the Au.D. became the entry level to practice, another a third (N = 125; 29%) reported that it would make no difference, another third (N = 156; 36%) did not know what impact adopting the Au.D. would have on the hiring of supportive personnel, and a few (2%) did not answer the question.

When asked how the number of candidates applying to audiology programs would be affected if the Au.D. became the minimum credential for entry into practice, 229 (53%) reported that they would expect a decrease, 81 (19%) reported an expected increase, and 118 (27%)

thought there would be no effect (2% did not respond to that question). Furthermore, if introducing the Au.D. resulted in a reduction in the number of university programs, most (N = 271; 63%) reported that they expected that reducing the number of programs would decrease the number of candidates applying for audiology because of diminished choice of location and greater geographical distances, but over a third (N = 156; 36%) reported that they did not expect that there would be any effect on the number of applicants to graduate programs in audiology (2% did not answer).

Factors that may be related to preference for or against the Au.D.

The key finding of the survey was that over 80% of Canadian audiologists believed that the education of audiologists in Canada needed to be improved. Despite the strong agreement that there should be changes in how audiologists are educated in Canada, there was no clear consensus as to which would be the best alternative to pursue. In 2003, just over half preferred to address this need by seeking improvements in the Master's programs and just under half preferred the Au.D. as a solution. Next, we examine factors that may distinguish those who favour the Au.D. from those who do not. We then summarize issues that are related to the deliberations of Canadian audiologists about the need for changes in education, and we present recommendations arising from the findings of this survey.

The response to question 28 of the survey, "In the best interest of the public, do you think the Au.D. should be the minimum entry level to practice audiology in Canada?", could have varied depending on ten possible factors that were thought to account for the split in the opinion of Canadian audiologists. The ten factors included province (Table 9), practice setting (Table 10), salary (Table 11), involvement in hearing aid dispensing (Table 12), country of training (Table 13), highest degree (Table 14), age (Table 15), years of experience (Table 16), membership in national associations (Table 17), and importance of ASHA reciprocity (Table 18).

As shown in Table 9, the Au.D. option was supported by just under a third (27 to 31%) of audiologists in all provinces with more than 10 respondents. In general, the Au.D. option was less favoured in provinces with provincial regulatory bodies than in provinces where practice was not regulated. In five of the six provinces where audiologists must belong to a regulatory body (New Brunswick, Quebec, Ontario, Alberta, and Saskatchewan), at least half of the

Table 9

Responses to question 28 by province

Province (N)	Yes N (%)	No N (%)	Do not know N (%)	Did not answer N (%)
ON (209)	65 (31%)	108 (52%)	35 (17%)	1 (1%)
QC (36)	11 (31%)	19 (53%)	6 (17%)	-
BC (58)	17 (29%)	23 (40%)	15 (26%)	3 (5%)
AB (42)	13 (31%)	21 (50%)	8 (19%)	-
NS (20)	6 (30%)	11 (55%)	3 (15%)	-
MB (11)	3 (27%)	5 (45%)	3 (27%)	-
NB (23)	7 (30%)	13 (65%)	3 (4%)	-
SK (10)	3 (30%)	5 (50%)	2 (20%)	-
NF & LB. (7)	3 (43%)	3 (43%)	1 (14%)	-
PEI	2	-	-	-
YK	1	1	-	-
NWT	-	1	-	-
NUNAVUT	1	-	-	-
NR	-	9	4	-
Total	132	219	80	4

respondents (50 to 65%) did not favour the adoption of the Au.D. as the minimum for entry into practice, and in the sixth province (Manitoba) almost half (45%) of the respondents did not favour the Au.D. Although practice in Nova Scotia is not regulated, more than half of the respondents (55%) from that province also said 'no' to the Au.D. option. Fewer respondents (40 to 43%) in other provinces where practice is not regulated said 'no' to the Au.D. Importantly, in all provinces (except New Brunswick) about 1 in 5 audiologists (14 to 27%) were undecided.

As shown in Table 10, the Au.D. option received the most support from private practice owners (40%), followed by students (37%), followed by those working for hearing aid manufacturers (35%), and then by those working in university settings (30%), with employees in both public and private practice settings being the least (25%) in favour of the Au.D. option. As shown in Table 11, those who said 'yes' to the Au.D. most often (39-41%) did not earn a salary (probably students) or earned salaries in the highest category (probably owners of private practices). The respondents with salaries in the lowest category said 'no' to the Au.D. more often (65%) than did those in other salary categories, and the group

Table 10*Response to question 28 by practice setting*

Job setting (N)	Yes N (%)	No N (%)	Do not know N (%)	No response N (%)
Public clinical practice (187)	47 (25%)	104 (56%)	34 (18%)	2 (1%)
Private practice owner (75)	30 (40%)	33 (44%)	11 (15%)	1 (1%)
Private practice employee (72)	19 (26%)	40 (55%)	13 (18%)	-
Hearing aid manufacturer (20)	7 (35%)	8 (40%)	5 (25%)	-
University (10)	3 (30%)	3 (30%)	4 (40%)	-
Students (43)	16 (37%)	19 (44%)	8 (19%)	-
Others (25)	9 (36%)	10 (40%)	5 (20%)	1 (4%)
Did not answer (3)	1	2	-	-
Total (435)	132	219	80	4

Table 11*Response to question 28 by salary*

Annual salary range (N)	Yes N (%)	No N (%)	Do not know N (%)	No response N (%)
< \$42,000 (37)	10 (27%)	24 (65%)	3 (8%)	-
\$43,000-\$50,000 (50)	14 (28%)	23 (46%)	13 (26%)	-
\$51,000-\$60,000 (134)	38 (28%)	67 (50%)	27 (20%)	2 (1%)
\$61,000-\$70,000 (110)	32 (29%)	59 (54%)	19 (17%)	-
> \$70,000 (80)	31 (39%)	37 (46%)	10 (13%)	2 (3%)
Not applicable (17)	7 (41%)	5 (29%)	5 (29%)	-
Did not answer (7)	-	4	3	-
Total (435)	132	219	80	4

Table 12*Response to question 28 by involvement in dispensing hearing aids*

Involvement in dispensing (N)	Yes N (%)	No N (%)	Do not know N (%)	No response N (%)
Dispense hearing aids (221)	70 (32%)	108 (49%)	41 (19%)	2 (1%)
Do not dispense (214)	62 (29%)	111 (52%)	39 (18%)	2 (1%)
Total (435)	132	219	80	4

with the lowest salaries included many who were employees in public and private practice settings. The number of respondents saying 'yes' or 'no' to the Au.D. did not seem to differ depending on whether or not the respondent dispensed hearing aids (Table 12). Across the range of all practice settings, and whether or not they dispensed hearing aids, many respondents (15 to 40%) were undecided.

For both Canadian and internationally trained audiologists, about a third were in favour of the Au.D. option (Table 13); however, a higher percentage of Canadian trained audiologists than internationally trained audiologists said 'no' to the Au.D. option (53% vs 46%). Almost all of those who already had an Au.D. or Ph.D. were in favour of the Au.D., but for those whose highest degree was a Bachelor's or a Master's only about 1 in 3 said 'yes' and about half said 'no' to the Au.D. option (Table 14). The pattern of about 1 in 3 saying 'yes' and about half saying 'no' to the Au.D. seems to be about the same for all age groups (Table 15), but more of those with over five years of experience (52-55%) say 'no' compared to those with five or less years of experience (42-49%).

Curiously, more of the respondents (40%) who were members in both CASLPA and CAA favoured the Au.D. option compared to those who did not belong to both. For those who were members of only one association, or of neither association, about a quarter (25-28%) said 'yes' to the Au.D. option and just over half (54-60%) said 'no' (Table 17). Furthermore, as shown in Table 18, respondents who felt that reciprocity with ASHA was important were more often (55%) in favour of the Au.D. option, and those who felt that it was not important were more often not in favour of the Au.D. option (65%). These results suggest that the Au.D. is accepted more by those who value membership in multiple associations.

Table 13*Response to question 28 by country of training*

Origin of training program (N)	Yes N (%)	No N (%)	Do not know N (%)	No response N (%)
Canadian trained (277)	84 (30%)	147 (53%)	44 (16%)	2 (1%)
Internationally trained (158)	48 (30%)	72 (46%)	36 (23%)	2 (1%)
TOTAL (435)	132	219	80	4

Table 14*Response to question 28 by highest degree*

Highest degree (N)	Yes N (%)	No N (%)	Do not know N (%)	No response N (%)
Bachelor's (18)	5 (28%)	9 (50%)	4 (22%)	-
Master's (396)	112 (28%)	206 (52%)	74 (19%)	4 (1%)
Au.D. (8)	8 (100%)	-	-	-
Ph.D. (9)	7 (78%)	2 (22%)	-	-
Did not answer/ not applicable (4)	-	2	2	-
TOTAL (435)	132	219	80	4

Table 15*Response to question 28 by age*

Age in years (N)	Yes N (%)	No N (%)	Do not know N (%)	No response N (%)
< 25 (34)	10 (29%)	16 (47%)	8 (24%)	-
26 - 35 (139)	48 (35%)	63 (45%)	27 (19%)	1 (1%)
36 - 45 (151)	40 (26%)	82 (54%)	26 (17%)	3 (2%)
46 - 55 (85)	24 (28%)	47 (55%)	14 (16%)	-
56 - 65 (21)	8 (38%)	9 (43%)	4 (19%)	-
> 65 (2)	1 (50%)	1 (50%)	-	-
Did not answer (3)	1	1	1	-
Total (435)	132	219	80	4

reject it, and about a fifth are undecided. Existing provincial regulatory bodies may reduce the support from audiologists for the Au.D. option. Those who value membership in multiple associations may be more supportive of the Au.D. option. Overall, it seems that audiologists at two extremes were more supportive of the Au.D. option: those who were students or who had few years of experience, and high income earners who owned a private practice or already held an Au.D. or Ph.D.

Issues associated with deliberations concerning the Au.D.

The deliberations of Canadian audiologists about the Au.D. inevitably become linked to a number of related pressing issues, including workforce shortages and the need to recruit and retain audiologists, uncertainty about health care funding for audiological services and products, and the recognition of audiology as a profession by governments, other health professionals, and third party payers.

The results of the survey indicate that 71% of the respondents were working full time. Changes in health care funding decisions have resulted in periods of instability in different provinces at different times over the last decade; however, it seems reasonable to assume that across Canada a shortage of audiologists persisted. There is certainly no doubt about the aging of the population and the increasing prevalence of hearing loss with age, so the needs of people who are hard-of-hearing should only be expected to increase over time and this is another reason why more audiologists will have to be trained. As shown in Table 2, about half of those in our sample (N=203) were

Having considered the ten factors which seemed most likely to differentiate those who did or did not favour the Au.D. option, it seems that the split on this issue is not readily explained by any particular factor. Almost no matter how the respondents are categorized, about a third support the Au.D. option, about half

seasoned professionals with more than six years of experience; however, being less than 45 years old they can be expected to remain in the workforce for another 20 years. The sample also largely represents those who have entered the profession after the differentiation of the professions had begun in curricula in the late 1970s

Table 16*Response to question 28 by years of experience*

Years of experience (N)	Yes N (%)	No N (%)	Do not know N (%)	No response N (%)
< 1 (41)	13 (32%)	20 (49%)	8 (20%)	-
1-5 (76)	24 (32%)	32 (42%)	20 (26%)	-
6-10 (83)	27 (33%)	46 (55%)	10 (12%)	-
> 10 (227)	66 (29%)	117 (52%)	40 (18%)	4 (2%)
Did not answer/not applicable (8)	2	4	2	-
Total (435)	132	219	80	4

Table 17*Response to question 28 by membership in national associations*

Organizations membership (N)	Yes N (%)	No N (%)	Do not know N (%)	No response N (%)
CASLPA members only (190)	47 (25%)	104 (55%)	37 (19%)	2 (1%)
CAA members only (43)	12 (28%)	26 (60%)	4 (9%)	1 (2%)
Dual membership in CAA and CASLPA (141)	57 (40%)	56 (40%)	27 (19%)	1 (1%)
No membership with CAA or CASLPA (61)	16 (26%)	33 (54%)	12 (20%)	-
Total (435)	132	219	80	4

Table 18*Response to question 28 by importance of ASHA reciprocity*

Importance of ASHA reciprocity (N)	Yes N (%)	No N (%)	Do not know N (%)	No response N (%)
Important (122)	67 (55%)	32 (26%)	23 (19%)	-
Not important (198)	36 (18%)	129 (65%)	31 (16%)	2 (1%)
Somewhat (95)	27 (28%)	46 (48%)	21 (22%)	1 (1%)
Do not know (18)	2 (11%)	11 (61%)	5 (28%)	-
Did not answer (2)	-	1	-	1
TOTAL (435)	132	219	80	4

and after the introduction of profession-specific national certification in 1987. Given this influx of more numerous recent graduates and the likely continued growth in the number of graduates produced by universities, the matter of how best to train future audiologists can be expected to become even more important. Evidence of the continued growth in the number of audiologists is indicated by the growth in membership of both national associations representing audiologists (CASLPA and CAA). In 1965, the CASLPA Directory listed 150 names (CSHA, 1965); ten years later in 1975, there were 361 members (CSHA, 1975); in 1986, following an energetic membership drive, there were 1,400 members (CASLPA, 1986); by 1988, there were more than 2600 members (Durieux-Smith, 1988; CASLPA, 1988, 1999). In 2004, CASLPA had a total of 4,762 members, with 788 (17%) of them being audiologists. Assuming that there are another 400 audiologists who are not already members of CASLPA or CAA, some of the growth in membership will continue to come from those with experience who decide to join; however, over time, a higher proportion of new members will come from recently trained audiologists as well as from immigration of audiologists trained in other countries. The annual enrolment capacity in Canadian programs has more than doubled over the last two decades and is now about 100 students (CASLPA, 2004b). It will be important for CASLPA and CAA, as well as the provincial associations and regulatory bodies, to continue their collaboration with the university programs to improve the training of audiologists. Clearly, on the one hand, audiology is a profession that is already well established in its own right, but on the other hand, it is a profession that is growing and evolving rapidly and

the pace is not likely to slow in the foreseeable future. Frequent updating of curricula will be needed to adequately prepare future audiologists to meet these needs.

Despite the obvious increasing need for audiological services, changes in health care funding in different provinces over the last 20 years have had the effect of shifting audiology practice from the public sector to the private sector in many provinces. It is estimated that in the late 1970's there were at most about 25 audiologists who had started private practices in Canada, and that in the mid 1980's there was a surge in the number of audiologists who had 'fee-splitting' practices with physicians (Don Hood, personal communication, May 2004). The present survey indicates that there are now almost as many audiologists in private practices or manufacturing or consulting (38%) as there are working in the public sector, including schools and government positions (47%). Reduced public health funding and greater reliance on other revenue sources such as third party payers are likely to occur in the future. Whereas many of the early private practices were begun by experienced audiologists working on their own, at the present time there are an increasing number of new graduates who take jobs as employees in private practice settings. The educational programs must accommodate to these shifts in work setting and the accompanying demands that are being placed on new graduates.

The shifts in practice settings have given rise to new concerns about the regulation of all health professions. Within this context, there is also mounting concern about the recognition of audiologists and the profession of audiology by governments, other health professionals, and third party payers and insurers. Confusion about the minimum credential for entry into practice increases the difficulties that challenge audiologists as they struggle to maintain funding of their services and products from public funding sources, as well as increasing their difficulties in gaining entry into the schedules of third party payers and insurers. Nevertheless, we cannot avoid situating the possible change to the Au.D. in the much larger context of change in health care funding. In the wake of the Romanow Report (Health Canada, 2002), the potential significance to health care funding of changing the credential for entry into practice is suggested by a decision in October 2003 of the federal and provincial ministries of health to declare a moratorium on any changes to entry level credentials for all health professions until new policies and procedures for approving such changes could be discussed and adopted (⁸Deputy Ministers of Health, personal communication, October 2003). The majority of Canadian audiologists we surveyed do not believe that adoption of the Au.D. as the minimum credential for entry into practice would result in an increase in income, at least not in the short term. However, some argue that more consistent and clearer labeling of the degrees obtained by audiologists would help to reduce confusion about who audiologists are,

what they do, and the kind of education that they need in order to perform their work. In short, some would argue that the identity of the profession will be strengthened by having a widely and easily recognized academic credential.

Recommendations

While keeping our eyes on the long-term horizon, we make the following short-term recommendations for Canadian audiologists:

1. The university programs are encouraged to use the recent revisions of the CASLPA Foundations of Clinical Practice for Audiology (CASLPA, 2004a) as a framework to guide how curricular content is created and updated. Furthermore, using the CASLPA Foundations, the programs are encouraged to engage in a nation-wide discussion of curriculum and program organization, including practicum experiences, with a view to ensuring that all students receive an equivalent core education.
2. The university programs should give priority attention to responding to the perceived need for audiologists to receive more and/or better practicum experiences in their preparation, including experience relevant to specialized areas and work in private practice settings such as business and hearing aid dispensing. CASLPA and CAA should work with the universities to review the role of clinical faculty members to ensure that their contributions to the education of audiologists are optimized and legitimized. Topics to explore include how to strengthen the connection between classroom and practicum learning, the possible development of national standards for clinical educators, and the proposal of guidelines for compensating and recognizing their contributions.
3. CASLPA and CAA should repeat and expand the survey of Canadian audiologists on a regular basis, preferably annually, and provide opportunities for all stakeholders to come to a clearer consensus on a long term plan of action to improve the education of audiologists to meet well-specified long-term needs.
4. CASLPA and CAA should continue to collaborate to promote the ongoing development of an identity for the profession of audiology that is clearly understood by government, the public, and third party payers and insurers. In this vein, CASLPA and CAA should collaborate to enable audiologists to represent themselves directly and in a united voice in discussions with the federal and provincial authorities (e.g., Deputy Ministries of Health, provincial licensing bodies, etc.).

While Canadian audiologists strongly agreed in 2003 that the education of audiologists needed to be improved there was still no strong agreement about whether changing the minimum entry level to practice was warranted at that time and the split in opinion did not seem to be strongly influenced by any factors that we could identify. Recall that ASHA decided in 1992 that the new credential for entry into practice in the United

States would be required by 2012, fully 20 years later. Even without the backdrop of significant changes in health care funding, changes in credentials do not happen quickly. Canadian audiologists will need to continue to discuss this matter until there is a clearer consensus about exactly how changes in the education of audiologists should be accomplished in the interests of the profession in the long term. Sequel surveys will show how our profession evolves to meet this challenge.

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Footnotes

¹Both authors are members of both Canadian national associations representing audiologists. At the time of the survey, Kathy Pichora-Fuller was a member of the Board of Directors of CAA and Josée Lagacé was the Audiology Advisor for the Canadian Association of Speech-Language Pathologists and Audiologists (in 2004 she left to undertake doctoral studies at the Université de Montréal). Both authors contributed equally to the preparation of the paper and they are listed in alphabetical order.

²Dalhousie graduates all receive a Master of Science degree. However, different qualifiers following the degree name have been added in order to distinguish the research-track from the clinical-track programs (Joy Armson, personal communication, 2005). Students who graduate having completed the thesis track receive a Master of Science (Human Communication Disorders). Students who successfully complete the audiology program without a thesis receive a Master of Science (Audiology). Similarly, students who complete the speech-language pathology program without a thesis receive a Master of Science (Speech-Language Pathology).

³Soon after the survey was conducted, the U of M announced its intention to implement an Au.D. program by 2007. UWO and Dalhousie have also announced plans to implement Au.D. programs, including options for those holding Master's degrees to upgrade. The Dalhousie proposal is to offer an Au.D. in addition to but not instead of an M.Sc. degree. As of January 2006, the proposals at these three universities were under consideration but had not yet received official university approval.

⁴The members of the CASLPA Au.D. Task Force were Pat Ellis, Jeanne Finn-Allen, Maxine Flaman, Cyne Johnston, Benoît Jutras, Josée Lagacé, Christine Santilli, Richard Seewald, and Navid Shahnaz.

⁵In 2005-06, "Joint Membership" is an agreement between CASLPA and a province/territory association to harmonize the collection of membership fees for full, reduced and student membership categories. Provinces that have a joint membership agreement require 100% of their members to belong to both CASLPA and their provincial/territorial association. As of 2005-06, provinces participating in the joint membership agreement with CASLPA are PEI, Nova Scotia, Newfoundland and Labrador, Saskatchewan, British Columbia, Yukon, and the Northwest Territories. In 2005-06, "Joint Alliance" is an agreement between provincial/territorial associations and CASLPA to collaborate. Joint alliance does not require mandatory membership between CASLPA and the province/territory. The Joint Alliance focuses on priority activities that meet the collective, current and future needs of our professions. As of 2005-06, provinces participating in the Joint Alliance agreement with CASLPA are Alberta, New Brunswick, PEI, Nova Scotia, Newfoundland and Labrador, Saskatchewan, British Columbia, Yukon, and the Northwest Territories. Note that the definitions of these agreements were elaborated and Ontario withdrew from its agreements with CASLPA after the 2003 survey.

⁶The Canadian Speech and Hearing Association was renamed the Canadian Association of Speech-Language Pathologists and Audiologists in 1985.

⁷The CASLPA agreement with ASHA for audiologists was revised on December 3, 2004 such that as of 2007 those seeking certification will have to do 27 extra coursework hours and one year of supervised practice. Specifically, "As of January 1, 2007, CASLPA Certified members

applying for ASHA Certification will be required to meet the new standards for the "Certificate of Clinical Competence in Audiology". This includes completing an additional 27 hours of post-baccalaureate study from an institution accredited by ASHA's Council on Academic Accreditation in Audiology and Speech-Language Pathology (CAA) or approved graduate coursework at a Canadian audiology program and 12 months full-time equivalent supervised clinical practicum sufficient in depth and breadth to achieve the knowledge and skills outcomes stipulated in Standard IV of "Standards Implementation Procedures for the Certificate of Clinical Competence in Audiology" from (http://www.caslpa.ca/PDF/Ashareciprocity_aud_2004agreement.pdf).

⁸Deputy Ministers of Health, October 2003, letter to CASLPA President about "Requests for changes to mandatory entry-to-practice education credentials for health professions".

Author Note

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Correspondence concerning this article should be addressed to: M. Kathleen Pichora-Fuller, University of Toronto at Mississauga, Department of Psychology, 3359 Mississauga Road, Mississauga, Ontario L5L 1C6 Email: kpfuller@utm.utoronto.ca.

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Appendix A:

The Survey (CASLPA Au.D. Task Force, 2003) Survey on the Professional Doctorate Degree in Audiology

As a Canadian audiologist, we would appreciate your input on this important issue facing the audiology profession. Your input and feedback are important to us. They will be used to help draft a CASLPA position paper as to whether the Doctorate Degree in Audiology (Au.D.) should be the minimum entry level to practice in Canada. Please take about 10-15 minutes as soon as possible to provide your input. The survey deadline is July 11, 2003. Your responses will be kept confidential. We have provided the following background information to assist you in completion of this survey.

1. The focus of the professional doctorate in Audiology (Au.D.) is (<http://www.audiology.org/professional/positions/aud.php>):

- the development of clinical proficiency,
- the highest university award given in Audiology in recognition of completion of academic preparation for professional practice,

- does not require a dissertation for its completion and is not a research-oriented degree.

2. The focus of an academic doctorate (Ph.D.) is (<http://www.audiology.org/professional/positions/aud.php>):

- on research culminating in the dissertation for the Ph.D.,
- defined as the mark of highest achievement in preparation for creative scholarship and research,
- often in association with a career in teaching at a university or college.

3. Background information

All professions are becoming more knowledge intensive and we are observing more and more health professions increasing their entry-level credentials for practice. In Canada, the Canadian Academy of Audiology (CAA) presented a Position Paper on the Professional Doctorate in Audiology in the fall of 2002. *CAA endorses the doctoral degree as the appropriate minimal entry-level degree for the practice of audiology* (CAA website: <http://www.canadianaudiology.ca/position-statement.html>). At the present time, there is no Canadian academic institution that is offering a program for a professional Doctorate Degree in Audiology. In addition, there is no licensing or regulatory body that requires a doctorate degree. The profession of audiology has evolved and the knowledge base has expanded, so it is timely that CASLPA takes a position on this important issue. The whole purpose of the following questionnaire is to seek information on what Canadian audiologists think and want regarding this issue.

In the United States, ASHA will introduce new audiology standards for entry to practice in 2007 and 2012 in response to extensive consultation and "changes in the scope of practice, to protect consumers and to promote quality services" by audiologists. As of 2012, a doctorate degree, either a Ph.D. an Au.D. or a professional Doctorate Degree in Science (Sc.D.), will be mandatory for persons applying for ASHA certification.

Since 1997, CASLPA certified-audiologists could apply for ASHA certification without writing the examination but may be required to complete a Clinical Fellowship (CF) or modified CF depending on the number of years that have passed since CASLPA certification. As of 2005, with the introduction of the new ASHA standards, this agreement will have to be renegotiated.

4. Where to find more information?

Here are some good articles on the topic:

Lewis, S. (April 2003). *A Public Policy Perspective on Education Credentials for Health Professions*, http://www.acc.ca/english/events/03allied_health.cfm.

Bloom, S. (Feb 2000) Moving to the head of the class: A progress report on the Au.D., *Hearing Journal*.

Florian, J. (June 2001). As fewer earn Ph.D.s, where will audiology find tomorrow's teachers, researchers? *Hearing Journal*.

AFA survey on benefits of Au.D. (March 2002) *Hearing Journal*

Florian, J. (April 2002). The proliferation of Au.D. programs: Is it too much of a good thing? *Hearing Journal*.

Appendix A

The Professional Doctorate Degree in Audiology (Au.D.)
Should it be the minimum entry level to practice as an audiologist in Canada?

Your Background

1. What is your primary job setting (please select only one)?

<input type="checkbox"/> Private practice clinical as the owner	<input type="checkbox"/> Public clinical practice, e.g. hospital
<input type="checkbox"/> Private practice clinical as an employee	<input type="checkbox"/> School setting
<input type="checkbox"/> Instructor	<input type="checkbox"/> University (as a faculty member)
<input type="checkbox"/> Student	<input type="checkbox"/> Other: _____
2. Which of the following best describes your current practice status?

<input type="checkbox"/> Full time	<input type="checkbox"/> Part time	<input type="checkbox"/> Student	<input type="checkbox"/> On leave of absence/maternity leave
<input type="checkbox"/> Other: _____			
3. In which province/territory are you employed?

<input type="checkbox"/> Nova Scotia	<input type="checkbox"/> New Brunswick	<input type="checkbox"/> Quebec	<input type="checkbox"/> PEI
<input type="checkbox"/> Alberta	<input type="checkbox"/> Ontario	<input type="checkbox"/> Manitoba	<input type="checkbox"/> Saskatchewan
<input type="checkbox"/> British Columbia	<input type="checkbox"/> Yukon	<input type="checkbox"/> Nunavut	<input type="checkbox"/> NWT
<input type="checkbox"/> Newfoundland & Labrador			
4. What is your age category?

<input type="checkbox"/> 25 and under	<input type="checkbox"/> 26-35	<input type="checkbox"/> 36-45	<input type="checkbox"/> 46-55	<input type="checkbox"/> 56-65	<input type="checkbox"/> 65 and over
---------------------------------------	--------------------------------	--------------------------------	--------------------------------	--------------------------------	--------------------------------------
5. How many years have you practiced audiology?

<input type="checkbox"/> less than a year	<input type="checkbox"/> 1-5 years	<input type="checkbox"/> 6-10 years	<input type="checkbox"/> more than 10 years
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6. What salary range best reflects your annual audiology income (based on a full-time position)?

<input type="checkbox"/> \$35 000 and under	<input type="checkbox"/> \$ 35 000 - \$42 000	<input type="checkbox"/> \$43 000 - \$50 000
<input type="checkbox"/> \$51 000 - \$60 000	<input type="checkbox"/> \$61 000 - \$70 000	<input type="checkbox"/> \$70 000 – over
7. How long was your Masters training program in audiology?

<input type="checkbox"/> 3-year program	<input type="checkbox"/> 2-year program
<input type="checkbox"/> Bachelor's in audiology and Master's in audiology (total of 4 to 5 years)	
<input type="checkbox"/> Other	
8. What is your highest academic degree in audiology?

<input type="checkbox"/> Bachelor's	<input type="checkbox"/> Master's	<input type="checkbox"/> Au.D.	<input type="checkbox"/> Ph.D.
-------------------------------------	-----------------------------------	--------------------------------	--------------------------------
9. Are you currently enrolled in an Au.D. program?

<input type="checkbox"/> Yes	<input type="checkbox"/> No
------------------------------	-----------------------------
10. Did you graduate (audiology degree) from a Canadian program?

<input type="checkbox"/> Yes	<input type="checkbox"/> No
------------------------------	-----------------------------
11. Do you dispense hearing aids?

<input type="checkbox"/> Yes	<input type="checkbox"/> No
------------------------------	-----------------------------
12. How many positions (in audiology) did you have in the past ten years?

<input type="checkbox"/> One	<input type="checkbox"/> Two	<input type="checkbox"/> Three	<input type="checkbox"/> Four
<input type="checkbox"/> More than four			
13. In how many provinces have you worked (in audiology) in the past ten years?

<input type="checkbox"/> One	<input type="checkbox"/> Two	<input type="checkbox"/> Three	<input type="checkbox"/> Four	<input type="checkbox"/> More than four
------------------------------	------------------------------	--------------------------------	-------------------------------	---
14. Have you worked as a clinical practicum supervisor (in audiology)?

<input type="checkbox"/> Yes	<input type="checkbox"/> No
------------------------------	-----------------------------
15. Check all association/college/academy you are affiliated with.

<input type="checkbox"/> Provincial regulatory body/licensing body (mandatory to work in your province)		
<input type="checkbox"/> Provincial Speech and Hearing Association (not mandatory to work in your province)		
<input type="checkbox"/> CASLPA	<input type="checkbox"/> CAA	<input type="checkbox"/> ASHA
<input type="checkbox"/> Other: _____		

Appendix A (continued)

Your opinion

16. Do you feel that your training program provided (or is providing) you with adequate preparation to enter the profession of audiology?
- Yes No Somewhat Do not know
17. Do you feel that the current Master's degree programs provide graduates with adequate preparation to enter the profession of audiology today?
- Yes No Somewhat Do not know
- If no, how long do you feel the program should be to better prepare graduates?
- Master's of 3 years
 Master's of 2 years
 Bachelor's in audiology and Master's in audiology (total of 4-5 years)
 Doctorate of 4 years (post-baccalaureate)
 Doctorate of 3 years (post-Master's)
 Other
18. Do you believe that holding an Au.D. degree would increase (or has increased) your income?
- Yes No Somewhat Do not know
- If yes, do you think that a change in income would occur immediately after national implementation of the Au.D as the minimum entry level to the profession?
- Yes No
19. The American Speech & Hearing Association (ASHA) will change their audiology membership criteria in 2012 to a Doctorate degree (Au.D., Sc.D. or Ph.D.) If the Master's degree remains the minimum criterion to work as an audiologist in Canada, this will affect the current agreement between ASHA and CASLPA. Is the CASLPA/ASHA reciprocal agreement for audiologists important to you?
- Yes No Somewhat Do not know
20. If the Au.D. becomes the minimum entry level to practice as an audiologist in Canada, how do you think it will affect the number of candidates applying to audiology programs?
- Increase the number of applicants No effect
 Decrease the number of applicants
21. If the Au.D. becomes mandatory to practice as an audiologist in Canada, do you think that current practicing audiologists should be allowed to continue without extra training?
- Yes No Somewhat Do not know
22. As a Master's degree holder or a student enrolled in a Canadian audiology program, would you consider enhancing your education to get an Au.D. if it became the entry-level requirement?
- Yes, I would consider returning to university to pursue the degree
 Yes, I would consider distance learning to pursue the degree
 No, I would maintain my current qualifications
 No, I would consider changing my career
 Does not apply
23. In order to have a strong Au.D. program, it may be necessary to reduce the number of university programs. Do you think this will affect the number of candidates who want to apply to audiology because of distance issues (from their geographical area to the nearest university program)?
- Decrease No effect
24. In your opinion, what would be the best option as the entry level to the profession in Canada?
- Maintain Masters degree (keep programs as they are)
 Improve current programs but keep the Masters degree as the entry level
 Implement an Au.D. as the entry level

Appendix A (continued)

a) If you chose the option of improving current programs, please provide a few suggestions on how to make this a reality (in terms of years, practica, etc.)

b) If you chose the option of the implementation of Au.D. programs as the entry level, please provide a few suggestions on what would be the most appropriate format to fulfill our needs in Canada (e.g. number of years, number of practica, length and frequency of practica, etc.)

25. By having the Au.D. as an entry level to practice and assuming that this will bring an increase in salary scale, do you believe that employers will hire more supportive personnel?

Yes No Do not know

26. If Canada moves to the Au.D. as the minimum entry level to practice, what benefits would you expect? Please rank: "1" being the most important to you and "8" the being the least.

___ Higher salary

___ Better recognition from my patients

___ Better recognition from allied health professionals

___ Being able to use the title "Dr."

___ Better prepared for the job

___ Being able to bill through governmental agencies or private insurances (i.e.: independently from physicians)

___ Being able to work independently

___ Other: _____

27. Do you support the move to the Au.D. as the minimum entry level to practice audiology?

Yes No Do not know

28. In the best interest of the public, do you think the Au.D. should be the minimum entry level to practice audiology in Canada?

Yes No Do not know

Why? _____

Thank you.