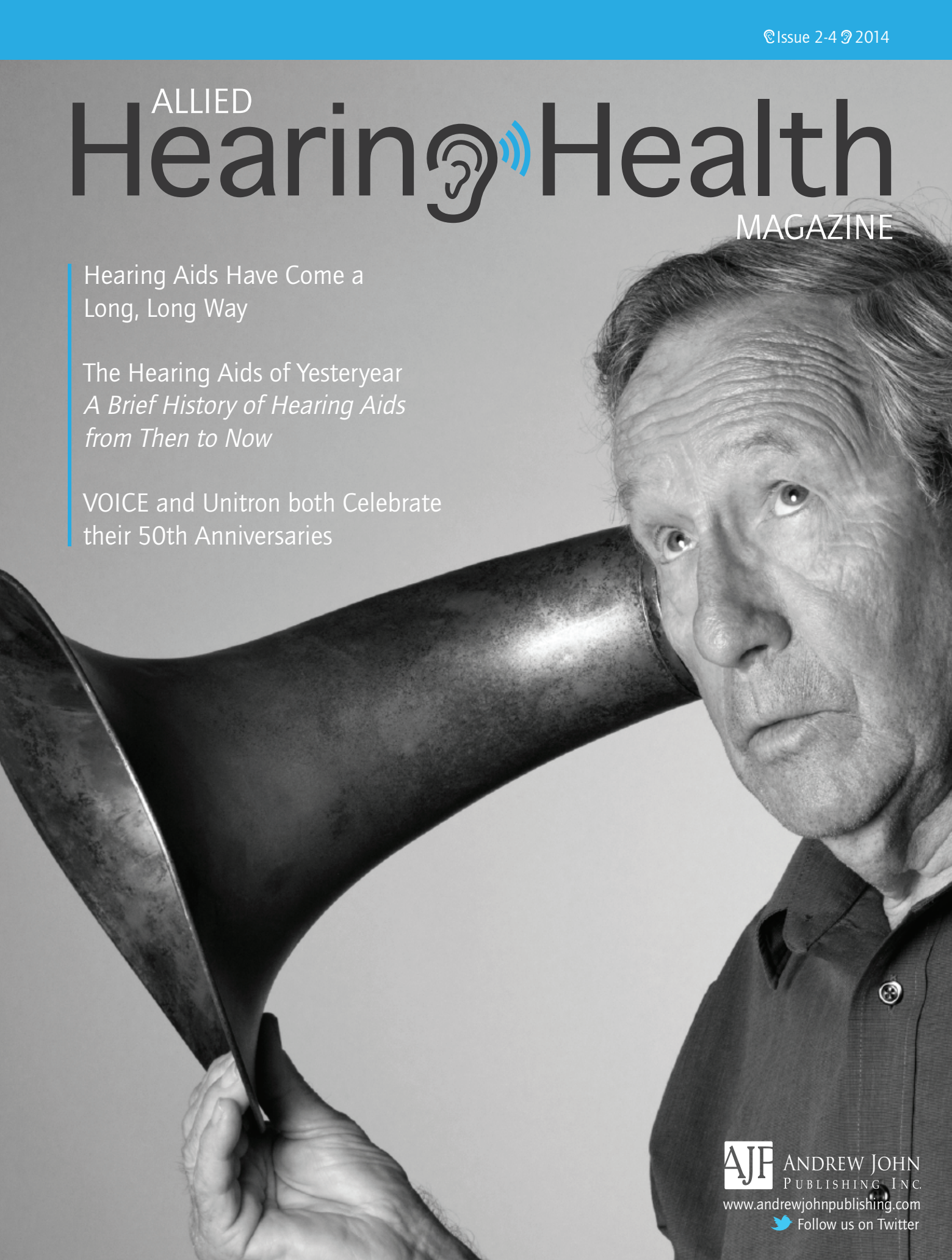
Issue 2-4 2014

ALLIED Hearing Health MAGAZINE

Hearing Aids Have Come a Long, Long Way

The Hearing Aids of Yesteryear
A Brief History of Hearing Aids from Then to Now

VOICE and Unitron both Celebrate their 50th Anniversaries



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ALLIED Hearing Health MAGAZINE

Issue 2-4 2014

ISSN 2291-8329

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contents



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Welcome to Allied Hearing Health Issue 4 for 2014!

First off, I just have to say that we are thrilled with the great response we've had from our readers since our launch earlier this year. The ongoing participation of our wonderful friends from some of Canada's best non-profit hearing advocacy groups has been a real point of pride for us. It's allowed us to reach so many people with hearing loss and to help them find out more about what supports, groups, and services are available.

And, the good news just keeps on coming. We've got a few more advocacy/service groups lined up to be part of *Allied Hearing Health* in the weeks and months to come, but for this issue we are thrilled to welcome VOICE for Hearing Impaired Children who are celebrating their 50th anniversary. VOICE provides auditory-verbal therapy and other programs for children and tirelessly supports these kids and their parents at a local, provincial, and national level.

Our regular trio of awesome columnists are all present and accounted for in this issue. In "The Happy HoH," Gael Hannan writes about recently finding a booklet called *80 Years of Looking & Learning* which tells the interesting story of the Toronto Hard of Hearing Club and gives an amazing, humorous look at life with hearing loss over the past 100 years.

Marilyn Dahl's "Now Hear This!" column tells us about the fantastic new Peer Support Program created in 2012 and implemented by two enterprising young adults, Bowen Tang and Joy Gong of the Young Adult Network of the Canadian Hard of Hearing Association.

And, Carole Willans returns in "Breaking the Sound Barrier," and shares her extensive experience with some fantastic tips for easier traveling with a hearing loss.

This issue seems to have a bit of a historical theme running through it. Gael Hannan's column touched on the story of the Toronto Hard of Hearing Club, our newest contributors VOICE for Hearing Impaired Children are celebrating their 50th anniversary, and our two features also delve into the past.

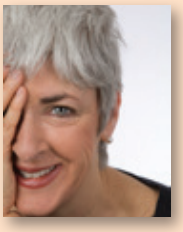
Our feature article in this issue is one of my personal favourites. Dr. Neil Bauman wrote us a fantastic article, complete with many, many pictures, on the history of the hearing aid. Aside from being a hearing loss coping skills specialist, researcher, author, and speaker, he is the curator of the fascinating Hearing Aid Museum (www.hearingaidmuseum.com). This article first appeared earlier this year in our sister publication, *Signal*, the official publication of the Association of Hearing Instrument Practitioners of Ontario. This is a real must-read for all of you history buffs out there.

And, finally, our friends at Unitron Canada are celebrating their 50th anniversary and were nice enough to share with us an interesting account of the early years of their company. Congratulations on 50 great years to everyone at Unitron!

Scott Bryant
Editor-in-Chief
Andrew John Publishing Inc.

Being Hard of Hearing in 1921

By Gael Hannan



About the Author
Gael Hannan is a writer, actor, and public speaker who grew up with a progressive hearing loss that is now severe-to-profound. She is a director on the national board of the Canadian Hard of Hearing Association (CHHA) and an advocate whose work includes speechreading instruction, hearing awareness, workshops for youth with hearing loss, and work on hearing access committees.

Gael is a sought-after speaker for her humorous and insightful performances about hearing loss. Unheard Voices and EarRage! are ground-breaking solo shows that illuminate the profound impact of hearing loss on a person's life and relationships, and which Gael has presented to appreciative audiences around Canada, the United States and New Zealand. A DVD/video version of Unheard Voices is now available. She has received several awards for her work, including the Consumer Advocacy Award from the Canadian Association of Speech Language Pathologists and Audiologists.

Never judge a book by its cover – even an inexpensive photocopied one – because what's inside might be jaw-dropping.

This week, sorting through 20 years' accumulation of hearing loss material, I was about to pitch out a spiral-bound booklet called *80 Years of Looking & Learning*. I opened it and was mesmerized. Compiled in 2001 by the early lip reading advocate Dorothy Scott, the mimeographed pages not only tell the story of the Toronto Hard of Hearing Club formed in 1921 – but they also give an amazing, humorous look at life with hearing loss over the past 100 years. Thank you to the existing members of the Toronto Hard of Hearing Club for sharing this written history.

Note: The following is taken directly from the booklet with only minor grammatical changes and notes. Some terminology may be considered politically incorrect by today's standards.

> 1921 – A small group in a then rather small Toronto got together to form the Toronto Lip Reading Club – the "First in the British Commonwealth".
>
> Who started it? Why then? Who had hearing loss in 1921?
>
> The Hard of Hearing populace then, as now, included those born with defective hearing or who developed a loss in infancy, but with impairment mild enough to enable the child to learn to communicate through speech and hearing.
>
> [In addition], a couple of years before, the 'War to End All Wars" had dragged to its exhausted end. The lads had come home with their memories – of mud and pain and gas and the screams of dying comrades. Some had a constant reminder – they had to learn to live with Hearing Loss. Gunfire, wounds, shock, meningitis and ear infections had changed their lives forever.
>
> Hearing loss was not confined to veterans. In the day before antibiotics, immunization and middle-ear surgical correction, those who suffered from partial deafness were often children and young adults. In the early years of the century, young Alec of Dundee developed scarlet fever. He did recover, but with ever-increasing deafness. In school, the top children sat at the front of the class. If your grades deteriorated, you were moved back and back until you sat with the failures in the rear, where poor confused Alec, who had confidently hoped for university, eventually found himself.
>
> There were lots of Alecs in Toronto. There was no way of diagnosing partial deafness in early childhood until defective speech gave some clue. Even if you did find out that the problem was poor hearing, not mental incapacity, what could you do?

One option for children over 7 was the School for the Deaf and Dumb in Belleville [now Sir James Whitney School for the Deaf], founded in 1907, which ran a 9-month, no-holiday term designed to prepare the child for non-verbal workplace activities – printing, saddle-making, domestic service, etc. The brochure stated, "It is not desirable that parents come often (to visit) or remain long." But although it was a good school, at the forefront of deaf education, many deaf children were kept at home by their parents.

With the returning soldiers came new wives, often accompanied by 'unmarried sisters.' And so K. Grace Wadleigh came to Toronto. She was a trained Teacher of Lipreading and Education of the Deaf and little was known about her except that she was Terrific. The Toronto School Board of the time had no place for her in her chosen field, although she did later work with them. But that didn't stop Miss Wadleigh. She became the founding teacher of the Toronto Lip Reading Club, formed in February 1921.

The annual membership fee was $1.00; by making the annual fee very small it was hoped no one would be prevented from joining. Meetings were held at the YMCA Thursday evenings and Saturday afternoons with teachers Miss G. Wadleigh, (the "First Teacher Of Lip Reading To Adults In Canada"), Miss G. Tuller and Miss M. Faircloth, both teachers of the deaf. What kind of training would these ladies have had? Certainly they all had their teaching certificate and probably were hard of hearing. By 1923 there were 73 members and the annual fee had doubled to $2.00. "Silver teas" were held to raise money, whereby participants left donations in a strategically placed bowl.

By the 1930s, things were beginning to hum in the hearing field! Universities and teaching hospitals were setting up Deaf and Hearing research facilities. Although the 4A Phono-Audiometer was introduced in 1926 to screen hearing, findings were pretty subjective. Most testing was still the old "*Can you hear my watch?*"

The Hearing Eye was the "Official Publication of the Canadian Federation of Lipreading Organizations", formed in 1933. L.M. Montgomery, the author of Canada's beloved Anne of Green Gables, was a frequent contributor and in 1935 she gave a talk to the club. She stood on a wobbly platform with a lamp shining on her face so that it would be visible. *"She enunciated so clearly that lipreaders were well repaid."* The same year, the Toronto Lip Reading Club was divided into three departments – Women, Men and Young People – and the first Theatre Amplifier was introduced in six movie theatres. This service involved sitting in a pew at the front using a telephone-like device. Only the boldest allowed themselves to be so helped – to be hard of hearing was still thought slightly shameful.

What a brilliant slice of hearing loss history! The booklet continues on with events through next 80 years, but you are probably more interested in hearing how things turned out for poor young Alec. Well, he studied course notes from a friend who went to engineering college, and he went on to build up a successful family business in custom engines. He also built himself a hearing aid from radio components. The microphone was in a lamp, the amplifier in a desk drawer and he interviewed clients leaning casually on his hand which held the receiver. Few realized that the man had disabilities, least of all himself.

The booklet ends with the **Lipreader's Prayer:**
From Mouthers and Shouters
And Stiff Upper-Lippers
And people with pipes in their mouths,
Good Lord, deliver us.

Note: The above blog is reprinted with permission from HearingHealthMatters.org. Each week, Gael Hannan writes the Better Hearing Consumer, a widely-read blog about living with hearing loss.

Leaders of Tomorrow

By Marilyn O. Dahl

About the Author
Marilyn Dahl is the president of the Canadian Hard of Hearing Association BC Chapter

Now and then, something happens which makes me want to stand up and cheer.

This time, the event inducing that reaction is the Peer Support Program created in 2012 and implemented by two enterprising young adults, Bowen Tang and Joy Gong.

Bowen, a UBC grad, is pursuing a master's in education at Smith College; Joy is a Vancouver Community College student, with a certificate in ASL and Deaf studies. Both are specializing in deaf and hard of hearing education; each have profound hearing loss, using both a hearing aid and a cochlear implant. Both credit their successes in life to exceptional support from parents, dedicated professionals, and friends.

As members of the Young Adult Network of the Canadian Hard of Hearing Association, Bowen and Joy have experienced the value of peer support in coping with their hearing disability. Having already reached the post-secondary stage in their educational careers, they recognized the need to provide a mechanism whereby others like themselves could gain access to and benefit from peer counselling.

The transition to post-secondary education is never an easy one, and it is particularly fraught with potential problems for anyone with a hearing problem. Making new friends, getting professors to speak so you can understand them, are just a few of the challenging situations faced.

Considerable time was required to plan and put into effect their project, not an easy task for two young adults pursuing their education. Fortunately, the importance of their goal was widely recognized and received enthusiastic support. Communication Access Services at secondary and post-secondary institutions and hearing resource teachers, were involved. Professional resource persons willingly participated in and helped organize workshops. Space for workshops, ASL interpreters, Captioning, were donated. The BC Chapter of CHHA office looked after processing criminal record checks on prospective monitors, covered the costs of the Mix'N'Mingle event, and continues to offer support.

There are three components to the Peer Support Program: the first component is the core of the program and began in 2012, and is called One to One Support, in which a youth is connected with a suitable young adult. Individual location and interests are taken into account. Preferably a mentor is found who has attended the same institution, perhaps from the same program, so can provide explicit information on the experience. The mentor is expected to help the youth set goals, develop an action plan, and maintain a regular contact to monitor progress. In-person meetings are ideal, but use of email, Skype and Face Time sessions are all utilized. Both students and hearing resource teachers have provided enthusiastic and grateful feedback from this experience.

The second component is Post Secondary Transition Workshops. These were first held in the fall of 2013, when Post Secondary Communication Access Services (BCIT) and Western Institute for the Deaf and Hard of Hearing partnered with the Peer Support Program to provide workshops on post-secondary transition. Topics at these first workshops included "individual changes in rights and responsibilities"; "how to access support services and technology" and "self-advocacy." Each student received a USB stick with additional information, including a Transition Checklist! Amongst all of the positive feedback received from students and teachers, one comment stood out, my biggest take-away is that self-advocacy is critical.

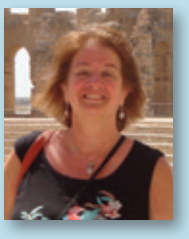
The third component, inaugurated in the spring of 2014, is the Mix'N'Mingle event. Open to youth and their families, it provides an opportunity to meet with peers, and the young adults who attend as facilitators. In describing the first such event, Bowen termed it "high energy." The day featured rotating participation in four sessions of round table mingling. Topics addressed included advances and setbacks in having a hearing loss; challenges and issues faced; strategies to overcome them. Bowen noted that "advocacy" came up in every discussion. He says, "In order for us to ensure continual access to communication, we must keep ourselves informed of changes made to government policies and take action when our interests are at risk."

To quote Bowen, "We are working to create a platform where deaf and hard of hearing individuals from ages 13 to 23, in their secondary and post-secondary education, can be empowered to foster active leadership, provide peer support, advocate and promote awareness of hearing loss in their communities." And, "...to cultivate the young people in our community today so we can work together to build a better tomorrow."

Way to go, guys! This is leadership in action!

On the Road Alone with my Hearing Loss

By Carole Willans



About the Author
Carole Willans is a hard of hearing lawyer and long-time advocate for persons who are hard of hearing or deafened. She has a profound bilateral hearing loss, the result of a household accident at the age of four. Carole has been involved in the Canadian Hard of Hearing Association since 1990, during which she served as the executive director, president, and board member.

I often have to do some long distance travel alone, with only my hearing loss as a companion. Believe me when I say that I am very aware of the presence of this fidgety companion when I am travelling. I would like to be able to wish him away, but he is quite stubborn, this companion. He insists on being with me every step of the way! As a result, I have had to work at finding ways to ensure that the travel experience is as calm as possible. There is always some stress in travel, and it's seriously worse when you have a profound bilateral hearing loss as I do, but I have two key strategies to deal with it all – the first is to be knowledgeable and as prepared as possible, and the second is to have a calm, forgiving and peaceful attitude (because you can't foresee everything, and you certainly can't control the weather and all the events and people that "happen" in spite of your best laid plans).

In terms of knowledge and preparation, thanks to the Internet, it's easy to do. Just be as thorough as possible. I make lists of the places I need to go. As I mostly travel alone on business, I know the itinerary from the hotel to the conference site, from the hotel to that restaurant or museum I want to go to, and so on. I get a good sense of whether something is walking distance or not. I try to make all travel arrangements in advance. I print out all the confirmations, and if I have to use the telephone or do some arrangements in person, I ask for written confirmation to ensure that I understood the information correctly. Find out whether there is a shuttle at the time that you expect to arrive, and in case there are

delays, until what time the shuttle runs. A good travel agent can contact airlines, hotels and attractions to make the arrangements and reservations. I like to have a folder with all my addresses, flight numbers, confirmation numbers, etc. easily available. Bring extra hearing aid batteries and tubing, and pack them in your carry-on.

Reduce your stress level by giving yourself plenty of time. Arrive early at the airport, the train station or the bus terminal. Tell the agent at the counter that you are hard of hearing and need to be notified in person when it is time to board. At the airport, ask for priority boarding. Then act as if you fully expect that you and your fidgety companion will be rapidly forgotten (in fact, it happens to me more than half the time). So be alert! Do not bury yourself in a newspaper or play a game on your portable electronic device. Keep your eyes on the person making announcements. Check the display board repeatedly. There may be departure time changes or gate changes. On the plane, I always find it a good idea to let the attendant know that I am hard of hearing and I ask that in-flight announcements be communicated to me in person. I prefer to seat in the aisle seat whenever possible, to be able to get up and stretch my legs, but more importantly to have a better chance at hearing the attendant.

So you get my drift. Be prepared. I cannot get through all the possibilities, however most of it is about thinking ahead. If you have done this, then you will already have done the major work towards achieving the second goal as well, which is to have a calm, forgiving and peaceful attitude. I have never seen anything good happen as a result of frazzled nerves; it makes a wreck out of me, drives the staff around the bend, and makes my fidgety companion even crazier. Have you ever noticed how much harder it is to hear when you are upset? Help yourself by keeping your cool, you will be a better communicator and people are more apt to help you out. By this, I don't mean to act like a marshmallow; you must ask for what you need. Be open about your hearing loss, this reduces the power your fidgety companion can have over you! Above all, remember that people are more likely to help you if they enjoy your presence. When I check in the hotel, I let them know that I have to take my hearing aids out at night, which makes me as deaf as post (that expression seems to make sense to hearing people) and so if there is a fire or other emergency, well… please let the fire marshal know in which room I am and do send a nice fireman up to break down my door and save me, preferably one who has been on this year's firefighter's calendar. Said with a nice smile, that usually gets their attention!

Open Mind, Open Heart & One Open Ear

By Kayla Dawn

My name is Kayla Dawn and I would describe myself as a person with an open mind, open heart, and one open ear. I live in the beautiful town of Osoyoos B.C. and this year I am graduating from Osoyoos Secondary School. I am also proud to say that I am the first Ambassador for The Hearing Foundation of Canada!

If you're wondering what I mean by one open ear, I was born with unilateral hearing loss, which has been a major obstacle in my life. My hearing loss has made day to day experiences rather challenging.

I had a very difficult and trying time at school, in regards to gaining the same experience as my peers. It is hard to focus in on the teacher when my ear picks up everything around the classroom. To make sure that I understand the work material, I often stay after school to work with the teachers and bring lessons home to relearn on my own, on top of my homework! Being that there is no hearing device to correct my hearing, I always get placed in the front of the class which I haven't always been happy about, but at least it keeps me out of trouble! I work very hard and put in many extra hours to be the best I can be in my studies.

My hearing loss has made it very difficult to interact socially as well, which I think has been the hardest challenge of all. Many times people would come up to me and point out how I would talk differently, and I would get made fun of all the time, which started to lower my self-esteem. I became a very shy little girl and was embarrassed of my hearing loss. I felt comfortable around people that understood and accepted me for who I was, but I did not like meeting new people and being social due to my negative experiences. Sometimes I would go to local hockey games with my friends and would often feel left out on conversations because of the noise of the game, as well as not having my ear placed in the right position. It is so embarrassing not having any idea what people are talking about in a conversation that you are suppose to be included in! It's not always easy to position myself properly, depending on the environment and the people around me. What I hate most about conversations is, when I don't hear what people say and get the courage to ask them to repeat themselves and they reply with "Oh, never mind!" – That's the worst.

As my social life was difficult, I found that I spent most of my time at home by myself. It was when I started writing music that I felt more confident and was able to erase the embarrassment I felt about my hearing loss. Instead of hanging out with friends I would spend most of my time in my bedroom making music. I had found an outlet to express my emotions, and was able to observe the things that were happening around me. Music helped me deal with my embarrassment, and bring a smile that I had never seen before. When I started to share my music with others, I felt respected and appreciated. I could sing without being judged, as people were listening to my voice as I sang, not as I talked.

I have learned how to live with my hearing loss and have come to accept it. I now see it as a gift which I received for a reason. As a singer/songwriter I have used music as my therapy to assist me through life's obstacles. With a lot of patience, determination and hard work I have been able to achieve a dream of mine, as I recently released my first album with original songs, titled "Never Give Up." I am so excited to share my music with others and really hope that it will inspire and encourage to "never give up" no matter what the world throws at you.

This album has been an absolute dream and I have many more goals to accomplish, such as becoming a music therapist. I want to be able to improve and assist the lives of others, especially children who live with hearing loss, through music. As I have used music as my therapy, I feel as if I can help others in the same way.

I know I will have to face many more obstacles as I continue on into adulthood, but I am ready to let the world know that I have hearing loss, and sometimes I struggle with it, but I will not let it deter me, but rather inspire me. I plan to continue working on my pronunciation, diction and social skills and hope that as an Ambassador for The Hearing Foundation of Canada, I will inspire others to believe that nothing is impossible, and you can always overcome any challenges you may face. I believe we all have something to offer in this world, and we should not be afraid to use our gifts to help others. I am a firm believer in the more we give back, the more we get back, causing a ripple effect of positive change. I am so excited that I have been given the opportunity to be an Ambassador for The Hearing Foundation of Canada!

Please check out my website http://www.kayladawn.ca/

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The Sounds of Summer: Beyond the Buzzing Bees

By Lynne Nieman
Manager of Resource Development and Communications,
Deaf and Hear Alberta

I'm lucky. I have what I think is "normal" hearing (for now). That means I can take pleasure in hearing the robins singing in the back yard, the bees buzzing as they burrow their way into the flower centre, and the sound of a mosquito humming around my face so I can swat it away.

If those were the only sounds of summer, how idyllic it would be. The reality of just how noisy summer can be hit home the other day as I was enjoying the Canada Day celebrations at a local park. In order to buy food tickets, you had to go inside the tent where there was musical entertainment. I had to shout my order to the server. Ergo, music too loud.

It was a warm day so I opened my bedroom window at night. The sirens started shortly after I crawled into bed. Then, right around 11:00, of course – the fireworks! And, that's not all. My fellow Canadians will also know summer by its other name: "construction season." There are festivals, concerts, lawn mowing, do-it-yourself projects using power tools (a deck-building project anyone?) the noise of a midway, and my personal favourite – motorcycles. Noise seems to be coming at us from all directions in the summertime.

We all know excessive noise causes both hearing loss and tinnitus. We also know that it is permanent and (at least for now) irreversible. And, we all know that noise-induced hearing loss is preventable. The trick is to remember to take the steps necessary to protect our hearing.

Higher intensity sounds (higher decibels [dB]) cause more damage. Experts advise that noise at higher than 85 decibels is where danger to hearing starts; at that level we need to start paying attention. Habitual exposure to noise at this level will cause a gradual hearing loss and louder noises will accelerate this damage. Lawnmowers and power tools start at around 90 dBs; rock concerts ring in at around 115 dBs, and fireworks can rack up at 150 dBs. For unprotected ears, the safe range of exposure time decreases by one-half for each 5 dB increase in the noise level.

That's 8 hours a day at 90 decibels (lawnmower); 4 hours per day at 95 decibels (a movie); and 15 minutes at 115 decibels – that's close to a rock concert. Who ever heard of a rock concert lasting 15 minutes?

If you think you have grown used to a loud noise, you probably have some hearing damage. No corrective treatment, not even hearing aids, can truly reverse hearing loss once it has occurred.

Since hearing loss is painless and gradual, it usually goes by unnoticed. What is more noticeable is the effect of tinnitus, (so-called "ringing in the ears") which may signal long-term exposure to noise that has damaged hearing.

My brother-in-law, who worked around airplane engines his entire career, has acute tinnitus – not surprising.

People differ in their sensitivity to noise. As a general rule, noise is excessive if:

- you have to shout over background noise to make yourself heard,
- the noise hurts,
- it makes your ears "ring," or
- your hearing is dulled or lost for several hours after exposure to the noise – as is usually the case after a loud concert.

Therefore it is important to protect what hearing you have. While this may seem painfully obvious, the best way to prevent injury from loud noise it to avoid exposure to the noise in the first place. If you have control over the amount of noise, then reduce the volume, the length of exposure, or preferably, both. If you cannot avoid excessive noise, then wear hearing protection, either in the form of earplugs or sound-reducing headphones. Both of them together is even better if the noise is extreme.

To be effective, hearing protection must totally block the ear canal with an airtight seal, which therefore decreases the intensity of sound that reaches the eardrum. That's why wads of cotton or tissue balled up and placed in the ears do not work, since they don't create a tight seal. Since our world has become increasingly noisy, my approach is just to assume that wherever I am going, it is going to be noisy. I habitually carry a pair of cheap wax earplugs with me, since I have not yet stooped to buying the expensive noise-cancelling headphones.

People react differently to loud noises; some react with anxiety and irritability, an increase in pulse rate and blood pressure, or an increase in stomach acid. Summer should be a time of rest, relaxation and re-charging our batteries, not of increased anxiety. Call in the quiet and listen to the bees buzz.

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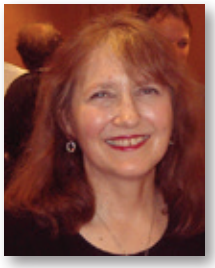
INTERNATIONAL FEDERATION OF HARD OF HEARING PEOPLE

By Carole Willans, Editor, *IFHOH Journal*



IFHOH President Ruth Warick

Ruth Warick was re-elected president of the International Federation of Hard of Hearing People (IFHOH) at its Biennial General Meeting (BGM) in Jerusalem, Israel, on April 7, 2014. This is a new two-year mandate. Ruth is Canadian, working as a senior diversity advisor at the University of British Columbia, in Vancouver. She is also a former president of the Canadian Hard of Hearing Association (CHHA). The other IFHOH Board members are from Israel, Vietnam, Finland, New Zealand and the Netherlands.

Highlights from the IFHOH BGM include the adoption of a Policy Paper on Education and of its 2014-2016 Action Plan. The Action Plan is an ambitious, yet realistic, agenda for the next two years. Key commitments include the development of a policy paper on hearing aids, the establishment of a global Hard of Hearing Awareness Day to be adopted by the United Nations, and the initiating of a speech-to-text (also known as captioning) project.

IFHOH has been heavily involved in work around the United Nations Convention on the Rights of Persons with Disabilities, and Ruth Warick is second vice-president of the International Disability Alliance (IDA). The United Nations' Millennium Development Goals (MDGs) period is expected to wrap up in 2015. Its world-wide goals range from halving extreme poverty rates, halting the spread of HIV/AIDS, and providing universal primary education. While there has been some success, there remains much to be done. The Post-2015 Development Agenda is being prepared by the UN. IDA is at the forefront of the movement to ensure that disability be an important part of the Post-2015 framework (which was not the case with the original MDGs). Ms. Warick was in New York on July 8 to participate in a UN panel discussion on *What can the Post-2015 development agenda achieve for persons with disabilities?*

The next IFHOH Congress and BGM will be hosted in cooperation with the Hearing Loss Association of America. It will take place in Washington, D.C. from June 23 to 26, 2016 at the Washington Hilton.

For more information about IFHOH, visit its website at www.ifhoh.org – you can update your knowledge of international news of interest to persons who are hard of hearing by reading recent issues of the *IFHOH Journal*. You can also visit IFHOH's Facebook page at

/groups/IFHOH/

voice for hearing impaired children 50 years

By Norah-Lynn McIntyre, Executive Director

VOICE's anniversary is a celebration of the power of parents. We celebrate those pioneering parents who had a vision for their children and who led the charge to establish school supports and the auditory-verbal approach as a viable option for children with hearing loss. We celebrate parents today who continue to advocate for the needs of their children with hearing loss. We celebrate the many individuals, businesses and foundations who give generously to VOICE.

The VOICE anniversary is an opportunity to remember that in the 1950s, The Hospital for Sick Children's Clinic for the Prevention of Deafness hosted meetings of the Metropolitan Toronto Association for Hearing Handicapped Children (MTAHHC). In 1962, the Metropolitan Toronto School for the Deaf was established and parents began meeting at the new school, serving as its PTA. A growing liberalism in society's attitude towards disability issues, coupled with new educational techniques and resources, empowered parents and professionals desiring integration for children with hearing loss, to move in a radical new direction. Their advocacy in favour of mainstream education ultimately set the stage for the creation in the mid-60s of VOICE for Hearing Impaired Children that has grown to include parent and professional members from across Canada.

It was extreme 50 years ago to think that children who were deaf could learn to communicate through listening. Louise Crawford helped pioneer in Canada an approach called auditory-verbal therapy at The Hospital for Sick Children, modeled after Doreen Pollack'a program in the U.S. Over the subsequent years, Miss Crawford helped hundreds of children to use their residual hearing and improve their speech. In 1979, with increasing demand, VOICE was instrumental in establishing a comparable auditory-verbal program at the North York General Hospital. Members of VOICE subsequently created the Learning to Listen Foundation led by Warren Estabrooks. In the early 90s, VOICE, under the leadership of Anita Bernstein, its director of therapy and training programs, trained five new auditory-verbal therapists in Ontario and helped York University to integrate auditory-verbal therapy into its Teacher of the Deaf program. VOICE successfully lobbied for infant hearing screening in Ontario and auditory-verbal therapy as an option for parents under this initiative. VOICE continues to lobby for universal infant hearing screening in every province in Canada. Today the vast majority of children born deaf are learning spoken language as a result of early identification and advanced hearing technology. Through the support of the Government of Ontario, VOICE developed a mentoring program in the auditory-verbal approach for teachers of the deaf and has been instrumental in the training of over 30 teachers to effectively support the growing number of students with hearing loss who are successfully integrating into their community schools. In addition, VOICE partners with the University of Ottawa's auditory-verbal certification program, and is now mentoring professionals in the provinces of Newfoundland and Manitoba.

In addition to its auditory-verbal therapy training program and advocacy initiatives, VOICE offers public education and parent support programs. Its well-attended conference, held each year on the first Saturday in May, is the largest of its kind in Canada. The VOICE DRESS LOUD DAY, a public awareness event held each year in schools and businesses nation-wide, is an opportunity for the public at large to support the work of VOICE.

While much has changed over these past 50 years, two things remain constant – VOICE provides hope for families, hope that their children can reach their fullest potential, and a sustained commitment by its members to support its mission:

"To ensure that all children with hearing loss have their rights upheld with access to services for developing their abilities to learn to hear, listen and speak."

www.voicefordeafkids.com

Walk with Us!

The Canadian Hard of Hearing Association (CHHA) had its first Walk2Hear fundraiser in Sept 2010, Sunday, from in Ottawa, Ontario with a total of about 100 walkers. Our second Walk2Hear was held in September 2011 in Ottawa, Vancouver and York, and we had a total of about 120 walkers across Canada. The third walk was held again in September 2012, in Ottawa, Vancouver with a total of 150 walkers in these three cities. Last year's walk was in Ottawa, Vancouver, and Edmonton with 150 walkers. This year promises to be bigger and better than ever with walks in Ottawa, Hamilton, Vancouver, and Newfoundland taking place on Sunday, September 28th, 2014.

Walk2Hear has been CHHA's main fundraising initiative, raising funds to help people with hearing loss across Canada. This year, all locations have adopted their own cause to support using funds raised through Walk2Hear; for example, the National Capital Region in Ottawa is using Walk2Hear to help pay for speechreading instruction for their members. Walk2Hear is an event that increases awareness of issues related to hearing loss, accessibility and advocacy for better services by taking to the streets to raise awareness about CHHA and our member's needs.

We hope that whatever the reason, people will join us to walk to Love, to Help and to have Fun!

To walk to Love is to support walkers and teams that you know (your friends, family, co-workers and people in your community living with hearing loss), to show your encouragement and support by joining the walkathon as an individual or creating a team, making pledges and fundraising for their benefit.

To walk to Help is to support CHHA, and the Branch or Chapter you walk with, this helps the association and our members, but creating new revenue for services and resources within that Branch or Chapter. By walking to help, you are not only helping the association, but all those that rely on CHHA's services and resources. As a not-for-profit organization, revenue raised by this fundraiser creates the lifeblood that allows us to do our work helping people living with hearing loss.

To walk to have Fun is simply because positivity is very important, especially for our members, and also because we're all fun people and want you to join us for Walk2Hear! Not only is getting outdoors fun, but being healthy while doing it is even better so don't pass up this opportunity be more active and support a great cause.

So please join us! CHHA has completely redesigned the Walk2Hear website using a new Peer-to-Peer platform, so you can use Facebook and Twitter to spread the word to all of your friends and followers. Check out our new video and our new Walk2Hear website.

Walk2Hear is mobility accessible, so you can walk, run, roll or enjoy your day with us however you please, so register online today; and if you don't see your city posted, you can even start up a virtual walk where you live so we can all Walk2Hear together!

Canadian **Hard of Hearing** Association
Association des **malentendants** canadiens

WARNING

Buying Hearing Aids from the Internet?

Serious Health Risks

In Ontario, a prescription is required by law prior to a hearing aid being dispensed.

- Without obtaining the assistance of qualified hearing healthcare professionals, you will not have obtained proper testing, selection, counseling and dispensing.
- Hearing Aids are a Class II Medical Device which must be approved by Health Canada to ensure they are safe and effective.
- Hearing aids over the internet may be counterfeit, cause serious infections, be recalled due to safety concerns or have missing parts.

Be Safe. Love Your Ears !

helpmehear.ca

The Hearing Aids of Yesteryear

A BRIEF HISTORY OF HEARING AIDS FROM THEN TO NOW

By Neil Bauman, PhD

About the Author

Neil Bauman, Ph.D. (Dr. Neil) of Stewartstown, PA is a hearing loss coping skills specialist, researcher, author and speaker on issues pertaining to hearing loss. No stranger to hearing loss himself, he has lived with a life-long severe hereditary hearing loss. He is the founder and CEO of "The Center for Hearing Loss Help" (http://www.hearinglosshelp.com). Through the Center, he provides education, support and counsel to hard of hearing people. He is a prolific writer and is the author of eleven books and more than 800 articles on subjects related to hearing loss and other ear conditions. A dynamic speaker, Dr. Neil travels throughout the USA and Canada speaking on topics related to hearing loss.

Dr. Neil is also the owner/curator of "The Hearing Aid Museum" (http://www.hearingaidmuseum.com), the largest on-line hearing aid museum in the world. Presently, the museum contains more than 1,200 different hearing aids and related items.

Hearing loss has been around since ancient times. So have hearing aids. Unfortunately, the origins and the designs of those early hearing aids have largely been lost in the mists of time. However, as Europe emerged from the darkness of the middle ages into the light of the Renaissance and Industrial Revolution, there was also an awakening interest in helping hard of hearing people hear better. It was at this point that people began to develop "modern" hearing aids.

The first written mention of a device for hard of hearing people is in Sylva Sylvarum: A Natural History, by Francis Bacon, published in 1627. In Paragraph 285 Bacon proposes what we would call an ear trumpet. He writes:

> Let it be tried, for the help of hearing, (and I conceive it likely to succeed) to make an instrument like a tunnel; the narrow part whereof may be the bigness of the hole of the ear; and the broader end much larger, like a bell at the skirts; and the length half a foot or more. And let the narrow end of it be set close to the ear: and mark whether any sound, abroad in the open air, will not be heard distinctly from further distance than without that instrument.

Bacon continues,

> And I have heard there is in Spain an instrument in use to be set to the ear, that helpeth somewhat those that are thick of hearing.

From this we learn that early ear trumpets were already being used at this time in Spain.

Hearing aid development closely paralleled the available technology of the day. Thus, we can divide the development of hearing aids into five classes based on the technology used. In order of development, hearing aids used acoustic (non-electric), carbon, vacuum tube, transistor, and digital technologies. Typically, there was considerable overlap after the invention of the latest technology before the previous technology died out.

Acoustic or Non-Electric Hearing Aids (<1640 – ~1990)

Acoustic or non-electric hearing aids were the only hearing aids available before the advent of electricity. Their amplification depended on the acoustic characteristics and shapes of the materials used. Some worked very well, and others were essentially useless. Acoustic hearing aids included all sorts of ear trumpets, conversation tubes, auricles, and ear inserts.

Ear Trumpets

The first ear trumpets probably arose when someone discovered that the hunting horns and megaphones currently in use could be reversed and the mouthpiece held up to the ear to make distant sounds louder.

About 1640, Italian nobleman, Pietro Amiani, gave us the first known detailed description of a hearing device designed specifically for those with hearing loss. In a section of his book Geometria entitled "Hearing Instruments for Those with Weakened Hearing," Amiani describes a desirable ear trumpet that had a sophisticated parabolic design.

The earliest ear trumpets were made from natural materials such as hollowed out cow and rams horns and some snail-shaped seashells. However, near the end of the 18th century,

Figure 1. This F. C. Rein collapsible metal ear trumpet was 66 cm (26") long and had a 17.8 cm (7") bell (©1850).

Figure 2. This "Bonnafont" (bugle-shaped) ear trumpet (©1890) was just under 23 cm (9") long.

Figure 3. This three-section hard-rubber ear trumpet is shown collapsed to 17.8 cm (7") (©1890).

entrepreneurs and "scientists" got together and began designing and manufacturing ear trumpets and making them readily available.

Frederick C. Rein is credited with establishing the earliest manufacturing firm to primarily make hearing aids. Rein was producing hearing aids in London, England as early as 1796.

At their simplest, ear trumpets consisted of a tapered tube that compressed (amplified) captured sounds, and at the same time, funneled them to the listener's ear. However, it didn't take long for hearing aid designers to realize that if they flared the end of the tube, or added a resonant bowl, they could increase the amplification.

The first ear trumpets were fairly large devices (Figure 1). Typically they ranged from 38–66 cm (15–26") long and had openings (bells) of 13–18 cm (5–7") in diameter.

Since long ear trumpets were hard to carry and took up a lot of space to use, it didn't take long before some imaginative inventors shortened their ear trumpets by making it in shapes resembling bugles. For example, around 1850 Jean Bonnafont decided the extreme length of some ear trumpets then in current use was both inconvenient and unnecessary. He folded the tube of the trumpet into four right angles (Figure 2) to make a much more compact ear trumpet.

As time went by, ear trumpets continued to shrink so that by 1890 or so many ear trumpets were around 25 cm (12") long and collapsed into shorter sections for ease in carrying them (Figure 3). When collapsed, their overall length was 15–18 cm (6–7") or less – small enough to carry in a pocket or purse.

Higher-powered ear trumpets had large resonant bowls to capture more sound. One of these was colloquially called "the Dipper" (Figure 4) since it resembled the shape of an early dipper for dipping water out of a water barrel. Its large size and large bowl made it the high-powered hearing aid of the 1880s. As a matter of interest, the large bowl collected and emphasized lower-frequency sounds. Thus, it sounded rather bassy.

In contrast, tiny dome-shaped ear trumpets, because of their small size, emphasized higher-frequency sounds. Thus, they produced much more treble and tinnier sounds. Many of these were in the shape of parabolic domes (Figure 5) patterned after the dome of St. Paul's Cathedral in London. Hence they were called "London Domes."

Besides making ear trumpets small enough to hide in your

Figure 4. The high-powered "Dipper" was 41.9 cm (16½") long while the bowl was 12.7 cm (5") in diameter. In 1876, it sold for $4.50.

Figure 5. This tiny "London Dome" ear trumpet was 6.7 cm (2⅝") high and had a bell diameter of 4.4 cm (1¾"). A person could easily hide it in their cupped hand (©1900).

Figure 6. Rare walking-stick ear trumpet (1875).

Figure 7. A longer conversation tube at 142 cm (55¾") with wooden earpiece and hard-rubber bell (©1860 – 1880).

Figure 8. Ladies rare, but beautiful, imitation mother-of-pearl auricles (1915). Each auricle was about 10 cm (4") long.

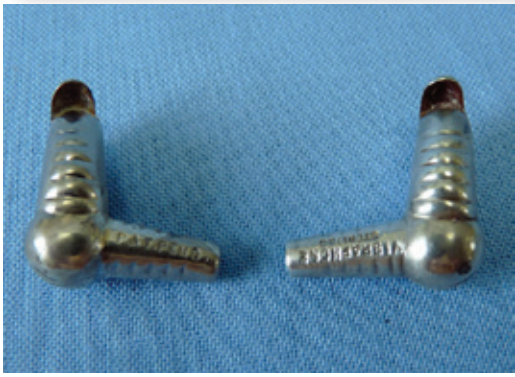


Figure 9. Vibraphones (1925) were quack devices – they simply didn't work. This pair of sterling silver Vibraphone's measured 1.9 cm (¾") along each side of the "L."

hand, there were other ingenious ways of hiding hearing aids in plain sight – even larger ear trumpets. One clever way was integrating the ear trumpet into the top of a walking stick (Figure 6). No one knew you were carrying your hearing aid with you. With your hand over the top, it looked just like any other walking stick. If you wanted to talk to someone, you simply raised it up to your ear and swung the ear tube to the ear you wanted to hear with. When finished talking, you swung the ear tube straight and continued on your way, using your hearing aid as a walking stick again.

Conversation Tubes

Conversation tubes were a different kind of long ear trumpet. Unlike ear trumpets that could pick up sound from some distance, conversation tubes were designed to pick up sounds directly from the speaker's mouth. Thus, you had to be close to the person you were talking with and put your lips right up to the bell end of the conversation tube (Figure 7). A typical conversation tube was around 106 cm (42") although they ranged somewhat in length.

A surprising thing is that when used properly, these conversation tubes worked wonderfully well – some seniors today find they work even better than their fancy, modern hearing aids. Unfortunately, conversation tubes aren't as convenient to use as are modern hearing aids. Since conversation tubes worked so well, they were still being manufactured and used as late as 1976 in the UK.

Auricles

Auricles (Figure 8), a special kind of ear trumpet, had a big advantage. They were the first "hands-free" hearing aids. A headband held them to your head, or a wire ear-hook hooked over your ears. Auricles were either for one ear, or for both ears. Double auricles were the first binaural hearing aids.

Ear Inserts

As you might expect, there were a number of quack hearing devices sold to an unsuspecting public such as the Vibraphones (Figure 9) invented by lawyer Charles Fensky. They didn't do anything to help your hearing, but definitely made your wallet lighter!

Bone-Conduction Devices

Some of the earliest "hearing aids" were held against the teeth and thus transmitted sounds to the inner ear via bone conduction. There are published reports of such devices as early as 1521. However "dental hearing aids" did not become popular until Richard Rhodes of Chicago, IL patented and began selling his Audiphone in 1879. The next year, a competitor put out the Dentaphone (Figure 10).

Figure 10. Dentaphones were bone conduction hearing aids. The user flexed them against their upper teeth (1880). When unfolded and in use, Dentaphones were not small – 35.5 × 23.7 cm (14" × 9⅜"), making it impossible for people not to notice them!

Figure 11. The Acousticon Model 28 carbon hearing aid – a lower-powered single carbon microphone hearing aid shown in its resonant case (1927).

Figure 12. The Acousticon Model SRD was a medium-powered double carbon microphone hearing aid. You could wear the double-carbon microphone around your neck or clipped to your shirt-front (1910 – 1928).

Figure. 13. The high-powered (4 microphone) Acousticon Model RF carbon hearing aid had a six-step volume control on the left end of the case to reduce the volume if it was too loud (1910 – 1923).

Figure 14. The "tiny" Electro-Ear Model 5 wearable carbon hearing aid had internal batteries (c. 1938).

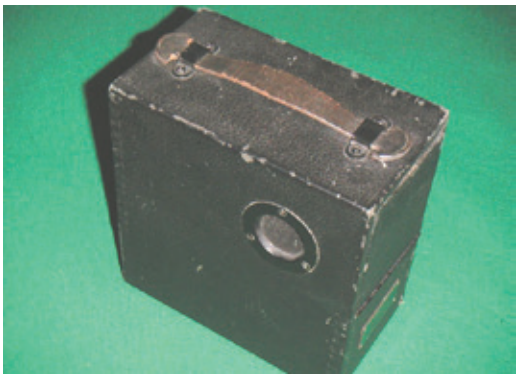


Figure 15. The Globe "Vactuphone" – the first commercially produced vacuum tube hearing aid (1921). This Vactuphone hearing aid still works after all these years. The tube is now 92 years old!

Carbon Hearing Aids (1898 – 1939)

Acoustic hearing aids were the sole technology used until electricity was harnessed and the new-fangled carbon hearing aids came out. Carbon hearing aids were the earliest electric hearing aids. The first carbon hearing aid was produced in 1898. Carbon hearing aids had their heyday from then until the beginning of World War II when they finally died out.

There are two particularly interesting things about carbon hearing aids. One is that you couldn't lay a carbon microphone flat. If you did, the carbon shot or carbon dust in the microphone only touched the lower contact and current couldn't flow. When held at an angle or vertically, the carbon shot or dust touched both the rear conductor and the diaphragm (front conductor) at the same time and voilá – sound!

The second thing about carbon hearing aids was the creative method they used to produce more volume. In order to get more volume you needed to increase the current flow. According to Ohm's Law, you can do this by reducing the resistance of the circuit, or by increasing the voltage. They typically chose to reduce the overall resistance by wiring multiple microphones in parallel. The more microphones in parallel, the less the resistance and since for the same voltage, if you halve the resistance, you double the current and thus the volume of the carbon hearing aid.

As a result, there were carbon hearing aids with 1, 2, or 4 microphones, and less commonly more. A dining room table model in the Hearing Aid Museum (http://www.hearingaidmuseum.com/) consists of 3 double carbon microphones. Carbon hearing aids typically ran on 3 volt or 4½ volt batteries.

Table-Top

Early carbon hearing aids typically were the size of lunch-boxes (Figure 11). To use one, you sat it on the table with the microphone facing the person to whom you were speaking. You wore the headphone or earphone.

Higher-powered carbon hearing aids had two microphones (Figure 12) typically housed in a one-piece case. The microphone could be in a "lunch-box" or worn around the neck.

High-powered 4-microphone carbon hearing aids (Figure 13) typically were housed in "lunch-box" sized table-top cases.

Body-Worn

By around 1930, carbon hearing aids had shrunk in size (so had their batteries) so you could wear many of them (Figure 14).

Vacuum Tube Hearing Aids (1921 – 1953)

With the invention of a practical triode vacuum tube, numerous hearing aid manufacturers began building vacuum-tube hearing aids. Vacuum-tube hearing aids required two batteries, a 1½ volt "A" battery to heat the filament, and a 45 volt "B" battery to provide the plate current. Over time, with smaller and more efficient vacuum tubes, they got the "B" battery down to 15 volts and consequently, much smaller in size.

Table Top

The first commercially-available vacuum-tube hearing aid was made by the Globe Ear-Phone Company of Boston, MA in 1921. They named it the Vactuphone (from VACuum TUbe telePHONE) (Figure 15).

Two years later, in 1923, the Western Electric Company also began manufacturing vacuum-tube hearing aids. Their first hearing aid was a binaural model – Model 10-A. This was a an enormous hearing aid—probably the all-time largest hearing aid made. It weighed an incredible 220 pounds and was housed in a cabinet 122 cm (48") long, 91 cm (36") high and 25 cm (12") deep. It cost $2,250.00 back then. With inflation, that would be equivalent to around $29,000.00 in today's dollars.

Body Worn (Two-Piece)

By the mid 1940s, vacuum-tube hearing aids had shrunk to a wearable size, but the large batteries were still too big to fit into the hearing aid case and just "floated around" outside

Figure 16. The Zenith Model A3A-B3A "Radionic" – a two-piece vacuum-tube hearing aid. The large "B" battery is on the left and the round "A" battery beside it (1944).

Figure 17. Acousticon's Model A-165 was the only wrist-worn vacuum-tube hearing aid ever made (1950).

Figure 18. Acousticon's Model A-200 – a rare double-barrette vacuum-tube hearing aid for the ladies (1951).

the aid. As a result, they were referred to as "two-piece" hearing aids. The Zenith Radionic Model A3A was a popular hearing aid from 1944 to 1946 or so (Figure 16). Men typically carried the batteries in a pocket, while the ladies carried theirs in a cloth pouch strapped to their upper leg.

Body Worn (One-Piece)

Around 1947, with the advent of 15 volt "B" batteries and smaller, more efficient vacuum tubes, hearing aids finally could have internal batteries. These "one-piece" hearing aids were much easier to wear and I'm sure the ladies rejoiced.

Around 1950 hearing aids could be made small enough that manufacturers made some interesting aids that could be "hidden in plain sight." For example, Acousticon came up with an unusual hearing aid that was worn on the wrist (Figure 17).

For the ladies, Acousticon designers created a vacuum-tube hearing aid that masqueraded as a beautiful faux tortoiseshell double-barrette (Figure 18).

Transistor Hearing Aids (1952 - ~2005)

Vacuum tube hearing aids had their heyday from the mid 1940s to 1952. Then, almost overnight, vacuum tube hearing aids went the way of the Dodo bird when, in December of 1952, Sonotone came out with their Model 1010 (Figure 19). This was the world's first hearing aid with a transistor in it. (Actually, this hearing aid was a hybrid – containing 1 transistor and 2 vacuum tubes.)

About 3-weeks later, in January 1953, Maico released their Model "O" (Figure 20), the first all-transistor hearing aid in the world. By the end of 1954, all hearing aids were transistorized, and vacuum-tube hearing aids were no more.

Did you know that hearing aids were the very first commercial application of the transistor? Transistor radios came later.

Body Worn

The first transistor hearing aids looked almost identical to the vacuum tube models that preceded them. For example, the Zenith "Royal" (Figure 21) vacuum tube hearing aid of 1952 and the Zenith "Royal T" (Figure 22) transistor hearing aid of 1953 were the same size. The difference was inside. However, it didn't take long before the size of transistor hearing aids had shrunk considerably.

Behind-The-Ear (BTE)

It only took three years until hearing aids had shrunk so much that they could be worn behind the ear. One of the first BTE aids was the humongous (by today's standards)

Figure 19. Sonotone's Model 1010 hybrid (1 transistor and 2 vacuum tubes) – the first hearing aid in the world to use a transistor (December 1952).

Figure 20. Maico's Model O "Transist-Ear" was the world's first all-transistor body hearing aid (January 1953).

Figure 21. The Zenith "Royal" vacuum-tube hearing aid was one of Zenith's last vacuum tube hearing aids made (February 1952).

Figure 22. The Zenith "Royal T" was Zenith's first all-transistor hearing aid (Feb, 1953). It was the same size as the "Royal" vacuum-tube aid. Note that it had a t-coil built in – called a "phone magnet" in those days.

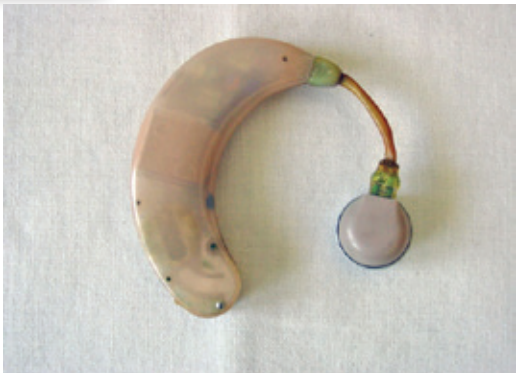


Figure 23. The humongous Zenith "Diplomat" BTE hearing aid – Zenith's first BTE hearing aid (June 1956).

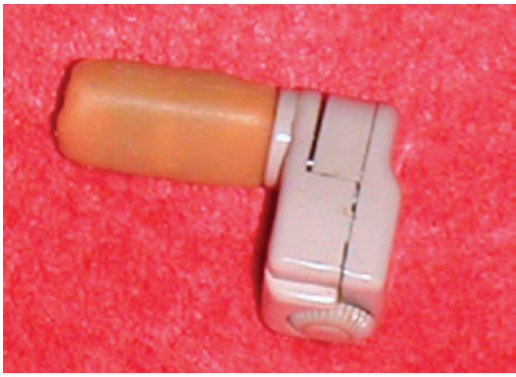


Figure 24. The Telex Model 23 "Electron Ear" – an early ITE hearing aid (1965).

Zenith Diplomat (Figure 23) that came out in June, 1956. It had an external receiver. Today's hearing aids, instead of using just three transistors, use millions of transistors in dual-core processors.

In-the-Ear (ITE)

Early in-the-ear (ITE) hearing aids looked pretty crude by today's standards. But back in 1965, the Telex Model 23 ITE hearing aid (Figure 24) was state of the art.

Eyeglass

Eyeglass hearing aids actually predated BTE aids by a year or so. The world's first fully-contained, transistorized, eyeglass hearing aid was Otarion's L10 "Listener" (Figure 25). It came out in December 1954.

It's interesting to note that early eyeglass hearing aids were the industry's first CROS (Contralateral Routing of Signal) aids. This wasn't by design, but occurred because these early eyeglass hearing aids needed both temple pieces to house all the electronics. The microphone was on one side and the receiver on the other side making it a CROS aid. This arrangement also had another benefit – it prevented feedback.

Digital Hearing Aids (1996 – Present)

For a number of years, hearing aids, were made with discrete components, then, with the invention of integrated circuits, the power and functionality of hearing aids increased dramatically. The digital revolution of the 1980s spawned digitally programmable analog hearing aids. Then, in 1996, Widex came out with their "Senso," and Oticon came out with their "DigiFocus Compact" (Figure 26) BTE aids. These were the first commercially-successful, fully-digital hearing aids produced.

Hearing Aids Batteries

Nothing illustrates just how far hearing aids have come in the past 100 years than in the size of the batteries that powered them. Compare the large No. 57 battery used in Acousticon hearing aids of 100 years ago with the tiny No. 5 Panasonic button cell that came out in 2008 (Figure 27). The tiny No. 5 was the smallest hearing aid battery ever made. It was so small it was about the size of one of the terminals on the No. 57 battery.

Looking Ahead

Fifty years from now, who knows what hearing aids will look like, or indeed, if we will even be using hearing aids then because of advances in hair cell regeneration and other medical advances. It may be that by then hearing aids will be extinct and the only places you will see them will be in museums such as The Hearing Aid Museum.

Figure 25. The Otarion Model L10 "Listener" – the world's first transistorized, eyeglass hearing aid (December 1954).

Figure 26. The Oticon Model DFC "DigiFocus Compact" BTE – one of the first completely digital BTE hearing aids made (1996).

Figure 27. The Acousticon No. 57 hearing aid battery – one of the largest hearing aid batteries made contrasted with the tiny Panasonic No. 5 battery – the smallest hearing aid battery made.

Also in 1964:
The Rolling Stones release their first album

Unitron's history reminds us this business is personal

The span of 50 years has brought many significant changes to the hearing healthcare marketplace. Significant technology advancements have enabled hearing instruments to become smaller and more powerful. Hearing healthcare providers are not only in traditional medical settings, but also in retail environments. And the competitive marketplace has witnessed a number of mergers and acquisitions amongst manufacturers. Through all these changes, the Unitron brand has endured and thrived, shaped by a belief that this business is personal; supported by an innovation strategy focused on the hearing aid wearer, and a steadfast commitment to creating personal relationships with hearing healthcare partners around the world.

Early beginnings

The company's story began in the early '60s in Newfoundland, Canada when friends and business partners Fred Stork, Rolf Strothmann and Rolf Dohmer combined their collective talents to form their first enterprise, a business offering television and radio sales and repairs.

With television still in its infancy in this remote area of Canada, the partners were actively seeking new pathways to allow the business to expand and serve a larger and more populous market. A chance encounter with an acquaintance, who at one time worked for a European hearing aid manufacturer, alerted them to the fact that Canada was an untapped market for hearing aid technology.

Recognizing and seizing the opportunity, Stork, Strothmann and Dohmer established Unitron Industries Limited in 1964 as Canada's first and only manufacturer of hearing aid technology. Shortly afterward, the three moved their business to Kitchener, Ontario to capitalize on a ready-made skilled labor force, world-class universities, and proximity to high-density markets.

Unitron began its expansion into international markets in 1969, opening an office in Germany, followed by a US office in Michigan in 1974. The company also began to build a strong network of distribution partners and Group Companies to enable its global reach as detailed in this issue's article: "Unitron – from grassroots to global player," page 14.

Over the next 20 years, Unitron grew from five employees to 150, and expanded from its original one-story office in Kitchener to a 27,000 square foot facility which continues to serve as the company's global headquarters location today.

Technology advancement through purposeful innovation

In a marketplace where technologies rapidly and continuously change, innovation has always been a guiding force in Unitron's history as a company. However, while many hearing instrument manufacturers have focused on technology leadership, Unitron chose early on to adopt a more pragmatic approach; choosing to innovate with a sole purpose of making life better for people with hearing loss. So, from its earliest days to today's R&D efforts, Unitron's patented technologies and product portfolio improvements have been purpose-driven and practical; focused on the goal of achieving patient benefit and acceptance.

To find first evidence of this purpose-driven innovation, one can travel all the way back to 1966 when Unitron introduced the industry's first fully rechargeable hearing aid. The next big advancement occurred in power BTEs (behind-the-ear) with the 960P product and continued with the introduction of the US80 product for the severe to profound hearing loss. US80 became an industry favorite and helped open the door for Unitron to distribute internationally. Many more innovations followed, including (but certainly not limited to): the inclusion of Wide Dynamic Range Compression (WDRC) signal processing and the Sound F/X product to help HHCPs better fit the needs of those with a mild hearing loss; an emphasis on directionality to offer better awareness of speech in noise; and programmable hearing aids and computers as an integral part of the fitting process.

The shift from an analog to digital world was a game changer for Unitron and the hearing healthcare industry overall. Toccata, a proprietary chip set, was launched and gave Unitron the ability to develop unique digital products such as Unison™, and to spin off a subsidiary (Dspfactory) to provide the hearing healthcare industry with ultra-low power digital signal processing (DSP) technology.

With the move to digital, Unitron was able to focus technology development on tackling specific problems for patients such as: protection from sudden intense noises (AntiShock™); hearing conversations clearly on the phone in both ears (binaural phone); significantly improving speech intelligibility in noise (SmartFocus™); and 360 degree detection and awareness of speech in all environments (SpeechZone™ 2).

And in 2014, Unitron brought home celebrated iF and Red Dot product design awards for its beautiful Moxi Kiss™ hearing instrument. These awards, which recognize outstanding achievements in product design, serve to highlight Unitron's more recent investments and purpose-driven advancements in the field of industrial design, aimed at improving a wearer's comfort while lowering the perception barriers that often stand in the way of hearing aid adoption.

This business is personal

While product innovation clearly plays a role in Unitron's success, technology advancement has never come at the expense of the customer relationship. Operating under the strong belief this business is personal, the relationships Unitron has established with hearing healthcare professionals (HHCPs) over the years, and those HHCPs have in turn built with their patients, have been instrumental in shaping the company's strategy and culture. In the company's first few years of existence, before there was a product portfolio, relationships formed the foundation for the company Unitron has become today. Mike Stork, son of Fred, and one time President of the company explains; "Relationships are a vital ingredient in any start-up's life, and they were instrumental in fuelling Unitron's growth over the years. They are all an entrepreneur has to go on, until they can build credibility for their products and their brand."

A commitment to relationships is a vital thread connecting Unitron's strategy through the years. In fact, a document from the late 1990s outlining the company's strategy at the time, presents a near mirror image of the company's business strategy today. Both talk to the importance of a close customer relationship; a focus on taking time to understand what our customers need to grow their business and achieve greater patient satisfaction; and the determination to provide unmatched services within the hearing healthcare marketplace.

So while much has changed over the 50 years Unitron has been in business, there are many constants to be celebrated during this half-century anniversary. At every stage of growth, Unitron, its leadership and its employees have never lost sight of the primary mission – to create high quality products that make our customers successful; to create positive and lasting relationships; and to improve the quality of life for people with hearing loss.

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