



SUMMARY OF THE CLINICAL,
SCIENTIFIC, ORGANIZATIONAL,
DIDACTIC, EDUCATIONAL
AND ARTISTIC ACTIVITY OF
PROF. HENRYK SKARŻYŃSKI,
MD, PHD, DR H.C. MULTI

Summary of the clinical, scientific, organizational, didactic,
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prof. Henryk Skarżyński, MD, PhD, dr h.c. multi
including
*the development of the first in the world program of electric-natural
stimulation in the treatment of various hearing disorders, especially
partial deafness, to prevent social isolation and enhance interpersonal
communication in contemporary societies if the world*

The activities of prof. Henryk Skarżyński include numerous, valuable and unique on international scale achievements, such as:

A. Scientific achievements – concerning research and implementations of the research results referring to physiology and pathology of hearing, including the development of an original method of combining electric stimulation and natural acoustic hearing in treatment of partial deafness (Partial Deafness Treatment) in patients of various age, especially in a group of millions of older adults; effects of the implementation change our view of the mechanisms of stimulation within the cochlea (Nobel Prize – 1961 Georg von Békésy).

B. Clinical achievements – referring to the most significant number (18–20 thousand per year) of surgical procedures in hearing treatment performed for 20 years and with 4.5 million of other services provided by the team of the Institute of Physiology and Pathology of Hearing within the 27 years; personal conduction of over 230 thousand hearing improving surgeries;

C. Organizational achievements – referring to creation and organization of the National Institute of Physiology and Pathology of Hearing 27 years ago; construction and organization of work of the World Hearing Center 20 years ago; conduction of early hearing screening in school-age children starting education in Poland and on three continents (over 1.5 million of children); initiating international series of Window Approach Workshop, developed to educate medical staff (5 thousands so far) from all continents and dissemination of knowledge on latest scientific implementations in partial deafness treatment during over 1.3 thousand of live surgeries; elaboration of programs leading to adoption of European scientific consensuses on early detection of hearing impairments in newborns (Milan, 1998) and school-age children

(Warsaw, 2011) and as a consequence adoption of “EU Council conclusion of 2 December 2011 on early detection and treatment of communication disorders in children, including the use of e-health tools and innovative solutions”.

D. cultural achievements – referring to the promotion of the latest successes in medicine and science in the contemporary world through the organization of the International Music Festival “Beats of Cochlea”, devoted to people who, after hearing treatment entered the world of sounds, developed their hearing abilities, speaking skills, learning new languages, developing musical skills; writing film scripts presenting outstanding achievements of the operated patients; writing a libretto for a musical “Silence Interrupted” and organization of the shows with the patients; writing numerous monographs on the patient’s achievements such as “Almost all on hearing”, or “The return of Beethoven”, reflecting the life and problems of the great composer in lives of patients who return to the world of sounds; establishing, together with his implanted patients two Guinness Records (meeting in one place of the largest group of auditory implants users in 2012 and 2017).

The activity of Professor Henryk Skarżyński is extensive and covers scientific, clinical, educational, organizational, and artistic areas. In the programs realized within the areas mentioned above, various actions beneficial to public health are implemented. They are usually addressed to new, already identified and specific groups of patients who can be effectively treated using numerous original methods.

It is closely related to the development of interpersonal communication in contemporary societies and counteracting isolation and social exclusion concerning millions of people, especially seniors.

It is reflected in the following issues:

A. Scientific achievements and implementation of the results of research concern new tools and methods used in the treatment of hearing disorders. It mostly is related to the development of a new, original surgical method and its application in the first in the world otosurgical treatment of partial deafness (the technique is based on electro-natural stimulation of the inner ear – Partial Deafness Treatment Electro-Natural Stimulation) and elaboration of hearing, speech and voice rehabilitation methods. In practice, the development of the method opened the opportunities to identify and indicate new numerous target groups of patients, especially seniors with progressive, irreversible hearing damage, who require

developed and implemented therapies. The achievements above are documented in 4456 publications, monographs and chapters in monographs and 3998 presentations at the world and continental congresses, international and national conferences, symposia and scientific workshops.

B. Clinical achievements concern activities in otorhinolaryngology, audiology, phoniatrics, auditory, speech and voice rehabilitation and related specialties. They are based on everyday clinical implementation of various modern and unique technologies, therapy methods in the treatment of hearing, speech, voice disorders and language communication skills. They include:

- elaboration and implementation of the program of treatment of total deafness with cochlear implants in Poland (Warsaw, 1992).
- development of guidelines and tools for universal hearing screening in Poland applied in the program of early detection of hearing disorders in newborns and infants (since 1993).
- development and implementation of the first in the world program of hearing and middle and inner ear structure preservation in the cochlear application in the treatment of deafness (New York, 1997).
- presentation of research and scientific observation results based on the first in the world operations of different types of partial deafness with use of cochlear implants in children and adults in years 1997- 2000 (Warsaw, Antwerp, Berlin – 2000).
- development of new surgical method – Skarżyński's 6 steps in the treatment of partial deafness with electric stimulation as a complementation to the normal hearing to 500Hz, with the cochlear implant and conduction of the first in the world operations in new groups of patients with Partial Deafness: Electric Complementation (PDT-EC) in adults (2002) and first in the world child (in 2004, Warsaw, Kajetany, Poland) and demonstration surgeries in Hannover – Germany; St. Petersburg – Russia; Grodno and Minsk – Belarus; Kyiv, Ukraine) and demonstration surgeries and simulations in Manila, Philippines; Bogota, Columbia; Bishkek, Kirgizstan.
- conduction of the first operations aiming at achieving combined electric and natural hearing (Partial Deafness Treatment – Electro-Natural Stimulation – PDT-ENS with preoperative hearing preserved up to 1500 Hz) in children and adults and an indication of new target groups of patients that include millions of people with substantially disturbed

communication abilities (since 2014), according to the Skarżyński mentioned above 6 step procedure.

- conduction of the first in Poland, Central and Eastern part of Europe and in the world, the whole group of various implant surgeries of the middle ear, including bone conduction implants and new variants of their fixation or connection with bone elements or other middle ear parts (since 2003).
- conduction of the first direct stimulation of the round window membrane applying further generations of the middle ear implants (since 2006).
- development of the first in the world method of assessing the preoperative hearing preservation degree in cases of partial deafness, according to Skarżyński et al. (2013).
- development and application in clinical practice of the first in the world hearing preservation scale used to objectively assess the effects of surgical treatment with the partial deafness cochlear implantation procedure (Skarżyński scale, 2013).
- development and global implementation (Europe, Asia and Africa) of screening tools for early detection of hearing, vision and speech defects in children and adults (“I can hear”, “I can see”, “I can speak”); elaboration of novel devices “Sense Examination Platform” and „Sense Examination Capsule”.
- development and implementation of the first international telemedical programs for the remote fitting of hearing implants – Telefitting (2007), Telerehabilitation (2010) as part of the first in the world National and then International Network of Teleaudiology (the main Computer World award in 2010, Washington, Prix Gallien and Gold Medal in the World Competition – Monte Carlo 2014)

The following figures illustrate the clinical activity of prof. Henryk Skarżyński. In the last unit that he organized from scratch – the World Hearing Center in Kajetany near Warsaw (2003) – the most significant number of hearing improving operations has been performed –starting from 1 500 to 18 000 otosurgical procedures per year. For 40 years of his professional activity, he has completed the most significant number of ear surgeries globally (230 000 surgical procedures). Thus, giving the people the possibility to communicate with each other and with their surroundings.

As part of the clinical implementation activities concerning total and partial deafness treatment, he was the author of the new design solutions of the electrode – SRA and other commercial products CI 422, CI 522, CI 622 – manufactured by the Australian company Cochlear Ltd.

Another example of new technological solutions that he applied to over 5 000 patients with excellent results is a passive middle ear implant called the “Skarżyński Piston” manufactured by the German company KURZ GmbH.

Various programs and tools for universal examination of sensory organs, especially hearing, vision, voice, and balance, are a great examples of inventions awarded with several dozen gold medals at the largest salons of innovations and technological progress in Brussels, Geneva, Paris, Nuremberg, Frankfurt, Cork, Stockholm, Seoul, Tokyo, Taipei, Kuala Lumpur.

C. Educational achievements concern the dissemination of the leading (above listed) and around 100 minor solutions used by specialists in the fields of medicine, engineering, acoustics, psychology and pedagogy. All of them are designed to achieve good and excellent results in the treatment of damaged sensory organs, mostly hearing. The ultimate goal is to ensure (despite the ageing of the societies) good interpersonal communication and counteract social and environmental isolation and exclusion despite the ageing of the societies.

The most outstanding educational achievements of prof. Henryk Skarżyński includes active participation in congresses, conferences and other scientific meetings. In total, he actively participated in 663 worlds, continental or intercontinental meetings, during which he was the author or co-author of 2525 scientific reports. Also, he participated in 339 national events, where he was the author or co-author of 1473 reports. Since 1990, he has organized the national series and then international training in otosurgery – 86 editions. Since 2007, he has been the main organizer of a “Window Approach Workshop”, a unique series of intercontinental clinical workshops aimed at presenting the surgical treatment of hearing impairments with the use of practically all available types of hearing implants and hands-on training. So far, he has organized 69 editions of the workshop, during which he has performed over 1 300 surgeries. Over 5 000 specialists from around the world observed them in the World Hearing Center. Besides, since 1996 he has been carrying out his educational mission, most often connected with conducting demonstration operations, in St. Petersburg, Kyiv, Minsk, Grodno, Bratislava, Hanover, Beijing, Manila and Bogota. Since 2010, he has cooperated with

the Live International Otolaryngology Network and conducted “online” surgeries of partial deafness and other hearing disorders as a presenter and operator.

D. The organizational achievements of prof. H. Skarżyński are related to national and global scientific and medical developments. He held managerial positions at the Medical University of Warsaw (1980-2000), the Fryderyk Chopin University of Music in Warsaw (2002-2018). Since 1990, after organizing and launching the deafness treatment program in Poland in 1992, he organized and managed the second organized in Europe – Diagnostic, Treatment and Rehabilitation Center for the Deaf and Hearing Impaired People „Cochlear Center” in 1993. Based on his scientific, clinical and educational achievements, he developed and presented a proposal to organize the departmental Institute of Physiology and Pathology of Hearing, which he presented to the Prime Minister of the Republic of Poland. The Institute has been running continuously since 1996. Continuing the development of the Institute, prof. H. Skarżyński initiated and supervised the world’s largest scientific and clinical facility diagnosing, treating and rehabilitating people with hearing and language communication disorders. In 2003, the first part of the World Hearing Center was opened, and in 2012, the second part of the World Hearing Center. The WHC is globally renowned for performing the most significant number of hearing improving procedures. It has also been the world premieres of the first in the world operations of new generations of middle ear implants, cochlear implants, or the first (2008) in the world bilateral brainstem implantation. In total, prof. H. Skarżyński, with his team, helped over 3 million people. Tens, if not hundreds of millions of people, especially seniors with a hearing impairment that often causes isolation and exclusion and other communication difficulties, have been identified and indicated for a specific, effective therapy initiated by prof. H. Skarżyński.

He represented Poland in the adopted European Scientific Consensus on the early detection of hearing impairment in newborns in Milan, 1998. In 2007, in the European Parliament in Brussels, together with his team and the support of Polish politicians, he presented the program focusing on early detection of hearing, vision and speech disorders for school-age children (“I can hear – I can see – I can speak – equal opportunities for the young generation of Europe”). This idea was adopted in Warsaw in 2011 during the Congress of the European Federation of Audiological Societies (EFAS), which he presided and developed later as European Scientific Consensus on early detection of hearing, vision and speech disorders in children starting school education. As a result of these activities, on 2 December 2011, the

Council of European Union adopted a conclusion entitled “Early detection and treatment of communication disorders in children, including the use of e-Health tools and innovative solutions.” The first pilot programs of early detection of hearing impairment in children starting school education in Asia and Africa were an extension of the activities undertaken in Europe. They aimed at early prevention and counteracting exclusion and isolation of children with sensory organs disorders. For 7 years, prof. H. Skarżyński has been implementing a new, specialized program titled „Early detection of civilization diseases affecting everyday communication of people in the modern world”. Domestic successful actions in the area allowed him to prepare and present an offer of similar undertaking to the greater audience and on a global scale during the 2nd World Congress of Otology in Warsaw in 2019.

Prof. Henryk Skarżyński is an honorary doctor of three Polish universities and an honorary professor of three foreign ones in the USA, Europe and Asia. Decorated by the Presidents of Poland, Ukraine, Georgia, the King of Belgium and Pope Francis, laureate of over 348 different individual and collective awards. He is a corresponding member of the Polish Academy of Sciences, Member of the European Academy of Sciences and Arts, the first Polish member of The American Otological Society and The American Neurotology Society and over 20 other international scientific societies.

E. Music, art, poetry have a special place in prof. H. Skarżyński’s life. He is an author of numerous documentary and training scripts, poems, song texts, and spectacles. He is a man of many passions.

He began to write poems when he was in high school. His most famous piece is “The world I hear”. The song is an anthem of the Institute of Physiology and Pathology of Hearing performed during various ceremonies with the participation of government representatives, ministries, state offices, scientists, experts from multiple medical fields, university representatives, patient organizations, NGOs, churches, and media.

Since 2015, prof. H. Skarżyński has been the main initiator and organizer of the annual “Beats of Cochlea”, the International Festival for Children, Youth and Adults with Hearing Disorders, which gathers over one hundred musically gifted hearing implants’ users from the world. The Festival shows the abilities of the people who, after implantation of a hearing implant, come back to the world of sound, freely communicate with their peers, families, teachers. Thanks to their passion for music, against all the odds, they develop artistic skills, sing, compose, play various instruments and record professional albums. They are absolute proof that the

incredible technological advances in science and medicine help overcome even the most profound hearing loss and deafness and that they can start a musical career. The organization of the Festival is aimed at helping them to realize their music passions and plans. He also wanted to document everyday medical achievements and present them to the society of hearing people.

The Festival, which has been successfully run for 8 years, is a music and science event known worldwide. In 2018 and 2019, Prof. H. Skarżyński and several laureates of the Festival were invited to participate in the European Parliament's special sessions in Brussels.

As the author of the libretto of the musical "Silence Interrupted", he suggested that the cast should include the hearing impaired musicians and actors implanted with the cochlear implant. The "Silence Interrupted" was premiered on 14 September 2019 at the Warsaw Chamber Opera. The musical is based on true stories, problems of real patients born deaf, who got deaf or hard of hearing later in life or who had other hearing problems. Thanks to the use of the most modern technologies and surgical methods, which Prof. H. Skarżyński developed and implemented in the World Hearing Center – those patients came out of the world of silence. These characters are performed, among others, by the patients of prof. H. Skarżyński. Professor devoted many of his poems to them, reflecting their challenging and complicated situation. The music composer and musical director of "Silence Interrupted" is the Polish composer and arranger, prof. Krzesimir Debski. Michał Znaniński is associated with the Warsaw Chamber Opera and the world-famous artist is the musical director. Luigi Scoglio is responsible for the set design. The plot of the musical, contained in three acts, shows lives, the development of hearing and speech and communication skills and the artistic path of many of Professor's patients. This artistic enterprise of prof. Henryk Skarżyński has been musical was nominated for the "Warsaw Cultural Education Award 2020" and an Award granted by the Marshal of Mazovian Voivodship.

Recently, prof. H. Skarżyński published the next monograph titled "The return of Beethoven", devoted to his achievements in science and medicine, presenting the stories of contemporary heroes – his patients who have regained hearing. The book was published on the 250th birthday anniversary of Ludwig van Beethoven, a distinguished artist who composed music even after losing the ability to hear.

A professor is also the author of the scripts for the full-length film and a documentary entitled "Beethoven's Return", which are ongoing projects. Both films will document the greatest,

pioneering contemporary achievements of Polish science and medicine in the diagnosis, treatment and rehabilitation of various damages of the sensory organs, especially the hearing organ. Their action takes place in various countries, on three continents and in Poland, in the World Hearing Center that for 18 years has performed the most considerable number of surgeries improving hearing (in children, young people and adults). The scripts refer to numerous latest technological, organizational and surgical achievements, elaborated and implemented in everyday clinical practice in numerous clinics in the world.

Collecting items with an image of a snail is another fantastic hobby of prof. Henryk Skarżyński. The passion became a pretext to create the Museum of a Snail and break the Guinness Record in 2012. With the result of 1 377 pieces, the record was broken in the category “The largest collection of objects similar or with an image of snail”. Currently, the collection includes over 5 000 exhibits.