



Healthy Athletes Program as a chance for a good quality of life for people with intellectual disabilities and their families in the context of health initiatives

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Accepted: 12-01-2017

Published: 26-01-2017

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Background:

Abstract

One of the consequences of improper process of socialization is ineffective health education and different structure of behaviours associated with the person's caring for his or her own health. The difficult socio-economic status of families with children with intellectual disabilities may impair meeting the needs of family members (especially children) concerning health. Up to a third of the cases of poorer health status in people with intellectual disabilities may result from lower socioeconomic position (Emerson and Hatton, 2007). Educational failure, typical of families of children and young people with intellectual disabilities (especially mild disabilities), can result in the children not learning appropriate behavioural patterns which are important to human health. If such patterns are not acquired, health can be deteriorating at an increasing pace.

The health status of people with intellectual disabilities is worse than the health in the general population (Allerton, Welch, Emerson, 2011; Tample et al., 2006). The most serious consequence of the poorer health of people with intellectual disabilities is higher mortality rate (Krahn et al, 2006). The average life expectancy of people with intellectual disabilities is 66 years (excluding people with Down syndrome, whose life expectancy is even shorter), being by 10 years shorter than that of people with normal intellectual capacity.

Bearing in mind that the access to the highest standards of health care for all people with disabilities represents the right that was stipulated on 13 December 2006 by the UN's Convention on the Rights of Persons with Disabilities, Special Olympics Poland took the initiative leading to beneficial changes in quality of life of athletes and their families in the context of health and promotion of appropriate health behaviours through the implementation of the Health Programs, which include the two related projects: **Healthy Athletes and Healthy Special Olympics Community.**

Keywords:

intellectual disability, health, Special Olympics

Word count: 4937

Tables: 0

Figures: 0

References: 110

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HEALTH STATUS OF PEOPLE WITH INTELLECTUAL DISABILITIES

According to the WHO, the person with intellectual disability is a person, who, before 18 years of age, was diagnosed with two factors that inhibit individual development i.e. lower level of intellectual functioning and difficulties in adaptation to the environment (World Report on Disability, 2011). These are not the only disturbing factors. Many barriers to the development of children with intellectual disabilities can be caused by their social and financial status. According to the literature, if optimal environmental conditions are ensured to people with intellectual disabilities (especially if effective rehabilitation is ensured), their adaptive opportunities may be very high (Kowalik, 2000). Around half a century ago, S. B. Sarason and T. Gladwin (1958) found that people who, based on the intelligence tests, were categorized as intellectually disabled, reached surprisingly high levels of social and economic adaptation (Guilford, 1978). Similar results were also obtained in the survey of special school leavers in Poland. The survey showed that if sufficient social care is provided to such people, they are able to function in society without noticeable differences compared to people with normal intellectual functioning (Felhorska, Urbańska, Wojtaszyk, 1964; Matuszczyk, 1980). However, most studies have demonstrated that living, financial, social and cultural conditions of children and young people with intellectual disabilities are statistically worse than average (Emerson et al., 2006; Emerson, Hatton, 2007; Firkowska-Mankiewicz, Kościelska, 1984; Kozubska, 1995; Pusta et al., 2008; Twardowski 1991; Wojciechowski, 1990). Other factors include parental incapacity in families (Giryński 1985; Wojciechowski, 1990) or morally corrupt family environments (Giryński 1985; Pusta et al., 2008). Since spontaneous following behaviours by children and young people with intellectual disabilities stimulates their psychosocial development for a major part of their lives, they often learn pathological patterns of behaviour which determine their future functioning in society. This thesis is also reflected by studies which have documented an increased risk and significantly higher frequency of anti-social behaviours among people with intellectual disabilities (Dickson, Emerson, Hatton, 2005). These behaviours lead to stigmatization i.e. assigning a role of an intellectually disabled person by society and expecting the behaviours that are consistent with such an etiquette (Kowalik, 1989). For the person with intellectual disability, this often mean exclusion from normal social life (Kowalik, 2005).

In conclusion, the conditions presented above i.e. status of the people with intellectual disabilities (reduced efficiency of intellectual processes and difficulties with adaptation), often combined with educationally incapable environments they come from and social stigma, impact on difficulties with the socialization process.

One of the consequences of inefficient socialization is improper health education and different structure of behaviours connected with the person's caring for the health, understood as not only the absence of a disease or disability but also a comprehensive physical, mental and social well-being (WHO, 2013).

The most important and indispensable environment that supports health is family (Kawczyńska-Butrym, 1995). The results of the survey conducted by WHO indicated that health needs are satisfied in 75% at home (Bożkowska, Sito, 1983). To a child (and, later, to a young person), this is the first social environment that provides the fundamental knowledge about health and instils adequate attitudes, which are critical to their own health (Kaiser, Sokołowski, 2010). Being engaged in specific health-related behaviours, parents impact on the level of health potential of their parents. Difficult socio-economic status of families of children with intellectual disabilities may not meet the health needs of all family members, especially children. Financial problems represent a limitation, especially in dental care, leading to worse condition of teeth and oral cavity hygiene (Fisher, 2004; Jain et al., 2009; Górski, Buczkowska-Radlińska, 2007). E. Emerson and C. Hatton (2007) found that even a third of the overall number of cases of worse health of people with intellectual disabilities may result from worse socio-economic position (ibidem). Furthermore, due to frequent parental incapacity, typical of the families of children and young people with intellectual disabilities (especially those with mild disability), children with intellectual disabilities do not learn sufficient behaviours which are critical to healthy development. If they fail to display such behaviours, their health status is likely to be quickly deteriorated.

The results of the studies have demonstrated unequivocally that the health status of people with intellectual disabilities is worse than that of general population (Allerton, Welch, Emerson, 2011; Emerson and Hatton, 2007; Krahn et al., 2006; Tample et al., 2006; Ouellette-Kuntz, 2005). People with intellectual disabilities suffer more often from respiratory tract infections and chronic diseases of the respiratory system (Davies et al., 2014; Doughan, 2014; DRC, 2006a; Durvasula, Beange, 2002; Esbensen, Seltzer, Greenberg, 2007; Haveman, 2004; Hollins et al., 1998; Krahn, Hammond, Turner 2006; Janicki et al., 1999; 2002; NHS, 2004; WHO, 2010). The literature suggests higher prevalence of pneumonia (2.5 times higher; Patja, Mölsä, Iivanainen, 2001); chronic bronchitis (Martinez-Leal et al., 2011); asthma (Gale, Naqvi & Russ, 2009; Oeseburg et al., 2010) and tuberculosis (Ouellette-Kuntz et al., 2005).

People with intellectual disabilities suffer significantly more often from disorders of the alimentary system, such as gastroesophageal reflux disease or peptic ulcer disease (Martinez-Leal et al., 2011; NHS, 2004; 2009; Patja, Eero, Iivanainen, 2001;

van Schroyen Lantman-de Valk et al., 2004; Wallece et al., 2004).

Higher prevalence of *Helicobacter* infection that leads to peptic ulcer disease, stomach cancer, gastrointestinal cancer and iron deficiency anaemia (Wallace et al., 2002, 2004; Duff, 2001) was found in people remaining for longer periods in such institutions as hospitals or social care centres (Duff, 2001; Luzza et al., 2004).

The results of studies that have evaluated the risk and morbidity rates of heart and cardiovascular system diseases are inconsistent. Part of researchers documented an elevated risk of these diseases among people with intellectual disabilities while others argued that the risk is the same or lower than in the general population (Haveman et al., 2009; 2010; Haverkamp, Scandlin, Roth, 2004; Horowitz et al., 2000; Martinez-Leal et al., 2011; McCarron et al., 2014; NHS, 2009; van de Louw et al., 2009). Prevalence of ischaemic heart disease is significantly higher in people with Down syndrome compared to the population of people with intellectual disabilities caused by other diseases than Down syndrome and compared to the general population (Emerson, Baines, 2011; NHS, 2004). People with intellectual disabilities suffer more often from congenital heart diseases, e.g. atrial and ventricular septal defects (Doughan, 2014; Draheim, 2006; van der Akker, Maaskant, van der Maijden, 2006). Around 30% of deaths due to cardiovascular diseases result from congenital heart diseases (Patja, Mölsä, Iivanainen, 2001). Small number of studies have examined cardiovascular system diseases among people with mild intellectual disabilities (Merrick, Kandel & Morad, 2003).

Another medical disturbance which is more common in people with intellectual disabilities than in the general population is vision and hearing impairments. The former group includes disturbances in refraction (long-sightedness, short-sightedness, astigmatism), strabismus, cataract (Haveman et al., 2009; Ouellette-Kuntz et al., 2005; Owens et al., 2006). The latter type of sensory disturbances that are more prevalent in the group of people with intellectual disabilities is disturbances of the hearing organ (Janicki et al., 2002; Ouellette-Kuntz et al., 2005; NHS, 2004). Of 10 athletes of the Special Olympics all over the world, four people need wearing corrective lenses, two suffer from diagnosed eye diseases (glaucoma) and three have hearing impairments (Special Olympics International Research and Evaluation Department, 2015).

Poorer dental health is also observed in people with intellectual disabilities compared to the general population. The most frequent problems include absence of teeth, more frequent anodontia, less frequent treated or untreated caries, higher number of decayed teeth and fewer filled teeth (Anders, Davies, 2010; Beange, Lennox & Parmenter, 1999; Borysewicz-Lewicka, Gerreth, 2009; Górski, Buczkowska-Radlińska, 2007; Kozak, Buczkowska-

Radlińska, 2005; Morgan et al., 2012). Of 10 athletes of the Special Olympics all over the world, four have untreated caries whereas 1 requires urgent dental consultation (Special Olympics International Research and Evaluation Department, 2015).

Substantially greater number of studies are indicating that people with intellectual disabilities (especially women) are more exposed to obesity and overweight compared to people in the general population (Emerson & Robertson, 2010; Groundhuis & Aman, 2013; Haveman et al., 2009; Henderson et al., 2008; Matuszak, Bryl, Pupek-Musialik, 2010; Rimmer & Yamaki, 2006; Rimmer et al., 2010; 2012; Robertson et al., 2014; Slevin et al., 2014; Stedman & Leland, 2010). In 2013, percentage of obese adults with intellectual disabilities was 33.9% compared to 12% in the general world population. Also in 2013, 46.0% of adults with intellectual disabilities living in the USA and examined by the Special Olympics were obese compared to 35.9% of the general population (Centers for Disease Control, 2012).

The aforementioned survey organized within the Special Olympics also analysed the problems connected with obesity. It turned out that six in ten athletes all over the world are obese (Special Olympics International Research and Evaluation Department, 2015).

People with intellectual disabilities are more prone to chronic pain compared to the general population (Barowsky, 1987; Temple et al., 2012). This represents an important health problem which is, however, often neglected (Mcguire, Daly & Smyth, 2010). People with intellectual disabilities suffer more often from diabetes compared to people from the general population (Cardol, Rijken, van Schroyen Lantman-de Valk, 2000; Doughan, 2014; Haverkamp, Scandlin, Roth, 2004; Janicki et al., 2002). There are 15 times more epileptic patients among people with intellectual disabilities than in the general population (Haveman et al. 2009; Matthews et al., 2008; Morgan, Scheepers & Kerr, 2001; van Schroyen Lantman-De Valk et al., 2000).

Lin J-A, Liao C-C, Chang C-C, Chang H, Chen T-L (2011) decided to explore whether intellectual disability can determine status of patients following surgical interventions and whether intellectual disability is linked to a higher risk of post-surgical complications and elevated death risk. Based on the collected data, the researchers identified 3983 patients after surgeries with preoperational diagnosis of intellectual disabilities in the general population of 2,010,412 people hospitalized in the period from 2004 to 2007. In order to increase statistical power, further analyses compared cases of each patient with intellectual disabilities with four randomly sampled patients without such disabilities but with consideration for similarity of sex, age and type of surgical intervention.

In conclusion, the results of this comprehensive population survey demonstrated for the first time that

the risk of serious post-surgical complications is significantly higher in the case of patients with intellectual disabilities and is linked to its degree. The results showed that hospitalized surgical patients with intellectual disabilities belong to the group of elevated risk in the case of serious surgical intervention, pointing to the necessity of ensuring integrated health care, both in terms of prevention and in the post-surgical period.

CONSEQUENCES OF WORSE HEALTH STATUS IN PEOPLE WITH INTELLECTUAL DISABILITIES

The most serious consequence of worse health status of people with intellectual disabilities is shorter lifespan (higher death rates, Krahn et al., 2006) and dying earlier than other people (Emerson et al., 2011; Heller & Sorensen, 2013; Heslop et al., 2014; Janicki et al., 1999; WHO, 2010). Life expectancy of people with this category of disabilities ranges from 33 to 66 years (Coppus, 2013; Janicki, 1999; Maaskant, Gevers, Wierda, 2002; Merrick, 2002).

The literature shows that death rates are twice higher in the case of more profound compared to mild intellectual disabilities, with the highest death rates observed in children with profound intellectual disabilities or those with additional health problems such as epilepsy or cerebral palsy (Gustavson, 2005; Hollins et al., 1998). A study conducted in the UK showed unequivocally that the death rate in people with intellectual disabilities under 50 years of age is twice higher compared to the rest of the population (22% vs. 9%) (Hollins et al., 1998). Most of premature death cases in the general population were caused by unhealthy lifestyles. However, in people with intellectual disabilities, premature deaths were mainly due to delays in diagnosis, problems with access to specialized medical tests, examinations and treatment of co-existing disease and negligence and/or poor health care (Tuffrey-Wijne, 2013). Durvasula and Beange (2002), indicated that over 50% of all deaths of people with intellectual disabilities occur at the age below 35 years. These people die nearly 3 times more often of the causes which could have been prevented (Heslop et al., 2014; Mencap, 2007).

The most popular causes of deaths with intellectual disabilities include diseases of the respiratory system, from 20% to 52% of all deaths (Durvasula, Beange, 2002; Hollins et al., 1998; Strauss et al., 1998). Death risk for this reason is by 2.6 times higher than in people with mild intellectual disability compared to the general population (Patja, Mölsä, Iivanainen, 2001).

The second most frequent cause of deaths is heart and cardiovascular system diseases, accounting for from 15% to over 40% of all deaths (Esbensen, Seltzer, Greenberg, 2007; Janicki et al., 1999).

The third major cause of death of people with intellectual disabilities is cancers (Esbensen, Seltzer,

Greenberg, 2007; Hanna, Taggart & Cousins, 2011; Hollins et al., 1998; Janicki et al., 1999; 2002; Patja, Mölsä, Iivanainen, 2001). According to the literature, the percentage of death cases due to cancers in people with intellectual disabilities ranges from 11.7% to 21% (Duff et al., 2001; Durvasula, Beange, 2002; Janicki et al., 1999; Tuffrey-Wijne et al., 2009; Wallace et al., 2004). The most common causes of death in people with intellectual disabilities are similar to the general population. These include diseases of the cardiovascular and respiratory systems and cancers (Esbensen et al. 2007; Janicki et al., 2002). However, it should be emphasized that intellectual disability does not necessarily mean a shorter life. According to M. P. Janicki et al. (1999) many people with this category of disabilities are characterized by similar life span as those from the general population (*ibidem*).

Many health problems of people with intellectual disabilities fail to be diagnosed during medical examinations since health problems and the accompanying ailments are often attributed to the disability. This is most often caused by insufficient knowledge about how to work with people with intellectual disabilities, which substantially limits a correct diagnosis. For example, an adult with intellectual disabilities who is 40 years old may not have been diagnosed with vision impairments yet since the doctors did not know how to adapt the eye chart to such people. Furthermore, family members can be convinced that the problems with reading in people with intellectual disabilities are caused only by cognitive disturbances. The symptoms of health problems connected with behaviour of people with intellectual disabilities (e.g. irritability, withdrawal, aggression) are mistakenly attributed only to this type disabilities. According to researchers, only a forth of adults with intellectual disabilities who take psychotropic medications had ever had any psychiatric consultations (Lewis, M., Lewis, C., Leake, King, & Lindemann, 2002).

SOCIAL FACTORS THAT DETERMINE WORSE HEALTH STATUS OF PEOPLE WITH INTELLECTUAL DISABILITIES

The causes of worse health status of people with intellectual disability also include social factors. Being a social group, people with intellectual disabilities have fewer opportunities for being physically active due to social isolation, which manifests itself as having fewer options to choose from and poorer opportunities for starting physical activity in society. With the difficulties with social orientation caused by intellectual difficulties, and, consequently, insufficient control over the environment around, these people find it hard to change their status (Messent et al., 1999). G. Sutherland et al. (2002) argued that higher death rates and morbidity results from diseases connected with hypoactivity. This thesis has been well documented in literature (Messent et al., 1999; Stanish

et al., 2007), whereas physical activity of people with intellectual disabilities has been shown to be similar to that of sedentary people with normal intellectual capacity (Draheim, 2006).

However, one should add that some studies have demonstrated that ca. 1/3 of people with intellectual disabilities are sufficiently active to benefit from physical exercise and that the scientific data are insufficient to conclude unequivocally that people with intellectual disability are less physically active than the general population (Temple et al., 2007). Furthermore, the examinations performed in Scotland showed that adults with intellectual disabilities are involved in physical activity twice less often (less frequently than once a week) compared to their able-bodied peers (Finlayson et al., & Mantry, 2009). The examinations performed in Taiwan and the UK showed that only 8% of teens with intellectual disabilities performed 30-minute sessions of physical exercise 3 times a week as recommended by the Centers for Disease Control and Prevention (Emerson, 2005; Lin et al., & Wu, 2010).

HEALTH BEHAVIOURS OF PEOPLE WITH INTELLECTUAL DISABILITIES

Another factor which can impact on worse health status of people with intellectual disabilities is lower knowledge of healthy behaviours, including risky behaviours (e.g. using stimulants), which, combined with susceptibility to the negative social effects, leads to the involvement in many behaviours that deteriorate health status (Krahn et al., 2006). Many studies have shown that people with intellectual disabilities are less likely to take part in health-promoting initiatives than their able-bodied peers (World Report on Disability, 2011).

One of the most important roles in modelling of healthy behaviours is played by family (WHO, 2007). It is parents who have the biggest influence on instilling healthy behaviours if they do what they declare (Skommer, 2008). Young people, who see healthy and unhealthy behaviours of their parents, have tendencies to follow and adopt their parents' behaviours (regardless of the social status of the family) (Wickamara et al., 1999). Many studies have demonstrated a significant and direct relationship between health-related behaviours (both healthy and unhealthy) of parents and those their children are engaged in. The most significant statistical correlations are observed for: consumption of fats (Rossow, Rise, 1994; Sallis, Nader, 1988), oral hygiene (Astrom, Jakobsen, 1996; Poutanen et al., 2006), taking up physical activity, especially in the case of girls (Mcguire et al., 2002; Theodorakis, Papaioannou, Karastogianidou, 2004), consumption of alcohol (Latendresse et al., 2008; Rossow, I. Rise, 1994), especially by fathers (Zhang, Welte, Wiczorek, 1999) and smoking (Otten et al., 2007; Rossow, Rise, 1994) although in the last case, the data have shown more

pronounced effect of older brothers and sisters or peers (Sallis, Nader, 1988; Theodorakis, Papaioannou and Karastogianidou, 2004). Furthermore, the sex effect was also found, with unhealthy behaviours of fathers affecting only unhealthy behaviours of sons whereas unhealthy behaviours of mothers were demonstrated to impact on unhealthy behaviours of their daughters (Wickamara et al., 1999).

Unequal access to health care has also been emphasized. Less attention is being paid to health protection programs and campaigns aimed at people with intellectual disabilities (Gustavson et al., 2005; Krahn et al., 2006). The literature points to both systematic problems with functioning of health care oriented at people with this category of disturbances (Chaplin et al., 2009) and problems with doctors resulting from insufficient knowledge of intellectual disabilities, no sufficient training for providing services for people with intellectual disability (Chaplin et al., 2009; Fisher, 2004), i.e. the lack of experience in meeting health needs in this group (Prater, Zylstra, 2006).

The above factors, which provide a picture of worse health status of people with this category of disturbances are determined internally (higher susceptibility to some illnesses, lower level of knowledge about health behaviours) and externally (lower socioeconomic status of the family, negative social effects, social isolation, more difficult access to health care). This means that the needs for healthy behaviours of people with intellectual disabilities, especially children and young people, are higher compared to those with normal intellectual capacity.

Despite difficult access of people with intellectual disabilities to health care, nearly 68% of world population is convinced that people with this type of disabilities receive medical care at the same, or even higher level! (Siperstein, Norins, Corbin, & T. Shriver, 2003).

It is remarkable that access of all disabled people to the highest-level standards of health care represents the right which was stipulated by the General Assembly of the United Nations on 13 December 2006 in the UN's Convention on the Rights of Persons with Disabilities and the Constitution of the World Health Organization (Geneva, World Health Organization, 1948). The Special Olympics started the initiative that led to the beneficial changes in quality of life of athletes and their families in terms of health and modelling of healthy behaviours through the implementation of the Health program which contains two closely related projects: **Healthy Athletes and Healthy Communities**. Before going on to characterize what the Special Olympics are, let us remind what the Special Olympics means.

SPECIAL OLYMPICS POLAND

The Special Olympics Poland is a program accredited by the international movement Special

Olympics Inc., whose main activity is to organize training programs and competitions for people with intellectual disability. Involvement in sport helps develop Polish athletes both physically and socially. They learn new skills, overcome their own barriers and are more open and self-assured. Apart from sport, the program is also aimed to raise awareness of society concerning the potential, skills and needs of people with intellectual disabilities. The **Health** programs were also developed (Healthy Athletes, Healthy Community of the Special Olympics; educational programs "Join us", "University"; integration programs such as Unified Sports, Young Athletes, Family Program, Special Olympics, Voluntary Work etc. Sport allows athletes to show their emotions, be involved in various social roles, educate, perform professional activity, overcome stereotypes, and contribute to better understanding and acceptance of people with intellectual disability.

The idea of the Special Olympics originated in the USA and its beginnings date back to the sixties of the 20th century when Eunice Kennedy Shriver, sister of the President John Kennedy, decided to establish an international sports organization for people with intellectual disabilities. Organizer of the first day camp for young people in 1963, she realized how important physical activity and healthy athletic competition is to the development of these people. Nowadays, the Special Olympics movement includes over 5 million athletes all over the world.

Poland was the first country of the Central and Eastern Europe when the Special Olympics movement started its official activity in the eighties of the last century. Since that time, the movement has been systematically developing, especially through engagement and commitment of families of athletes, coaches, voluntary workers and activists. Therefore, the activities can be conducted at the highest level, maintaining high international standards.

Over 17.5 thousand of athletes are currently training in the Special Olympics Poland, associated in 507 clubs and 18 regional departments. They have options to choose from 24 summer and winter sports. Every year, apart from the regular training cycle, the Special Olympics organize over 260 athletic events and competitions. The community of the Special Olympics movement in Poland also includes 1445 coaches, 659 members of families and 7372 volunteer workers.

In 2005, the organization received the status of a public benefit organization. Activity of the association is based mainly on volunteer work, which is financially supported by public institutions, sponsors and private donors. The organization is also supported by a group of important persons from the world of sport, culture and politics. The President of the organization is Anna Lewandowska, elite female athlete, promoter of the healthy lifestyle, author of books and training programs (www.olimpiadyspecjalne.pl/)

SPECIAL OLYMPICS HEALTH PROGRAM IS COMPOSED OF TWO SUPPLEMENTARY PROGRAMS:

Healthy Athletes and Healthy Community

The vision of the **Health** program is to create the reality where people with intellectual disabilities have the same life opportunities for living in good health as able-bodied people.

A fundamental objective of the **Healthy Athletes** program is to constantly improve psychophysical capacity of athletes to train at a professional level and perform maximal physical exercise during competitions. The aim of the program is to regularly assess the health status of the athletes of the Special Olympics through performing comprehensive medical examinations, prepare experts for conducting examinations during regional and national-level competitions of the Special Olympics, and collect and analyse the results obtained during examinations of the health status of athletes in order to identify the needs and to educate future medical staffs (www.olimpiadyspecjalne.pl/).

The global program was implemented in 1997. Nowadays, it is continued within 125 accredited programs, with 1.7 million athletes examined to date with voluntary involvement of over 135,000 doctors, physiotherapists and other experts. Since 2014, the Special Olympics have trained 120,000 health service professionals to work with people with intellectual disabilities. Some 84% of the participants of the Healthy Athletes program declared that they felt better prepared for treatment of people with intellectual disabilities (www.olimpiadyspecjalne.pl/).

In Poland, the program has been operating since 2002, with 7 projects:

1. Healthy Smile - standardized examinations of oral health by trained doctors and prevention campaigns which consist in practical presentation of the principles and techniques of oral hygiene, preparation of dentistry doctors and students for working with disabled people.
2. Healthy Hearing - otolaryngological and audiological examinations conducted using professional, modern equipment with the analysis of the obtained results of the audiological examinations, definition of necessary follow-up examinations or specialized examinations of the athletes with identified hearing impairments.
3. Healthy Eyes - diagnosis of vision impairments and choosing corrective lenses, preparation of special protective sports glasses made of safe plastics for people involved in team sports
4. Healthy Feet - dynamic and static examinations of lower limbs of athletes in terms of feet and joint deformation and the related pain syndromes, analysis of the condition of skin and nails and control of footwear quality.
5. FUNfitness - comprehensive evaluation of physical fitness and examination of the range of

mobility in individual joints, assessment of the abilities to maintain body in balance and maintain proper posture, evaluation of motor abilities such as endurance and strength.

6. Health Promotion - measurements of body height and body weight of athletes and providing information about the principles of healthy nutrition, threats connected with smoking and using stimulants, presentation of benefits of maintaining body hygiene, promotion of protective initiatives against the harmful effects of the UV radiation.
7. Strong Minds Strong Body. The program is currently at the stage of a pilot project while its core objective is to recognize main stress-inducing factors and to help develop the skills of coping with stress in athletes of the Special Olympics.

People who implement this program are voluntary workers, experts on dentistry, ophthalmology, optics, podiatry, orthopaedics, dermatology, general medicine and physiotherapy (www.olimpiadyspecjalne.pl/).

The second program which supplements the Health concept of the Special Olympics is **Healthy Community**, with its objective being to ensure access of athletes to medical care in addition to the Healthy Athletes screening and to promote healthy lifestyles. The program opens up opportunities for health education, creation of health-conscious community and lobbying for health of people with intellectual disabilities. The program is aimed to reinforce the effects of the Healthy Athletes program and supports athletes in continuation of the medical care (meeting the health needs) and other medical services.

The Healthy Community program was started in the the Special Olympics in 2015. Poland is beginning its way through the program as it implemented it in the middle of 2016. The Special Olympics Health programs have been implemented under the patronage of the Supreme Medical Chamber. The plan of the activities involves the following areas:

1. implementation of the Healthy Athletes* program
2. providing opportunities for medical care following the examinations within the Healthy Athletes program for 70% of those who need them.
 - Building the database with contacts, examinations, potential doctors etc.
 - Workshops/meeting with parents in order to change attitudes in terms of the need for caring for health and medical care following the examinations
 - Newsletter: communication with doctors, physiotherapists and universities;
3. implementation of projects/programs/campaigns concerning healthy lifestyles.
 - Healthy Parents project: project of physiotherapists concerning problems with the spine and urinary incontinence; I Am a Woman

project: prevention of breast diseases; I Am Fit project: healthy nutrition, physical fitness and improvement in quality of life; My Heart project: physical capacity tests, including cardiorespiratory tests;

4. Raising awareness and knowledge of medical professionals and students in medicine and other medical university majors and physiotherapists concerning working with people with intellectual disabilities;
 - Organization of practical and theoretical workshops within Healthy Athletes program; eye, dental, laryngological and audiological examinations, health promotion, podology and orthopaedics, body posture, psychological tests: fit body, fit mind;
 - Preparation of electronic and printed versions of guidelines to help work with patients with intellectual disabilities;
5. Lobbying for changes in health policy.
 - Meeting with various governmental organizations and institutions in order to develop shared position concerning health of people with intellectual disabilities;
 - Collaboration with non-governmental organizations in various health projects;
 - Collaboration with scientists who implement scientific and research projects (www.olimpiadyspecjalne.pl/)

As demonstrated based on the previous examinations, health care over people with intellectual disabilities represents a specific challenge, not only for the system of health care but also for the system of social care. It was demonstrated that when people with disabilities seek medical advice, doctors and medical staffs were not prepared to ensure high quality of medical services. The results of surveys are worrying: people with intellectual disabilities are twice more often dissatisfied from competencies of health service professionals, they complain four times more often about being improperly treated, and are three times more often refused to be provided medical care! (World Health Organization, 2013).

From the standpoint of the Special Olympics, implementation of the Health program offers a professional support in at least two areas. The efforts are mainly made to improve social awareness connected with the problems of health care for people with intellectual disabilities. The organization meets the needs concerning both education of future and current professionals and promotion of healthy attitudes in the communities of people with intellectual disabilities and their families and, importantly, it is involved in concrete initiatives in all the areas, which are an indispensable tool for providing the conditions of independent and active life of people with intellectual disabilities.

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