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## Medical Speech-Language Pathology in Bulgaria – a Comparative Study of the Current Status and Development

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### Abstract

**Introduction:** The complexity of ever-changing health standards, new health policies, changes in the healthcare environment, necessitates an advanced level of professional expertise in Medical Speech-Language Pathology (MSLP).

**Objectives:** This study presents the current status, opportunities and perspectives for the development of MSLP in Bulgaria.

**Method:** Theoretical overview and comparative analysis of the data and literature on MSLP as it exists in the USA and is developing in Bulgaria, where it is most often referred to as Clinical Logopedics. In this article, we present: (i) a comparative analysis of the development of this dynamic, expanding, and continuously developing health profession in the USA (the country with the most innovative and highly evolved practice of MSLP) and Bulgaria; (ii) brief historical notes related to the development of Speech-Language Pathology in the United States and Bulgaria; (iii) the scope of practice of MSLP in the USA and Bulgaria, which is a key problem for the prospects for the development of this specialty in Bulgaria, and (iv) the problems associated with establishing a master's degree program in MSLP.

**Conclusions:** MSLP has perspective for development in Bulgaria only if it is studied as a health specialty within medical or health faculties, but necessarily housed within a medical university. A clear understanding of the scope of practice is fundamental for the development of MSLP, but it should not overlap the purview of other professions. The MSLP master's program should be innovative, manageable, and comprehensive, providing for a wide range of specialised clinical experiences that prepare students to practice effectively in a medical environment.

**Keywords:** Medical Speech-Language Pathology, scope of practice, Clinical Logopedics, communication disorders, evidence-based practice

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## 1. Introduction

During the last decade, some Bulgarian universities<sup>1</sup> have begun to educate students within the specialty of Logopedics in the professional area of Public Health. As a consequence of the COVID-19 pandemic, all Bulgarian hospitals have restructured their activities, including the divisions of Otolaryngology (ENT) and Neurology. Speech and language services provided in healthcare settings have been developed and evaluated with regard to both safety and effectiveness (Castillo-Allendes et al., 2020; Pak-Hin Kong, 2021), but in Bulgaria, there is no officially accepted document that defines the scope of practice in Logopedics<sup>2</sup>, including medical rehabilitative settings. This represents a serious obstacle to the creation of an organised and effective master's degree program in Clinical Logopedics (CL). There is no doubt that such a program must support high-quality clinical practice for voice, aphasia, dysphagia, dysarthria, and neurocognitive disorders, all of which are commonly encountered communication disorders (CDs) in medical rehabilitative settings.

MSLP has a rich and long history of providing health care to people with a multitude of CDs, according to Robb (2014), "The profession of speech-language pathology," (Robb, 2014, p. 34), "encompasses the study of human communication, swallowing, speech and language development, and their disorders." Whereas MSLP is a dynamic and highly developed discipline in the USA, it remains at a rudimentary stage in Bulgaria.

The complexity of ever-changing health standards, new health policies, and changes in the healthcare environment, requires an advanced level of professional expertise on MSLP. Also needed are clear and organised requirements for the sustainable application of services based on evidence and a strong foundation for an ever-expanding scope of clinical practice.

The continued development of MSLP is intimately tied to its connection with the concept of evidence-based practice (EBP) from the basics of assessment and therapy, to the documentation of clinical outcomes (Frattali & Golper, 2007).

The question thus arises regarding what, specifically, distinguishes MSLP from the traditional practice of speech-language pathology (SLP<sup>3</sup>) or, what in many countries is called logopedics. Johnson and Jacobson (2007) provide some insight in this regard. They note that, in the USA, there has been one point of view "that a distinct category of professional practice within the field encompasses a body of information and a range of clinical activities that impact a patient's medical status or are impacted by a patient's medical condition" (p. 4). This distinction using the term "medical" and was first published in the adopted 2001 revision of the SLP scope of practice by the American Speech-Language-Hearing Association (ASHA). The second view is that the entire practice of SLP is medical by virtue of its status as a health profession, regardless of the environment in which the specialist practises, the type of patients/clients treated or the nature of the clinical services provided.

## 2. Objectives of the study

This article discusses the present status, challenges, and opportunities for developing MSLP in Bulgaria.

## 3. Methodology

A theoretical overview and comparative analysis of the literature on MSLP, including the development of this health specialty in the USA and Bulgaria. Through narrative review of the present situation, the authors examine valuable and controversial factors that impede MSLP development in Bulgaria. The American model was selected as a basis of comparison as the USA currently has the most innovative professional programs and provides the most highly developed form of MSLP practice. The comparative analysis includes the following topics of discussion: (i) brief historical notes relating to the development of SLP in the USA and Bulgaria; (ii) the scope of practice of SLP in the USA and Bulgaria, which is a key issue for the prospects for the development of this specialty in Bulgaria, and (iii) problems related to the master's degree programs in SLP and CL.

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<sup>1</sup> Medical universities in Bulgaria are independent institutions of higher medical education.

<sup>2</sup> The authors use the terms *logopedics* and *logopedist*, as accepted in Bulgaria.

<sup>3</sup> The authors use the terms *SLP* and *SLPs*, as accepted in the USA.

## 4. Discussion

### 4.1 Discussion on the brief historical notes related to the development of speech and language pathology as a profession and university specialty in the USA and Bulgaria.

During the 20th century, SLP developed rapidly in both Europe and America. In Germany, at the beginning of the century, Hermann Gutzmann (1865-1922) established speech therapy as a practical science for the diagnosis and elimination of speech disorders, mainly in children. He is the founder of the Berlin School for the Study of Speech and Hearing Disorders. In 1924, Emil Froeschels, the leader of the Vienna School for the study of CDs, founded the International Association of Logopaedics and Phoniatrics (IALP). Since the establishment of the IALP, the term "logopedics" has been adopted in Europe. Its meaning, however, is fully pedagogised: from the Greek language *logos* - word, speech and *paideia* - education, training: literally the science of education of the child's speech. For this reason, in many parts of the world, the term is avoided in favour of reference to the discipline of "communication sciences and disorders."

In the early 20th century, Prof. Carl Emil Seashore established the Department of Psychology at the University of Iowa, where the first US speech and hearing disorders training program was founded. In 1914, the first university speech clinic in the country was opened at the University of Wisconsin (Lubinski, & Golper, 2007). In the ensuing years, many American universities followed suit. The European term *logopedist* was proposed for use in the USA in the mid-1940s, but was rejected by the scientific community. Discussion of which term to officially adopt to identify the speech and language specialist ended in 1976, when the Legislative Council of the American Professional Association of Speech Pathologists (Legislative Council of ASHA, LC 10-76; Lubinski, & Golper, 2007, p. 9) decided on the use of "speech-language pathologist."

Following World War II, Europe lost much of its leading role in the study of communication disorders. As highlighted by Duchan (2002), the large number of European speech clinicians who emigrated to America in the mid-20th century made indisputable contributions to the development of SLP, helping to establish the US as leaders in this discipline.

In 1956, University "St. Kl. Ohridski" in Sofia, Bulgaria, initiated university study in Defectology within the Faculty of Philosophy. Until 2002, Bulgarian specialists were trained to treat certain CDs in the pedagogical specialty "Special Pedagogy". In 2002, for the first time in Bulgaria, South-West University "Neofit Rilski" (SWU), separated Logopedics from Special Pedagogy and, by 2009, the Faculty of Public Health was established and accredited at SWU to provide logopedics training.

Over the course of the last 40 years, SLP has experienced significant expansion in the developed countries. The main reason is the constant expansion of the scope of practice, which leads to several challenges such as the growing number of CDs or diseases accompanied by CDs for which SLPs must develop a deeper scientific understanding and maintain professional competencies. The American SLPs address typical and atypical communication and swallowing in seven areas, including 31 types of disorders and more than 100 subtypes (ASHA, 2007, pp. 5-6).

There are approximately 290 universities in the United States that provide an academic program in SLP. Of these universities, 266 offer accredited SLP programs, which are required to provide comprehensive academic and clinical education in a prescribed period of study that should not be extended (Council on Academic Accreditation in Audiology and Speech-Language Pathology, 2021). To facilitate student learning, most US programs have their own speech clinics that deliver diagnostic and therapeutic services to the local community and provide an opportunity for practical training for their students (Robb, 2014, p. 43). The American model of education for a bachelor's-level program in communication sciences and disorders (CSD) is based on extended education in liberal arts and sciences, which typically lasts 3-4 years. The emphasis in master's programs is placed on specialised training, which are usually two years. The permission to practise the profession is obtained after acquiring a master's degree in SLP. After completing a master's degree, graduates receive an additional 1 year of clinical fellowship training under the supervision of a licensed and certified speech-language pathologist. Upon successful completion, they have the right to take a standardised national licensure examination and receive a Certificate of Clinical Competence (CCC-SLP). The average

period of study in a bachelor's and master's degree in SLP in the United States is about 7 years; that is, 2 years of general "pre-professional" education and a subsequent 5 years of specialised "professional" education in SLP. Although standards for the profession of SLP are developed and published by the ASHA, each US state regulates the specialty by law through the Departments of State License and Regulatory Affairs. The majority of states adhere to ASHA national standards, although there may be some differences. In recent years there has been interest in an additional 2 and a half years of training leading to a clinical doctorate in SLP (ASHA, 2015). The clinical doctorate in SLP is different from the master's degree and the classic research and teaching doctorate (PhD). It is currently available at 7 American universities: The University of Kansas, Rocky Mountain University, Northwestern University, Nova Southwestern University, Loma Linda University, Kean University of New Jersey, and Valdosta State University. An eighth such program is under development at the University of Pittsburgh. The SLP Clinical Doctorate program prepares candidates for the acquisition of a high degree of professional development as an expert clinician, to become a clinical administrator or a leader in the field of clinical practice, as well as to develop and support applied clinical research.

The Bulgarian model of educating students in Logopedics follows the European tradition. The bachelor's degree (with four years of study) begins with direct and intensive clinical and academic training in the specialty. The focus is on the fundamentals of Logopedics and establishing basic competencies. After obtaining a bachelor's degree, graduates can start practising without acquiring a master's degree or passing a national examination for licensure. Unfortunately, the universities in Bulgaria that train students in logopedics do not have a clinical infrastructure. This hinders the quality of practical training (especially concerning the master's program in CL). In general, Bulgarian universities that train logopedics students have a good instructional infrastructure, but the scientific and clinical infrastructures are somewhat lacking or are under development.

A brief review of the historical development of SLP in the USA highlights its rapid evolution as a specialty and profession. The current level of SLP development in Bulgaria is, in many respects, similar to the status of

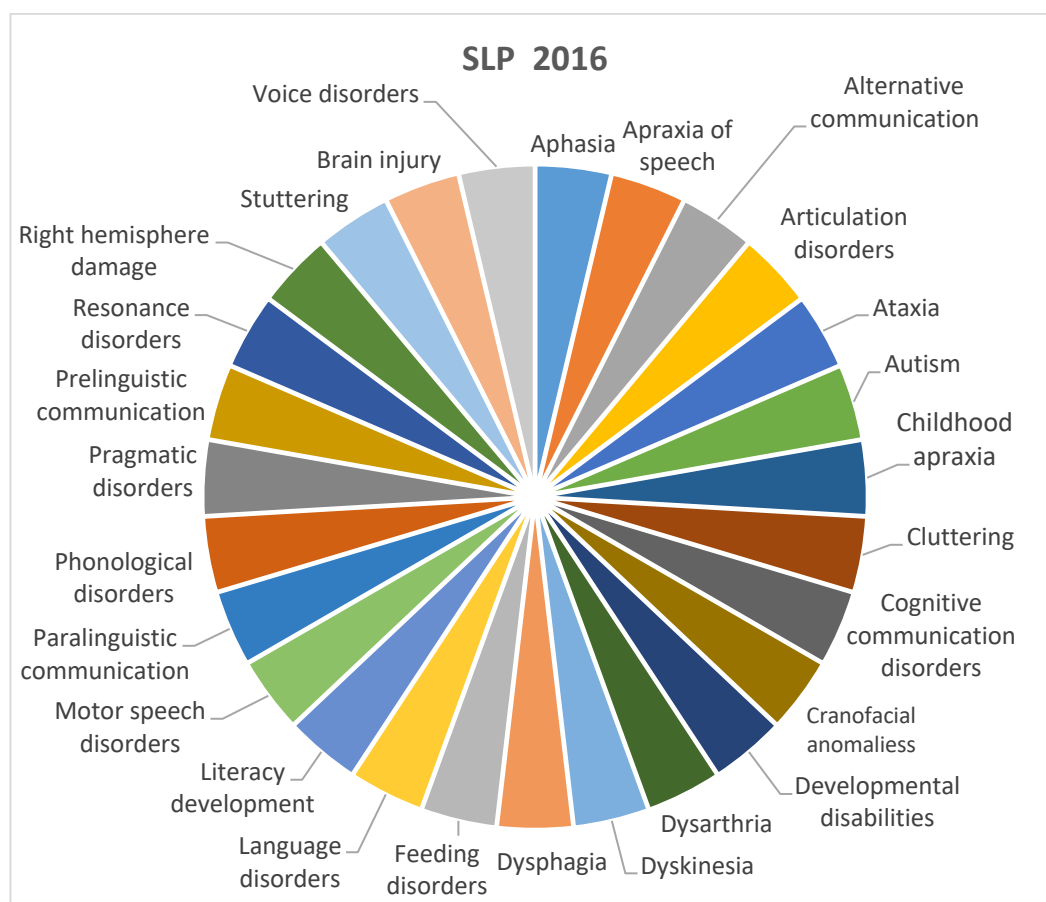
the field in the USA during the so-called "processing" and "linguistic" periods from the late-1950s to the mid-1970s (Duchan, 2011). One reason for this is that, until 2009, the profession and the specialty of logopedics did not exist in the Bulgarian classification of scientific specialties. Logopedics, as part special pedagogy, realised the professional as little more than a special pedagogue (what, in the USA, would be considered a "special education teacher") with a logopedics subspecialisation.

## **4.2 Discussion on the scope of SLP practice in the USA and Bulgaria.**

The expansion of the SLP scope of practice has progressed at a remarkable pace in the USA. In particular, clinical SLP practice now encompasses several areas that are not directly related to speech, language, and hearing (Council for Clinical Certification in Audiology and Speech-Language Pathology of the ASHA, 2013). Lubinski and Golper (2007) have noted that current SLP practice in America "includes prevention, diagnosis, habilitation, and rehabilitation of communication, swallowing, or other upper aerodigestive disorders, elective modification of communication behaviors; and enhancement of communication" (p. 40).

The scope of practice presupposes a health, speech and language health service aimed at the impaired structure and/or function of the human body, activities and/or participation in them, as proposed by the International Qualification of Functioning, Disability and Health (ICF) model of the World Health Organization (World Health Organization, 2001). This model provides the conceptual framework for the development of modern SLP (Hopper, 2007; Larkins, 2007; Lubinski, Golper, & Frattali, 2007; Ma, Yiu, & Verdolini, 2007; Mackie and Kagan, 2007; McLeod & McCormack, 2007; Threats, 2007; Yaruss, 2007).

The basis of the classic understanding of human communication and its disorders is the relationship between biomedical, linguistic and behavioural sciences, which should be studied in speech pathology programs (Cheng, 2010, p. 212). According to Johnson and Jacobson (2007, p. 4), MSLP "may be defined by (1) *where* it is practised (the continuum of care); (2) *who* delivers speech-language services (the specialists and subspecialists); and (3) *how* and what types of services are performed (procedures and competencies)."



**Figure 1. Scope of practice in the field of Speech-Language Pathology in the USA as of 2016 – with the permission of Yaruss.** Note: The figure was prepared by Prof. J. Scott Yaruss and presented within his Erasmus+ program lecture “History of SLP in USA” at SWU in 2016.

Figure 1 presents the current scope of SLP practice in the United States and the extent to which new areas have been incorporated over the past recent decades. One reason for the expanding scope of practice is the high percentage of SLPs involved in the US healthcare system. The employment of SLPs in the US is distributed as follows: 40% work in clinics, 50% are employed in the education system, 5% work at university research centres and laboratories, and only 5% in the private sector (Robb, 2014, pp. 45-46). By comparison, over 90% of the logopedists working in Bulgaria practise mainly in an educational setting. A very small percentage work in social institutions, and an almost negligible number are employed in hospitals and rehabilitation centres. This is one of the explanations for the lack of development of MSLP in Bulgaria - the non-involvement of the Bulgarian logopedists in the health system. On the other hand, the strong pedagogical orientation of Bulgarian Logopedics over the last 60 years has led to a marked neglect of the medical aspects of the

profession. Bulgaria may be unique in that the same specialty, with the same qualification characteristics (in this case, Logopedics) is studied in two radically different professional fields (Pedagogy vs. Public Health).

The existing dichotomy in no way helps to stimulate the development of MSLP, but rather maintains the course of logopedics within the educational system. Undoubtedly, it impedes the training of qualified specialists who have the opportunity to practise in a clinical health environment with patients of all ages who have CDs. The medical perspective (i.e. the science-based cause-effect paradigm) is useful and fundamental to the competencies of any speech-language pathologist.

In the US, there have been several decades of accumulated experience in practising this subspecialty within the health care system. Current evidence (Robb, 2014, p. 45) indicates that, among US SLPs:

- 31% diagnose and treat dysphagia;

- 50% diagnose and treat cognitive language disorders;
- 66% work with augmentative and alternative communication;
- 45% supervise and provide clinical training of students and specialists in SLP;
- 2% make use of an assistant (technician or paraprofessional).

#### **4.3 Discussion on the Master's program in Clinical Logopedics and the concept of evidence-based practice.**

In the master's program in CL as offered in Bulgaria, the scope of practice is significantly narrowed, concentrated mainly on the study of aphasia, dysphagia, and dysarthria in children and adolescents. Noticeably absent are courses in voice and fluency disorders, geriatric medicine, neurodegenerative dementias, associated disorders as well as communication skills in persons with dementia, and EBP and outcomes-oriented approaches.

In parallel with the development of MSLP, the influence of EBP in the study of CD must be taken into account. In the last three decades, in the field of public health care, an important problem has been posed worldwide; that is, how to document and evaluate the final product of the treatment. EBP in SLP is considered a fundamental issue, one also related to professional ethics (Kully & Langevin, 2005). The new EBP paradigm is unknown or little known to the Bulgarian logopedists (Georgieva & Orlikoff, 2020). The application of EBP in Bulgaria is problematic for both clinical practice and research. The professional bodies that govern clinical practice in the Bulgarian health fields are not currently guided by EBP concepts. There are no established guidelines based on existing SLP practice which, in itself, is not well documented.

It is known that EBP in SLP is based on empirical data obtained from clinical practice and mainly affects MSLP (Orlikoff et al., 2022). Originating from a call for evidence-based medicine (Sackett et al., 2000), EBP in clinical disciplines is a valuable concept in ensuring quality of SLP care. It dictates that “the expert clinicians should consistently seek new information to improve therapeutic effectiveness. To this end, clinicians should be data seekers, data integrators, and critical evaluators of the application of new knowledge to clinical cases” (Bernstein Ratner, 2006, pp. 257-258).

The American experience shows that the development of rules for clinical practice for CDs is based on evidence obtained from applied science-based diagnostics and therapy, which are within the scope of MSLP. According to Olswang and Bain (2013), the purpose of evidence-based SLP practice is: “(a) to provide an overview of some of the principles and procedures of EBP; (b) to describe the relevance of EBP to current clinical issues in speech-language pathology and audiology; (c) to raise awareness of the importance of EBP research as one component of the research mission of the ASHA; and (d) to recommend potential steps towards increasing the quantity of credible evidence to support clinical activities in the profession” (ASHA, 2004, p. 1).

Unfortunately, the Bulgarian program in CL does not meet the requirements for completeness and complexity for either academic or clinical education—for example the voice disorders course, fluency disorders course (neurogenic stuttering; cluttering) are not included in the program. It is imperative to promote internationalisation in the training of logopedists (Orlikoff & Georgieva, in press). The duration of the master's program in CL in Bulgaria is 1 year, while in the USA the master's program in SLP is usually two years. As was mentioned earlier, another 2.6 years can be added to it, if the training is a Clinical Doctorate. The obligatory courses included in a CL master's program in Bulgaria are: clinical psychology, aphasia and right hemisphere damage, dysphagia, cerebral palsy in children and adolescents, neurodegenerative CD, neurofeedback and biofeedback, differential diagnosis in CD, and generalised developmental disorders.

In Bulgaria, there remains no officially adopted documents that outline the scope of practice in logopedics. This not only complicates the establishment of student training programs for MSLP, but also leads to confusion in clinical practice, where there is often a mixing responsibilities between logopedists and other related specialists.

Another challenge to the development of MSLP in Bulgaria concerns the fact that there is a lack of regulation of private practice in logopedics (Georgieva et al., 2014). These practitioners are not registered by the Health Profession Council (HPC). In fact, HPC registration is not available for logopedists, meaning that the interests of those with CD are not protected. In the US, by contrast, private SLPs are required to carry insurance for professional liability.

Such insurance policies protect the client from speech-language clinicians who are not conscientious, do not demonstrate professional competence and do not apply appropriate practical skills (Robb, 2014, p. 51). By implementing American practices, MSLP in Bulgaria will be able to advance a more health science-related approach to patient care, apply evidence-based practices, and be more accountable for positive clinical outcomes. As Bernstein Ratner (2006) postulates, “ideally, our field needs therapy outcome results that cohere with theory” (p. 259). More precisely, documenting the results of clinical intervention in MSLP will require acquiring outcome measures for:

- Aphasia (Holland & Thompson, 1998);
- Cognitive communication disorders [(traumatic brain injury (Adamovich, 1998); right hemisphere brain damage (Tompkins & Lehman, 1998); dementia (Bourgeois, 1988)];
- Voice disorders (Verdolini, Ramig, & Jacobson, 1998);
- Fluency disorders (Blood & Conture, 1998);
- Health care settings (Cornett, 1998);
- Dysphagia (Logemann, 1998);
- Motor speech disorders (Beukelman, Mathy, Yorkston, 1998);
- Child language and phonological disorders (Goldstein & Gierut, 1998);
- Rehabilitation services (Strategy #5 of The Rehabilitation Services Plan, April 1994).

In this context, the aim is to train highly qualified logopedists in the health system to work with patients with all manners of CD (Johnson & Jacobson, 2007). During their university training, they rely on the formation of knowledge related to the management of CD in all clinical settings where such patients may be identified, including hospital and medical rehabilitation environments.

## 5. Conclusion

It could be stated with confidence that the development of MSLP in Bulgaria will depend on whether it aligns itself with medical or health faculties, is housed within a medical<sup>2</sup> university, and is viewed as a comprehensive health specialty. Among the strongest SLP Master's programs in the US are those

offered by Vanderbilt University within its School of Medicine and others at University of North Carolina-Chapel Hill, Boston University, University of Arizona, University of Iowa, University of Wisconsin-Madison whose programs are offered within Health and Rehabilitation Sciences.

The allied health professions, including MSLP, should develop knowledge, skills, and competencies in their respective disciplines as part of their basic university education (Wylie et al., 2014). Undoubtedly, the well-developed clinical infrastructure and specialists from medical universities in Bulgaria will greatly enhance the preparation and competent practice of future medical SLPs. Some possible initial steps related with future perspectives on MSLP development in Bulgaria may include:

- Official description of the scope of practice of the logopedists from the Bulgarian Scientific Society of Public Health (In 2020, the Logopedics sector was opened);
- Preparation of an official document describing the autonomy of the profession (see, for instance, ASHA, 1986);
- Preparation of a document that defines the CDs that are within the scope of practice of the medical SLPs (see, for instance, ASHA, 1993); and
- Preparation of a document that defines the preferred models for practicing this subspecialty (see, for instance, ASHA, 1997).

Taking into account the good foreign experience, the official description of the scope of practice will be fundamental for the development of MSLP in Bulgaria, but it should not necessarily overlap the scope of other professions. The state regulator should adopt the status of a regulated profession of the MSL pathologist and determine the rules for training, as well as the requirements to apply the profession in the health system in Bulgaria. We strongly believe that the term Logopedics should be dropped as overly restrictive and, frankly, inaccurate, to be replaced by the internationally recognised term speech-language pathologist.

Bulgaria is in its evolutionary stage in the application of EBP in clinical settings, but a stage crucial to the development of MSLP. The brief historical review shows that SLP is a dynamic, growing and



competitive field in the US. The rudiments of MSLP are present in Bulgaria. The perspective for the development of MSLP in Bulgaria is wider and favourable in view of the continuous aging of the population and the need for effective and high-quality treatment for all types of CD across the lifespan. An MSLP master's program should be both innovative and comprehensive, allowing students to gain a wide range of specialised clinical experience to prepare them to become effective clinicians in a medical or healthcare setting.

## Conflicts of interests

Authors declare no conflict of interests.

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