



Prosthetics and Orthotics Industry Development in Ukraine

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Ukraine's Prosthetics and Orthotics Industry is experiencing ongoing growth and development. Currently, there are over 100 prosthetics and orthotics centers, and the annual number of new amputees remains consistent. From January 2022 to December 2024, the total number of individuals with traumatic limb amputations was around 15,000, with 16% of these amputations attributed to tourniquet syndrome. In this Position Paper, Protez Hub offers insights into the prevalent issues within the industry, outlines its stance on these matters, and suggests potential solutions. We encourage as many international stakeholders and partners as possible to review this Position Paper and consider the proposed solutions when planning their initiatives and activities in Ukraine. Protez Hub team is open to collaboration on the activities related to addressing the issues described in this Position Paper.

I Service Organization and Administration

There is a need to establish prosthetics and orthotics prescription criteria (as part of the Ukrainian Government's funding program).

Protez Hub, in collaboration with the Ministry of Social Policy of Ukraine and the Ministry of Health of Ukraine, has begun exploring ways to enhance the process of prescribing assistive devices. A review of several relevant regulatory documents has been conducted. Protez Hub emphasizes the need to establish a clear procedure for utilizing functional assessment tools, outcome measures, and tests to prescribe suitable prostheses and orthoses. The evaluation of the patient's functional abilities and the issuance of conclusions based on the outcome measures should be performed by members of the multidisciplinary team (MDT), which includes a doctor of rehabilitation medicine, physical therapist, occupational therapist, and prosthetist-orthotist.

There is a need to improve the availability of appropriate orthotics funded by the Ukrainian Government based on patient needs.

Protez Hub, in collaboration with the Ministry of Social Policy and with input from international orthotics specialists, has created a revised, expanded, and greatly enhanced list of orthoses. This

initiative aims to provide individuals with disabilities, particularly injured Ukrainian defenders, access to high-quality orthoses utilizing the latest technology, along with a broader selection. The process of updating the relevant regulatory documents is currently underway.

There is a need to further increase the awareness of amputees and stakeholders of the availability of the state-funded prosthetics-orthotics program.

At healthcare facilities where patients are informed about the new platform from the Ministry of Social Policy of Ukraine, protez.msp.gov.ua, and the independent, unbiased initiative Protez Hub, protezhub.com, patients can easily access essential information. This includes guidance on preparing for prosthetics, various types of prosthetic components, a list of prosthetics-orthotics centers with ratings based on patient feedback, and an explanation of how the state prosthetics program operates - all without any pressure or manipulation. Consequently, there are no issues with patient awareness at those hospitals.

In May 2025, Protez Hub, in collaboration with CF Patients of Ukraine, the Ministry of Digital Transformation, and with support from the Belgian development agency Enable, will start training employees at Administrative Service Centers. This initiative aims to enhance the capacity of ASCs to provide accurate information on assistive devices, expand the availability of prosthetics and orthotics services, improve patient pathways, and ensure a transparent delivery system for services.

There is no need to produce thousands of poorly trained prosthetics-orthotics specialists or establish more prosthetics-orthotics centers.

In 2023, the Protez Hub team, alongside international experts from the American Board for Certification in Prosthetics, Orthotics and Pedorthics, the International Society for Prosthetics and Orthotics, and independent specialists, collaborated with the CF Patients of Ukraine, the Ministry of Health of Ukraine, the Ministry of Social Policy of Ukraine, and the Ministry of Education and Science of Ukraine, with support from the Swiss Government, to create a long-term plan in this field.

- By 2028, based on population needs, Ukraine will require 300 certified prosthetists-orthotists (a regulated clinical profession within healthcare, per the new professional standard) and at least 600 prosthetic-orthotic technicians (a technical, unregulated profession in biomedical engineering who work under the supervision of a prosthetist-orthotist).

These numbers are expected to remain stable in the future.

Currently, Ukraine has 34 certified prosthetists-orthotists according to the new professional standard, with this figure projected to rise to 40 by the end of 2025. There are also over 340 technicians.

Furthermore, in 2024, Master of Prosthetics and Orthotics programs were launched at four Ukrainian medical universities, with an expectation that at least 30 more prosthetists-orthotists will graduate by 2026.

Protez Hub, in partnership with Jonkoping University, has developed a suitable national educational standard (curriculum) and is collaborating with three universities to ensure the training program's quality.

The decision to create Master's programs was based on an analysis of various educational models from several countries. It was concluded that investing in a two-year specialized program for students holding a Bachelor's degree in a related field is a more rational use of available resources, rather than pursuing a longer specialized program.

Thus, Ukraine is progressing according to the plan regarding the number of prosthetists-orthotists.

The updated professional standard for prosthetic-orthotic technicians is on the way, which will lead to the establishment of specialized technician educational programs.

Occasional claims that there is a shortage of prosthetics specialists in Ukraine or that patients are facing waiting lists for prosthetics stem from the following:

- Currently, there is an overabundance of prosthetics service providers in Ukraine. There is no need to establish more prosthetic centers, especially within hospitals. New centers struggle to hire qualified staff or to train them quickly.
- Some service providers create waiting lists by requiring patients to submit application forms and wait, even when patients reside in other regions where centers can provide the same services promptly.

Establishing prosthetics-orthotics workshops within hospitals in Ukraine is not advisable at this time for the following reasons:

- Rapid training of specialists is not feasible. In developed countries, prosthetic workshops are sometimes integrated into healthcare facilities, employing qualified and certified specialists who are accountable for service quality. This is not the situation in Ukraine.
- The provision of prosthetics-orthotics services in Ukraine is a commercial venture. The primary goal is profit, regardless of whether the workshop is independent or hospital-based. In most developed countries, when workshops are part of healthcare facilities, they are considered just another service without a commercial aspect.

Consequently, it is not practical to establish prosthetics-orthotics centers directly in hospitals in Ukraine. Patients should have the freedom to choose a center with qualified specialists rather than being obliged to use a hospital workshop staffed by potentially unqualified personnel. Simultaneously, hospitals and prosthetic-orthotic centers must establish contracts (according to patient preference) and collaborate in the rehabilitation of individual patients.

There is a need to improve the control of the prosthetics and orthotics service quality.

Prosthetics-orthotics centers in Ukraine primarily consist of private companies that produce medical devices. These facilities are overseen by the State Service on Medicines and Drugs Control.

The State Service conducts regular inspections to verify that the centers possess the necessary equipment and adhere to safety regulations, among other requirements.

However, a significant issue currently facing the sector is the lack of established criteria for who is authorized to provide prosthetics and orthotics services.

International standards dictate that only a qualified prosthetist-orthotist (a regulated profession with clinical specialization) should interact directly with patients, while technical tasks should be handled by prosthetic-orthotic technicians.

Currently, many amputees in Ukraine, particularly at newly established centers, are fitted by inexperienced individuals who have completed brief training courses (lasting between 2 weeks and 2 months) offered by prosthetic component manufacturers or foreign clinics. This situation has resulted in a higher incidence of poorly fabricated devices, leading to complications for patients.

It is essential to implement regulations that define who is qualified to fit patients in Ukraine, in accordance with new professional standards.

Quality control measures for services should also enable the payer (the Ukrainian Government) to verify that patients receive the prescribed fittings. This could be accomplished by requiring video evidence of the fittings.

There is a need for a rehabilitation pathway and rehabilitation guidelines for persons who lost limbs.

Protez Hub, in collaboration with the CF Patients of Ukraine and the Ministry of Health of Ukraine, is finalizing the development of a rehabilitation pathway for amputees. Protez Hub has also translated and adapted international clinical guidelines for the rehabilitation of individuals with upper and/or lower limb amputations.

Both documents are currently undergoing final review and approval.

II Procurement and Supply

There is a need to establish a more transparent prosthetics components procurement system.

Prostheses and orthoses are funded by the Ministry of Social Policy of Ukraine, specifically through the Fund for Social Protection of Persons with Disabilities. While the system could use some minor enhancements, it is largely effective. Transferring the system to the NHSU or any other institution is unnecessary and could lead to complications in their provision.

The Ministry of Social Policy of Ukraine is actively working to enhance the billing system to ensure maximum efficiency and stakeholders are encouraged to support the Ministry in this direction.

It is crucial to understand that the most expensive prostheses are not necessarily the best fit for every patient. A high-quality, high-performance prosthesis is one that enables an individual to achieve the highest level of functional independence.

Encouraging the procurement and importation of prosthetic components directly from manufacturers, bypassing intermediaries and distributors, is recommended.

III Innovation, Technology and Best Practices

Any technology and practices introduced in Ukraine should be useful, appropriate and ethical.

Some of the most sought-after and beneficial assistive devices introduced in Ukraine by Protez Hub, an official provider of continuing education, in collaboration with Prosthetyka and with support from the Swiss Government and UNDP, are pneumatic mobility devices designed for early patient verticalization. It is essential for more hospitals to be equipped with these devices and for hospital staff to receive training on their usage to enhance the effectiveness of amputee rehabilitation.

Osseointegration has also been introduced in Ukraine. While this method is utilized in developed countries, it comes with significant limitations and remains under research.

The Ministry of Health of Ukraine has developed a procedure for osseointegration, which will be performed at healthcare facilities whose teams have received certification for a specific type of implant. All patients must undergo a consultation and receive an evaluation from a prosthetist-orthotist with a minimum of five years of experience, confirming that the patient is not a suitable candidate for a traditional prosthesis.

There is an urgent need to establish a registry of osseointegrated patients to monitor their condition over the coming years and to adjust regulatory procedures accordingly.

Stakeholders are encouraged to support training and professional exchanges of surgeons, aimed at decreasing the number of stump revisions and repeated amputations among Ukrainian patients.

There is a need for a greater emphasis on case management and community rehabilitation.

It is essential to implement the concept of "case management" throughout all stages of trauma patient rehabilitation, ranging from the intensive care unit to the patient's reintegration into the community. This requires a seamless transfer of patient data across various structures to ensure an effective process.

The UISSS system, operated by the Ministry of Social Policy of Ukraine, currently includes case management features for social workers. This functionality should be expanded and integrated with the systems of other relevant ministries, such as the Ministry of Health of Ukraine and the Ministry of Veteran Affairs of Ukraine.

CF Patients of Ukraine should be actively engaged by any stakeholders working in this area.

A dedicated case manager should support the patient from the beginning of their rehabilitation journey until they successfully reintegrate into the community.

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