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# MEETING THE NEEDS OF CLIENTS WITH ACQUIRED BRAIN INJURY BY MEMBERS OF AN INTERPROFESSIONAL TEAM WITHIN THE CONTEXT OF COORDINATED IN-HOME REHABILITATION

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***Abstract***

**Introduction.** The functional abilities limitations of clients with acquired brain injury affect self-sufficiency and activities of daily living, which is a burden on both the client and their families. For this reason, it is essential to analyze the needs of individual clients and look for suitable solutions, especially after clients return to their homes.
**Aim.** This study aimed to determine ways for a PT, occupational therapist, and social worker to work together as an interprofessional team to meet the needs of clients with acquired brain injury during coordinated home rehabilitation.
**Materials and methods.** Twenty clients with acquired brain damage were given access to an interprofessional team consisting of a physiotherapist, occupational therapist, and social worker as part of a coordinated home rehabilitation program. The study used a qualitative research strategy and an interview to determine the needs of clients. The data were analyzed using the axial coding method and the ATLAS.ti program. Results identified how individual professional skills are best used to meet these needs.
**Results.** An interprofessional coordinated home rehabilitation team was able to meet most of the needs conveyed by clients with acquired brain injury. Each skill, i.e., physiotherapist, occupational therapist, and social worker, was involved, to varying degrees, in meeting the needs of clients. However, client needs exist as a complex network, and meeting those needs cannot be easily divided based on expertise.
**Conclusions.** Only through mutual and coordinated cooperation among the members of interprofessional home environment rehabilitation teams can the needs of clients with acquired brain injury, and their families be effectively addressed and resolved.

***Keywords:*** **acquired brain injury, coordinated rehabilitation, client needs, homecare**

## INTRODUCTION

Acquired brain damage is a heterogeneous group of diseases and injuries that arise as a result of various etiological factors. The most common are stroke, traumatic head injury, inflammatory brain disease, tumors, hypoxia, intoxication, and metabolic disorders [6]. In the European Union, stroke is the second most common cause of death and the leading cause of disability in adults [14]. In a 2020 report from Hatem et al., they estimated that between 2017 and 2047, the number of people living with stroke in the European Union would increase by 27%, mainly due to an aging population and high levels of acute healthcare [13]. Damage to brain tissue characteristically leads to neurological deficits, cognitive impairments, and behavioral changes, the severity and duration of which are individual and depend on the extent and location of the lesion [3].

The limitations of functional abilities associated with brain injuries affect self-sufficiency and activities of daily living, which represents a burden on both clients and their families [12]. For this reason, it is essential to comprehensively analyze the individual needs of each client and find suitable solutions, especially after the client returns to their home environment. Although acute care for patients with brain damage in the Czech Republic is provided by neurorehabilitation teams working in highly specialized institutions, there is often a lack of continuity in long-term care and in-home rehabilitation [5, 11]. As part of this research, a three-month intervention

focused on in-home physiotherapy, occupational therapy, and social work for clients with brain damage, with an emphasis on an interprofessional and coordinated approach. To ensure the quality of care and subsequent quality of life of clients, systematic evaluation and fulfillment of needs is essential and should be based on a balance between professionally determined needs and the actual perceived needs of clients; this process increases the effectiveness of rehabilitation and other aspects of post-stroke care [16]. It is, therefore, clear that a careful analysis of the needs of clients with acquired brain injuries and the determination and implementation of appropriate solutions should be a priority in client care.

## AIM

This study aimed to determine the best methods for an interprofessional team consisting of a physiotherapist (PT), occupational therapist (OT), and social worker (SW) to meet the needs of clients with acquired brain injury within the framework of coordinated home rehabilitation.

## MATERIALS AND METHODS

As part of this research project, teams consisting of a PT, an OT, and two SWs visited clients and their families. Each client received an intensive in-home three-month physiotherapy intervention emphasizing coordinated rehabilitation and cooperation with the interprofessional team.

The study participants consisted of 20 clients with acquired brain injury (Appendix 1). The study used a qualitative research strategy and utilized several semi-structured interview techniques. Subsequently, the data were analyzed using the axial coding method and the ATLAS.ti program to determine the specific need categories for the clients in our study. Based on our personal experience with the implementation of coordinated in-home rehabilitation interventions, we defined, for each category of needs, how the individual team members (PT, OT, and SW) would be utilized to meet the needs of the client.

## RESULTS

Eight categories of needs were determined for the study participants based on a qualitative analysis of the interviews we conducted with the clients. Further, we determined how the members of the interprofessional team should work to meet these needs within the framework of the coordinated in-home rehabilitation intervention used in our study (Fig. 1). The eight categories determined for this study are described in the following sections.

### 1. The need for health

In the field of physical health, clients perceived that they had limited mobility and thus expressed the need to improve their musculoskeletal system, improve walking, **and the related stability and function of their limbs**. The category was noted by comments such as: *«… and in the city, walking is definitely unstable. I don't feel dizzy, it's nothing (like that), but suddenly my legs are doing what they want. I have such a problem»* (Client SA3).

A specialist for musculoskeletal system issues in the coordinated rehabilitation team was the PT. The consequences and the clinical manifestations of acquired brain damage are diverse and individual. The role of the PT was to offer short-term and long-term rehabilitation plans for each client based on their kinesiological analysis of the client, doctor recommendations, and the client's wishes. Plans were continuously revised according to the client's current condition.

The first step toward verticalization was to teach clients how to rotate in bed and sit up, as well as train them on sitting stability. This was followed by standing by the bed and training in standing stability, all of which are prerequisites for safe walking and increased independence. By training indoor and outdoor walking as well as training stair climb/descend skills, the PT meets not only the need for improved health but also the need for safety, security, and self-sufficiency. To improve overall musculoskeletal abilities, the PT works closely with the OT to train gross and fine motor skills. As part of their intervention, the OT evaluates the apartment, including the identification of architectural barriers, and then proposes facilitation means. To improve walking, these are aids for locomotion, minor interior modifications, such as the removal of thresholds and carpets, or more complex modifications, such as a barrier-free bathroom or entrance to the house.

The PT also performs upper limb therapy, including fine motor skills training, and, in cooperation with an OT, **helps meet the need to improve fine motor function and eliminate tremors**, which are key to mastering self-sufficiency: *«And I try to wash dishes. Drinking glasses and mugs. Not pots and heavy things. I don't have strength in my fingers. I can pick it up, but then I can't hold it»* (Client ŠA3). Through overall activation, including the upper limbs, brain plasticity is supported, which also affects cognitive functions.

**The need to improve cognitive functions** is manifested in clients with acquired brain damage involving speech, memory, attention, concentration, information processing speed, spatial orientation, as well as planning, organizing, decision-making, and multitasking. For these issues, the OT focuses on functional training, which is adapted to the specific needs of the client within their home environment and focuses on a variety of effective compensatory strategies. A PT participates in improving cognitive function through specific exercises and activities, including the so-called dual-tasks. A dual-task can be performing a movement task, e.g., carrying a cup of water, while at the same time performing a cognitive task, e.g., listing the months of the year backward. Based on the

expressed needs of clients, PTs include various games, tasks, and activities to train memory and other cognitive functions: *«…and those tasks. Oh, that was great. She still had other tasks, and she was checking me, so I knew I had to do them»* (Client HBZ2). A PT and an OT also often recommend suitable publications and materials for cognitive function training and help with setting up an optimal daily routine, which includes regular activities to strengthen damaged functions. An SW is also involved in supporting cognitive functions by providing information about available services and how to support things like cognitive health, social interactions, problem-solving, and, equally important, emotional health. If specific cognitive therapy is needed, clients were provided contacts for a clinical psychologist or speech therapist as needed.

In the area of health, clients expressed a **need to improve sensory functions**. Similar to cognitive functions, sensory function training is part of the interventions described above and involves a PT, OT, and SW. The PT uses complex techniques involving multisensory stimulation of the central nervous system, e.g., the Vojta method for proprioceptive neuromuscular facilitation. If the client's condition requires it, they are advised to contact a general practitioner or other specialists.

Pain is also an important part of sensory perception and has a significant impact on the course of rehabilitation. A **physiotherapist participates in satisfying the need to be pain-free** through manual therapy, kinesiotherapy, and physical therapy, as well as education about movement habits and ergonomics. In addition to the physical aspects of pain, an OT focuses on adapting the environment, using aids, counseling, mental health support, and education in the field of self-sufficiency and pain prevention. Since many factors contribute to the perception of pain, an SW can assist with this need through emotional support, support in solving social problems, and informing clients about healthy lifestyles that can improve the situation.

A need that is linked to pain perception is **the need not to be fatigued** and **the need for quality sleep**. To relieve fatigue, long and quality sleep is essential. Good sleep contributes to the recovery of both physical and mental strength. To meet these needs, the PT performs relaxation techniques and breathing exercises in addition to kinesiotherapy. The OT suggests adjustments to the environment to facilitate better sleep and help to make the client's Activities of Daily Living more effective and less fatiguing. The SW can provide emotional support in dealing with situations that can increase stress and fatigue, as well as a mediator of available assistance or care services that can significantly relieve the client's work and stress load.

**2. The need for safety and security**

The need for safety and security for clients with acquired brain damage arises mainly from uncertainty and fear of a life-changing event and being faced with new challenges or situations and unfamiliar conditions. The need for safety and security on the emotional level is provided by the interprofessional team as a whole based on mutual cooperation, reliability, regular visits, effective communication, and harmony of transmitted information. Clients thus gain the necessary trust in the whole team and a sense of stability, which are key for the entire rehabilitation process: *«I consider you a good team because you agree with each other, pass on information, and advise me; it's good that you work together like this»* (Client MR12).

In the area of physical safety, clients report **the need for safe and secure walking**, which includes indoor walking, stairs, walking outdoors, and using transport: *«I'm afraid to take a step when the surface is uneven. I start to fall immediately»* (Client KV9). The need for safe and confident management of new activities, including all types of walking, is addressed by the PT, who provides training to master a given physical activity smoothly with an emphasis on gradual adaptation not only of the musculoskeletal system but also of the cardiovascular and other systems. The physiotherapeutic intervention includes longitudinal monitoring of postural locomotor functions and evaluation of the risk of falls in each client, as well as training locomotion using various aids. In this area, cooperation with an OT is crucial, who, based on an evaluation of the client's residence, an evaluation of barriers to movement, and other risks in the residence, recommends aids for safe walking, including suitable footwear, suggests modifications to the residence to prevent injuries or falls and thus provide the client with a safe home environment.

Another part of the need for safety and security is **the need for economic security**. This need is initially satisfied mainly by the client's family in close cooperation with the SW: *«We applied for a care allowance; I only get a pension. I don't pay anything; my daughter and wife take care of that»* (Client KF4). The SW helps the client to orient themselves in their existing social system, provides information about social benefits, helps with the preparation of documents, or accompanies clients to the relevant institutions.

The SW also serves as support for the **need for better communication with the authorities** by instructing the client on how to complete documents and applications correctly, how to communicate effectively with the authorities, and helps respond to questions so that the client's needs are properly understood and addressed: *«Helping with writing applications and submitting them, is good. Having (the SW) come them with the papers also»* (client KV9).

**3. The need for self-sufficiency**

Clients value the need for self-sufficiency since it allows them to carry out normal daily activities independently and maintain independence in personal

care. The role of the OT is key in addressing this need. Their task is to help the client achieve the maximum possible self-sufficiency, independence, and societal participation. The OT continuously evaluates the client's functional abilities with regard to the performance of Activities of Daily Living and Instrumental Activities of Daily Living, as well as their degree of self-sufficiency in the home environment. OTs used standardized diagnostic tools, such as the Functional Independence Measure or the World Health Organization Disability Assessment Schedule 2.0. A PT uses kinesiotherapy to influence the musculoskeletal system, which enables the OT to maximize the development of the client's potential. The OT practices everyday activities, suggests activity modifications, facilitates barrier-free modifications to the home-based, and recommends appropriate compensatory aids to promote independence and reduce the need for family help: «The occupational therapy at home *was good. It's great that the OT can look in the kitchen and advise me on how to prepare a potato or use clothespins; it doesn't take much; I just grasp things differently, and then I can do it. But they have to know how to do it. That's important, and not just anyone can show you these things»* (Client MR12). Here, the role of the SW becomes more important, who, in cooperation with an OT, provides clients with comprehensive advice for suitable aids or home modifications. If available, and if interested, they can mediate financing through contributions and other social support mechanisms.

Part of the need for self-sufficiency is also **the need for independence in terms of employment or a place to live**. To meet this need, the SW cooperates with the OT. An SW provides counseling on matters related to employment and social housing. The OT complements counseling with occupational diagnostics, pre-work rehabilitation, and the recommendation of technical aids. If the client obtains social housing, the OT helps with adapting the new environment to ensure safety and functionality with regard to the client's needs: *«That you explained to me is helpful; I already know what I'm getting into. I also know that if I need help with the apartment, I can get in touch, and you'll help me»* (Client RM7).

**4. Need for help**

The need for help also includes family and professional help. In the area of **the need for family help**, PTs, OTs, and SWs can provide help to family members in the form of professional support and help clients gain greater self-sufficiency and independence.

**The need for professional physical therapy** is addressed by the PT as part of the coordinated in-home rehabilitation effort provided by the team. Regrettably, after the three-month interprofessional team intervention, clients often go without subsequent physical rehabilitation, even though their functional condition still requires physiotherapy: *«As soon as you stopped coming, my progress stopped. I tried to exercise, but it was not as much as I did with you. That was different»* (Client ML14). The PT can support clients by providing information on the availability of outpatient physiotherapy, spa treatments, or stays in a rehabilitation institute.

**The need for professional social worker assistance** is most evident in connection with the need for economic security. An SW provides clients with information on social benefit programs, especially care allowances, mobility allowances, pensions, and getting a special entitlement pass, i.e., TP, ZTP, or ZTP/P card (severe disability, extremely disability, or extreme disability with the need for a guide, respectively). In this area, the SW also helps with the preparation of documents, filling out applications, and, exceptionally, accompanying clients to the relevant authorities. An SW is perceived by clients primarily as a source of psychological and informational support, while the main function of the SW is to provide counseling services: *«I think you are doing your job well; in my case, you also offer important psychological support, I would say that I could talk about things with someone I better remember it»* (Client LM10).

Furthermore, in the home environment, SWs can examine social integration needs, offer social and legal counseling, and deal with social rehabilitation. They provide information on social housing entitlements and employment opportunities. They also connect clients with services and professionals in medical and non-medical areas and offer individual planning, social management, and prevention programs to improve the client's quality of life. The aim of the professional SW is to ensure client independence and facilitate their integration back into society.

In connection with the need for professional SW assistance, clients often mention **the need for timely social security assistance**. During the three-month coordinated rehabilitation team intervention, SWs assist with applications for social benefits, although clients often perceive the process as being very slow: *«Don't even talk to me about this. We applied in January, and since then, nothing. They just keep sending registered letters that the process was interrupted and has to start again; so, you just keep running to the post office, and nothing»* (Client BP21). There is also the need to obtain a disability (ZTP) card, which especially helps with parking at the doctor's office. Often, it takes months before clients receive these cards. Unfortunately, neither the team nor the SW has the ability to speed up this process in any way.

Satisfying the **need for help from a professional occupational therapist** is key to meeting the need for self-sufficiency. An OT focuses on supporting clients in their daily lives in order to improve their quality of life and promote social participation.

Depending on the current state of health, clients also describe the **need for other professional help,** such

as from a neurologist, rehabilitation doctor, psychologist, psychiatrist, speech therapist, allergist, urologist, ophthalmologist, and prosthetist. Physiotherapists, OTs, and SWs provide advice and assist clients in contacting a general practitioner (GP). They also inform the GP about the client's current health status and can recommend appropriate specialists for the client. The whole interprofessional team can also support clients with information on the best solutions for their health issues and mediate contact with specific experts.

Among the needs for professional help, clients also express the **need for professional help in the field of other services**: *«We may need to contact a caregiver or someone who could come here from time to time to clean, help, and shop. Not now necessarily, but maybe it will be needed in the future»* (Client RM7). An SW provides information regarding these services in the local area, and provides information about assistance services, medical transport services, educational services, and more. They also provide contact information for specific organizations or companies.

Clients also express **the need for information,** which the team addresses together during the three-month intervention. The team provides clients with comprehensive information related to acquired brain damage according to their current needs.

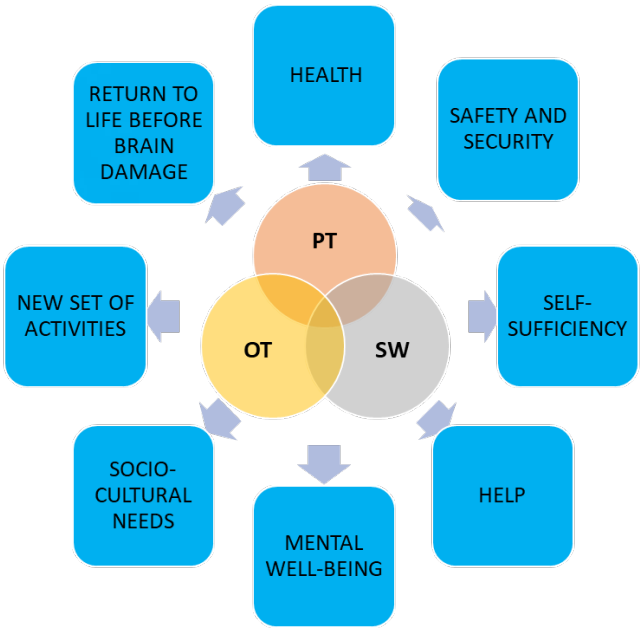


**Figure 1. Addressing the needs of clients with acquired brain injury by an interprofessional team during coordinated in-home rehabilitation; Source: Own research.**

### 5. The need for mental well-being

The need for mental well-being significantly affects the overall rehabilitation process. It includes the need for mental health, the need not to be alone, the need for love and belonging, the need not to feel fatigued, and the need for self-esteem and self-realization. The need for psychological well-being is initially managed by the family through emotional and social support, the creation of a stable family environment, the promotion of self-esteem, and a healthy lifestyle. The need for mental health is closely related to physical health and fatigue, which is mainly addressed by the PT in cooperation with an OT, who helps clients find new activities to enhance mental well-being. Mental well-being is also addressed by the team SW, who is often perceived by clients as an important source of psychological support: *«You supported me mentally, yes, I managed it at the beginning, and then it fell on me, I just thought, what am I doing here… and then you came and talked to me, you really supported me»* (Client ŠA3). An SW also helps to address the need for self-esteem and self-fulfillment in the form of counseling and mediation with assistance organizations since clients often associate self-realization with adapting to a new situation and looking for ways to find meaning in life through work, education, and leisure activities.

### 6. Socio-cultural needs

Socio-cultural needs are linked to the need for psychological well-being. Family, friends, neighbors, and work colleagues, as well as the PT, OT, and SW, are involved in fulfilling these needs. In the first weeks after returning home, clients often only associate with their immediate family and meeting with the interprofessional team represents a social event for them. Trust in the whole team is gradually built; clients look forward to these meetings and often ask for more frequent visits: «Yes, the talk was nice; it's *also a kind of psychological support. He could go out more often; I mean it in a good way. I would be glad, also for my dad's sake, that he talks to someone like that. It's a kind of relaxation»* (daughter of Client KF4).

Because of regular visits, clients from a partnership with team members, which is motivational for maintaining contact with the outside world: *«He (physiotherapist) helped me a lot, I enjoy him as a person, I have something to talk to him about, about work, about the world… it's just very cool»* (Client LM10). Subsequently, clients express the need for social, cultural, and leisure activities that promote social health and integration into society. Here, the support of an SW is helpful; they can provide information about the various services available in the client's area.

**7. The need to return to life as it was before brain damage**

The desire to return to «normal» is the primary need at which all other needs are directed. The interprofessional team tries to address this primary need by fulfilling all the needs described above.

**8. The need for a new set of activities**

If full recovery is not possible, the OT will teach the client compensatory strategies that will allow them to cope with everyday life in the best way possible. The interprofessional team helps the client adapt to their new living conditions and find new life activities and interests in accordance with the client's current abilities to help the client experience more joy and satisfaction from life. Clients are also provided with information about clubs, education opportunities, and organizations associated with leisure activities.

## DISCUSSION

Our research shows that PTs, OTs, and SWs should be involved in meeting the needs of clients with acquired brain injury at home, according to the type of need. Each of these professionals brings a specific skill set and specialized knowledge that complement each other and work synergistically to improve the quality of life of clients. A PT focuses on restoring motor functions, reducing pain, and preventing complications [7]. The OT focuses on the client's self-sufficiency in everyday activities, evaluates the home environment, and suggests rehabilitation aids [9]. The SW provides psychological support, helps with solving social problems, and facilitates access to important governmental and other social and healthcare services [4]. All client needs are interconnected, and managing them cannot be completely divided into competencies based on areas of expertise. Just as the perceived needs of clients are intertwined, so is the cooperation of the interprofessional team. Only through mutual and coordinated cooperation between interprofessional teams and their clients and the clients' families can comprehensive management of client needs be addressed: *«You worked well together. I can see that you are a well-coordinated team. You cooperate well with each other and with me»* (Client MR12).

Team home visits bring a number of benefits to clients and their families. A study found that clients were more willing to articulate their personal goals and problems in their natural home environment [15]. Clients do not have to spend time traveling to specialists, which saves time and money and reduces stress. In addition, clients feel safe in their home environment, which positively affects their motivation for rehabilitation. As Client BV15 noted: *«The exercise was fine, as long as it was at home. Because you can use what is already at home. No need for expensive gadgets.»* Coordinated in-home rehabilitation is also effective because it eliminates duplicate activities and provides comprehensive client care [8]. As Client ŠA3 confirms: *«It's better that you go home and work together like this. If I had to go to every specialist separately and make appointments everywhere and then explain my situation again and again, it would really be a waste of time.»* In addition to the professional care provided by the interprofessional team, clients greatly appreciate the psychological support and social benefits: *«It was mainly mental for me; it helped that I had to meet new people»* (Client KV9). Regular visits, motivational tasks, and social interactions increase the quality of life of clients and promote their inclusion back into society [2].

Despite the team's efforts to meet the needs of clients, in practice, barriers often appear that can make it challenging to achieve the set goals and require searching for new solutions (Fig. 2). Clients wanted to be informed about their condition, its course, subsequent rehabilitation, available services, etc., even before returning to their home environment: *«I think there should be more education prior to a patient being discharged home. Because neither the patient nor the family knows what to expect»* (Client RM19). Clients also reported disruptions to their feelings of a «safe space» in their home environment, especially during the first visit of the entire interprofessional team at once: *«That you all came for the first time, too many sensations at once. And that it was so soon after coming home, that I wasn't acclimated»* (Client HBZ2). To increase the comfort of clients, it would be advisable if they met with the team coordinator before the first team visit, either during hospitalization or in the first days after returning home. The coordinator can discuss the goals of the team and the organizations that will be utilized with the client and the family; this should help orient the client regarding the team's function, goals, and responsibilities. The client would also be less stressed by already knowing one person on the team during the first visit of the entire interprofessional team.

The need for social stability is very important for clients when they return home. Long waiting times, complex applications for ZTP cards, and other benefits are often overwhelming. To improve this, the clients propose the use of readily available, time-limited ZTP cards as well as financial support to cover the initial costs of care, which could be issued by the attending physician upon discharge from the hospital, e.g., a disability (ZTP) care lasting six months with extensions available as needed

for their health condition: *«If I could, I would recommend that the ZTP card be issued by the doctor who discharges you from the hospital, stating that it is limited in time and then if he invites me in half a year/a year for a check-up, they should take it away from me. But if you need it on discharge, you shouldn't have to wait»* (Client ŠA3).

The client's need for physiotherapy is usually sufficiently met during the three-month intervention, but after its completion, most clients remain without subsequent physiotherapy, even though they have other types of rehabilitation available: «*I don't have rehabilitation, it bothers me. Now I miss it. Overall, I miss the rehabilitation»* (Client RM19). Without the availability of follow-up rehabilitation, the client's progress is often lost or reversed. According to the Ministry of Health of the Czech Republic, the rehabilitation process should be individually adapted to the needs of each client and should continue as long as it brings improvement (Ministry of Health of the Czech Republic, 2010). When looking at the perception of health status during the five years following a stroke, a study found that insufficient rehabilitation was the main factor influencing the health status reported by clients [1]. In order to increase the quality of life of clients, it is necessary to introduce a systemic solution in the form of the Act on Coordinated Rehabilitation, which will ensure the continuity of rehabilitative care [8, 10]. Only such a system has the potential to significantly improve the quality of life of people with acquired brain damage and support their social inclusion.

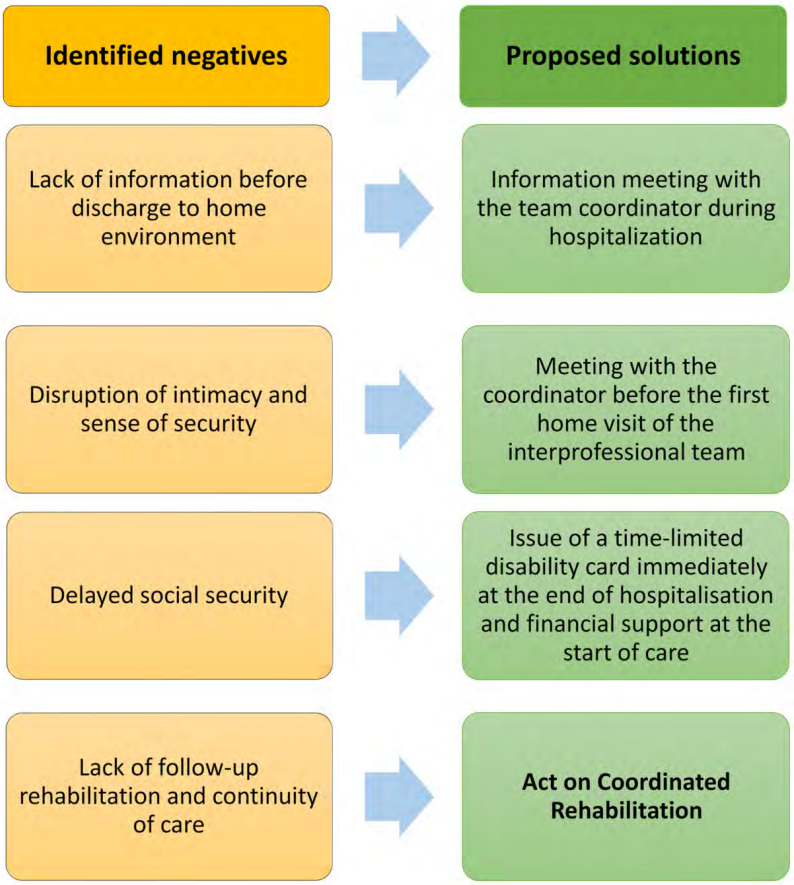


**Figure 2. Solutions for identified failure in meeting the needs of clients with acquired brain injury in the home environment; Source: Own research.**

## CONCLUSIONS

Our research describes how the members of an interprofessional team consisting of a PT, an OT, and an SW work together to meet the needs of clients with acquired brain damage. The team is the foundation of a three-month coordinated in-home rehabilitation intervention. Our study also identified both positives and negatives associated with the intervention, and we included proposals for specific issues. Meeting the needs of clients after brain damage requires a comprehensive and coordinated approach that goes beyond the boundaries of each individual profession. Interprofessional cooperation is essential to ensure optimal rehabilitation while addressing the broadest range of client needs during in-home rehabilitation.

***Perspectives for further research.*** Identifying and addressing client needs after acquired brain injury is a prerequisite for further development of the care system. Information on needs can serve as a basis for the

development of new interventions, the optimization of existing services, and the improvement of care coordination. It is important to focus not only on the individual needs of clients but also on the systemic factors that may affect their ability to meet those needs. Sharing information about needs across healthcare, government, and service provider systems can lead to the identification of gaps in care and support the development of innovative solutions. Regular evaluation and improvement of the care system based on client feedback is key to ensuring high-quality and effective care.

## COMPLIANCE WITH ETHICAL REQUIREMENTS

All personal information gathered during this study was processed in compliance with the European Parliament and Council's Regulation EU 2016/679 of 27 April 2016 on the protection of natural persons concerning the processing of personal data and on the free movement of such data (General Data Protection Regulation, GDPR). The research was approved by the Ethics Committee of the Faculty of Health and Social Sciences of the University of South Bohemia in České Budějovice. The study used the basic bioethical norms of the Helsinki Declaration of the World Medical Association on Ethical Principles (amended in 2008), the General Declaration on Bioethics Convention on the Rights of Man, and Biomedicine (1997).

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## AUTHOR CONTRIBUTIONS

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*Appendix 1*

**Characteristics of the research cohort**

| Client | Age | Sex | Diagnosis | Clinical picture |
|---|---|---|---|---|
| KL1 | 77 | M | iCVA | right-sided hemiparesis |
| HBZ2 | 52 | F | iCVA | left-sided hemiparesis |
| SHA3 | 71 | F | iCVA | left-sided hemiparesis |
| KF4 | 72 | M | iCVA | left-sided hemiparesis |
| CM6 | 78 | F | iCVA | right-sided hemiparesis |
| RM7 | 82 | F | iCVA | left-sided hemiparesis |
| RH8 | 73 | F | iCVA | left-sided hemiparesis |
| KV9 | 70 | M | iCVA | left-sided hemiparesis |
| LM10 | 70 | M | iCVA | right-sided hemiparesis |
| TM11 | 74 | F | iCVA | left-sided hemiparesis |
| MR12 | 48 | M | hCVA | left-sided hemiparesis |
| KT13 | 42 | M | craniotrauma | left-sided hemiparesis |
| ML14 | 58 | M | iCVA | left-sided hemiparesis |
| BV15 | 63 | M | iCVA | right-sided hemiparesis |
| HJ16 | 65 | F | iCVA | right-sided hemiparesis |
| RB17 | 77 | F | iCVA | left-sided hemiparesis |
| KL18 | 35 | M | polytrauma | left-sided hemiparesis |
| RM19 | 69 | F | iCVA | left-sided hemiparesis |
| KJ20 | 86 | M | iCVA | left-sided hemiparesis |
| BP21 | 42 | F | hCVA | tetraplegia |

CVA = cerebrovascular accident (stroke); iCVA = ischemic stroke; hCVA = hemorrhagic stroke; Source: Own research.

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## *Резюме*

### ЗАДОВОЛЕННЯ ПОТРЕБ КЛІЄНТІВ ІЗ НАБУТИМИ УШКОДЖЕННЯМИ МОЗКУ ЧЛЕНАМИ МІЖПРОФЕСІЙНОЇ КОМАНДИ В КОНТЕКСТІ КООРДИНОВАНОЇ РЕАБІЛІТАЦІЇ НА ДОМУ



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**Вступ.** Обмеження функціональних можливостей клієнтів із набутими ушкодженнями мозку впливають на їхню самостійність і виконання щоденних справ, що створює навантаження як для клієнта, так і для їхніх сімей. Тому важливо аналізувати потреби кожного клієнта та шукати відповідні рішення, особливо після повернення клієнта додому.

**Мета.** Метою цього дослідження було визначити способи співпраці фізіотерапевта, ерготерапевта та соціального працівника в складі міжпрофесійної команди для задоволення потреб клієнтів із набутими ушкодженнями мозку під час координованої реабілітації на дому.

**Матеріали та методи.** Двадцять клієнтів із набутими ушкодженнями мозку отримали доступ до міжпрофесійної команди, до складу якої входили фізіотерапевт, ерготерапевт і соціальний працівник, у межах програми координованої реабілітації на дому. Дослідження використовувало якісну стратегію дослідження та інтерв'ю для визначення потреб клієнтів. Дані аналізувалися методом аксіального кодування за допомогою програми ATLAS.ti. Результати виявили, як найкраще використовувати професійні навички кожного фахівця для задоволення цих потреб.

**Результати.** Міжпрофесійна команда координованої реабілітації на дому змогла задовольнити більшість потреб, висловлених клієнтами із набутими ушкодженнями мозку. Кожна спеціальність – фізіотерапевт, ерготерапевт і соціальний працівник – брала участь у задоволенні цих потреб у різному ступені. Однак потреби клієнтів існують як складна мережа, і їхнє задоволення не можна легко розподілити за окремими спеціалізаціями.

**Висновки.** Лише через взаємну та координовану співпрацю між членами міжпрофесійних команд з реабілітації в домашніх умовах можна ефективно задовольнити та вирішити потреби клієнтів із набутими ушкодженнями мозку та їхніх сімей.



***Ключові слова:*** **набуте ушкодження мозку, координована реабілітація, потреби клієнтів, догляд на дому**

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