

# Evidence-based healthcare: Bridging the gap between research and practice

Aleksandra Królikowska<sup>1,2,A–F</sup>, Robert Prill<sup>3,4,A–C,E,F</sup>, Miloslav Klugar<sup>5,6,A–C,E,F</sup>

<sup>1</sup> Physiotherapy Research Laboratory, Faculty of Physiotherapy, University Centre of Physiotherapy and Rehabilitation, Wrocław Medical University, Poland

<sup>2</sup> Evidence-Based Healthcare in Wrocław: A JBI Affiliated Group, University of Adelaide, Australia

<sup>3</sup> Center of Orthopaedics and Traumatology, Brandenburg Medical School Theodor Fontane, University Hospital Brandenburg an der Havel, Germany

<sup>4</sup> Evidence Based Practice in Brandenburg (EBB): A JBI Affiliated Group, Brandenburg Medical School, Brandenburg an der Havel, Germany & University of Adelaide, Australia

<sup>5</sup> Cochrane Czech Republic, Czech Republic: A JBI Centre of Excellence, Czech GRADE Network, Institute of Health Information and Statistics of the Czech Republic, Prague, Czech Republic

<sup>6</sup> Center of Evidence-based Education and Arts Therapies: A JBI Affiliated Group, Faculty of Education, Palacký University Olomouc, Czech Republic

A – research concept and design; B – collection and/or assembly of data; C – data analysis and interpretation;

D – writing the article; E – critical revision of the article; F – final approval of the article

Advances in Clinical and Experimental Medicine, ISSN 1899–5276 (print), ISSN 2451–2680 (online)

*Adv Clin Exp Med.* 2025;34(2):139–147

## Address for correspondence

Aleksandra Królikowska

E-mail: [aleksandra.krolikowska@umw.edu.pl](mailto:aleksandra.krolikowska@umw.edu.pl)

## Funding sources

None declared

## Conflict of interest

None declared

Received on January 22, 2025

Reviewed on February 6, 2025

Accepted on February 9, 2025

Published online on February 13, 2025

## Abstract

The establishment of the first JBI Affiliated group in Poland at Wrocław Medical University marks a significant advancement in evidence-based healthcare (EBHC) nationally. This editorial explores the evolution of EBHC and the critical role of JBI in driving its progress. Founded in 1996 as a research institute at the Royal Adelaide Hospital in South Australia and now based at the University of Adelaide, JBI has emerged as an international leader in evidence synthesis, transfer and implementation. Its Feasibility, Appropriateness, Meaningfulness, and Effectiveness (FAME) framework highlights the feasibility, appropriateness, meaningfulness, and effectiveness of healthcare practices, ensuring that decisions are patient-centered and contextually relevant. JBI's global collaboration network encompasses over 85 entities, with 23 located in Europe, emphasizing the importance of cultural inclusivity and international partnerships. Recent initiatives include translating the JBI Model of into Polish, German and Czech, linking global knowledge to local contexts, and enhancing understanding for professionals and students alike. This editorial also underscores the collaborative achievements of JBI entities in Wrocław, Brandenburg an der Havel, Prague, and Olomouc. These partnerships have propelled regional implementation, research and education, fostering a shared vision for elevating healthcare quality. Launching a new EBHC section in the *Advances in Clinical and Experimental Medicine* journal is a significant step forward, inviting global contributions and stimulating innovation and knowledge sharing in EBHC. The presence of a JBI Affiliated group at Wrocław Medical University symbolizes a transformative commitment to excellence and collaboration. It sets new benchmarks for healthcare in Poland and beyond while reinforcing the global mission of evidence-based practice.

**Key words:** collaborative research, evidence-based practice, internationality, translational medical research

## Cite as

Królikowska A, Prill R, Klugar M. Evidence-based healthcare: Bridging the gap between research and practice.

*Adv Clin Exp Med.* 2025;34(2):139–147.

doi:10.17219/acem/201184

## DOI

10.17219/acem/201184

## Copyright

Copyright by Author(s)

This is an article distributed under the terms of the

Creative Commons Attribution 3.0 Unported (CC BY 3.0)

(<https://creativecommons.org/licenses/by/3.0/>)

## Introduction

Establishing the first JBI Affiliated Group in Poland at Wrocław Medical University marks a pivotal moment in advancing evidence-based healthcare (EBHC) nationally. By aligning with JBI, previously known as the Joanna Briggs Institute, Wrocław Medical University commits to the highest standards of EBHC. It signifies a commitment to innovation, excellence and patient-centered care, catalyzing positive change in the area and setting a new benchmark for healthcare quality in Poland.

Today, professional practice is acknowledged as requiring a foundation of sound evidence combined with expertise gained from education and experience. Healthcare professions and education now emphasize research-based evidence, a shift that began only after the 1950s. Previously, practices relied heavily on handed-down knowledge from experienced professionals, often unevaluated. Early attempts to test treatment effectiveness lacked the scientific rigor now considered essential.

The JBI Collaboration is comprised of over 80 entities that collaborate worldwide. The closest JBI entities to Wrocław are Brandenburg an der Havel (Germany) and Prague and Olomouc (Czech Republic). These entities are the closest not only geographically but also because of their ongoing collaboration. The present editorial focuses on a comprehensive exploration of EBHC and highlights the collaborative efforts and insights from the JBI centers in Wrocław, Brandenburg an der Havel, Prague, and Olomouc.

## The evolution of evidence-based healthcare

Evidence-based healthcare evolved from evidence-based medicine (EBM) in the early 1990s. In 1990, Professor Dr. Gordon Guyatt from McMaster University (Hamilton, Canada) introduced Scientific Medicine, a bedside teaching method inspired by Professor Dr. David Sackett. His colleagues reacted negatively, rejecting the idea that current practices were unscientific. In 1991, Guyatt renamed the curriculum Evidence-Based Medicine and published it. Evidence-based medicine asserts that medical procedures and medications must be supported by evidence of effectiveness, cost-efficiency and safety. While the term emerged in 1991, foundational work began earlier.<sup>1</sup>

The EBM movement also owes much to the pioneering work of Scottish physician and epidemiologist Dr. Archibald Cochrane, who advocated basing medical decisions on rigorous research and data. In 1972, Cochrane's lecture introducing his monograph "Effectiveness and Efficiency: Random Reflections on Health Services" highlighted the lack of evidence for medical treatment effectiveness in the UK, criticizing it as a waste of resources and a cause of unnecessary suffering.<sup>2</sup> The monograph, known by its short title "Effectiveness and Efficiency," became

a bestseller and captured the attention of physicians, medical administrators and public health officials in the UK, the USA and many other countries. That seminal text supported the development of evidence-based practice ideals in medicine and other health disciplines.<sup>3</sup>

Building on this foundation, Professor Alan Pearson greatly enhanced the concept by expanding the scope of evidence-based practices from medicine to encompass all areas of healthcare. As a leading figure in the development of EBHC, Pearson advocated for the inclusion of all health professions in the evidence-based approach, ensuring that EBHC became a comprehensive model for enhancing care across disciplines, from nursing to allied health fields.

Pearson's concerns about the lack of an evidence base for patient care began in the late 1970s and involved nursing, as he was a nurse working at that time in Ward 33 of North Tees General Hospital in Stockton-on-Tees in the UK. The high incidence of pressure sores among orthopedic patients in his ward led him to research the latest treatment methods and implement the most effective one. He observed that many colleagues preferred seeking peer advice over using well-researched evidence. In the early 1980s, as head of UK's first nurse-led unit for post-acute patients, Pearson became even more convinced that nursing practice should be evidence-based. At that time, little research on clinical nursing problems was being utilized, and care was primarily based on the clinical opinions of senior nurses and passed down through generations.<sup>4</sup>

While Cochrane and Pearson were exploring evidence-based practice, the prevalent clinical trials utilized comparison groups. Despite efforts to improve measurement and reduce bias, the focus remained on matching patients with similar characteristics, which limited the accuracy of the findings. Cochrane argued that the only way to improve accuracy was through randomized controlled trials (RCTs), namely, randomly assigning patients to groups to eliminate bias. He called RCTs "a very beautiful technique" for testing whether one treatment is better than another, expressing results as probabilities, and placing RCTs at the top of his evidence hierarchy.<sup>4</sup>

It has to be highlighted that the ideas behind the RCTs that Cochrane promoted in "effectiveness and efficiency" were not new. The necessity of a research-based approach to medicine and the significance of randomization in assessing effectiveness was already emphasized in the mid-19<sup>th</sup> century by French scientist Pierre Louis. While modern clinical trials are more advanced and rely on statistical analysis rather than Louis's simple arithmetic, the core principle of randomization remains unchanged.<sup>5</sup> Nevertheless, Louis's random method for enhancing efficiency did not spark interest in the medical community until 1946 when the *British Journal of Medicine* announced the first UK RCT on human subjects for a new drug, streptomycin, initiated by Sir Austin Bradford Hill.<sup>6</sup> Still, it is widely considered that the first RCT was conducted by James Lind, a Scottish physician. Through his pioneering experimental study, Lind

demonstrated the therapeutic value of fruits containing what was later identified as vitamin C in treating scurvy, setting a foundational example for clinical research methodology.

Although Cochrane strongly advocated for RCTs as the best way to determine treatment effectiveness, he recognized their limitations and challenges. He acknowledged that while double-masked trials reduced bias, RCTs were not the only valuable research design. Still, he believed they offered the most accurate information for medical administrators choosing between alternatives. However, Cochrane emphasized that conducting more trials alone was insufficient; their findings needed to be readily accessible to clinicians to impact practice.<sup>4</sup>

Cochrane recognized that research findings would more effectively influence clinical practice if systematically reviewed and aggregated. Starting in 1970, Dr. Ian Chalmers conducted the first systematic review of controlled trials (to our current standards), which Cochrane hailed as a milestone in evaluating care. This success led to 2 influential books in 1989, profoundly impacting policy and practice. The findings became a basis for decision-making by professionals and laypeople, while scientists benefited from insights guiding further research.<sup>7</sup>

Following the success of the review, Chalmers and others argued that funding was needed to establish a Cochrane Centre to undertake a range of systematic reviews. While some clinicians questioned the value of secondary research, the Cochrane Collaboration was founded in the 1990s, building on Cochrane's work and influence. It has since led the development and promotion of evidence-based medical care and remains a leader in designing methodologies for systematic reviews of RCTs. The establishment of the current Cochrane Collaboration can be credited to 3 people: Dr. Tom Chalmers, Dr. Ian Chalmers and Dr. Murray Enkin. Today, the collaboration connects review groups worldwide and provides training and support.<sup>4</sup> For example, Cochrane Poland – a branch of the Nordic Cochrane Centre in Copenhagen, hosted by the Systematic Reviews Unit – Polish Cochrane Branch, was established in 2015 at the Faculty of Medicine of the Medical College of the Jagiellonian University in Cracow.<sup>8</sup>

The evidence-based movement began gaining momentum in the early 1990s when several agencies became involved in systematic reviews. Additionally, the Campbell Collaboration, established in the USA in 2000, should be mentioned. The international collaboration focuses on evidence of the effects of social and educational policies and practices by service providers, policymakers, educators, their students, and professional researchers. The Cochrane Collaboration established the standard for most other international collaborations. Thus, the focus was primarily on the systematic review of trials for specific medical conditions, client groups or particular interventions by health professionals.<sup>4</sup>

When discussing those who played a crucial role in formalizing and expanding the concept of EBM, Sackett must be acknowledged in more detail. As one of the key figures

in developing EBM at McMaster University, Sackett was instrumental in establishing evidence-based practice as a core principle in medical education and healthcare. His work provided the framework for integrating clinical expertise with the best available research evidence.<sup>9</sup> In 1981, articles from the *Canadian Medical Association Journal* by Sackett, Dr. Brian Haynes, Dr. Peter Tugwell, and Dr. Victor Neufeld introduced a method for physicians called “critical appraisal.” They aimed to teach not only how to understand literature but also how to apply new information at the bedside.<sup>10</sup>

Other notable contributors to the development of EBM include numerous researchers and clinicians whose efforts have greatly advanced the field.<sup>10–15</sup>

## The role of JBI in advancing evidence-based healthcare

The JBI was established as a research institute by Pearson in 1996. It was based at the Royal Adelaide Hospital in South Australia and made possible through a grant from the Royal Adelaide Hospital Research Foundation. In recognition of this support, the institute was named after Mrs. Joanna Briggs, who served as the hospital's first Matron in 1855. Since 2010, JBI has been integrated into the Faculty of Health and Medical Sciences at the University of Adelaide.<sup>4</sup>

JBI, based at the University of Adelaide, is an international collaboration of health scientists, professionals and researchers dedicated to promoting and supporting evidence-based decision-making that improve health and healthcare service delivery. The JBI's vision is “Better evidence. Better outcomes. Brighter future.” Its mission is to promote and support EBHC.<sup>16</sup> What distinguishes JBI is that it is an organization involved not only in evidence synthesis but also in the transfer and utilization of evidence for the clinical decision-making process. Pearson's vision has always been to bridge academia and practice, making a reality of what the theoreticians are saying.

From the very beginning, international collaboration and global partnership were at the forefront of Pearson's mind. Through the JBI Collaboration (JBIC), JBI collaborates with universities and hospitals worldwide, ensuring that the research evidence we synthesize, transfer and implement is culturally inclusive and relevant to the diversity of healthcare internationally. The JBIC is comprised of JBI Centres of Excellence and JBI Affiliated Groups. Currently, it includes over 85 collaborating entities worldwide, with 23 located in Europe.

According to Pearson, the Founding Executive Director, and Professor Zoe Jordan, the current Executive Director, the main aim of JBI is to “get the appropriate information into the hands of those who determine health policy and deliver healthcare, as this is fundamental to improving healthcare delivery and health outcomes.”<sup>17</sup>

Pearson's path to founding JBI began well before the rise of the so-called evidence-based movement. His inspiration

stemmed from his time as a clinician in the UK, where he was influenced by philosophies that connected research with practice, sparking meaningful changes in nursing care.<sup>4</sup> His ambitious vision for JBI encompassed establishing global collaborating entities, training systematic reviewers, creating “Practice Information Sheets” (now known as Best Practice Information Sheets) for clinicians, and developing and delivering short courses on evidence-based nursing.<sup>4</sup> JBI aims to improve global health by providing point-of-care access to evidence databases, decision support systems, implementation, evaluation, and continuous improvement tools.

JBI defines EBHC as decision-making that considers the feasibility, appropriateness, meaningfulness, and effectiveness of healthcare practices.<sup>18</sup> This process is informed by the best available evidence, the context in which care is delivered, the individual patient, and the professional judgment and expertise of the health professional.<sup>18</sup> This approach is encapsulated in JBI’s FAME framework, which stands for Feasibility, Appropriateness, Meaningfulness, and Effectiveness. Feasibility is the extent to which an activity or intervention is practical and practicable. Clinical feasibility is whether or not an activity or intervention is physically, culturally or financially practical or possible within the given context. Appropriateness is the extent to which an activity or intervention fits with context or situation. Clinical appropriateness is about how the activity or intervention relates to the context in which the care is given. Meaningfulness refers to the significance a patient associates with an activity or intervention based on their experience with it. It encompasses personal experiences, opinions, values, thoughts, beliefs, and interpretations expressed by patients or clients. Effectiveness is the extent to which an activity or intervention achieves the intended effect.<sup>18–20</sup>

The logo of JBI effectively embodies its ideas and activities. Designed to represent the evidence-based movement and its connection to clinical practice, the logo was entrusted to Simone Lee. It was ultimately decided that a pebble dropping into water, creating ripples, is the apt metaphor for knowledge sharing and practice change. Today, the JBI red “pebble of knowledge” and its surrounding ripples are recognized worldwide as the organization’s trademark. This logo is prominently featured in all JBI publications, products and promotional materials, symbolizing the profound impact a single pebble can have. Additionally, each JBI entity has its logo that includes both JBI and the entity’s name (Fig. 1–3).

The original JBI Model of EBHC was published in 2005 and defined evidence-based practice as “clinical decision-making that considers the best available evidence, the context in which the care is delivered, client preference and the professional judgment of the health professional.”<sup>19</sup> Furthermore, this model has emerged as a crucial benchmark, showcasing JBI’s distinct and innovative strategy for conceptualizing and operationalizing EBHC. Consecutively, based on the results of citation analysis and a stakeholder engagement process, the model was updated.<sup>20</sup>



Fig. 1. Logo of the evidence-based healthcare in Wrocław: A JBI Affiliated Group



Fig. 2. Logo of the evidence based practice in Brandenburg: A JBI Affiliated Group



Fig. 3. Logo of the Czech Republic: A JBI Centre of Excellence

Pearson et al. emphasized the importance of EBHC as a process that not only identifies and addresses clinical or policy questions but also ensures that the knowledge generated is appraised, synthesized and effectively translated into practice. This approach focuses on delivering healthcare that is not only evidence-based but also effective, feasible, and meaningful for specific populations, cultures and settings.<sup>21</sup>

JBI highlights the importance of translational science, which bridges the gap between evidence and practice, ensuring that evidence is implemented in ways that positively impact health outcomes, health systems and professional practice. Moreover, JBI acknowledges the critical need to bridge an often-overlooked gap – the gap between the need for knowledge and its discovery – ensuring that the evidence generated aligns with real-world healthcare challenges and priorities.

In 2024, EBHC in Wrocław (EBHC-W): A JBI Affiliated Group, undertook the translation of the JBI Model into Polish (Fig. 4). Recently, the Evidence Based Practice in Brandenburg (EBB) – A JBI Affiliated Group also translated the model into German (Fig. 5). Earlier, entities in the Czech Republic had translated the JBI model into Czech (Fig. 6). These initiatives allow healthcare professionals, researchers and policymakers in these 3 countries to engage with the JBI Model of EBHC principles without language barriers, bridging the gap between global knowledge and local practice. By facilitating integration into the Polish, German and Czech healthcare context, the translation enhances understanding and ensures accurate implementation of the model. Translating the JBI Model into other languages has significant educational benefits, particularly for future healthcare professionals. Providing the model in their native language improves comprehension, encourages critical thinking and fosters



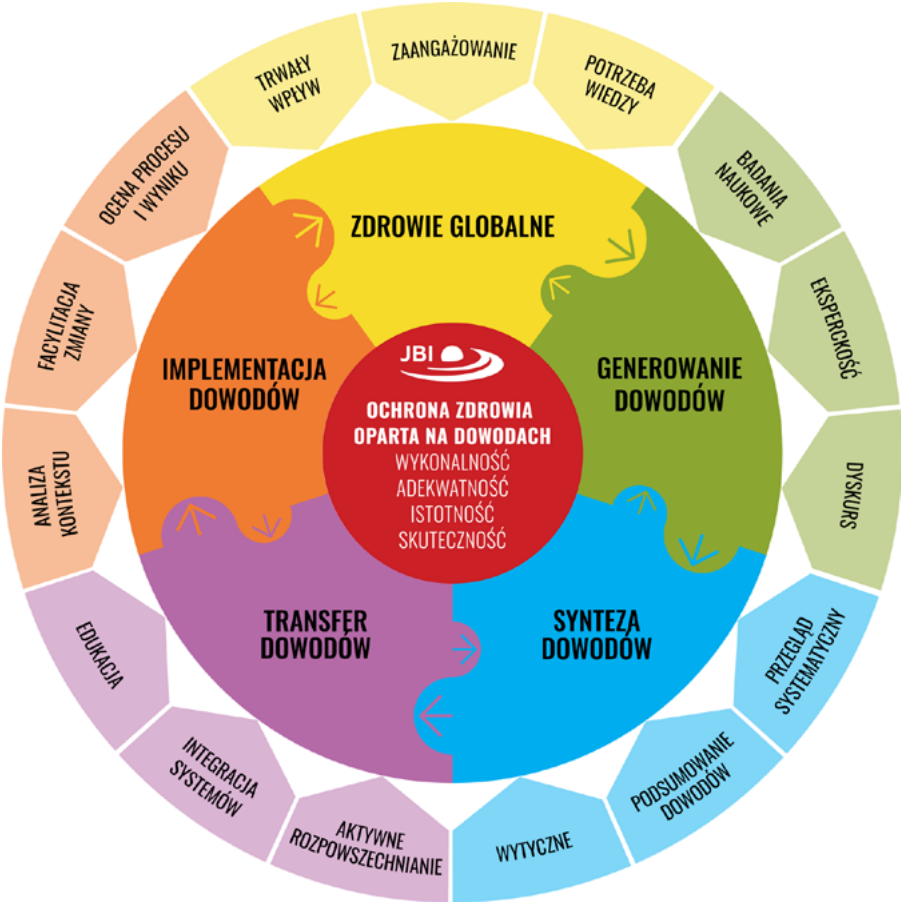


Fig. 4. Polish translation of the JBI model of evidence-based healthcare

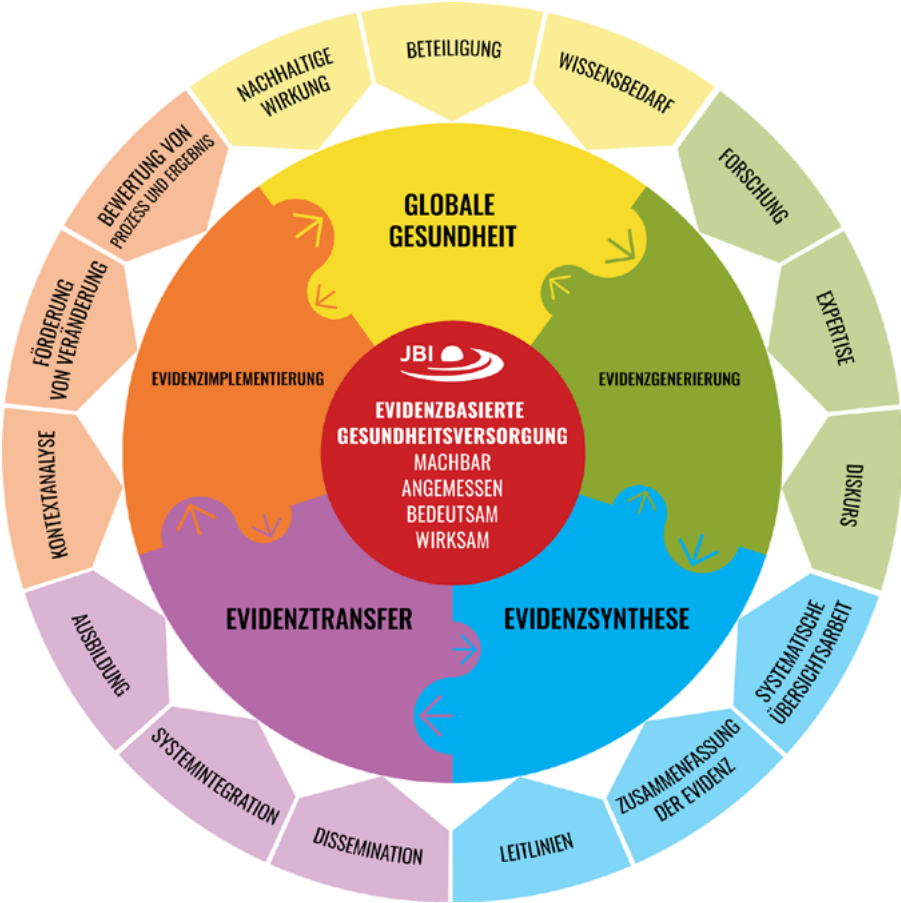


Fig. 5. German translation of the JBI model of evidence-based healthcare

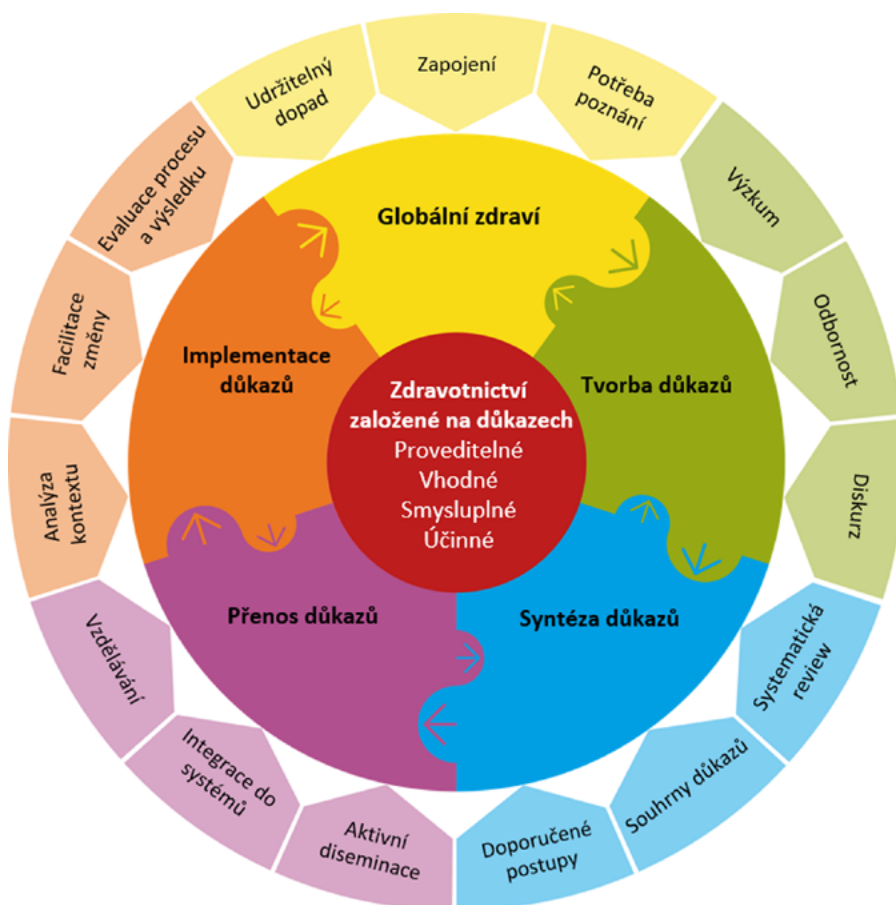


Fig. 6. Czech translation of the JBI model of evidence-based healthcare

engagement, enabling students to grasp its nuances and applications better. This inclusive education and professional development approach supports the JBI's mission to advance evidence-based practice and drive global healthcare improvement.

## Regional perspectives: The JBI entities in Wrocław, Brandenburg an der Havel, Prague, and Olomouc

The establishment of a JBI Affiliated Group at Wrocław Medical University has been one of the tasks financed under the university's 2024–2026 Development Strategy, titled "Wrocław Medical University in the Light of Scientific Excellence 2024–2026".

The Strategy mentioned above prioritizes enhancing the quality and international scope of scientific research, improving teaching standards and elevating the global recognition of Wrocław Medical University. As part of these efforts, establishing a JBI Affiliated group aligns with the University's objective of building partnerships with leading international research institutions. In 2024, dr. hab. Aleksandra Królikowska, a university professor, became the Proxy of the Rector of Wrocław Medical University for EBHC, leading to the establishment

of the EBHC in Wrocław (EBHC-W) Group. That year, the EBHC-W Group applied for and joined the JBI Collaboration, a process started by Królikowska, who also serves as the Group's convenor.

The EBHC-W: A JBI Group is dedicated to synthesizing, transferring and implementing evidence to enhance patient care and outcomes across diverse healthcare disciplines. The group's primary strength lies in its diverse and multidisciplinary team, which effectively fosters innovative interprofessional collaboration to tackle complex healthcare challenges. The EBHC-W: A JBI Group focuses on conducting systematic reviews, developing innovative methodologies and creating tailored dissemination strategies. Its primary goal is to apply the best available evidence, particularly within the Jan Mikulicz-Radecki University Hospital in Wrocław, while striving to broaden its international impact continuously.<sup>22</sup>

The Evidence-Based Practice in Brandenburg (EBB): A JBI Affiliated Group was established in 2023. The convenors – Dr. Robert Prill and Professor Dawid Pieper – lead a multidisciplinary group focusing on evidence synthesis and evidence implementation. Both have been involved in the European Network Grant COST CA17117, focusing on evidence-based research.<sup>23,24</sup> Within the project, they began collaborating with Dr. Miloslav Klugar. Prill finished the JBI Comprehensive Systematic Review Training Program at an entity led by Klugar. Both successfully applied

together with universities from Cracow and Split for an Erasmus+ Strategic Partnership Project focusing on Evidence Implementation under the leadership of the German team at Brandenburg Medical School. Despite pandemic-related difficulties, the “Evidence Implementation in Clinical Practice” (EICP) Project was successfully finished and the EBB team has been already involved in 32 implementation projects using the JBI Implementation Framework. Examples of successfully published best practice implementation projects are “Nutrition as Therapy – the Role of Dietitian Counseling”, “Intra-Articular Knee Injections in Patients with Primary Osteoarthritis in a Tertiary Clinical Setting”, “Cross-Disciplinary Advance Care Planning in Oncology and Palliative Care Amidst a Pandemic”, “Promoting Running as the Best Treatment for Lower Back Pain in Physiotherapy Practice”, or “Education of Adult Type I Diabetes Patients in a Diabetes Ward Setting”.<sup>25–29</sup> In 2024, the EBB organized a JBI Comprehensive Systematic Review Training Programme for the first time, with participants from Brandenburg an der Havel and Wrocław. The participants of the course, coming from various disciplines within healthcare, have already started working on their reviews.

The Czech Republic: A JBI Centre of Excellence (Czech JBI) was established in 2013 at Palacký University Olomouc. It was promoted to the status of “Centre of Excellence” in 2016 due to its activities in evidence synthesis, evidence implementation and research methodology. Dr. Miloslav Klugar and Dr. Jitka Klugarová, leaders of the Czech JBI, are members of several JBI method groups. They have trained over 200 health professionals in evidence synthesis methods and more than 100 in implementation methods, not only in the Czech Republic but also globally. Czech JBI contributed to the establishment and mentoring of other JBI groups in the region, including the Center of Evidence-Based Education and Arts Therapies: A JBI Affiliated Group at the Faculty of Education, Palacký University Olomouc (2021) and Evidence-Based Practice in Brandenburg – A JBI Affiliated Group (2023). The Czech JBI co-initiated an important discussion in the Czech Republic regarding the “National Trustworthy Guidelines,” which led the leaders of Czech JBI to establish the Cochrane Czech Republic and the Czech GRADE Network in 2018. 2018 was also the year when the pilot project “Clinical Practice Guidelines” received financial support from the Ministry of Health. Then, in 2023, the Ministry of Health of the Czech Republic established the National Institute for Quality and Excellence in Healthcare (NIKEZ), under which the Czech JBI, Cochrane and GRADE centers are currently hosted as 3 international pillars and guarantors of the robustness and trustworthiness of Czech National Guidelines.<sup>30</sup> The 3 Czech international centers won a bid in 2018 to host the most significant and largest event in the field of EBHC, the Global Evidence Summit (GES), which was successfully held in Prague in September 2024.<sup>31</sup> Klugar served as the Chair of the Scientific

Committee of GES. The center was successful in several research grants that supported 52 JBI implementation projects across 8 European countries. The center contributed to establishing the International Living Map for COVID-19 recommendations during the COVID-19 pandemic.<sup>32</sup> Currently, the center collaborates with numerous entities worldwide regarding evidence implementation, evidence-based practice and evidence-based research.

## Implementation and collaborative research achievements

The JBI entities from Germany, the Czech Republic and Poland have already participated in 1 collaborative implementation project, the results of which were published in 2024 in the *JBI Evidence Implementation* journal.<sup>28</sup> This implementation project aimed to promote running as an effective treatment for lower back pain (LBP) in an outpatient physiotherapy setting, addressing gaps in understanding the role of intervertebral disc water management. Conducted following the JBI Evidence Implementation Framework, the project employed an evidence-informed clinical audit and feedback strategy, resulting in significant improvements in compliance with key criteria and enhancing patient confidence in managing their condition through running.<sup>28</sup> The entities also published protocols in JBI Evidence Synthesis of the systematic review they initiated on the effects of physiotherapy interventions for home-based rehabilitation on physical function following primary total knee arthroplasty.<sup>33</sup> Currently, they are working on new joint scoping and systematic reviews and are planning further collaborative implementation projects.

With the professional background of the convenors from Wrocław and Brandenburg an der Havel, their collaboration has been deeply focused on advancing research in orthopedics, traumatology, sports medicine, and rehabilitation. In 2023, they co-authored an editorial titled “Why There is a Need to Improve Evaluation Standards for Clinical Studies in Orthopedic and Sports Medicine,” which launched a series of articles aimed at enhancing evaluation standards in these fields.<sup>34</sup> The series was published in 2023–2025 in *Knee Surgery, Sports Traumatology, Arthroscopy* (KSSTA) and the *Journal of Experimental Orthopaedics* (JEO), both official journals of the European Society of Sports Traumatology, Knee Surgery and Arthroscopy (ESSKA), a leading pan-European organization for knee surgery, arthroscopy and sports traumatology. By launching this series written by experts in given fields, the 2 journals sought to equip researchers with the tools and knowledge to produce high-quality studies that drive meaningful advancements in the field.

The first editorial by Prill, Królikowska and leading experts in orthopaedics and sports medicine emphasized the need for transparency, rigor and adherence to reporting guidelines, such as the Consolidated Standards of Reporting Trials (CONSORT), to address common issues

like inadequate randomization, unclear methodologies and poor result reporting.<sup>34</sup> Other co-authored articles offered valuable, practical insights on tackling these issues, such as how to prepare and register a study protocol, which checklists and guidelines help report research, how to verify the reliability of the measurement tool intended for study purposes, and how to apply patient-reported outcome measures (PROMs).<sup>35–38</sup> As an extension of their activities on the improvement of research in orthopedics, traumatology, sports medicine, and rehabilitation, Królikowska, Prill et al. recently explored and mapped the reporting practices and methodological quality in RCTs published in the KSSTA journal, focusing on identifying gaps in adherence to reporting guidelines and transparency.<sup>39</sup>

One of the editorials from the series mentioned above, co-authored by the representatives of JBI entities from Germany, Poland and the Czech Republic, precisely Prill, Królikowska and Klugarová, addressed the challenges and importance of implementing EBM in everyday clinical practice, particularly in orthopedics and sports medicine. It highlighted the need for integrating clinical expertise, patient preferences and high-quality evidence while overcoming barriers such as resource limitations, communication gaps among stakeholders and varying healthcare contexts.<sup>40</sup> Prill, Królikowska and Klugar have made significant efforts to promote systematic and scoping reviews, emphasizing the value of evidence-based research in rehabilitation, orthopedics and sports medicine, while advocating for new research that systematically builds on previous studies to address critical knowledge gaps and prevent unnecessary redundancy.<sup>23,41,42</sup>

Another highly significant activity in the context of knowledge translation was the involvement of Prill (Chair), Królikowska and Klugarová (Steering Group) in the Formal EU-US Meniscus Rehabilitation Consensus: An ESSKA-AOSSM-AASPT initiative (2022–2024). The goal of the consensus, which was a collaborative effort by ESSKA, the American Orthopaedic Society for Sports Medicine (AOSSM) and the American Academy of Sports Physical Therapy (AASPT), was to provide recommendations for the rehabilitation of patients undergoing either conservative or surgical treatment for meniscus lesions or acute meniscus tears.<sup>43</sup> Consensus initiatives are crucial components of EBHC, as they combine expert opinions and research findings to develop unified, reliable guidelines that ensure consistent, high-quality care throughout the healthcare spectrum settings.<sup>44</sup> The convenors of the described JBI entities are currently involved in consecutive ESSKA and other expert consensuses.

## Future directions and collaborative vision

Considering the professional backgrounds and experiences of the JBI entities from Wrocław, Brandenburg

an der Havel, Prague, and Olomouc, their collaboration demonstrates significant potential to shape the future of evidence-based practice, particularly but not limited to rehabilitation within orthopedics, sports medicine and traumatology. The collaboration aims to promote interdisciplinary approaches that enhance care across the continuum – from prevention to treatment and recovery. By emphasizing rigorous methodologies, innovative research and the integration of high-quality evidence into clinical practice, this partnership is poised to tackle key challenges and create impactful advancements.

Currently, Prill chairs the ESSKA Rehabilitation Committee, with Królikowska set to take over from 2026 to 2028, showcasing their dedication to the field. Since its establishment, the ESSKA Rehabilitation Committee has been crucial in promoting interdisciplinary collaboration among healthcare professionals, fostering innovation and bridging gaps between diverse specialties.<sup>45</sup> Looking ahead, the Committee aims to enhance clinical outcomes and advance patient care throughout Europe.<sup>46</sup>


In addition, the collaboration between Wrocław, Brandenburg an der Havel, Prague, and Olomouc intends to strengthen partnerships with organizations such as ESSKA, expand educational initiatives and advocate for evidence-based practice among healthcare stakeholders. These activities will prioritize integrating patient or population perspectives, ensuring the real-world applicability of research findings and addressing healthcare disparities.

In a related development, the *Advances in Clinical and Experimental Medicine* journal has introduced a new section called “Evidence-Based Healthcare”. This section, overseen by editors Aleksandra Królikowska and Robert Prill, invites submissions from researchers worldwide. We strongly encourage authors to contribute their work to this initiative, which will foster further growth and innovation in the field of EBHC.

## ORCID iDs

Aleksandra Królikowska  <https://orcid.org/0000-0002-6283-5500>

Robert Prill  <https://orcid.org/0000-0002-4916-1206>

Miloslav Klugar  <https://orcid.org/0000-0002-2804-7295>

## References

- Haynes RB, Devereaux PJ, Guyatt GH. Clinical expertise in the era of evidence-based medicine and patient choice. *ACP J Club*. 2002; 136(2):A11–14. PMID:11874303.
- Cochrane AL. *Effectiveness and Efficiency: Random Reflections on Health Services*. London, UK: Nuffield Provincial Hospitals Trust; 1972. ISBN:978-0-900574-17-7.
- Cochrane AL. Archie Cochrane in his own words: Selections arranged from his 1972 introduction to “Effectiveness and Efficiency: Random Reflections on the Health Services” 1972. *Control Clin Trials*. 1989; 10(4):428–433. doi:10.1016/0197-2456(89)90008-1
- Jordan Z, Donnelly P, Pittman E. *A Short History of a Big Idea: The Joanna Briggs Institute, 1996–2006*. Melbourne, Australia: Ausmed Publications; 2006. ISBN:978-0-9775153-0-1.
- Rubin GL, Frommer MS. Evidence-based medicine: Time for a reality check. *Med J Aust*. 2001;174(5):214–215. doi:10.5694/j.1326-5377.2001.tb143237.x



6. Porter R. *The Greatest Benefit to Mankind: A Medical History of Humanity from Antiquity to the Present*. London, UK: HarperCollins; 1997. ISBN:978-0-00-215173-3.
7. Chalmers I, Enkin M, Keirse MJNC, eds. *Effective Care in Pregnancy and Childbirth. 1: Pregnancy*. Reprint (with corr.). Oxford, UK: Oxford University Press; 1993. ISBN:978-0-19-261558-9.
8. Storman D, Bala MM. Cochrane Poland and Cochrane Collaboration: History, structure, and future. *J Health Inequalities*. 2018;4(2):101–102. doi:10.5114/jhi.2018.83589
9. Sackett DL. Clinical epidemiology. *Am J Epidemiol*. 1969;89(2):125–128. doi:10.1093/oxfordjournals.aje.a120921
10. Sur RL, Dahm P. History of evidence-based medicine. *Indian J Urol*. 2011;27(4):487–489. doi:10.4103/0970-1591.91438
11. Daly J. *Evidence-Based Medicine and the Search for a Science of Clinical Care*. Berkeley–New York, USA: University of California Press & Milbank Memorial Fund; 2005. ISBN:978-0-520-24316-3.
12. Feinstein AR. Clinical epidemiology: I. The populational experiments of nature and of man in human illness. *Ann Intern Med*. 1968;69(4):807–820. doi:10.7326/0003-4819-69-4-807
13. Feinstein AR. Clinical epidemiology: II. The identification rates of disease. *Ann Intern Med*. 1968;69(5):1037. doi:10.7326/0003-4819-69-5-1037
14. Feinstein AR. Scientific standards in epidemiologic studies of the menace of daily life. *Science*. 1988;242(4883):1257–1263. doi:10.1126/science.3057627
15. Evidence-Based Medicine Working Group. Evidence-based medicine: A new approach to teaching the practice of medicine. *JAMA*. 1992;268(17):2420–2425. doi:10.1001/jama.1992.03490170092032
16. JBI (Joanna Briggs Institute). About JBI. Adelaide, Australia: JBI (Joanna Briggs Institute); 2024. <https://jbi.global/about-jbi>. Accessed January 25, 2025.
17. Pearson A, Jordan Z. Evidence-based healthcare in developing countries. *Int J Evid Based Healthc*. 2010;8(2):97–100. PMID:21077397.
18. Jordan Z, Lockwood C, Munn Z, Aromataris E. The updated Joanna Briggs Institute Model of Evidence-Based Healthcare. *Int J Evid Based Healthc*. 2019;17(1):58–71. doi:10.1097/XEB.0000000000000155
19. Pearson A, Wiechula R, Court A, Lockwood C. The JBI model of evidence-based healthcare. *Int J Evid Based Healthc*. 2005;3(8):207–215. doi:10.1111/j.1479-6988.2005.00026.x
20. Jordan Z, Lockwood C, Munn Z, Aromataris E. Redeveloping the JBI Model of Evidence Based Healthcare. *Int J Evid Based Healthc*. 2018;16(4):227–241. doi:10.1097/XEB.0000000000000139
21. Pearson A, Jordan Z, Munn Z. Translational science and evidence-based healthcare: A clarification and reconceptualization of how knowledge is generated and used in healthcare. *Nurs Res Pract*. 2012;2012:792519. doi:10.1155/2012/792519
22. Wrocław Medical University. Evidence-Based Healthcare in Wrocław: A JBI Affiliated Group. Wrocław, Poland: Wrocław Medical University; 2024. <https://www.umw.edu.pl/pl/evidence-based-healthcare-wroclaw-jbi-affiliated-group>. Accessed January 21, 2025.
23. Prill R, Pieper D, Klugar M, Ayeni OR, Karlsson J, Lund H. Evidence-based research in orthopaedics, sports medicine and rehabilitation: Why new studies should rely on earlier work. *Knee Surg Sports Traumatol Arthrosc*. 2024;32(2):203–205. doi:10.1002/ksa.12047
24. Lund H, Pieper D. Evidence-based research. *Syst Rev*. 2024;13(1):312. doi:10.1186/s13643-024-02735-6
25. Weglarz P, Skop-Lewandowska A, Prill R, et al. Nutrition as therapy: The role of dietitian counseling. A best practice implementation project [published online as ahead of print on November 13, 2024]. *JBI Evid Implement*. 2024. doi:10.1097/XEB.0000000000000479
26. Kayaalp ME, Hakam HT, Klugarová J, et al. Intra-articular knee injections in patients with primary osteoarthritis in a tertiary clinical setting: A best practice implementation project. *JBI Evid Implement*. 2025;23(1):81–89. doi:10.1097/XEB.0000000000000474
27. Muehlensiepen F, Stanze H, May S, et al. Cross-disciplinary advance care planning in oncology and palliative care amidst a pandemic: A best practice implementation project. *JBI Evid Implement*. 2024;22(4):345–355. doi:10.1097/XEB.0000000000000445
28. Jaster C, Klugarová J, Królikowska A, et al. Promoting running as the best treatment for lower back pain in physiotherapy practice: A best practice implementation project. *JBI Evid Implement*. 2024;22(3):281–290. doi:10.1097/XEB.0000000000000441
29. Kania M, Sudul P, Wilk M, et al. Education of adult type 1 diabetes patients in a diabetes ward setting: A best practice implementation project. *JBI Evid Implement*. 2025;23(1):51–61. doi:10.1097/XEB.0000000000000436
30. The National Institute for Quality and Excellence in Healthcare. The National Institute for Quality and Excellence in Healthcare Developing and Evaluating the Quality and Safety of Health Services. Prague, Czech Republic: The National Institute for Quality and Excellence in Healthcare; 2024. <https://nikez.mzcr.cz/en>. Accessed January 21, 2025.
31. Global Evidence Summit 2024. General information. Prague, Czech Republic: Global Evidence Summit 2024; 2024. <https://www.globalevidencesummit.org>. Accessed January 21, 2025.
32. Canadian Institutes of Health Research (CIHR). COVID19 Recommendations. Montreal, Canada: Canadian Institutes of Health Research (CIHR); 2024. <https://covid19.recmmap.org>. Accessed January 21, 2025.
33. Prill R, Kayaalp ME, Królikowska A, et al. Effects of physiotherapy interventions for home-based rehabilitation on physical function after primary total knee arthroplasty: A systematic review protocol. *JBI Evid Synth*. 2022;20(12):3017–3024. doi:10.11124/JBIES-21-00355
34. Prill R, Królikowska A, Becker R, Karlsson J. Why there is a need to improve evaluation standards for clinical studies in orthopaedic and sports medicine. *Knee Surg Sports Traumatol Arthrosc*. 2023;31(1):4–5. doi:10.1007/s00167-022-07179-w
35. Prill R, Hakam H, Karlsson J, Ramadanov N, Alfuth M, Królikowska A. Structured success: Study protocols and preregistration in orthopaedics, sports medicine and rehabilitation. *Knee Surg Sports Traumatol Arthrosc*. 2024;32(5):1065–1070. doi:10.1002/ksa.12126
36. Prill R, Królikowska A, de Girolamo L, Becker R, Karlsson J. Checklists, risk of bias tools, and reporting guidelines for research in orthopaedics, sports medicine, and rehabilitation. *Knee Surg Sports Traumatol Arthrosc*. 2023;31(8):3029–3033. doi:10.1007/s00167-023-07442-8
37. Królikowska A, Reichert P, Karlsson J, Mouton C, Becker R, Prill R. Improving the reliability of measurements in orthopaedics and sports medicine. *Knee Surg Sports Traumatol Arthrosc*. 2023;31(12):5277–5285. doi:10.1007/s00167-023-07635-1
38. Królikowska A, Reichert P, Senorski EH, Karlsson J, Becker R, Prill R. Scores and sores: Exploring patient-reported outcomes for knee evaluation in orthopaedics, sports medicine and rehabilitation. *Knee Surg Sports Traumatol Arthrosc*. 2025;33(1):21–28. doi:10.1002/ksa.12334
39. Królikowska A, Urban N, Lech M, et al. Mapping the reporting practices in recent randomised controlled trials published in *Knee Surgery, Sports Traumatology, Arthroscopy*: A scoping review of methodological quality. *J Exp Orthop*. 2025;12(1):e70117. doi:10.1002/jeo2.70117
40. Prill R, Mouton C, Klugarová J, Królikowska A, Karlsson J, Becker R. Implementation of evidence-based medicine in everyday clinical practice. *Knee Surg Sports Traumatol Arthrosc*. 2023;31(8):3034–3036. doi:10.1007/s00167-023-07468-y
41. Prill R, Królikowska A, Enes Kayaalp M, Ramadanov N, Karlsson J, Hirschmann MT. Enhancing research methods: The role of systematic and scoping reviews in orthopaedics, sports medicine and rehabilitation. *J Exp Orthop*. 2024;11(4):e70069. doi:10.1002/jeo2.70069
42. Prill R, Karlsson J, Ayeni OR, Becker R. Author guidelines for conducting systematic reviews and meta-analyses. *Knee Surg Sports Traumatol Arthrosc*. 2021;29(9):2739–2744. doi:10.1007/s00167-021-06631-7
43. European Society of Sports Traumatology, Knee Surgery and Arthroscopy (ESSKA) Academy. ESSKA Consensus Projects. Luxembourg, Luxembourg: European Society of Sports Traumatology, Knee Surgery and Arthroscopy (ESSKA); 2024. <https://esskaeducation.org/esska-consensus-projects>. Accessed January 21, 2025.
44. Beaufils P, Dejour D, Filardo G, et al. ESSKA consensus initiative: Why, when and how? *J Exp Orthop*. 2023;10(1):101. doi:10.1186/s40634-023-00664-2
45. Prill R, Briem K, Karlsson J, Hirschmann MT, Nyland J. Teamwork is needed now: Time to focus on collaboration, rehabilitation and patients' needs! *Knee Surg Sports Traumatol Arthrosc*. 2024;32(7):1641–1644. doi:10.1002/ksa.12243
46. European Society of Sports Traumatology, Knee Surgery and Arthroscopy (ESSKA). The Power of Teamwork: Establishing a Rehabilitation Committee in ES. Luxembourg, Luxembourg: European Society of Sports Traumatology, Knee Surgery and Arthroscopy (ESSKA); 2024. <https://www.esska.org/news/news.asp?id=658556>. Accessed January 21, 2025.