

Implementation Process

Healthy Mind VR is a virtual reality solution that utilizes immersive, interactive environments to reduce patients' perception of pain and anxiety. By combining visual and auditory elements with simple techniques such as breathing exercises, it offers non-pharmacological support in various areas of medical care, including oncology, palliative care, pediatric wards, aesthetic medicine, and neurology.

- 1) Initial implementation was conducted at the Department of Neurology at the Medical University of Warsaw
- 2) Staff training on using the Healthy Mind VR system, including adjusting session content and maintaining device hygiene
- 3) Pilot sessions with insights gathered from participants and healthcare professionals
- 4) Integration of the system into routine clinical practice on the ward, combined with the ongoing selection of patients undergoing procedures associated with pain or anxiety, particularly during diagnostic or therapeutic interventions requiring patient cooperation.

Impact and Results

- Ease of use and quick preparation of the set make it possible to incorporate it into the daily routine of the ward without major difficulties. A patient using VR is visibly calmer, primarily because they do not see the medical procedures being prepared around them, which can be stressful. One element that requires additional attention is the regular disinfection. – nurse (1)
- Many patients say that for the first time in a hospital, they felt so well cared for. – nurse (2)
- A patient wearing VR goggles does not make unpredictable movements, which facilitates the precise collection of diagnostic material and similar procedures. Of course, this is not a solution for everyone – in some neurological conditions, such as epilepsy, we may not be able to use it. – nurse (3)

Country	Poland
Institution/Organisation	Department of Neurology, Central Clinical Hospital, University Clinical Centre, Medical University of Warsaw
Type of setting	Hospital
National Context	Poland has been actively exploring digital health innovations to improve patient care efficiency. The use of non-invasive technologies in hospitals, such as VR, aligns with national goals of humanizing medical treatment and supporting the healing process through non-pharmacological means.

Success Factors

- High patient acceptability due to non-invasiveness
- Significant reductions in reported pain and anxiety
- Time efficiency for medical personnel
- Intuitive interface for diverse patient populations

Challenges and Barriers

- Staff scepticism or lack of digital literacy
- Adapting VR sessions to specific medical contexts (e.g., varying session lengths)
- Ensuring device sanitation and maintenance in hospital environments

Resources and Funding

The implementation of the Healthy Mind VR system was made possible through a partnership with a pharmaceutical company, which fully covered the cost of the equipment. This support came at a pivotal moment, perfectly aligning with the opening of the newly renovated ward of the Neurology Department, enabling the seamless integration of the technology into a modern, patient-centred clinical environment.



Recommendations:

Practical advice for future implementations:

- Select departments with high patient throughput and procedural anxiety
- Ensure early training and buy-in from staff
- Start with a pilot and gather qualitative patient feedback
- Pair implementation with ongoing evaluation for funding and scaling purposes

Specific Environment and Limitations:

External factors that supported implementation:

- Growing national interest in digital health
- CE and ISO certifications

External factors that restricted implementation:

- Budget limitations and device maintenance logistics
- Variation in institutional readiness

Key Lessons Learned:

Insights and lessons for similar initiatives:

- Integration is smoother when the system requires minimal staff intervention
- Flexibility and personalization of VR content enhances therapeutic effectiveness
- Strong visual and auditory realism are critical to user immersion
- Certification and compliance with medical regulations ease institutional acceptance

Transferability to other settings:

The Healthy Mind VR system is highly transferable to various medical environments beyond neurology, including oncology, paediatric wards, rehabilitation, emergency departments, and outpatient settings. Its portability, intuitive interface, and lack of dependence on external infrastructure make it ideal for use across diverse clinical contexts, including mobile and home-based care settings.

Integration in Education Settings:

The Healthy Mind VR system has been introduced into the educational activities of the Neurology Department at the Medical University of Warsaw. Medical students and clinical interns are exposed to its practical applications in pain management and anxiety reduction. The technology is also used to demonstrate non-pharmacological interventions in multidisciplinary care, encouraging students to adopt patient-centred, innovative approaches in future practice

Supporting Materials:

