



Prifysgol Cymru
Y Drindod Dewi Sant
University of Wales
Trinity Saint David

Digital Transformation in the Health and Care Professions (BMHP6026) Component 2 Assessment

Student name: Ana Claudia Delfino
Student ID:2325193
Lecture Name: Muhammed Khan
Title: Virtual Reality (VR) for Therapy

Use of AI Acknowledgement

Introduction

- **Virtual Reality in Healthcare**

The health and care sectors that are using therapeutic tools to help patients in their mental health issues, physical rehabilitation and symptoms control.

- **Virtual Reality Therapy in the United Kingdom Healthcare Setting**

National Health Services in England use its digital programs to create new medical solutions and to create personalized treatment using this new technology.

- **History of Virtual Reality Therapy in the United Kingdom**

United Kingdom shows that, NHS Hospitals included Virtual Reality to different departments since 2010. For example; stroke rehabilitation and palliative care services.

(Phelan et al, 2021).

Impact on Workforce

- **Changes in Job Roles and Practice**

VR Therapy has transformed the role of clinicians , making for example: improvements to the functioning of the group.

- **Workforce Competency and Training**

One example: Physiotherapists who cannot use VR in their work, face training shortages and time limitations was the main obstacles, before implemented VR.

- **Interprofessional Collaboration**

The implementation process of VR,needs of management between IT Department and Therapist to work together for safe and effective system usage with multidisciplinary working groups priorities of the NHS.

Alrashidi et al. (2025), Edwards (2025), (Kouijzer et al., 2023).



Figure 1: A healthcare professional using VR.
Source: Knack (2018)

Impact on service delivery

- **Transformation of Day-to-Day Service Delivery**

The NHS neurorehabilitation center use VR for reality relaxation and it's providing effectiveness and do not interfere with existing therapeutic programs.

- **Efficiency and Capacity**

The use of virtual reality technology (VR) does increase operational efficiency because it allows patients to interact with their treatment while providing medical professionals with a standardized treatment method. •

Accessibility and Innovation

Virtual reality technology enables patients with walking disabilities to access medical treatment because it reduces their need for physical treatment areas while they undergo their rehabilitation process in hospitals and public spaces.

(Edwards ,2025). (Pope et al., 2025). (Butcher et al., 2025).



Figure 2: A surgeon using VR during an operation

Source: Knack (2018)

Impact on patients

- **Patient Engagement and Motivation**

Patients are getting better rehabilitation results using VR system because it's providing more interactive and engaging therapy experiences.

- **Symptom Management and Comfort**

VR reduced both, pain and anxiety levels, given more comfort for patients

- **Health Literacy and Empowerment**

VR technology enable patients to make researches to learn more about how to manage skills pain education programs.

(Butcher et al., 2025). (Burridge et al., 2025). (Pope et al., 2025).



Figure 3: A patient using VR
Source: Ries (2019)

Impact on community

- **Access to Care**

VR provides guided exercises to community rehabilitation services which support NHS preventive care objectives.

- **Impact on Families and Carers**

The implementation of VR to caregivers and medical staff members improved their communication reducing enhance manage medical, also give more responsibilities to caregivers to their ability to symptoms.

- **Public Health Implications**

Primarily, implications are more centred on physical symptoms, eye strain, Headaches, psychological effects(addictions, fear responses...)exposure to harmful content. While promising for therapy and pain management, it requires careful and moderate use.

(Pope et al., 2025). (Gokani et al., 2025). (Skidmore et al., 2024).

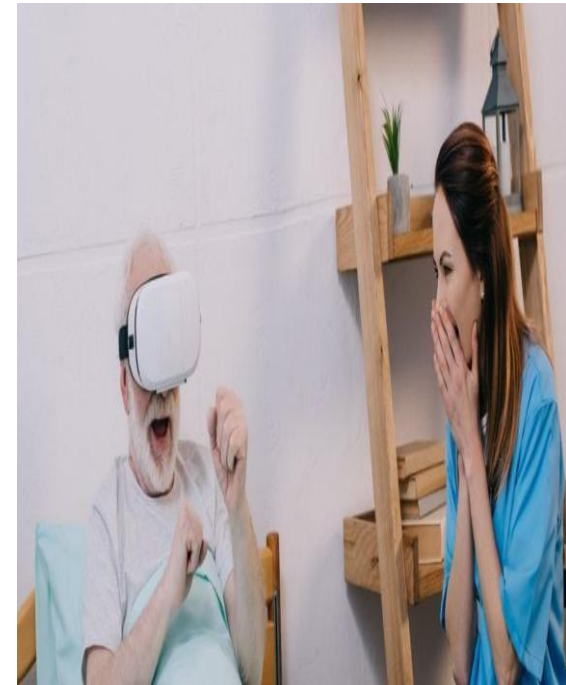


Figure 4: A happy caregiver and patient using VR

Source: National Garden Scheme (2021)

Challenges of the innovation

- **Employee resistance to change**

When the VR was introduced in NHS clinical treatment employee resistance had a significant barrier which effects professionals who did not trust in digital tools and who consider virtual reality to be established healthcare methods.

- **High initial costs and ongoing technical maintenance and integration work with existing IT systems**

NHS trusts face limitations in their ability to scale operations because their different digital systems create interoperability challenges. The NHS resource limitations which include financial constraints, time limitations, and staff shortages, restrict both training opportunities and successful VR integration into regular treatment procedures.

- **Motion sickness and digital isolation**

According to Chadwick (2024) digital isolation continues to be a problem for those who do not know much about technology. Also, some patient experience anxiety and motion sickness and it creates discomfort.



Figure 4: A VR user feeling to nauseated

Source: Mahapatra (2023)

(Alrashidi et al., 2025). (Khan, 2023). (Mahapatra, 2023). Chadwick et al. (2024).

Recommendations

- **Continuous training programs**

NHS organizations need to establish continuous training programs which maintain structured delivery to develop workforce confidence and achieve equal digital skills across all clinical positions that provide VR therapy treatment.

- **Clear governance and ethical frameworks**

Clear governance and ethical frameworks should be established to address data security, patient safety, consent, and accountability, which will enable safe integration of VR technologies with current healthcare systems **Community engagement and funding**

Policymakers and healthcare leaders need to focus on designing elements with dedicated funding and community planning efforts which serve as their base requirements for success. (Pote et al., 2021). (Karampatakis et al., 2023). (Karampatakis et al., 2023). (Nilsen et al., 2020).

Conclusion

The United Kingdom healthcare system uses virtual reality therapy as a fundamental element of its digital transformation efforts to create realistic interactive spaces which boost patient treatment results and rehabilitation success.

The studies provided in the presentation demonstrate that virtual reality treatments affect both patients and hospital operations, which leads to changes in employee duties, patient care methods, family interactions, and community health services.

The system needs continuous financial support, personnel training, equitable service delivery, and proper operational control to reach sustainable outcomes.

Healthcare organizations and policymakers must find treatment barriers that require them to create safe and effective treatment protocols and implement research-based solutions, which will optimize results while maintaining fair patient treatment.

References

Alrashidi, M., Tomlinson, R.J., Buckingham, G. and Williams, C.A., (2025). *Virtual reality current use, facilitators and barriers to implementation in paediatric physiotherapy: cross-sectional online survey of UK paediatric physiotherapists*. Disability and Rehabilitation: Assistive Technology, 20(3), pp.585–591. Available at: <https://doi.org/10.1080/17483107.2024.2393695> Accessed: 17/03/26.

Buckingham, S.A., Anil, K., Demain, S., et al, (2022). *Telerehabilitation for people with physical disabilities and movement impairment: a survey of United Kingdom practitioners*. JMIRx Med, 3(1), Article e30516. Available at: <https://doi.org/10.2196/30516> Accessed: 17/03/26.

Burridge, N., Sillence, A., Teape, L. et al, (2025). *Virtual reality reduces anxiety and pain in acute hospital palliative care: service evaluation*. BMJ Supportive & Palliative Care, 15(3), pp.387–390. Available at: <https://doi.org/10.1136/spcare2023-004572> Accessed: 17/03/26.

Butcher, T., Warland, A., Stewart, V., et al, (2025). *Rehabilitation using virtual gaming for hospital and home-based training for the upper limb in acute and subacute stroke (RHOMBUS II): results of a feasibility randomised controlled trial*. BMJ Open, 15(1), Article e089672. Available at: <https://doi.org/10.1136/bmjopen-2024-089672> Accessed: 17/03/26.

Chadwick, H., Lavery, L., Finnigan, R., et al, (2024). *Engagement with digital health technologies among older people living in socially deprived areas: qualitative study of influencing factors*. JMIR Formative Research, e60483. Available at: <https://doi.org/10.2196/60483> Accessed: 17/03/26.

Edwards, L.E., (2025). *A feasibility study of the use of virtual reality relaxation in an NHS inpatient neurorehabilitation unit*. Frontiers in Virtual Reality, 6, article 1504894. Available at: <https://doi.org/10.3389/frvir.2025.1504894> Accessed: 17/03/26.

Gokani, H.A., Sommerlad, A., Jawharieh, H., et al, 2025. *Carers and professionals' views on using virtual reality in dementia care: a qualitative study*. Dementia (London), 24(1), pp.71–90. Available at: <https://doi.org/10.1177/14713012241272786> Accessed: 17/03/26.

References

Karampatakis, G.D., Wood, H.E., Griffiths, C.J., et al, (2023). *Ethical and information governance considerations for promoting digital social interventions in primary care*. Journal of Medical Internet Research, 25, e44886. Available at: <https://doi.org/10.2196/44886> Accessed: 17/03/2026.

Khan, Z., (2023). *The emerging challenges and strengths of the National Health Services: a physician perspective*. Cureus, 15(5), Article e38617. Available at: <https://doi.org/10.7759/cureus.38617> Accessed: 17/03/2026.

Knack, A. (2018) *How VR and AR could transform the health sector*. Digital Health. Available at: <https://www.rand.org/pubs/commentary/2018/02/how-vr-and-ar-could-transform-the-health-sector.html> Accessed: 17/03/2026.

Khan, Z., (2023). *The emerging challenges and strengths of the National Health Services: a physician perspective*. Cureus, 15(5), Article e38617. Available at: <https://doi.org/10.7759/cureus.38617> Accessed: 17/03/26.

Mahapatra, D. (2023) *All about virtual reality motion sickness*. Twin Reality. Available at: <https://twinreality.in/all-about-virtual-reality-motion-sickness/> Accessed: 17/03/2026.

National Garden Scheme (2021) *Virtual reality and palliative care: How gardens can take away the pain....* National Garden Scheme. Available at: <https://ngs.org.uk/virtual-reality-and-palliative-care/> Accessed: 17/03/2026.

Nilsen, E.R., Stendal, K. and Gullslett, M.K., (2020). *Implementation of eHealth technology in community health care: the complexity of stakeholder involvement*. BMC Health Services Research, 20(1), Article 395. Available at: <https://doi.org/10.1186/s12913-020-05287-2> Accessed:17/03/2026.

References

Phelan, I., Furness, P.J., Dunn, H.D.,et al., (2021). *Immersive virtual reality in children with upper limb injuries: Findings from a feasibility study*. Journal of Pediatric Rehabilitation Medicine, 14(3), pp.401–414.Available at: <https://doi.org/10.3233/prm-190635> Accessed: 17/03/2026.

Pope, R., Zenonos, A., Bryant, W., et al, (2024). *Real-world learnings for digital health industry-NHS collaboration: Life sciences vision in action*. Future Healthcare Journal, 11(3), p.100168.Available at: <https://doi.org/10.1016/j.fhj.2024.100168> Accessed: 17/03/2026.

Pote, H., Rees, A., Holloway-Biddle, C.et al,(2021). *Workforce challenges in digital health implementation: How are clinical psychology training programmes developing digital competences?* Digital Health, 7, pp.1–12.Available at: <https://doi.org/10.1177/2055207620985396> Accessed: 17/03/2026.

Ries, J. (2019) *Study finds virtual reality can help reduce severe pain*. Healthline.

Available at: <https://www.healthline.com/health-news/vr-can-help-treat-severe-pain> Accessed:17/03/2026.

Skidmore, N., Ryan, C.G., Mankelow, J. et al, (2024). *Acceptability and feasibility of virtual reality to promote health literacy in primary care from the health professional's view: a qualitative study*. Patient Education and Counseling, 123, p.108179. Available at: <https://doi.org/10.1016/j.pec.2024.108179> Accessed:17/03/2026.