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PROFESSIONAL-FACING DIGITAL HEALTH TECHNOLOGY (DHT) FOR CARE OF PATIENTS WITH CHRONIC PAIN: A SYSTEMATIC SCOPING REVIEW

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1 INTRODUCTION

Chronic pain is estimated to be affecting as many as 20-30% of people worldwide (Cohen et al, 2021)

Chronic pain has a significant economic burden (Dear et al, 2021), especially on primary care services in the UK (Belsey, 2002)

There is a need for new innovations in chronic pain management (Cohen et al, 2021)

Digital health technology (DHT) may be a possible solution to some of the challenges in chronic pain care, as it is flexible and cost-effective

DHT refers to all digital, electronic, computer technologies to improve health (Mathews et al, 2019)

Healthcare professional (HCP) involvement is important in chronic pain management (SIGN, 2019)

No reviews have previously investigated how DHT can be used to support HCPs to improve chronic pain care

2 METHODS

Aim of review: To investigate the available professional-facing DHT for the care of patients with chronic pain (see McCartney et al, 2024 for full protocol)

The eligibility criteria followed the PCC framework:

- (A) *Participants: HCPs involved in the care of patients with chronic pain*
- (B) *Concept: DHT (e.g., mobile health, websites etc.) intended to assist HCPs in the management of chronic pain care*
- (C) *Context: No restrictions, predicted to be in clinical and research environments*

Databases MEDLINE, EMBASE, CINAHL, PsycInfo and Inspec were searched for papers fitting the eligibility criteria.

Following the PRISMA-ScR guidelines, a comprehensive search strategy was developed and implemented; 2 independent reviewers conducted title and abstract screening, then full-text screening.

Data extraction of included studies was guided by the Template of Intervention Description and Replication (TIDIER) checklist and quality assessment was guided by the Quality Assessment of Diverse Studies (QuADS)

3 RESULTS



A total of 52 studies reporting 44 different DHT for HCPs were included in this review.

The DHT were intended for remote patient monitoring, clinical decision support, education of HCPs and assessment/diagnosis.

The most common target population were multidisciplinary HCP teams; the most common target population was primary care.

Approx. half of the DHT had a connected patient-facing system.

Inductive content analysis categorised the user features of the DHT into 4 themes (left) and thematic synthesis produced 4 themes which highlight the factors affecting HCP use of DHT (right).

Many DHT were developed without adequate co-design and very few were guided by frameworks to ensure rigor.

None were developed for chronic pain care support in the UK.

Categorical theme	Ex. User feature
1. Guiding initial consultation	Access to patient clinical history
2. Supporting chronic pain management	Treatment decision support
3. Facilitating ongoing patient management	Previous pain assessment results
4. Supporting routine duties	Educational content

Theme	Ex. HCP perspective
1. Additional value of DHT	DHT helpful to "support decision making"
2. Integration of DHT into clinical workflow	DHT can be "disruptive to workflow"
3. Ease of DHT navigation	"DHT is easy to use"
4. Trust in DHT	"accurate, trustworthy and relevant information"

4 DISCUSSION

DHT has many benefits for HCPs, as it can reduce clinical workload whilst enhancing work efficiency (Shah et al, 2021). This review suggests that there is still unmet potential in professional-facing DHT for chronic pain care. None of the DHT focused on supporting interdisciplinary care, which is thought to be the best way to target chronic pain (Gatchel et al, 2014). Most studies focused on primary care, although none investigated primary care in the UK. It is important to take into account HCP perspectives when designing DHT for chronic pain management, such as the factors highlighted by the thematic synthesis. However, many of the DHT were developed without adequate involvement of stakeholders. Future research should develop DHT using proper co-design methods, involving HCPs in the process. It is possible that some professional-facing DHT for chronic pain care were not included in this study, as it was limited to academic articles published in the English Language.

5 CONCLUSION

To our knowledge, this is the first review to investigate professional-facing DHT for care of patients with chronic pain.

This review forms the first step of a PhD focused on co-designing DHT to support HCPs in chronic pain management.

There will be two studies conducted to rigorously develop a prototype using agile co-design methods.



Contact for further information

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