

**POPULATION HEALTH AND DIGITAL HEALTH
PROMOTION – COMPONENT 1
BLOGS**

Programme: MSc Public Health and Social Care in Practice

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BLOG 1

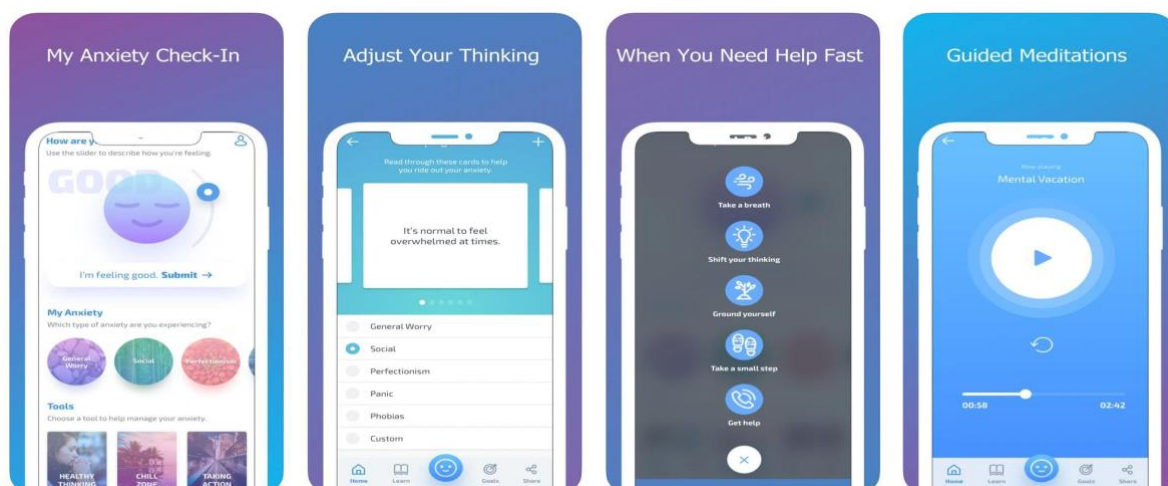
Impact of Digital Mental Health Apps on Anxiety in Young Adults

Anxiety disorders are highly prevalent among young adults and are associated with academic difficulties, reduced social functioning, and increased risk of long-term mental illness. Long waiting times, stigma, and limited access to traditional therapy mean that many young adults do not receive timely support. In response, digital mental health apps (DMHAs) have emerged as accessible, scalable interventions based on established psychological treatments such as cognitive-behavioural therapy (CBT).



(Stein and Sareen, 2015)

Evidence strongly supports their effectiveness. A recent randomised clinical trial evaluating the CBT-based Maya app demonstrated significant reductions in generalised anxiety symptoms among young adults aged 18–25, with most participants completing the majority of modules (Gunning et al., 2025). Similarly, a comprehensive meta-analysis found that stand-alone digital mental health applications produced small-to-moderate but statistically significant improvements in anxiety and depression across randomised controlled trials (Karyotaki et al., 2023). These findings highlight the clinical usefulness of DMHAs, even without therapist involvement.



(Firth et al., 2017)

Targeted applications for social anxiety disorder (SAD) show even stronger effects. A systematic review and meta-analysis of digital interventions for children, adolescents, and young adults found moderate to large effect sizes, especially when interventions incorporated guidance or were tailored specifically for SAD (Walder et al., 2025). Broader reviews also report that DMHAs have moderate positive effects on promoting mental well-being among young people, indicating value not only for clinical anxiety but also prevention and mental-health promotion (Chen et al., 2024).

However, challenges remain. Engagement and adherence are key limitations; many users discontinue apps prematurely, limiting therapeutic impact (Gunning et al., 2025). Digital exclusion also contributes to inequality in access, affecting those with limited internet availability or low digital literacy. A scoping review of 81 digital interventions highlighted issues such as variable usability, lack of long-term follow-up, and insufficient personalisation (Richards et al., 2025). Privacy concerns and inconsistent regulatory oversight further complicate widespread adoption

In conclusion, mental health apps represent an effective and scalable solution to address anxiety in young adults. Evidence demonstrates clinically meaningful symptom reduction, especially for CBT-based and guided interventions. However, future developments must address engagement, equality of access, long-term support, and data security to maximise their impact within public-health mental-care systems.

BLOG 2

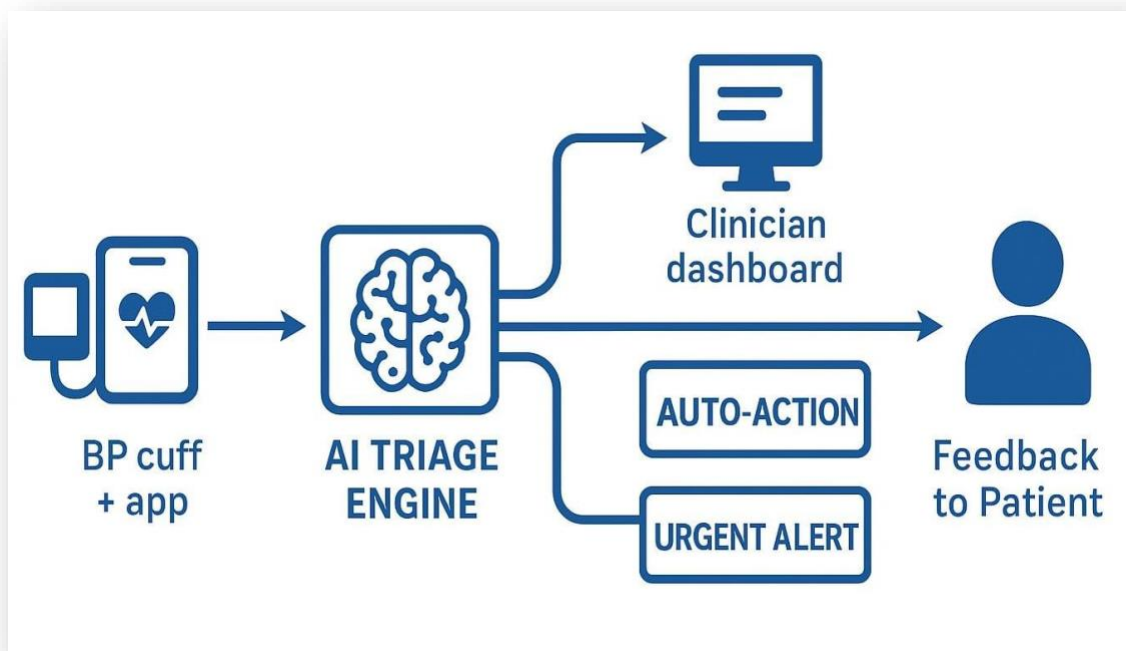
Designing “HyperCare Tele-HTN”: an AI-assisted telehealth pathway for hypertension

Problem and rationale:

Despite effective antihypertensive therapies, many UK patients remain above target BP due to delayed treatment adjustments, sporadic monitoring, and limited clinician contact. Telehealth can close this gap by enabling continuous monitoring and prompt management decisions. Recent evidence supports telemonitoring plus professional support for improving BP outcomes and cost-effectiveness when implemented with integrated care pathways.

Description of the technology:

HyperCare Tele-HTN is a service-level telehealth platform combining an NHS-approved, validated home BP cuff, secure smartphone app, clinician dashboard, and an AI triage engine. The AI analyses trends (e.g., morning surge, masked hypertension), flags clinically significant patterns, and triages data into three streams: auto-action (algorithm-driven advice), clinician review, and urgent alerts. The patient app delivers personalised feedback, medication reminders, short micro-learning modules, and behaviour support using the COM-B framework to build capability, opportunity and motivation for adherence and lifestyle change.



(Topol, 2019)

Expected impact & evidence base:

Personalised telehealth with clinician oversight is associated with better BP control and higher adherence versus usual care; AI triage can reduce clinician workload by prioritising high-risk patients and summarising trends. Trials such as TASMINH4 and recent meta-analyses demonstrate clinical benefit of self-monitoring plus remote support; economic evaluations suggest long-term cost-effectiveness when events are averted.

Limitations & mitigation:

Risks include digital exclusion, user anxiety from frequent readings, algorithm opacity, and data privacy concerns. To mitigate: (1) provide subsidised devices and in-person digital literacy sessions for vulnerable groups; (2) implement opt-in frequency settings and educational messaging to reduce anxiety; (3) ensure transparent algorithm explain-ability and human-in-the-loop oversight; (4) adopt NHS-grade end-to-end encryption and granular consent controls. Implementation science guidance recommends co-design with patients and clinicians and staged pilots to refine workflows.

Conclusion & recommendations.

HyperCare Tele-HTN, built on current evidence, could improve BP control and be cost-effective if deployed with equity measures, clinician workflow integration, and robust privacy safeguards. Future evaluation should include pragmatic trials measuring BP outcomes, health-economic endpoints, patient experience, and equity impacts.

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