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Improving the evidence base for digital health interventions to increase contraception use

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Contraception is a lifesaving and essential component of healthcare. Since COVID-19 disrupted routine health service delivery, increased use of digital health (or mHealth) has been required to reduce risks to patients and healthcare workers[1 2] A recent systematic review was, however, unable to draw concrete conclusions on the overall effectiveness of mHealth interventions to increase contraception use in low-income and middle-income countries.[3] A meta-analysis was not possible due to differences between study populations, interventions and outcomes. In the meantime, another trial reported no measurable effect of an mHealth intervention for female sex workers on unintended pregnancy in Kenya, adding to the mixed evidence.[4] A better evidence base for digital health interventions to increase contraception use is required, but how can this be achieved?

First, a common set of study outcome measures for interventions for contraception is required. To date, a variety of approaches to measuring contraception use have been used, to assess current use or adherence over time. While objective measures such as using biological markers or electronic medication monitors are considered less prone to bias, their use is challenging.[5] Thus subjective measures enquiring about self-reported use remain de rigueur for most trials, accepting their known biases. An expert working group could be convened with the aim of harmonising contraceptive trial outcomes in order to reduce heterogeneity between studies and allow future meta-analyses.

Second, a deeper examination of the intervention mode of delivery and resource requirements is required. Distinctions between unidirectional and interactive interventions are important but the intensity and mode of interaction needs further evaluation. The ideal digital health intervention would be fully automated, scalable, safe and effective. It remains to be seen whether this is possible for contraception where there are a wide range of methods, cultural beliefs and nuanced side effects. Further understanding of the degree of personal interaction required and overall resource implications are important considerations for service providers when considering replicability and scale.

Third, now is the time to conduct larger studies that have shown to be effective, or promising but underpowered, and prioritised over trials of new interventions. Trials could be undertaken in different settings, but use the same outcome measures, maintaining the core components of the original intervention, subject to cultural or linguistic adaptions that might be required. This should result in an increased evidence base for service providers wanting to adopt best practices in digital health in their contraception programmes.

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