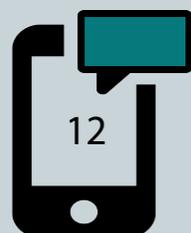


# Digital Contact Tracing: A Cochrane Review

Are **digital solutions** more effective than manual methods for measuring **outbreak response, proximity tracing, and symptom tracking**?  
A Cochrane rapid review evaluates real-time and modeled digital contact tracing studies to address this question.

## EVIDENCE ASSESSED



12 total studies included

6

observational cohort studies

3 assessed digital contact tracing during an outbreak

Ebola (Sierra Leone), Tuberculosis (Botswana), and Pertussis (USA)

3 assessed digital contact tracing in the setting of **simulated outbreaks within schools**

6

mathematical models

4 assessed digital solutions via **COVID-19 simulations**

2 simulated close contacts in **non-specific outbreak settings**

## RESULTS

### Is digital contact tracing effective?

#### Digital tracing effectively...



Reduced secondary cases when paired with other public health measures. *(Low certainty evidence, 2 modeling studies)*

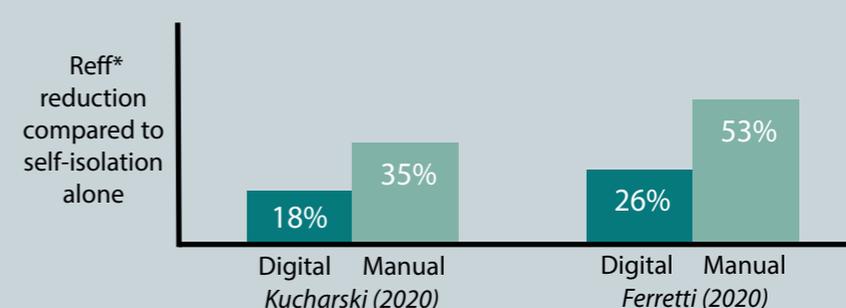


Increased number and accuracy of **close contacts identified** compared to self-reported diaries or surveys. *(Very low certainty evidence, 2 cohort studies)*



Reduced time required to complete a set of close contacts. *(Very low certainty evidence, 1 cohort study)*

#### ...but manual tracing was more effective in reducing Reff



\*Reff (effective reproductive number): average number of secondary cases per index case (low certainty evidence from 2 modeling studies)

### How does digital tracing measure up to manual tracing?

#### ADVANTAGES

- Digital system simpler to use
- Saves personnel time
- Improves accuracy with larger data sets
- Improves security measures

#### DISADVANTAGES

- Higher initial costs and staff training needs
- Technical problems with hardware & software
- Possibility of stolen hardware
- Variability in internet access

*Based on qualitative data from 2 studies*

## OTHER CONSIDERATIONS

- **Important considerations include equity issues** when employing digital contact tracing in at-risk populations or populations with poor access to internet. No study in the review addressed equity.
- **No studies evaluated the potential of using digital solutions in conjunction with manual contact tracing.**

The efficacy of **digital contact tracing** is largely unproven, but may help curb epidemic growth if combined with robust public health efforts. Digital solutions may have **equity implications for at-risk populations.**