Moving from paper-based information systems to electronic information systems can allow staff to collect some routine health information faster and with fewer mistakes, but many evidence gaps remain

What is the context of this review?

- Routine health information systems (RHIS) are needed to provide information to support governance, financial and delivery arrangements.
- Interventions to improve RHIS performance often focus on two main functions: 1) the production of quality data, and 2) the use of data for decision-making. These interventions can be technical, behavioural, and organizational.
- Poor information support is a major obstacle for improving health systems, so it is valuable to assess the effects of improving RHIS performance.

What question is being addressed?

- What is the effectiveness of interventions to improve the performance of routine health information systems?

How was the review done?

- The authors conducted a comprehensive search in several databases to find relevant studies.
- A total of 420 studies were initially found, six of which were included in the review after assessing their eligibility.

> **Box 1: Coverage of OHT building blocks**
>
> This review addresses building block #5:
> 1) defined patient population
> 2) in-scope services
> 3) patient partnership and community engagement
> 4) patient care and experience
> **5) digital health (domain 40 - Data harmonization across organizations, sectors and systems)**
> 6) leadership, accountability and governance
> 7) funding and incentive structure
> 8) performance measurement, quality improvement, and continuous learning

How up to date is this review?

- The authors searched for studies published up to May 2019.

What are the main results of the review?

- Moving from paper-based information systems to electronic/digital systems likely allows staff to collect routine health information faster and with fewer mistakes.
- However, it is unclear if electronic/digital systems lead to fewer serious mistakes (such as giving the wrong test results for a patient when moving information from the laboratory system to the clinic system).

- Sending frequent text-messages to community health workers to motivate them to collect information (for example, about pregnancies, births and newborn deaths) made little or no difference to the quality of the information that was reported, compared to less frequent messages.
- The authors are uncertain about the effect of health information strengthening on service quality (for example, health worker motivation, receipt of training by health workers, health information index scores, quality of clinical observation of children and adults) because the certainty of the evidence is very low.

How confident are we in the results?

- This is a recent and high-quality systematic review with an AMSTAR score of 9/10.