



## Workstream 2 (WS2)

### Global Evidence



#### WHAT IS WS2 ABOUT?

Current best research practices demand that any new research be informed by the best available evidence. To align with this, PHISICC conducted two systematic reviews. The aim of the first review was to assess the evidence on the effects of HIS interventions on data quality, use and health status. The aims of second review were: to map elements of decision making processes at PHC level, to inform our theoretical decision making framework and to identify barriers, strategies and opportunities to use HIS solutions for PHC decision making.

#### WHICH METHODS DID WE USE IN WS2?

Both reviews used standard systematic literature review methods. Search strategies were developed and applied across multiple literature databases to identify relevant studies. Articles were screened against explicit inclusion criteria and data from selected studies were extracted and synthesised.

#### WHAT WERE THE FINDINGS OF WS2?

**SR1 – Effects of HIS interventions:** The database searches retrieved 12,433 articles of which 16 studies met the inclusion criteria in terms of study designs, participants, interventions and outcomes. The risk of bias of studies was generally large with only a few examples of studies using robust methods.

Studies were carried out in (number of studies): Kenya (5), China (2), India (2), Uganda (2), Ghana (1), Malawi (1), Pakistan (1), Peru (1) and Thailand (1). 14 studies focused on HIS interventions for specific health care areas (e.g., immunisation) and only two on the whole PHC system. Interventions included both paper-based (e.g. used as educational materials) and digital (e.g. PDA, mHealth) tools. The effects of interventions were mixed. There were examples of beneficial outcomes (e.g. improvement of vaccination coverage in intervention groups) and outcomes showing inconsistent results (e.g. quality of data improved in three studies, but another one showed a non-significant change).

**SR2 – Framework synthesis:** A total of 6,513 articles were identified and screened for inclusion. 50 studies were selected to inform the development of the decision making framework and of these, 14 high-quality studies informed the in-depth analysis. Studies showed a wide range of barriers influencing the use of HIS for decision making; some were common to other health system areas (e.g., constrained resources, weak programme implementation, difficulties in building rapport and trust with patients and personal satisfaction when using tools – paper and digital), but others specifically related to how HIS are designed and set up (e.g., lack of availability of tools, difficulties accessing information including feedback on performance, health worker attitudes toward recording and reporting). We found an overwhelming focus on the use of HIS for the purpose of reporting (as opposed to immediate clinical and public health decision making). Strategies for improvement included the re-organisation of processes and workflows and ensuring that the end-user remains the focus of any changes to information tools.

#### WHAT ARE THE IMPLICATIONS OF WS2 FOR PHISICC?

There is no clear evidence supporting any particular intervention to improve HIS in having effects on data quality, use or health outcomes. This is consistent with the focus that the international health community places on the HIS as a reporting tool rather than as a decision making aid. The scope of PHISICC (i.e., the whole PHC HIS system) and the use of best research practices is a unique research and learning opportunity to fill this evidence gap and to inform policy makers on the viability and sustainability of paper-based health information interventions to improve decision making at PHC level, where life and death decisions take place.

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