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"Real-Real World" Evidence to understand the Use of Health Information Systems for Decision Making

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RACHEL BRIDGE

HOW TO
MAKE A
MILLION
BEFORE LUNCH

Disclosure

Founding source:
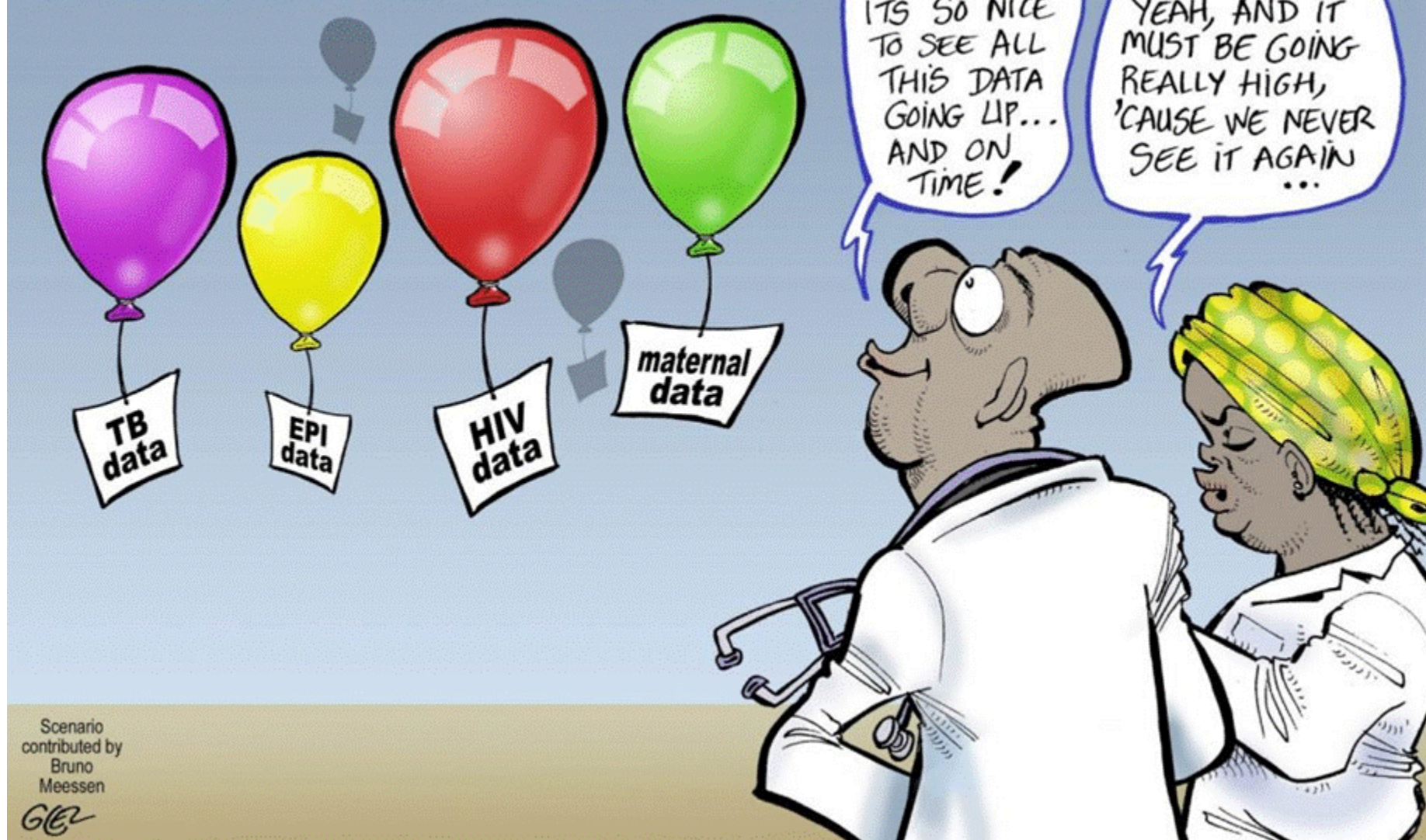
– Bill & Melinda Gates Foundation

Conflict of interest :

– I have no actual or potential conflict of interest in relation to this presentation.
– One of our co-authors works at the funding agency

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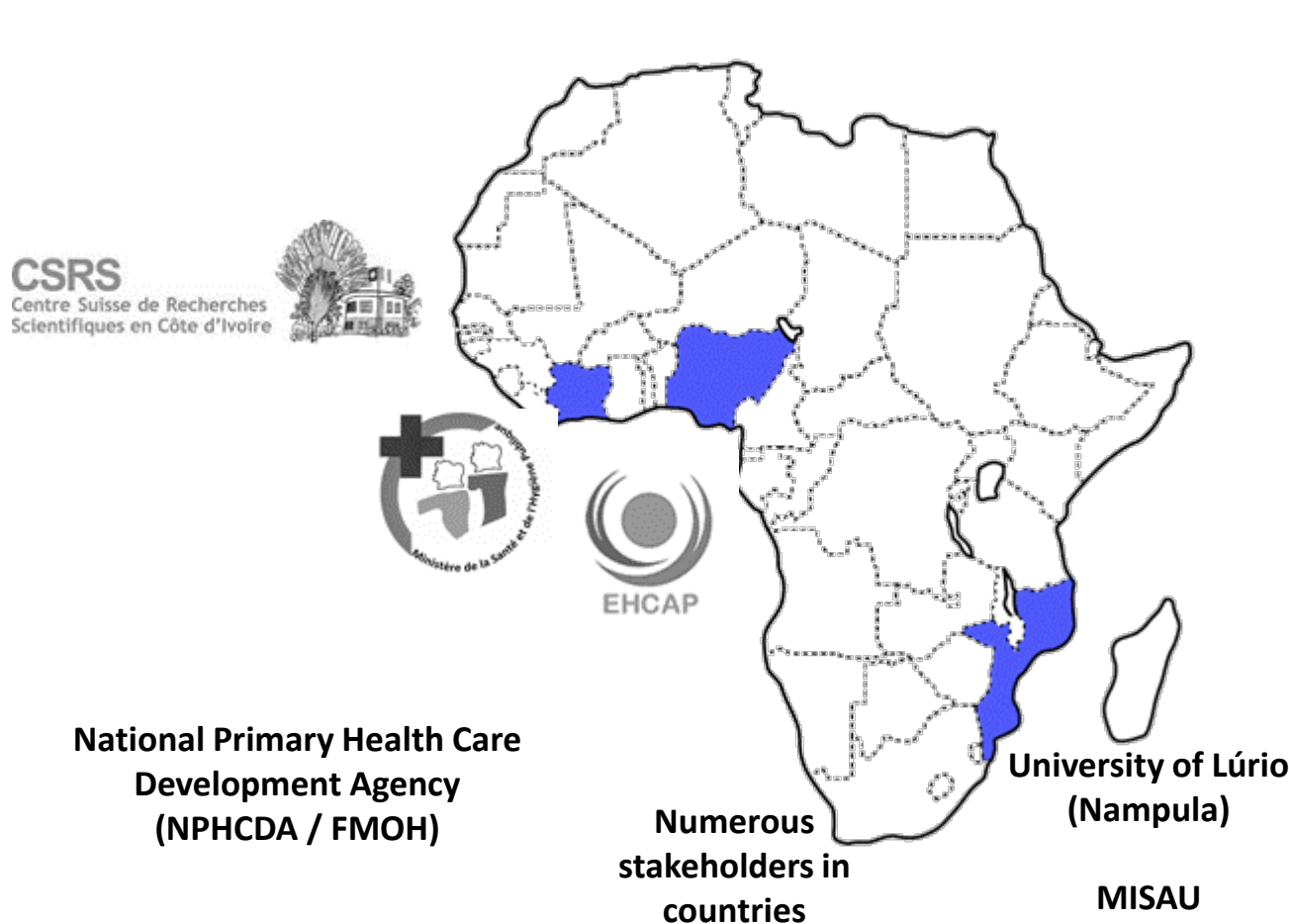# The problem

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To test the effects of
innovations in paper-based health
information systems in
data quality, **data use** and **health
outcomes**.

Project Proposal to the BMGF; page 2.

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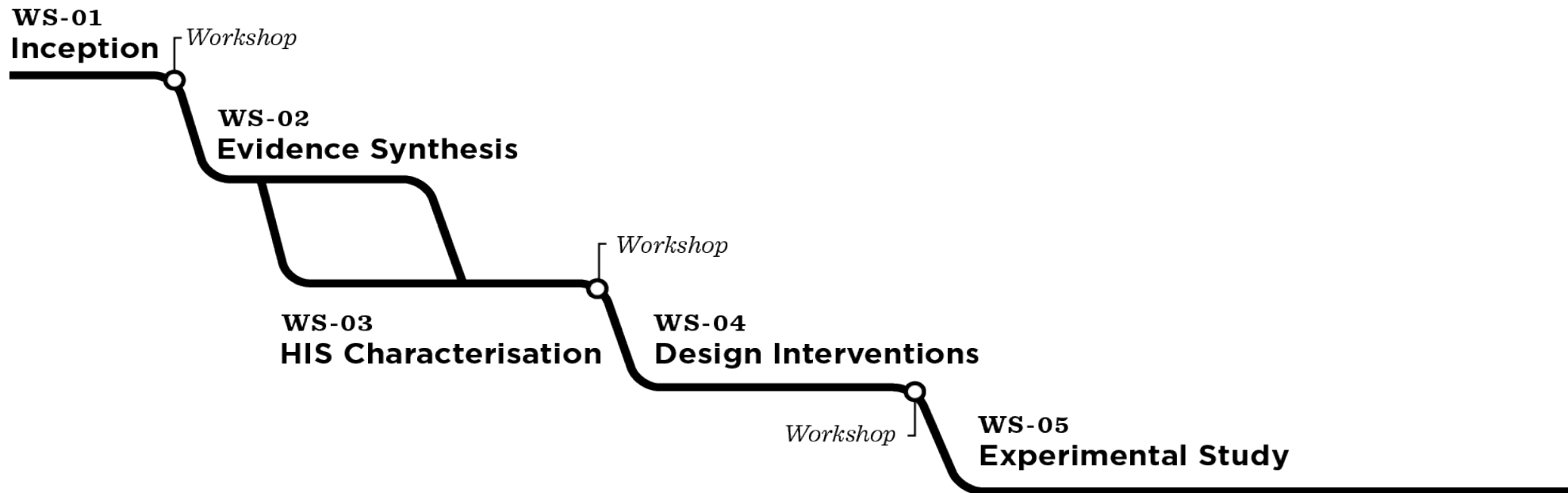@PHISICC_   phisicc.org

The partnership

Swiss TPH

- Swiss Centre for International Health (SCIH)
- Biostatistics (Epidemiology and Public Health)
- Medicines Research
- Project Administration Unit

gravitytank

BILL & MELINDA GATES foundation

CSRS
Centre Suisse de Recherches
Scientifiques en Côte d'Ivoire

EHCAP

National Primary Health Care Development Agency (NPHCDA / FMOH)

Numerous stakeholders in countries

University of Lúrio (Nampula)

MISAU

25 to 30 EXPERTS! in 7 countries

Technical Advisory Group (TAG)

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The plan

WS-01
Inception *Workshop*

WS-02
Evidence Synthesis

WS-03
HIS Characterisation

Workshop

WS-04
Design Interventions

Workshop

WS-05
Experimental Study

Workstream 06: Policy Advocacy will occur throughout the project.

0 MONTHS   **12**

The effectiveness systematic review

The 'effectiveness' systematic review
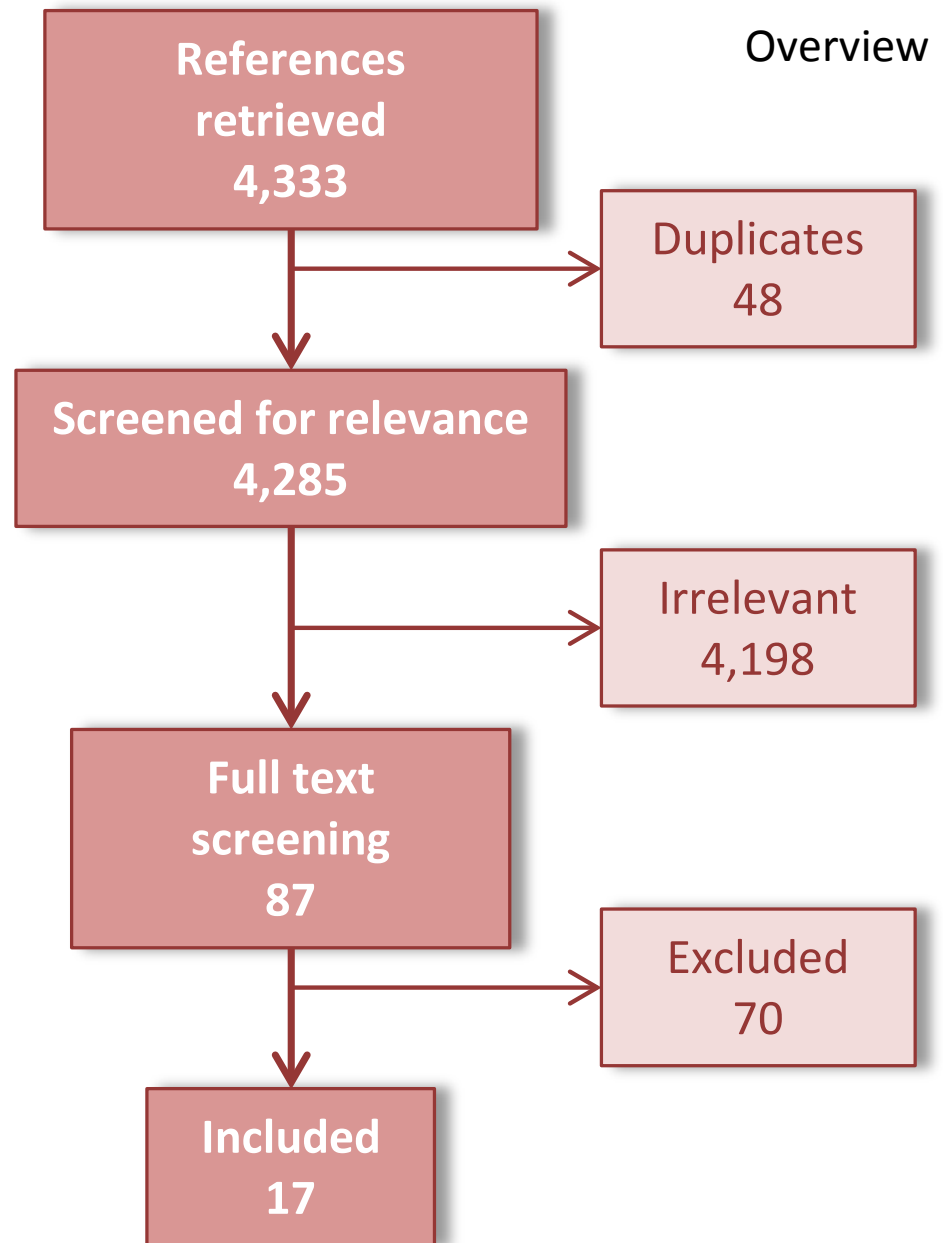
P   when **health care providers** use

I   **innovative Health Information Systems**

C   as compared to **regular** Health Information Systems

O   do **data quality**, **use** or **health outcomes** improve

in PHC in LMIC

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The 'effectiveness' systematic review

Interventions:

- Training on recording
- EHR
- Problem oriented record
- Redesign immunisation card
- SMS reminders

References retrieved
4,333

Duplicates
48

Screened for relevance
4,285

Irrelevant
4,198

Full text screening
87

Excluded
70

Included
17

The 'effectiveness' systematic review

Data quality

discrepancies in data sources, completeness

Data use

knowledge, identification of outliers, system 'usability', adherence to guidelines

Health outcomes

clinical episodes identified, vaccinations, nets protection, mothers' enrolment, viral supression

Other

time spent, workload, satisfaction

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The 'effectiveness' systematic review

- Innovations are in the side of '**electronic**' (not in the side of paper) or mixed (e.g. **reminders**)

- Most of the studies reported **numerous outcomes**

- **We could still learn from electronic systems.**

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The mistake
(yes, mistake)

We thought we knew

what

health information systems

~~are~~ **mean**

RWE:

"information on health care that is derived from multiple **sources outside typical clinical research settings**, including electronic health records (EHRs), claims and billing data, product and disease registries, and data gathered through personal devices and health applications".

Sherman et al. 2016   *The* NEW ENGLAND JOURNAL *of* MEDICINE

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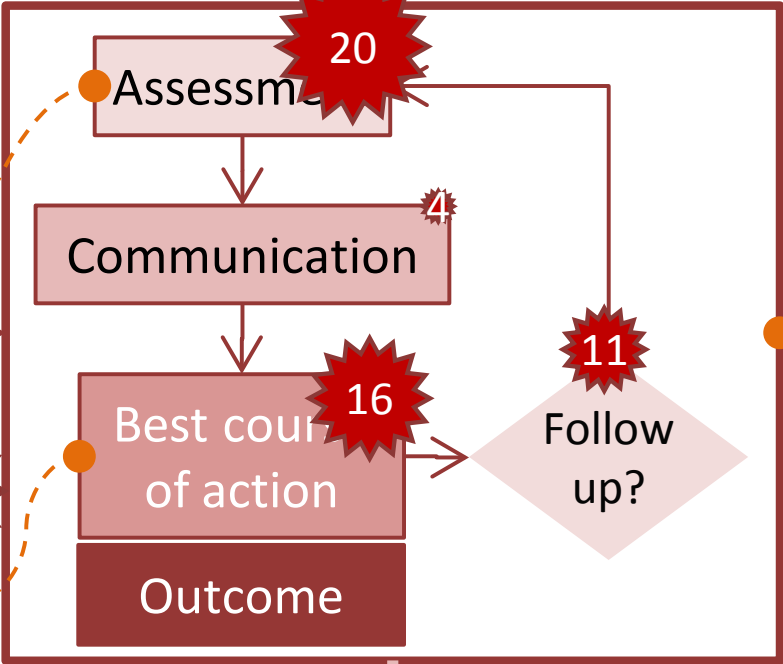
Back to the ~~desk~~ field

**PRIMARY DECISIONS
(Community / Health facility)**

Data audit — 5

Knowledge — 14
- Regulations
- Guidelines
- Peers' advice
- Own experience
- Tacit...

Assessment — 20

Communication — 4

Best course of action — 16

Follow up? — 11

Outcome

Technical audit — 24

Data transformation and management — 42 Recording — 41 Reporting

Knowledge
- Regulations
- Guidelines
- Peers' advice
- Own experience
- Tacit...
- Guidelines
- Peers' advice
- Own experience
- Tacit...

Assessment

Assessment

Communication

Communication

Best course of action

Outcome

Follow up?

Follow up?

Technical audit

Technical audit

Data audit

Data audit

Data audit

Data transformation and reporting

Data transformation and reporting
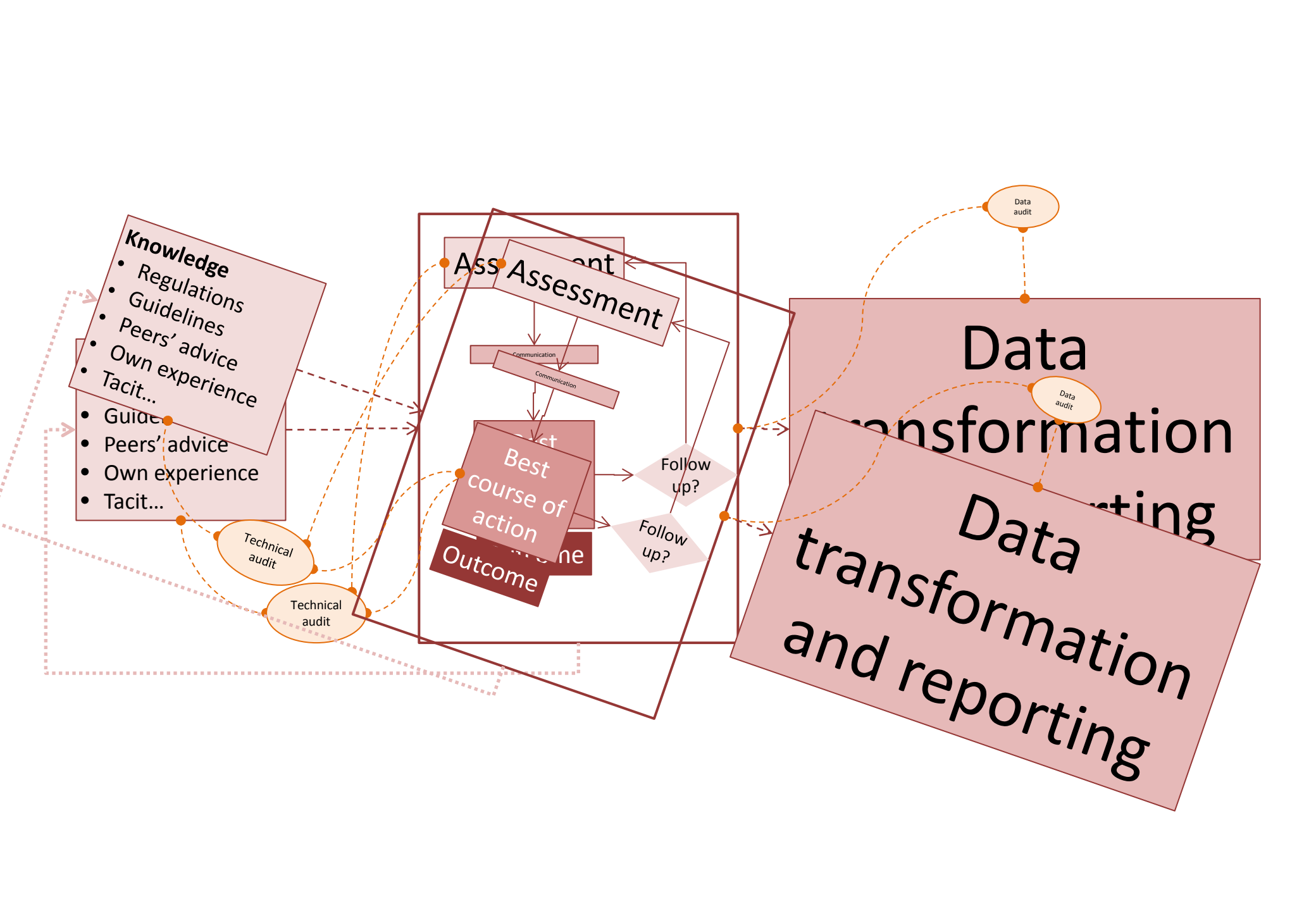
What have we learned?

Conclusions

- It is not (only) a matter of the **type of study**, but of what **we miss** without field-experience;

- It is not (only) a matter of **understanding interventions**, but of understanding **people** (making decisions) affected by them;

- It is not (only) a matter of **research partnerships**, but of **listening** to partners

RRWE:

"information on health care that is derived from **the direct observation of human events using appropriate methods**, including human-centred design, behavioural approaches and other disciplines outside the health sector".

PHISICC's team - 2017

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it is not about paper tools

it is not about parts of information systems

it is not about the best quality data

It is about PEOPLE, improving their lives*

trough better decisions on what affects them

informed by adequate data

carefully recorded by health workers

in paper tools

* Especially, the most vulnerable

Global Evidence Summit
Using evidence. Improving lives.

Thanks to:

Health services users, health workers, Ministries of Health, Research partners and stakeholders in Côte d'Ivoire, Mozambique and Nigeria.

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T4A