

The effectiveness of interactive checklists within an individual case-based eRegistry for maternal and child health: A cluster randomized trial protocol

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BACKGROUND

- A lack of data to inform policy for Reproductive, Maternal, Newborn and Child Health (RMNCH) is of concern in achieving universal health coverage.
- The key challenge is to deliver consistently high quality health care using proven international practice guidelines for maternal and child health.
- Electronic data-driven tools such as **electronic checklists** and **decision support tools** have the potential to improve the delivery of quality healthcare.
- There is insufficient evidence to support the systematic implementation of these tools in **antenatal care, care at birth, newborn care and postnatal care**.
- **Context of Palestine:** The current data collection system in primary healthcare involves repetitive paper work and inefficient reporting chores. Standardizing healthcare guidelines and promoting robust health information systems is a top priority.



OBJECTIVE

To study the comparative effectiveness of interactive electronic checklists in primary healthcare for maternal and child health, within an individual case-based electronic registry versus paper-based case notes.

DEFINITIONS

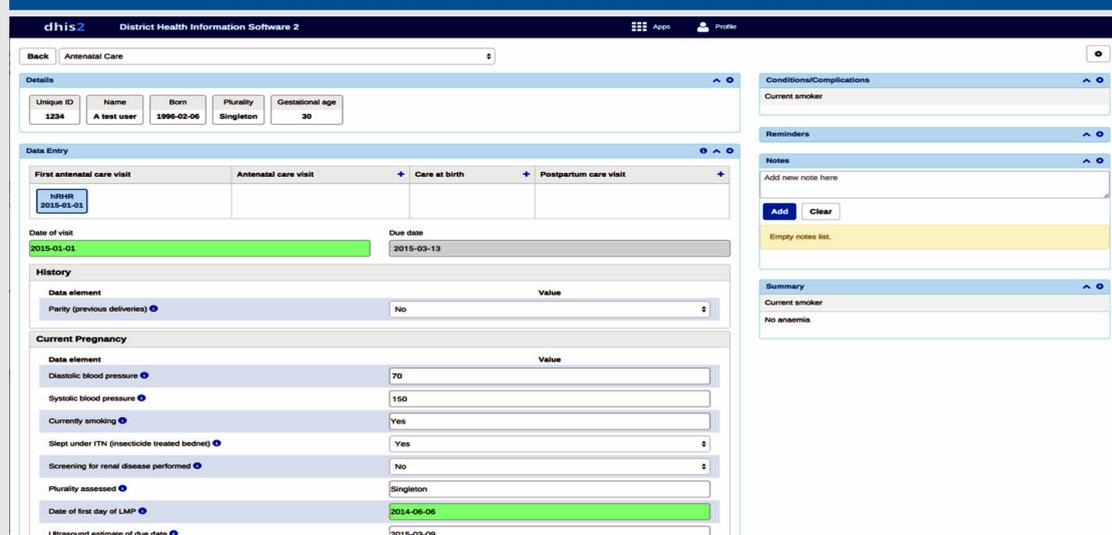
- A **checklist** is a type of informational job aid used to reduce failure by compensating for potential limits of human memory and attention. It helps to ensure consistency and completeness in carrying out a task.
- A **clinical decision support** tool provides timely information, usually at the point of care, to assist physicians and other health professionals in making decision about a patient's care.
- An **interactive checklists** consist of **checklists** combined with **clinical decision support**.
- An **electronic registry for maternal and child health** is an electronic organized system for the collection, storage, retrieval, analysis, and dissemination of information on health determinants and outcomes for individual persons, focusing on maternal and child health, with the purpose of supporting health care provision, public health surveillance, and research.
- The **eRegistries framework** is a comprehensive, customizable system designed to document, manage, and communicate health data to inform health care decisions, priority setting, and health policy, including an individual case-based electronic registry for maternal and child health using indicators based on the WHO's Essential Interventions, Commodities and Guidelines for RMNCH.

METHOD

The trial protocol is being developed in line with the **SPIRIT** protocol checklist for intervention trials

- **Trial design:** Population-based two armed cluster randomized trial
- **Study setting:** Primary healthcare centers in the West Bank of Palestine
- **Population:** New antenatal care enrollments in primary healthcare centers in the West Bank
- **Intervention:** Interactive electronic checklists for antenatal care, care at birth, newborn care and postnatal care within the eRegistries ' electronic registry for maternal and child health customized for Palestine using the District Health Information System 2 software
- **Comparator:** Standard paper based case notes
- **Outcome:** Process and outcome indicators for the WHO Essential Interventions, Commodities and Guidelines for RMNCH will be assessed in relation to effects reflecting the US Institute of Medicine's domains of quality of care, namely; safety, effectiveness, patient-centeredness, timeliness, efficiency and equity
- **Sample size:** Preliminary estimates suggest a sample size of 132 clusters (primary healthcare centers) with an annual enrollment rate of 80 pregnancies, assuming an alpha of 0.05, a power of 80% and an apriori intracluster correlation coefficient of 0.02

eREGISTRY FOR MATERNAL AND CHILD HEALTH DEMO



EXPECTED RESULTS

- The anticipated outcomes include appropriate **uptake and coverage** of maternal and child healthcare indicators assessed against the quality of care framework.
- The study is expected to generate **high quality evidence** for the effect of interactive checklists in a middle income country to inform health policy.

ACKNOWLEDGEMENT



REFERENCES

Spirit 2013 checklist: Standard protocol items: recommendations for intervention trials. Institute of Medicine. Crossing the Quality Chasm: A New Health System for the 21st Century. Washington, D.C: National Academy Press; 2001. The WHO Essential interventions, Commodities and Guidelines for Reproductive, Maternal, Newborn and Child Health, 2011.