

Ronald Muhumuza Kananura¹, Ousman Mouhamadou², Francesca Tognon³, Firehiwot Abathun⁴, Jacqueline Minja⁵, Iliaria Mariani⁶, Lorenzo Giovanni Cora⁶, Sara Geremia⁷, Paolo Delena^{6,7}, Ghislain Franck Houndjahoue², Giovanni Putoto³, Joy Lawn⁸, Donat Shamba⁵, Peter Waiswa¹, Louise Tina Day⁸, Marzia Lazzerini^{6,8}

¹ Makerere University School of Public Health, Uganda ²CUAMM Doctors with Africa, Central African Republic ³CUAMM Doctors with Africa, Italy ⁴CUAMM Doctors with Africa, Ethiopia ⁵Ifakara Health Institute, Tanzania ⁶WHO Collaborating Centre for Maternal and Child Health, Institute for Maternal and Child Health IRCCS Burlo Garofolo, Trieste, Italy ⁷University of Trieste, Italy ⁸London School of Hygiene & Tropical Medicine London, UK

BACKGROUND AND OBJECTIVES

Reliable data for newborns and stillbirths is essential to ensure Every Newborn survives and thrives. The Improving Quality and Use of Newborn Indicators (IMPULSE) study focuses on improving quality and use of newborn and stillbirth indicators in four African countries: Central African Republic (CAR), Ethiopia, Tanzania and Uganda.

METHODS

The IMPULSE Study Phase 1 assessed RHIS in 96 health facilities (14 in CAR, 24 in Ethiopia, 29 in Tanzania and 29 in Uganda) reviewing source registers and monthly summary reports. Data were collected using the "EN-MINI Tools", analyzed with descriptive statistics stratified by country and health system level. Data quality was assessed across four dimensions: completeness, availability, accuracy, and internal consistency.

CONCLUSIONS

Study findings suggest fragmentation, duplication, high staff workload in recording and reporting newborn and stillbirth indicators in RHIS in all countries. Significant gaps in completeness, accuracy, and internal consistency undermine the reliability of newborn and stillbirth data in RHIS. The findings are not directly generalizable to other settings; however, the assessment could be easily replicated in other sites.

RESULTS

Availability of standardized registers The average number of printed registers for maternal and newborn data in health facilities, ranged between 3.2 in Tanzania to 6.8 in Uganda. Among 10 specific registers assessed, only a standardised labour and delivery register was available in all sites, with a lack of dedicated postnatal care and newborn registers (Fig 1).

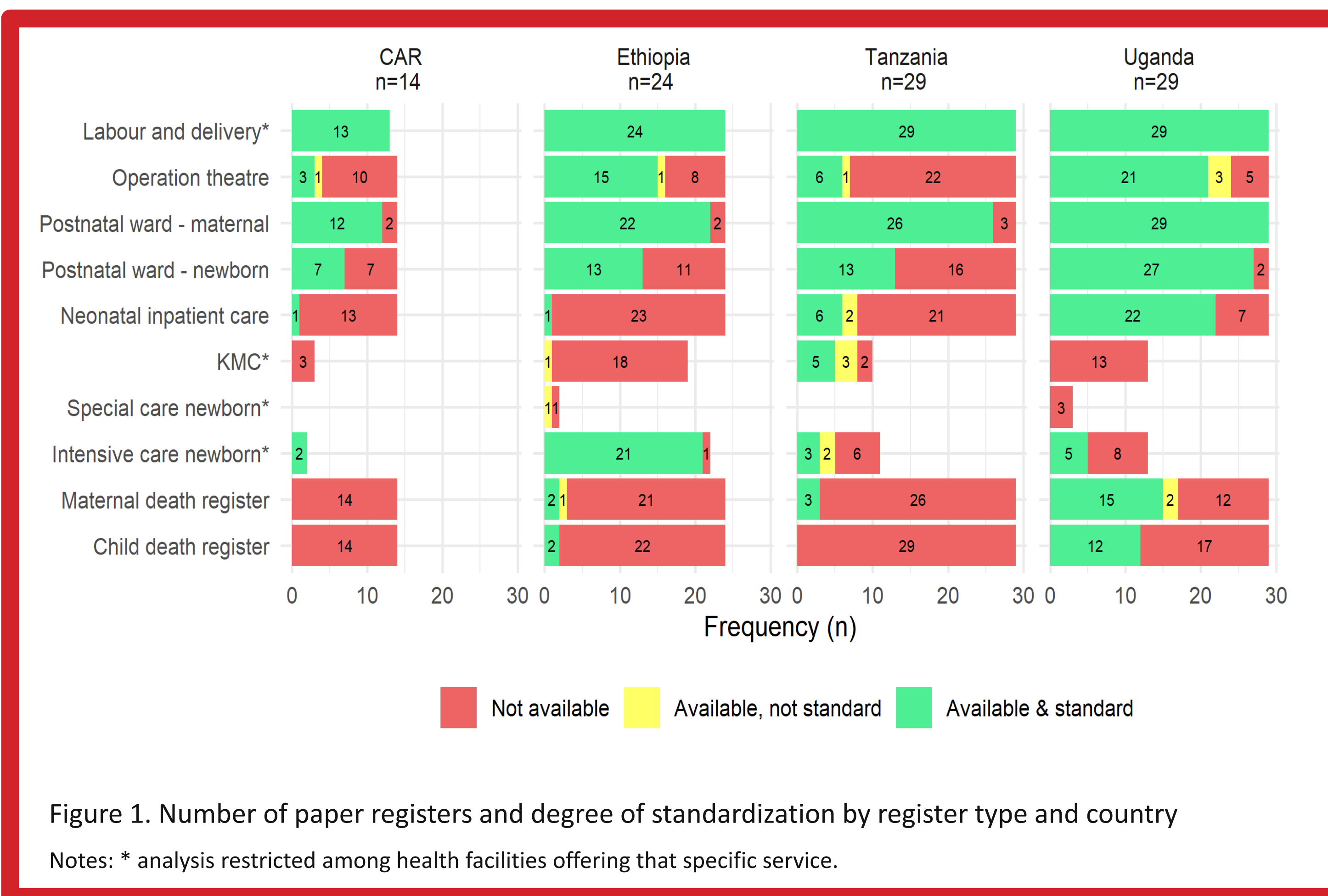


Figure 1. Number of paper registers and degree of standardization by register type and country
Notes: * analysis restricted among health facilities offering that specific service.

IMPULSE PHASE 2

In CAR, Ethiopia, Tanzania and Uganda, dedicated tailored intervention aiming at improving the quality and use of newborn and stillbirth data are underway with results expected by May 2026.

Availability of data elements

- ✓ Among 10 core data elements, data elements highly available (>80%) in RHIS were 10 in Tanzania and Uganda, eight in Ethiopia and five in CAR (Fig 2).

Data Quality

- ✓ Completeness for denominators (total and live births) exceeded 90% in Uganda and Tanzania but was lower in CAR (87%) and Ethiopia (82%).
- ✓ Completeness of impact numerators was suboptimal, averaging 79% for neonatal mortality and 81% for low birth weight, with Ethiopia performing worst (45% and 32%, respectively).
- ✓ Accuracy was a major concern, with exact concordance between recounted register data and reported summaries ranging from only 8.3% to 53.6% (Fig.3).

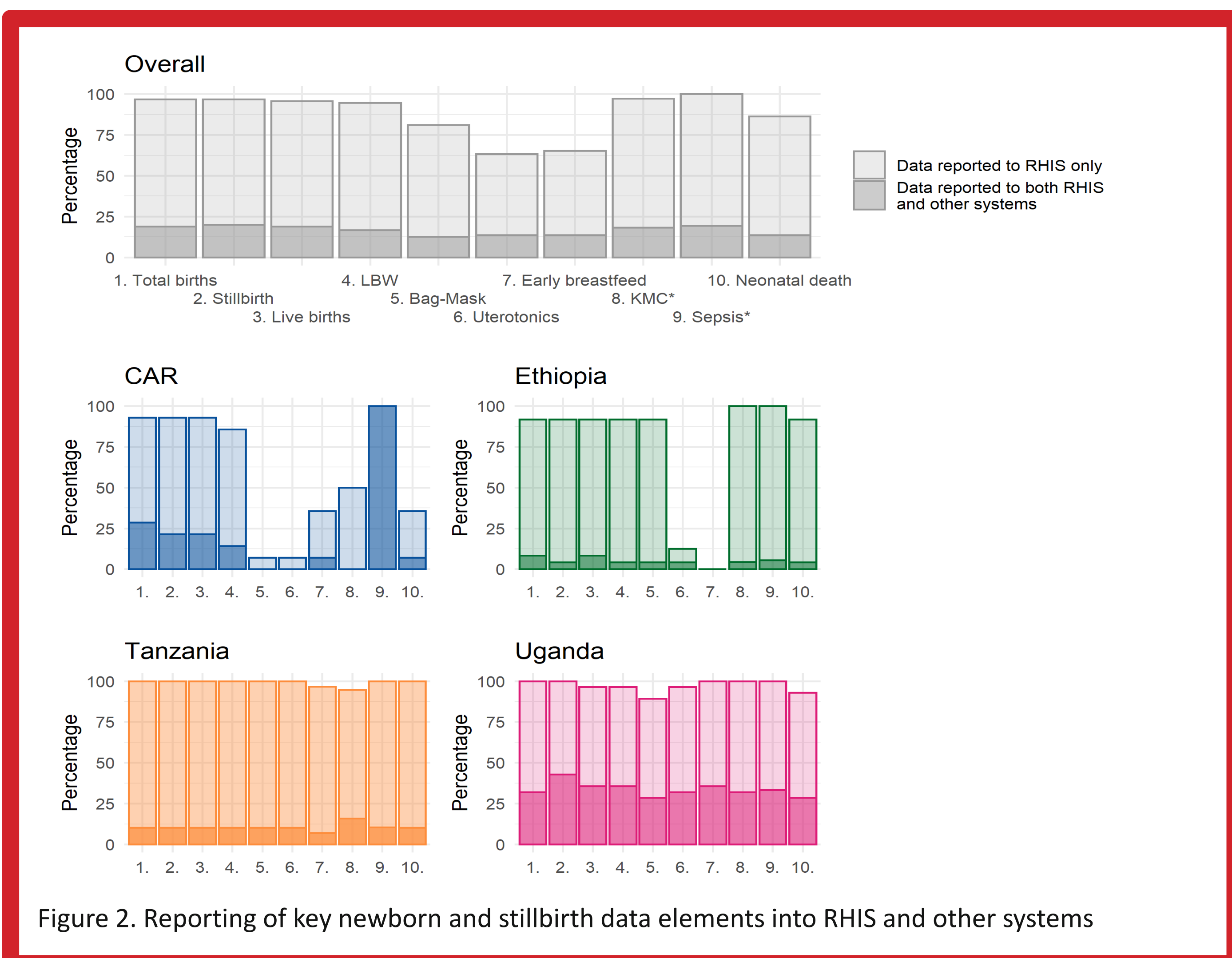


Figure 2. Reporting of key newborn and stillbirth data elements into RHIS and other systems

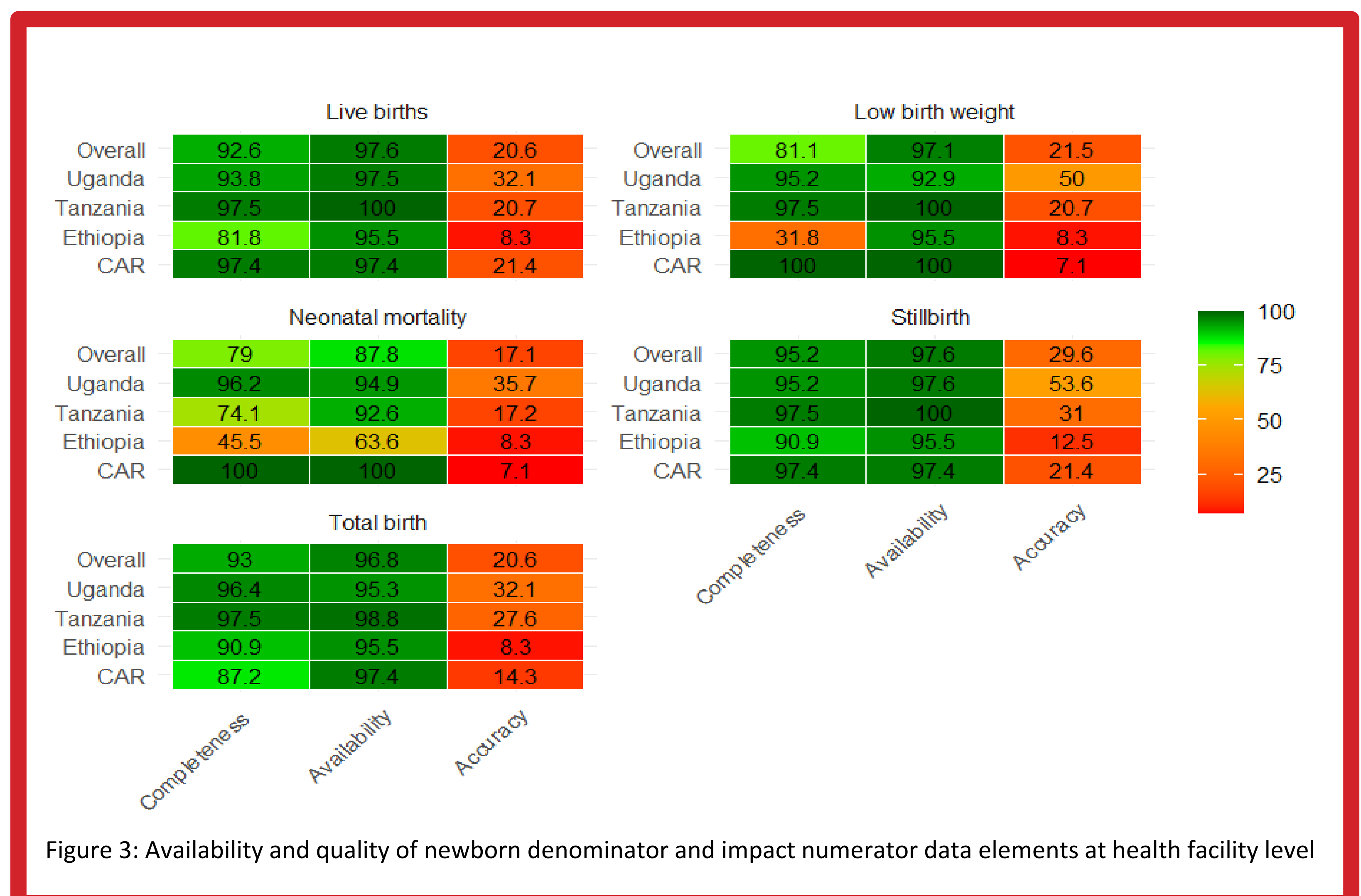


Figure 3: Availability and quality of newborn denominator and impact numerator data elements at health facility level

Acknowledgements

The research is coordinated by The London School of Hygiene & Tropical Medicine (LSHTM), in collaboration with Doctors with Africa CUAMM, the WHO Collaborating Center in Maternal and Child Health IRCCS Burlo Garofolo Trieste Italy, Makerere University School of Public Health and Ifakara Health Institute, kindly funded by Chiesi Foundation.

For more information



lshtm.ac.uk/
impulse

