

mHealth4Afrika - Community-based ICT for Maternal Healthcare in Africa

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Co-design in Preparation Stage

Importance to ensure alignment with national and regional policies and priorities

- Looked at range of health-related challenges where ICT could assist
- Identified priority area - to support quality community-based maternal and Newborn healthcare delivery at clinic level

Importance to identify partners with complementary expertise

- Complementary technical expertise
- Good knowledge of healthcare sector at national level
- Existing relationships with Ministry of Health
- Existing relationships with healthcare clinics – urban, rural, deep rural

Co-design process

- Identification of technical challenges at national level in target countries
- Identification of human resource challenges
- Identification of training requirements within healthcare clinics
- Agreed most relevant technologies and approaches
- User-centered Design
- leverage the current state-of-the-art in terms of patient record systems and medical sensors to innovate and adapt to advance beyond the state-of-the-art in mHealth in a clinic context in Africa



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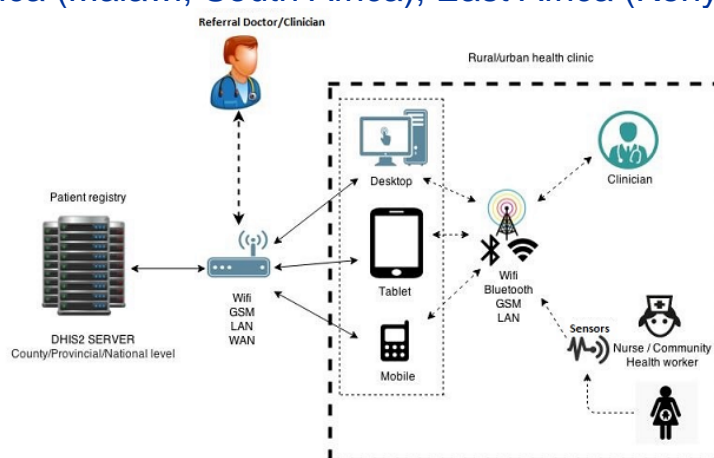
Based on engagement with health clinics in the target countries, practical constraints identified that need to be addressed in the design and implementation of this research and innovation project include:

- limited availability of ICT skills among healthcare workers, which requires that user interfaces are intuitive and easy to use, thus reducing the need for specialist training to use the system
- limited infrastructure in rural and deep rural clinics thus requiring the communication layer for data transfer to leverage appropriate, cost effective technologies, low power consumption devices and solar charging units to charge laptops, tablets and phones
- limited experience leveraging medical sensors for diagnosis, offering an opportunity to demonstrate to key stakeholders including healthcare workers their potential impact in combination with mobile technologies to improve clinical delivery indicators and support telemedicine
- deficit of healthcare professionals in rural and deep rural clinics, which opens up an opportunity to demonstrate how ICT tools can help available staff provide more efficient healthcare delivery and access referral expertise via telemedicine
- differences in languages and healthcare systems
- other logistical constraints including long distances to health clinics



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- Research and evaluate the potential impact of co-designing an open source, multilingual mHealth platform to support quality community-based maternal and Newborn healthcare delivery at clinic level, based on end-user requirements in Southern Africa (Malawi, South Africa), East Africa (Kenya) & Horn of Africa (Ethiopia)



This will inform the co-design of a common platform suitable for wider adoption across Africa, with limited additional configuration and adaptation required by new participating countries.



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- IIMC, Ireland (Coordinator)
- University of Gondar, Ethiopia
- Strathmore University (@iLabAfrica), Kenya
- University of Malawi (Chancellor College)
- Baobab Health Trust, Malawi
- University of Oslo (Department of Informatics), Norway
- Nelson Mandela Metropolitan University (Centre for Community Technologies), South Africa
- University of Ulster (Computer Science Research Institute), UK

Brings together multidisciplinary research expertise for seven countries to include human-computer interaction (HCI), cross-platform mobile technologies, sensors for healthcare, health informatics, end-user driven needs assessment and evaluation, maternal and newborn health expertise



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Benefits of Cross Border Collaboration

- Cross border collaboration will assist in increasing the research capacity within each participating country through knowledge exchange and skills transfer
- Undertaking research and innovation activities across different regions of Africa provides a unique opportunity to collect a critical mass of comparative data related to end-user requirements and pilot evaluation, to assist in analysing similarities and differences in participating countries

Thank you for your attention



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