

# Report from Kenya

September-15, 2022



**KENYA MEDICAL  
RESEARCH INSTITUTE**



**NEKKEN**  
Institute of Tropical Medicine,  
Nagasaki University

Orchestrating a brighter world

**NEC**

# NUITM-KEMRI Project: WIRE System in Kenya

- ◆ NUITM-KEMRI<sup>\*1</sup> project have implemented Pregnant Women and Infant Registration (WIRE) system which aims at a digitalized mother-child health (MCH) handbook system in Kenya.
- ◆ WIRE system currently runs at 9 health facilities and registers more than 4,000 mothers and 3,500 children under 5 years old.



**\*1: NUITM: Institute of Tropical Medicine, Nagasaki University  
KEMRI: Kenya Medical Research Institute**

# Vaccination Management System (VMS): a part of WIRE

- ◆ VMS, a part of WIRE study, stores profile of mothers and children and vaccination schedule for babies.
- ◆ VMS adopts biometrics technologies including a method for newborn biometric identification for precise operation.

**New Registration / Update - Child**

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Personal Info: HF County \*, HF Subcounty \*, HF Ward \*, HF HealthFacility \*

[ID] Name of Health Facility (Auto): 10/09/2022

Face Image: 1911\_001\_00000001-001 National ID Huduma Number

Finger-print: First Name Middle Name Last Name \* Gender Date of Birth DD/MM/YYYY

Vaccination: County Subcounty Ward

Physical features: Town/Trading centre/Village Estate/hse no Physical address Phone number

Discharge on BD ☐ HIV Status Passed away ☐

Registration / Update Top

*Profile registration page at VMS*

**New Registration / Update - Child**

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Vaccination Schedule View Vaccine View Name

At Birth 6 Weeks 10 Weeks 14 Weeks 9 Months 18 Months

	Date of Vaccination	Schedule	Done/Alert
BCG	Select a date	Select a date	<input type="checkbox"/>
OPV	Select a date	Select a date	<input type="checkbox"/>

Registration / Update Top

*Vaccination management page at VMS*

# Unique Technologies in VMS: Biometric Identification

- ◆ 3 types of biometric identification technologies are implemented in VMS.
  - For adults : Face and Voice
  - For children: Fingerprint
- ◆ New newborn fingerprint identification method registers babies' data at delivery as birth information\*<sup>1</sup> and it provides a capability to track vaccination schedule properly.

\*1: This leads to SDGs16.9 “By 2030, Provide legal identity for all, including birth registration”.



*Fingerprint registration page at VMS*



*Newborn fingerprint scanning process at health facility*



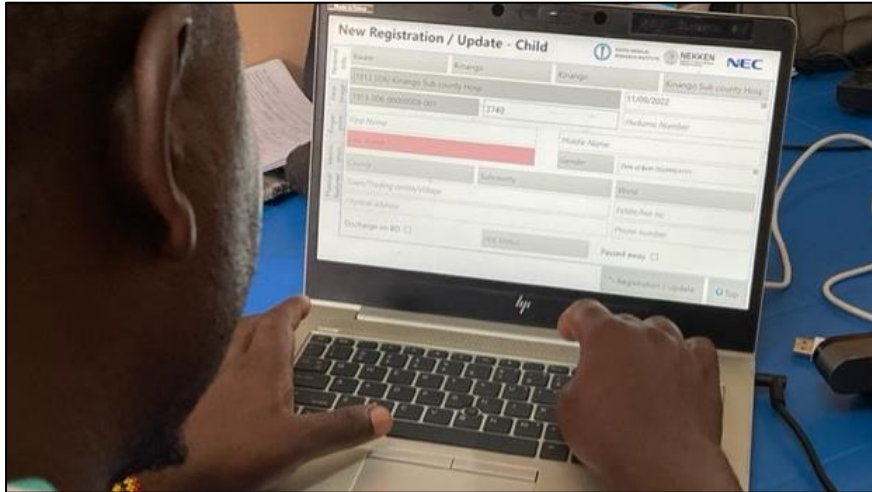
# Voices from Research Site: Leave No One Behind



*Informed consent process*



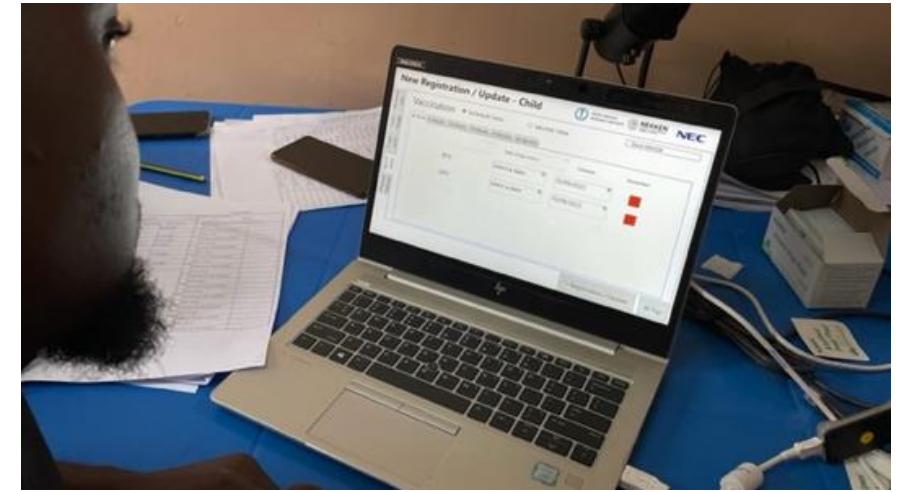
*Newborn Fingerprint data registration process*



*Profile registration process*



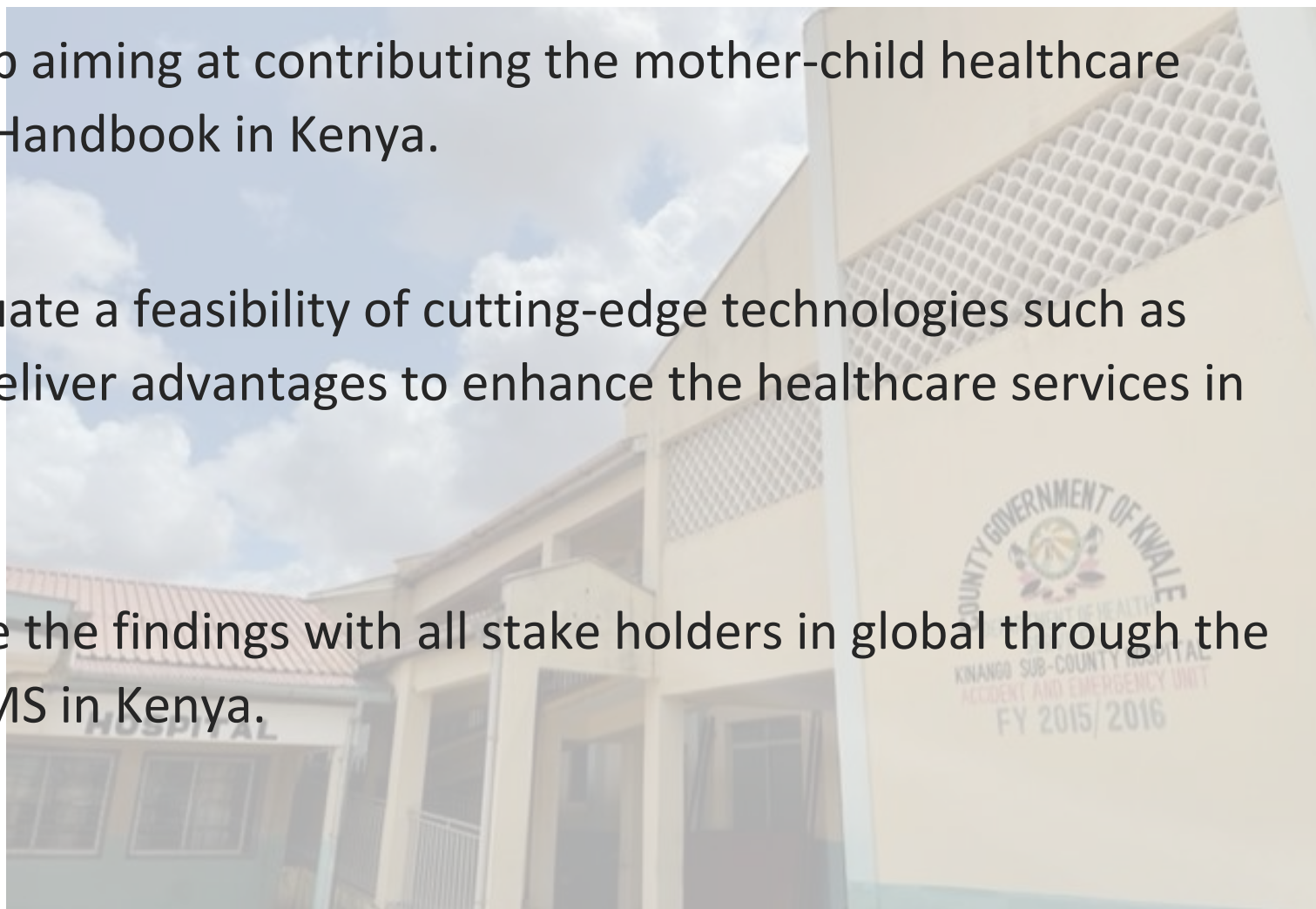
*Newborn Face image data registration process*



*Vaccination data registration process*

# Summary: The Vision of NUITM-KEMRI project

- ◆ NUITM-KEMRI projects will keep aiming at contributing the mother-child healthcare including digitalization of MCH Handbook in Kenya.
- ◆ NUITM-KEMRI project will evaluate a feasibility of cutting-edge technologies such as biometric technologies which deliver advantages to enhance the healthcare services in Kenya.
- ◆ NUITM-KEMRI project will share the findings with all stake holders in global through the onsite research by WIRE and VMS in Kenya.



*Kinango Sub-County Hospital, a place creating our future*