



Final Report on NoviGuide

Implementation in Eastern Uganda
(Kamuli and Buyende Districts)

JULY 17TH - 19TH, 2024



Prepared by :
**Waligo Henry &
Dr. Nakakeeto Margaret**



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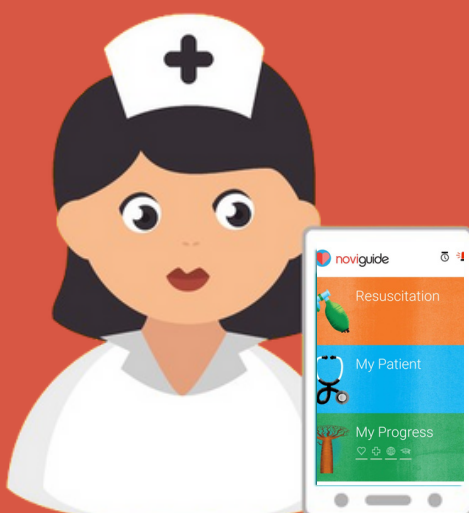
EXECUTIVE SUMMARY

The NoviGuide training initiative, organized by the Nakakeeto Foundation and funded by Global Strategies, was held from July 17th to 19th, 2024, in the Kamuli and Buyende districts of eastern Uganda. This region, comprising 32 districts, has only recently started implementing NoviGuide, with the training expanding its reach to three districts: Kamuli, Buyende, and Tororo.

The primary objective of this training was to equip frontline healthcare workers with the digital skills necessary to effectively utilize NoviGuide in the care of newborns, particularly those who are sick or premature. A total of 27 healthcare workers participated, with 89% being female and 11% male. This gender-diverse group reflects the region's commitment to improving newborn care, and their enthusiastic participation underscores the readiness to adopt new digital tools to enhance healthcare delivery.

Recommendation: To maximize the impact of NoviGuide on newborn care, it is recommended that the tool be used not only for assessing sick and small newborns but also as a screening tool for all newborns. This broader application can significantly improve early detection and intervention, leading to better healthcare outcomes.

Conclusion: The successful implementation of the NoviGuide training across eight health facilities in the Eastern region marks a critical step forward. The strong engagement from healthcare workers demonstrates a clear commitment to integrating digital solutions into routine practice. With continued support and further integration, NoviGuide holds the potential to significantly improve newborn healthcare outcomes across the region.





BACKGROUND

Newborn deaths currently account for approximately 40% of all deaths of children under five years of age in developing countries –the three major causes being birth asphyxia, infections and complications due to prematurity and LBW. Birth weight is a significant determinant of newborn survival. LBW is an underlying factor in 60–80% of all neonatal deaths. In fact, prematurity is the largest direct cause of neonatal mortality, accounting for an estimated 29% of the 3.6 million neonatal deaths every year (Lawn et al. 2010). LBW infants are approximately 20 times more likely to die, compared with heavier babies (Kramer 1987). One-third of LBW babies die within the first 12 hours after delivery.

According to the SDG 3.2 by 2030, all countries are expected to have reduced neonatal mortality to as low as 12 per 1,000 live births and under-5 mortality to 25 per 1,000 live births. Great improvement is being

realized for the under 5 and neonatal mortality for Uganda has reduced to 22/1000 live birth after being stagnant for almost 2 decades at 27/1000 live births. However, regional discrepancies continue to be noted. This is partly due to capacity gaps amongst the frontline health workers. Hence, attention is increasing on building capacity for frontline health workers focusing on newborn care. Another major challenge is inadequate staffing of skilled healthcare workers.

Due to this, Nakakeeto Foundation under the Newborn Steering Committee-MOH introduced the use of NoviGuide, an application that has streamlined assessments, provides automated drug, feeding and fluid calculations. In doing this, it helps improve quality of care and hence safety of babies during care.

INTRODUCTION

In our continuous effort to improve the quality of care for small and sick newborns in the Eastern region of Uganda, the Nakakeeto Foundation has achieved a significant milestone by introducing NoviGuide.

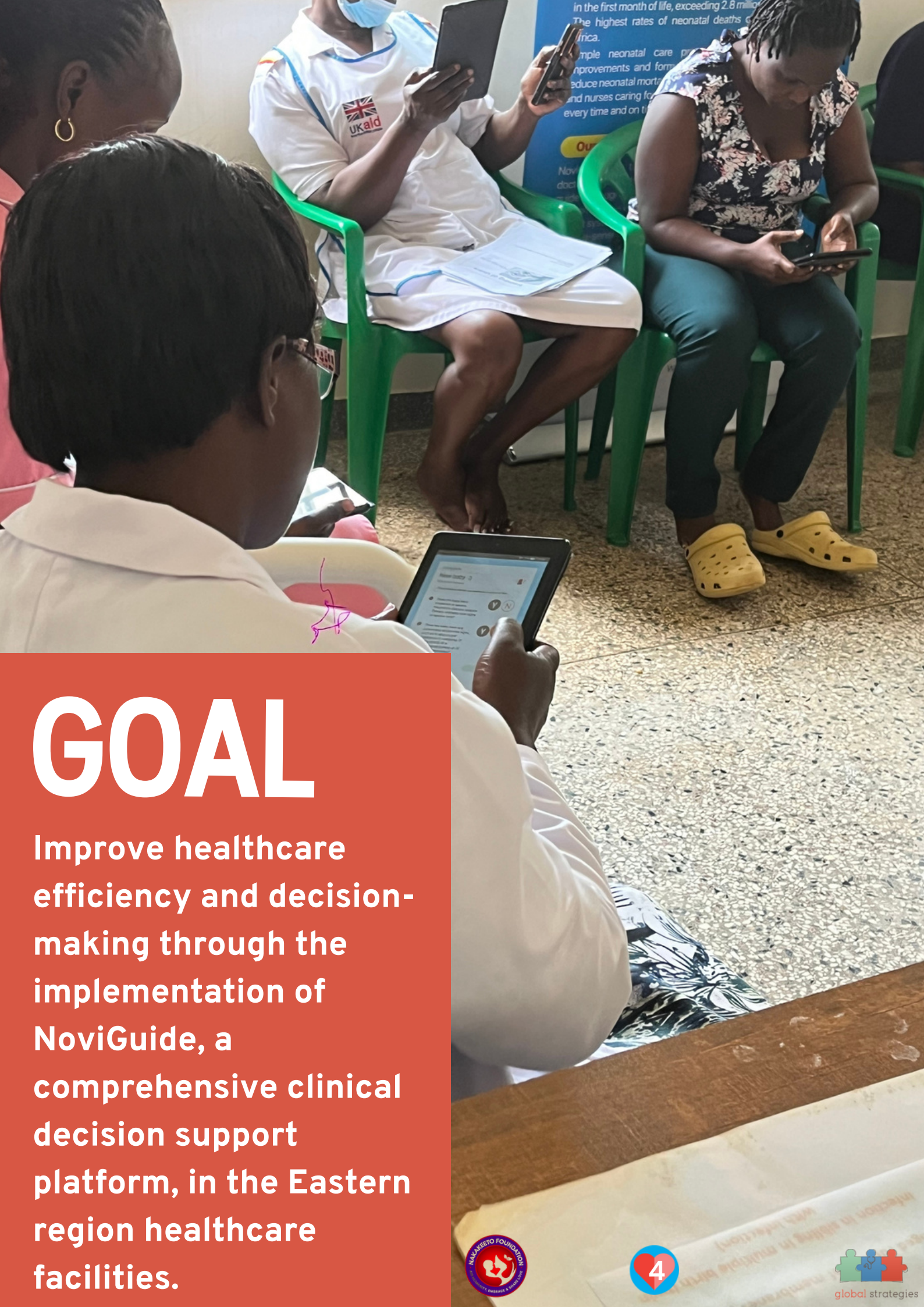
Developed by Global Strategies, NoviGuide is an advanced clinical decision support platform that provides expert bedside guidance while simultaneously collecting vital data to inform system-level interventions.

Understanding the critical importance of adhering to Uganda's neonatal guidelines and protocols, we identified the need to train healthcare workers in the effective use of NoviGuide. This digital tool, essential for advancing healthcare practices, became the centerpiece of a comprehensive six-day training initiative. The program was conducted across three strategically selected healthcare facilities—Kidera HCIV, Kamuli GH, and

Nankandulo HCIV—to ensure broad and meaningful implementation. Initially, Namwendwa HCIV was also considered for the training. However, upon arrival, it became evident that NoviGuide could not be safely implemented there due to the absence of the facility's in-charge and the lack of staff preparedness.

The Eastern region of Uganda encompasses 32 districts, and we plan to extend NoviGuide's implementation to at least five more districts in the next financial year.





GOAL

Improve healthcare efficiency and decision-making through the implementation of NoviGuide, a comprehensive clinical decision support platform, in the Eastern region healthcare facilities.



OBJECTIVES

01 Implement NoviGuide in Healthcare Facilities:

Introduce NoviGuide in healthcare centers and hospitals across the targeted districts in Eastern region, Uganda.

03 Facilitate Data-Driven Interventions:

Utilize NoviGuide's Clinical Knowledge Library to establish standardized clinical pathways, ensuring streamlined data collection adhering to health system standards.

05 Scale-up NoviGuide use across Eastern region:

Promote and encourage the use of NoviGuide in Eastern districts, aiming for widespread use and impact.

02 Enhance Clinical Decision-Making:

Train healthcare professionals to effectively use NoviGuide's Algorithm Architect to create and utilize decision trees for informed patient care.

04 Monitor and Evaluate Implementation:

Establish a monitoring and evaluation framework to assess the effectiveness of NoviGuide's implementation in healthcare facilities, ensuring continuous improvement and adaptation.

06 Enhance Healthcare Workflow:

Position NoviGuide as a central component to enhance the overall healthcare workflow, providing a reliable and robust tool for healthcare professionals.



TARGET PERSONS

Nurses

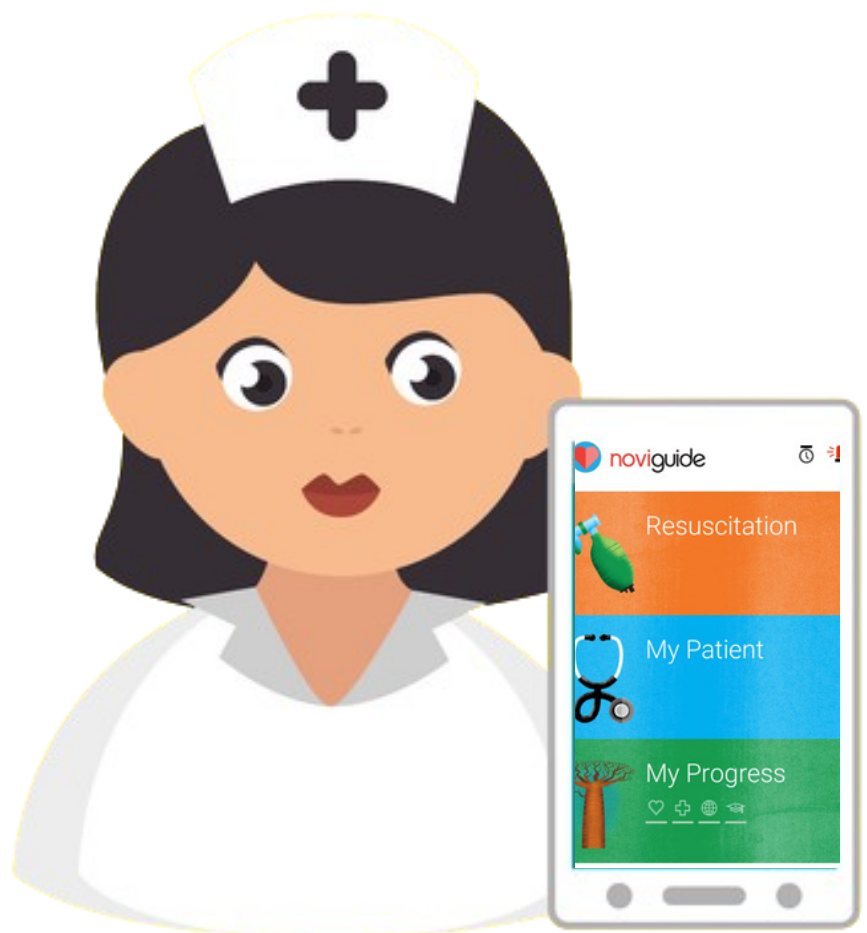
Nurses working in various capacities, especially those directly involved in caring for newborns.

Midwives

Midwives responsible for supporting maternal and newborn health.

Doctors

Medical professionals including doctors, who are actively engaged in newborn care and medical decision-making.

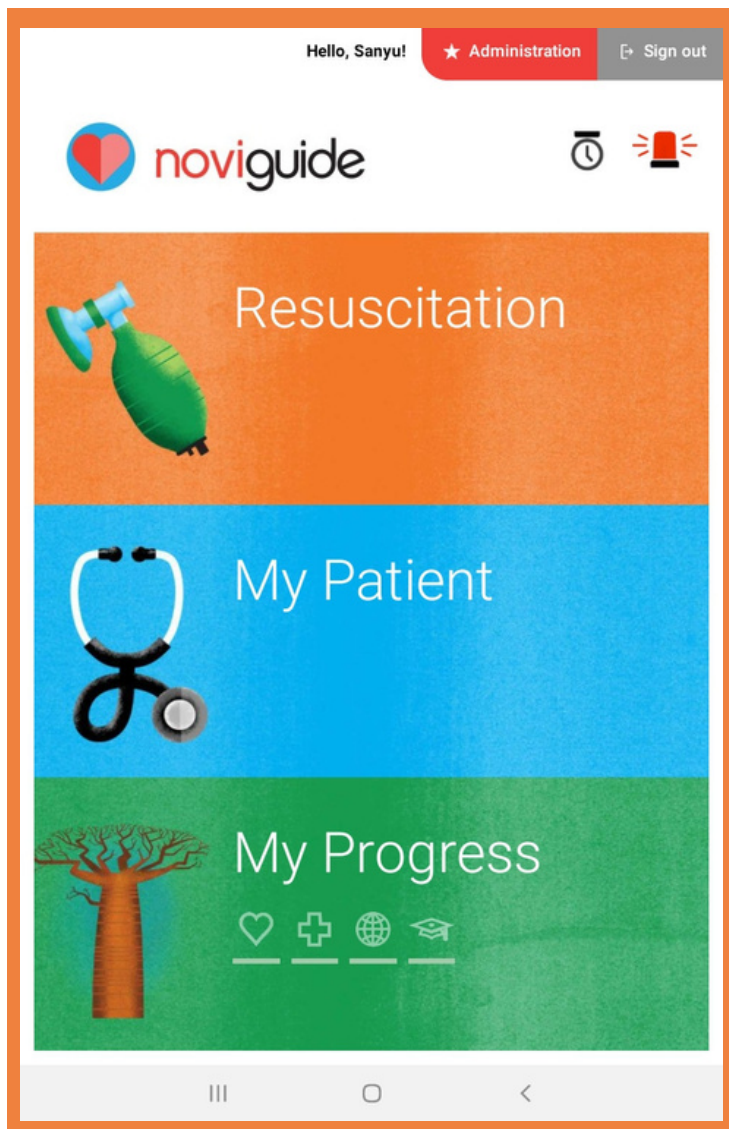


TRAINING DESIGN AND METHODOLOGY:

By structuring the training in this way, it was ensured that participants not only grasped the theoretical aspects but also gained practical skills through hands-on application and real-life scenarios. Below are the methodologies used to deliver;

1. Preparation and Introduction:

- Began with an introductory presentation using visual aids such as PowerPoint slides to provide an overview of NoviGuide, emphasizing its benefits.
- Covered key aspects of NoviGuide's features and functionalities.



2. Training Materials:

- Distributed training manuals to participants for comprehensive understanding.
- Conducted a session on the general use and care of the NoviGuide tablet.

3. Hands-On Tablet Training:

- Facilitated a step-by-step practical session with the NoviGuide tablet.
- Instructed participants on navigating the application, focusing on its various sections.

4. Group Learning:

- Organized small group activities where each group was provided with a tablet.
- Encouraged participants to use the application in scenarios related to the care of small and sick newborns.

5. Real-Life Scenarios:

- Developed real-life patient scenarios to simulate the practical application of NoviGuide.
- Guided participants in using the application to assess and address challenges commonly faced in clinical practice.

6. Interactive Q&A:

- Allocated time for an interactive session where users could ask questions.
- Provided both clinical and technological answers to address queries effectively.

7. Web-Based Version Exploration:

- Introduced the web-based version of NoviGuide, demonstrating its compatibility with smartphones.
- Allowed participants to explore and use NoviGuide on their smartphones for a hands-on experience.

8. Feedback and Assessment:

- Collected feedback from participants regarding the training session.
- Assessed participants' understanding and proficiency in using NoviGuide through quizzes or practical assessments.

9. Follow-Up Support:

- Offered post-training support for any additional queries or clarifications through their WhatsApp groups. (Each health facility has a mentorship WhatsApp group).
- Developed a system for ongoing learning and monitoring. Will have Zoom meetings with focal persons weekly for the first two months and thereafter monthly to discuss progress and challenges.



Training Content:

1. Introduction to NoviGuide:

Introduced NoviGuide, providing an overview of its role as a clinical decision support platform and emphasizing its significance in healthcare settings.

2. Key Features:

Highlighted NoviGuide's capabilities and benefits in supporting healthcare professionals.

3. NoviGuide Tablet Usage:

Provided guidelines on the general use and care of NoviGuide tablets, ensuring optimal performance and longevity.

4. NoviGuide Main Menu:

Overviewed the NoviGuide main menu, emphasizing the five key sections: Resuscitation, My Patient, My Progress, Timer and Emergency Button.

5. Resuscitation Section:

Explored the Resuscitation section, showcasing the 3-D instructional animation video for neonatal resuscitation and its real-time application.

6. My Patient Section:

Explained the My Patient section in detail, covering point-of-care assessments for different scenarios, spot checks, and discharge procedures.

7. My Progress Section:

Provided insight into the My Progress section, highlighting educational videos and the acknowledgment of achievements through badges based on NoviGuide usage.

8. Timer Section:

We trained healthcare workers on using NoviGuide's Timer feature, which allows them to set customizable timers for tasks like newborn assessments. The timer includes a note feature for adding details and can be set for any duration, starting from 5 minutes. Multiple timers can be used simultaneously to help manage care effectively.

9. Emergency Button Usage:

Conducted training on the purpose and usage of the Emergency Button, with a specific focus on reporting and responding to emergencies like seizures, abdominal emergencies, and resuscitation issues.

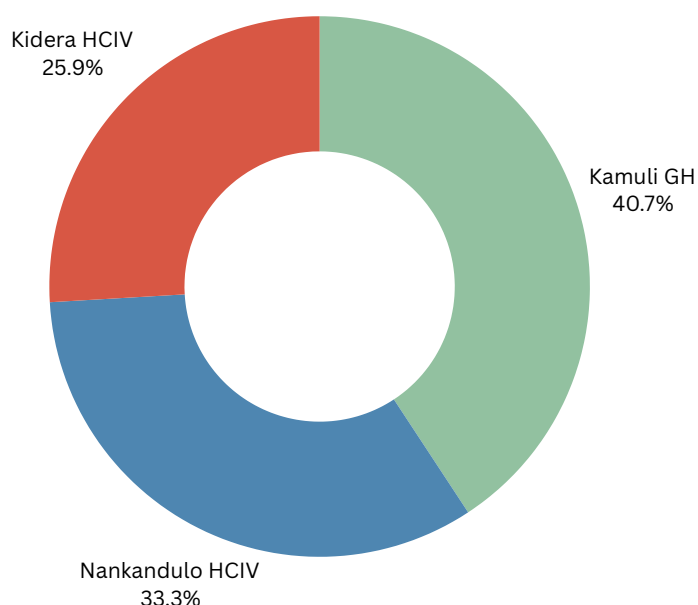


Facility Information

The NoviGuide training program successfully engaged participants from diverse backgrounds across two facilities in Kamuli District and one in Buyende District, all located in the Eastern region.

KAMULI	BUYENDE
- Kamuli General Hospital - Nankandulo HCIV	Kidera HCIV

Distribution of Participants Across Training Sites



Total of 27 participants trained across multiple sites: Kidera HCIV (7), Nankandulo HCIV (9) and Kamuli General Hospital (11).

KIDERA HCIV

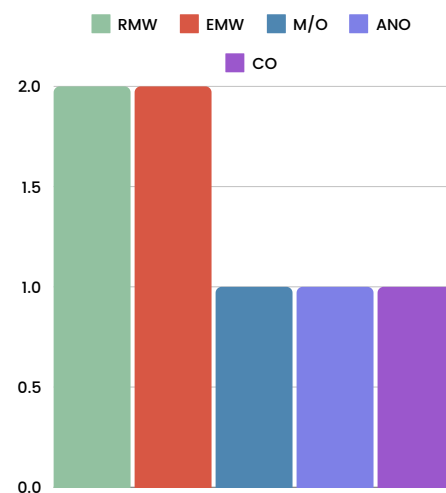
BUYENDE DISTRICT



The NoviGuide training session at Kidera HCIV took place in the hospital's NICU on Wednesday, July 17th. Seven participants attended, engaging actively throughout the training. After productive discussions, the team unanimously selected Sister Kasubo Sarah and Dr. Mutaka Joel as the NoviGuide Focal Leads for the facility.

At the conclusion of the session, the team received a NoviGuide tablet, with the focal lead signing an acknowledgment form to affirm their commitment to implementing NoviGuide in their practice. With this preparation, the team at Kidera HCIV is now well-equipped to seamlessly integrate NoviGuide into their daily clinical workflows, enhancing patient care and outcomes.

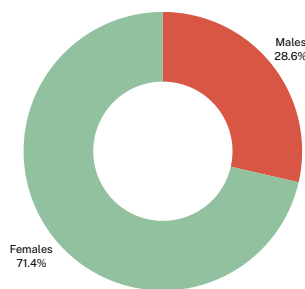
Figure 1. Showing distribution of participants by CADRE.



Seven healthcare workers attended the training, including 2 registered midwives, 2 enrolled midwives, 1 medical doctor, 1 assistant nursing officer, and 1 clinical officer.



Figure 2. Showing distribution of participants by Gender.



A total of 7 health workers attended the training, 5 were females and 2 were males

Attendance List

ATTENDANCE LIST FOR NOVIGUIDE TRAINING IN EASTERN UGANDA



Nakakeeto Foundation
Wakiso District
P.O. Box 24960 Kampala, Uganda
nakakeeto@gmail.com

#	NAME	SEX	CADRE	CONTACT	EMAIL	SIGNATURE
1	KASOBO SARAH	F	R/mw	0751628193	sarahkasobo@gmail.com	[Signature]
2	NAMUGA AIDAH	F	E/mw	0740429595	namugaidah20@gmail.com	[Signature]
3	NAKAYOVU MONICA	F	AMO	075780261	monicayovu@gmail.com	[Signature]
4	MUTAKA JOEL	M	MO	0788664235	mutakajoel424@gmail.com	[Signature]
5	KINUMUYA JOSEPH	M	MO	079116361	kinumuyajoseph@gmail.com	[Signature]
6	NAMPAISA TENDY	F	Elm	0701517813	tendy2009@gmail.com	[Signature]
7	NAMBAALA JULIET	F	R/mw	0753127609	nambaalajuliet@gmail.com	[Signature]

Tablet Issuance form

NoviGuide Tablet Issuance Acknowledgment Form

Facility Details:

Facility Name: KIDERA HC4 District: BUYENDU

Tablet Information:

Tablet Brand: Samsung Serial Number: W9KR707014J

Recipient Details:

Name of Recipient: DR. MUTAKA JOEL Position/Title: Medical Officer

Contact Number: 0783664235 Email Address: mutakajoel424@gmail.com

Acknowledgment:

I, DR. MUTAKA JOEL, hereby acknowledge the receipt of 01 NoviGuide tablet(s) and I understand that this tablet is the property of Global Strategies and is provided for the purpose of enhancing healthcare services through the implementation of NoviGuide.

Tablet Usage Agreement:

I agree to use the NoviGuide tablet responsibly and exclusively for its intended purpose, which includes but is not limited to accessing clinical decision support, data collection, and other functionalities related to patient care.

Responsibilities:

I understand that as the recipient of the NoviGuide tablet, I am responsible for its safekeeping, proper use, and prompt reporting in case of loss, damage, or malfunction.

Training Acknowledgment:

I confirm that I have undergone the necessary training in the use of NoviGuide and understand its functionalities.

Signature: [Signature] Date of issuance: 17th Jul 2024

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KAMULI GH

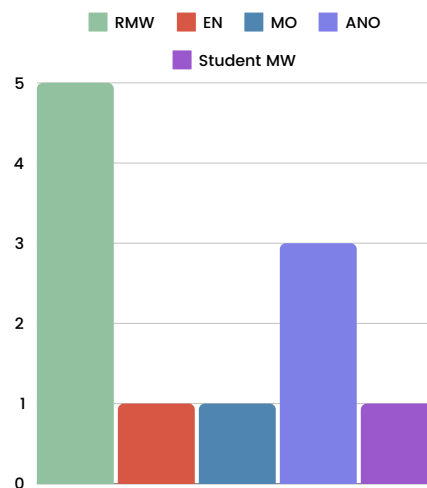
KAMULI DISTRICT



The NoviGuide training session at Kamuli General Hospital was conducted on July 18th in the NICU space dedicated to Kangaroo Mother Care (KMC). Eleven participants attended, demonstrating strong engagement throughout the training. Following collaborative discussions, Sister Mbewona Deborah and Nabiryo Judith were chosen as the NoviGuide Focal Leads for the facility.

The hospital received two NoviGuide tablets, and both unit leads signed acknowledgment forms, underscoring their commitment to integrating NoviGuide into their daily practice. With this preparation, the team at Kamuli GH is now well-equipped to begin using NoviGuide, positioning themselves to enhance the quality of care for newborns. The introduction of NoviGuide in their workflows marks a significant step toward improving clinical outcomes and reinforcing best practices in newborn care at the facility.

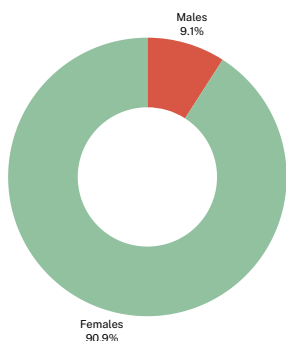
Figure 1. Showing distribution of participants by CADRE.



Eleven healthcare workers participated in the training, including 5 registered midwives, 1 enrolled nurse, 1 pediatrician, 3 assistant nursing officers, and 1 student midwife.



Figure 2. Showing distribution of participants by Gender.



A total of 11 health workers attended the training, 10 were females and 1 was a male

Tablet Issuance forms

NoviGUIDe Tablet Issuance Acknowledgment Form

Facility Details:

Facility Name: KAMULI GENERAL HOSP District: KAMULI

Tablet Information:

Tablet Brand: Galaxy Tab A Serial Number: P9K801B76J

Recipient Details:

Name of Recipient: MBEONNA DEBORAH Position/Title: AND

Contact Number: 078-346742 Email Address: mbeonnadeborah@gmail.com

Acknowledgment:

I, MBEONNA DEBORAH, hereby acknowledge the receipt of One NovigUIDe tablet(s) and I understand that this tablet is the property of Global Strategies and is provided for the purpose of enhancing healthcare services through the implementation of NovigUIDe.

Tablet Usage Agreement:

I agree to use the NovigUIDe tablet responsibly and exclusively for its intended purpose, which includes but is not limited to accessing clinical decision support, data collection, and other functionalities related to patient care.

Responsibilities:

I understand that as the recipient of the NovigUIDe tablet, I am responsible for its safekeeping, proper use, and prompt reporting in case of loss, damage, or malfunction.

Training Acknowledgment:

I confirm that I have undergone the necessary training in the use of NovigUIDe and understand its functionalities.

Signature: [Signature] Date of Issuance: 18/7/2024

NoviGUIDe Tablet Issuance Acknowledgment Form

Facility Details:

Facility Name: KAMULI GENERAL HOSP District: KAMULI

Tablet Information:

Tablet Brand: Galaxy Tab A Serial Number: P9K801B76J

Recipient Details:

Name of Recipient: NABIRTO GUSTIN Position/Title: ASSISTANT NURSING OFFICER

Contact Number: 078-346742 Email Address: nabirto.gustin@gmail.com

Acknowledgment:

I, NABIRTO GUSTIN, hereby acknowledge the receipt of One NovigUIDe tablet(s) and I understand that this tablet is the property of Global Strategies and is provided for the purpose of enhancing healthcare services through the implementation of NovigUIDe.

Tablet Usage Agreement:

I agree to use the NovigUIDe tablet responsibly and exclusively for its intended purpose, which includes but is not limited to accessing clinical decision support, data collection, and other functionalities related to patient care.

Responsibilities:

I understand that as the recipient of the NovigUIDe tablet, I am responsible for its safekeeping, proper use, and prompt reporting in case of loss, damage, or malfunction.

Training Acknowledgment:

I confirm that I have undergone the necessary training in the use of NovigUIDe and understand its functionalities.

Signature: [Signature] Date of Issuance: 18/7/2024

ATTENDANCE LIST FOR NOVIGUIDE TRAINING IN EASTERN UGANDA

DISTRICT:	NAME	SEX	CADRE	CONTACT	EMAIL	SIGNATURE
Kamuli	KITASAALA KIMMY	F	R/N	0776938773		[Signature]
	ALUNGAT FAITH DOBORH	F	R/N	0782674454	anguguborh@gmail.com	[Signature]
	NANKWANA HILDER	F	stud midwife	0741397455		[Signature]
	AKATEKIT MARY GOROST	F	R/N	0773328825		[Signature]
	NAMUKOSE FLATIA	F	R/N	0787705601		[Signature]
	NAMUKOSE SARAH	F	AND	0782825048	namiukose.sarah48@gmail.com	[Signature]
	MBEONNA DEBORAH	F	AND	0782846192	mbeonnadeborah@gmail.com	[Signature]
	NABIRTO GUSTIN	F	AND	078346742	nabirto.gustin@gmail.com	[Signature]
	NABATEREGA CUSST	F	R/N	0733882532	nabatereregacust@gmail.com	[Signature]
	DR. MBEKEGA PROSS	F	Paediatrician	0722580622	prossmbekega@gmail.com	[Signature]
	Kanyongo Salimu	M	B/N	0784254984	Salimu.kanyongo24@gmail.com	[Signature]



NANKANDULO HCIV

KAMULI DISTRICT



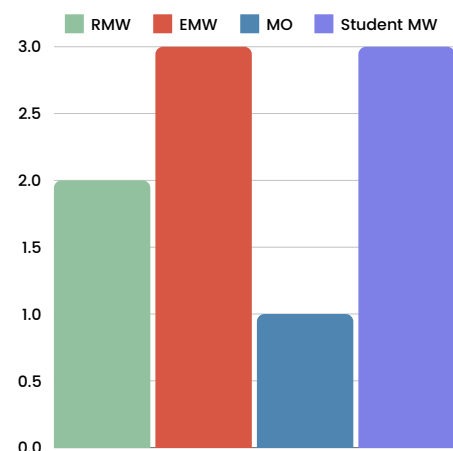
On the afternoon of July 18th, a NoviGuide training session was conducted at Nankandulu HCIV in the hospital's NICU. The session was attended by nine female healthcare workers who actively engaged in the training process. The participants demonstrated a strong commitment to enhancing neonatal care through the use of NoviGuide.

Following the training, Sister Nabalyango Lillian was selected as the NoviGuide Focal Lead for the facility, tasked with guiding the integration of the tool into daily clinical practice. To support this initiative, the hospital received one NoviGuide tablet. Sister Lillian signed the acknowledgment form, reinforcing her dedication to implementing NoviGuide effectively.

With the training and resources provided, the team at Nankandulu HCIV is now well-prepared to incorporate NoviGuide into their

workflows. This integration marks an important step in improving the quality of care for newborns at the facility, ensuring that best practices are consistently applied to achieve better health outcomes.

Figure 1. Showing distribution of participants by CADRE.



Nine healthcare workers participated in the training, including 2 registered midwives, 3 enrolled midwives, 1 pediatrician, 3 assistant nursing officers, and 3 student midwives.



Attendance List

ATTENDANCE LIST FOR NOVIGUIDE TRAINING IN EASTERN UGANDA

DISTRICT: Kamuli FACILITY: Namvundwa HCN DATE: 18/07/2024

#	NAME	SEX	CADRE	CONTACT	EMAIL	SIGNATURE
1	NAMAGANDA CHRISTIE	F	RM	0759731480	christie.namaganda@gmail.com	
2	Nabalyango Lillian	F	RM	0782600520	lillian.nabalyango@gmail.com	
3	Dr. NANSWEZYA ANITA	F	MO	0775597740	anitananswezya510@gmail.com	
4	KAMBEDHA EDITH	F	ELM	0775034322	kambedhaedith@gmail.com	
5	NSABAGWA HASIFA	F	EM/Imo	0789223276	hasifansabagwa@gmail.com	
6	NAMUKWAYA JANET	F	RM	0774404445	Janet.namukwaya@gmail.com	
7	NDIBONZIRIASHA ROSE	F	Student mid	0785034003	rose.ndibonzirishasha@gmail.com	
8	MUKYALA IMMACULATE	F	Student mid	0750975518	immaculate@gmail.com	
9	KABEKO MASROORAH	F	Student midwife	0706335070	masroorah.kabeko@gmail.com	
10						

Tablet Issuance form

NoviGuide Tablet Issuance Acknowledgment Form

Facility Details: Namvundwa HCN
 • Facility Name: Nabalyango Lillian District: Kamuli

Tablet Information:
 • Tablet Brand: Galaxy Tab A (2019) Serial Number: EQK2703EV27

Recipient Details:
 • Name of Recipient: Nabalyango Lillian Position/Title: RM
 • Contact Number: 0782600520 Email Address: lillian.nabalyango@gmail.com

Acknowledgment:
 I, Nabalyango Lillian, hereby acknowledge the receipt of _____ NoviGuide tablet(s) and I understand that this tablet is the property of **Global Strategies** and is provided for the purpose of enhancing healthcare services through the implementation of NoviGuide.

Tablet Usage Agreement:
 I agree to use the NoviGuide tablet responsibly and exclusively for its intended purpose, which includes but is not limited to accessing clinical decision support, data collection, and other functionalities related to patient care.

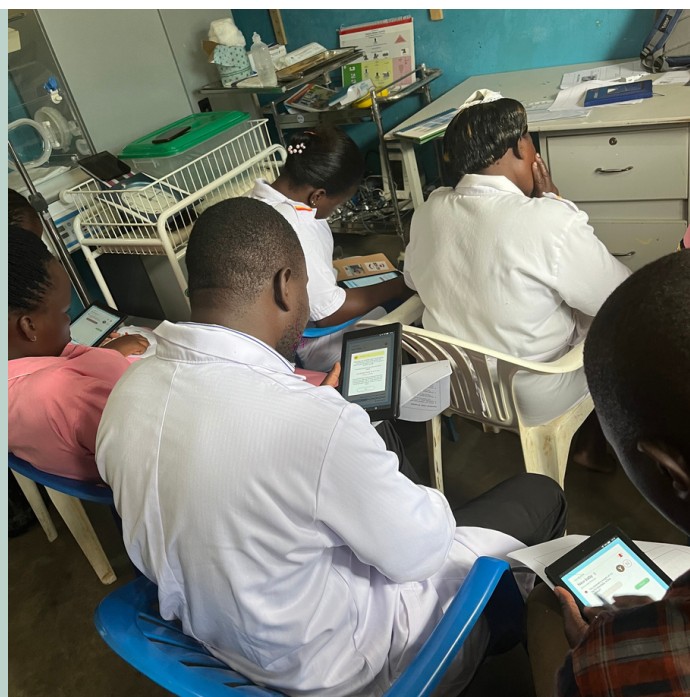
Responsibilities:
 I understand that as the recipient of the NoviGuide tablet, I am responsible for its safekeeping, proper use, and prompt reporting in case of loss, damage, or malfunction.

Training Acknowledgment:
 I confirm that I have undergone the necessary training in the use of NoviGuide and understand its functionalities.

Signature: Nabalyango Lillian Date of issuance: 18/7/2024

noviguide





Tablet Distribution Across Sites:

- | | |
|---------------------------|----------|
| • Kidera HCIV: | 1 tablet |
| • Nankandulo HCIV: | 1 tablet |
| • Kamuli General Hospital | 2 tablet |

Tablet Mark List:

- | | |
|----------------------------|----------|
| • Kidera HCIV: | 2024-T24 |
| • Nankandulo HCIV: | 2024-T22 |
| • Kamuli General Hospital | 2024-T21 |
| • Kamuli General Hospital: | 2024-T25 |



Resuscitation

Recommendation

To ensure the sustained integration and effective utilization of NoviGuide across healthcare facilities in the Eastern region, it is recommended to establish a robust system for continuous support and monitoring. This system should include periodic follow-up sessions, refresher courses, and access to on-demand technical assistance to address any challenges or questions that may arise.

Additionally, it is recommended to conduct the training for the Namwendwa site in October during the scheduled site mentorship visits. This will provide an opportunity to ensure that all targeted facilities are equipped with the necessary skills and resources to fully implement NoviGuide in their daily practice.

CONCLUSION

"The strides made thus far are a testament to the dedication of all involved, and they set a strong precedent for future efforts to enhance neonatal care across the region."



The implementation of NoviGuide across selected healthcare facilities in the Eastern region marks a significant advancement in neonatal care. The training sessions conducted at Kidera HCIV, Kamuli General Hospital, and Nankandulu HCIV were met with strong engagement and commitment from the healthcare workers, resulting in the successful selection of focal leads and the distribution of NoviGuide tablets.

With the foundational training completed, these facilities are now well-equipped to integrate NoviGuide into their daily clinical workflows, promising improved care for newborns. The commitment demonstrated by the staff, coupled with the ongoing

support and monitoring system recommended, positions NoviGuide to make a lasting impact on healthcare outcomes in the region.

As we look forward to extending the training to the Namwendwa site and beyond, the continued collaboration between the Nakakeeto Foundation, Global Strategies, and local healthcare teams will be crucial in realizing the full potential of this digital tool. The strides made thus far are a testament to the dedication of all involved, and they set a strong precedent for future efforts to enhance neonatal care across the region.



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JULY 17TH - 19TH, 2024

