



vENC TRAINING REPORT

IN WEST NILE REGION, UGANDA

27TH-29TH, MAY 2024

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THE CON TENT

vENC

vENC TRAINING REPORT IN THE WEST NILE REGION

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INTRODUCTION

The Virtual Essential Newborn Care (vENC) training program is a cutting-edge initiative aimed at enhancing the skills and competencies of healthcare providers in essential newborn care through the use of virtual reality (VR) technology. The vENC tool offers an immersive learning experience that replicates real-life clinical scenarios, enabling participants to practice and refine their skills in a controlled, risk-free environment.

This training program was organized by the Nakakeeto Foundation, an organization committed to improving maternal and newborn health outcomes. The training was generously funded by the vENC Project, which is dedicated to advancing healthcare education and practice through innovative technological solutions.

The primary purpose of the vENC training was to equip healthcare providers, particularly midwives and NICU nurses, with the necessary knowledge and skills to effectively manage and care for newborns. By integrating advanced VR simulations, the training aimed to bridge the gap between theoretical knowledge and practical application, ultimately improving the quality of care provided to newborns in various healthcare settings.



This training sessions, conducted at Koboko General Hospital, Yumbe Regional Referral Hospital and Moyo General Hospital in the West Nile region, is a significant step towards building a robust and competent workforce capable of delivering high-quality newborn care. It underscores the commitment of the Nakakeeto Foundation and the University of Washington to fostering continuous professional development and enhancing healthcare delivery through innovative educational tools.



vENC | Virtual Essential Newborn Care



MISSION

Our mission is to help reduce global neonatal mortality rates through improving the quality of care and access to refresher training.

VISION

Our Vision is that every healthcare professional globally will access virtual simulation training to maintain their skills.

VALUES

We care deeply about making continuing education accessible and engaging for health professionals.

OBJECTIVES

The vENC training program was designed with specific objectives to ensure comprehensive learning and practical application of essential newborn care skills. The key objectives of the training are as follows:

Enhance Clinical Skills:

Equip healthcare providers with the practical skills necessary to effectively manage and care for newborns using advanced VR simulations.

Improve Knowledge Retention:

Strengthen the theoretical understanding of essential newborn care practices through immersive and interactive learning experiences.

Foster Critical Thinking:

Encourage participants to develop critical thinking and problem-solving abilities by presenting them with realistic clinical scenarios that require prompt and accurate decision-making.

Standardize Newborn Care Practices:

Promote the adoption of standardized protocols and best practices in newborn care across different healthcare facilities.

Facilitate Continuous Professional Development:

Provide ongoing opportunities for professional growth and development, ensuring that healthcare providers stay updated with the latest advancements in newborn care.

Evaluate Training Effectiveness:

Assess the impact of the vENC training on participants' skills, knowledge, and confidence through pre- and post-training evaluations.



TRAINING OVERVIEW

From May 27th to May 29th, 2024, a series of comprehensive training sessions on the Virtual Essential Newborn Care (vENC) tool were conducted across three key healthcare facilities in West Nile, Uganda. This training was organized by the Nakakeeto Foundation and funded by the University of Washington, the developers of the vENC tool.

TRAINING SCHEDULE AND PARTICIPATION

- May 27th, 2024: Koboko General Hospital
 - Participants: 10 healthcare professionals
- May 28th, 2024: Yumbe Regional Referral Hospital
 - Participants: 12 healthcare professionals
- May 29th, 2024: Moyo General Hospital
 - Participants: 10 healthcare professionals

Each of these training sessions was facilitated by Dr. Margaret Nakakeeto, Chairperson of the Newborn Steering Committee, and Waligo Henry, a specialist in digital health systems.

TRAINING STRUCTURE

The training sessions were structured to maximize learning and practical application within a single day at each facility. The day was divided into two key segments:

1. Morning Session: Helping Babies Breathe (HBB) Course

- Facilitated by Dr. Margaret Nakakeeto
- This session focused on enhancing the participants' skills in neonatal resuscitation and immediate newborn care, using the HBB curriculum. The course aimed to ensure that all healthcare providers were well-versed in the critical interventions necessary to save newborn lives in the first minutes after birth.

2. Afternoon Session: Virtual Essential Newborn Care (vENC) Training

- Facilitated by Waligo Henry
- The afternoon sessions were dedicated to training participants on the use of the vENC tool. This included an introduction to the tool, navigating its features, and practical exercises using virtual reality simulations. Participants engaged in realistic clinical scenarios designed to improve their competence and confidence in essential newborn care.

Training Goals and Outcomes

The primary goals of these training sessions were to:

- Enhance the practical and theoretical knowledge of healthcare providers in essential newborn care.
- Familiarize participants with the vENC tool to standardize and improve newborn care practices.
- Provide hands-on experience through immersive VR simulations to reinforce learning and skill acquisition.

Feedback and Future Directions

Participants expressed high levels of satisfaction with both the HBB and vENC training components. They appreciated the interactive nature of the sessions and the opportunity to practice in a risk-free virtual environment. The feedback collected will be used to refine future training programs and ensure that the vENC tool continues to meet the needs of healthcare providers in Uganda.

TRAINING METHODOLOGY

The training sessions on Virtual Essential Newborn Care (vENC) in West Nile employed a multifaceted methodology to ensure comprehensive understanding and skill acquisition among participants. The following techniques were utilized:

1. Demonstration and Return Demonstration
2. Projection
3. Lectures
4. Brainstorming

Each training day was structured to incorporate all these methodologies, ensuring a balanced mix of theory and practice.

This comprehensive approach ensured that participants not only learned new information but also developed the confidence and competence to apply their new skills in real-world clinical settings. The use of diverse methodologies catered to different learning styles and reinforced the training objectives effectively.



CONTENT DISCUSSED

INTRODUCTION

- Introduction in terms of names, cadre, work station.

PREPARING FOR THE BIRTH

- The four major steps were demonstrated to the participants, which include identifying helpers and review the emergency plan, preparation of the area for delivery, hand washing and preparation of the ventilation area, and later each had to practice the four steps

RESUSCITATION (HBB APPROACH)

- Emphasized the need to dry the baby immediately after birth and change the cloth and keep the baby warm skin to skin as you monitor breathing
- Emphasized breathing in the first minute of life of the baby and a health worker should do all he can to initiate a breath in case the baby has not responded to drying and stimulation before one minute elapses.
- It involves ventilating a baby about 40 times in a minute using bag and mask aiming at the normal respiratory rate of a newborn.

ESSENTIAL NEW-BORN CARE

- Introduced it as helping babies survive and highlighted that all babies need it in order to survive and thrive.
- It includes caring for all the babies in the first 90 minutes before you classify a baby to be normal, to have a problem or having a danger sign and you care accordingly



INTRODUCTION TO VENC

- Overview of Virtual Essential Newborn Care (vENC)
- Purpose and benefits of using vENC in neonatal care

INSTALLATION AND SETUP

- How to download and install the vENC application on smartphones
- Setting up the VR headsets and synchronizing them with the application

NAVIGATING THE VENC APPLICATION

- Main menu overview: Start button, settings icon, and About vENC
- Customizing user preferences in the settings menu
 1. Visual settings: VR option, Touch, or Dot Pointer option
 2. Invert settings: Reverse look sideways or Reverse look up
 3. Audio settings adjustments

USING VENC FOR TRAINING

- How to initiate training sessions using the Start button
- Explanation of the 12 scenarios available in the vENC application
- Step-by-step guidance on completing scenarios

INTERACTIVE LEARNING WITH VENC

- Hands-on practice: Participants using the application
- Demonstration and return demonstration: Ensuring participants understand each scenario
- Projection and walkthroughs: Visual aids to supplement learning

CHALLENGES AND TROUBLESHOOTING

- Common issues faced while using the vENC application
- Solutions and tips for overcoming technical difficulties
- Support resources: Where to find help and additional information

INTEGRATION INTO DAILY PRACTICE

- Strategies for incorporating vENC training into routine neonatal care
- Role of focal leads in supporting continuous learning and application use
- Monitoring and documenting progress and outcomes

FUTURE DIRECTIONS

- Ongoing support and mentorship from the Nakakeeto Foundation and University of Washington
- Plans for follow-up assessments and further training sessions
- Encouraging feedback and suggestions for future improvements to vENC

FACILITY INFORMATION

Koboko General Hospital

Koboko District



Date: Monday, 27th May 2024

Location: Koboko General Hospital Board Room

Participants: 10

Overview

The training session at Koboko General Hospital was part of the vENC (Virtual Essential Newborn Care) initiative aimed at enhancing neonatal care through virtual reality simulations. The session was attended by 10 healthcare professionals, comprising 3 nurses and 7 midwives.

Morning Session: Helping Babies Breathe (HBB) Course

The morning was dedicated to the Helping Babies Breathe (HBB) course, where participants underwent a comprehensive training module. Key activities included:

- **Knowledge Check:** A pre-training knowledge assessment was conducted to gauge the participants' baseline understanding of neonatal resuscitation and essential newborn care.
- **OSCES ENC 1 Pre-Test:** Participants also completed a pre-test on Objective Structured Clinical Examination (OSCES) for Essential Newborn Care (ENC 1) to assess their practical skills.





Afternoon Session: vENC Training

The afternoon session focused on the vENC training, introducing participants to the virtual reality tool designed to simulate essential newborn care scenarios. This segment aimed to familiarize participants with the vENC application, its features, and its practical applications in daily clinical practice.



Team Structure

To ensure effective implementation and support, the team at Koboko General Hospital designated focal leads for different departments:

- NICU Focal Lead: Amos Awusa Yole
- Maternity Focal Lead: Ayikoru Sally

These focal leads will oversee the use of vENC in their respective departments, ensuring consistent application and providing support to their colleagues.

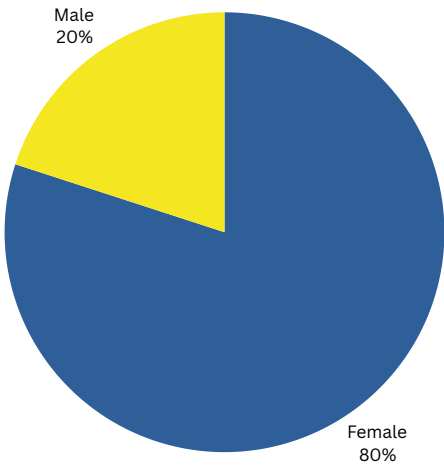
Equipment Distribution

The team at Koboko General Hospital received two VR headsets to facilitate the vENC training and practice. Both focal leads, Amos Awusa Yole and Ayikoru Sally, signed for the receipt of these headsets, acknowledging their responsibility for maintaining and utilizing the equipment effectively.

The training at Koboko General Hospital was a successful step towards integrating advanced technology into neonatal care. The active participation and enthusiasm of the team members, combined with the structured training and support, are expected to significantly enhance the quality of newborn care in the facility.

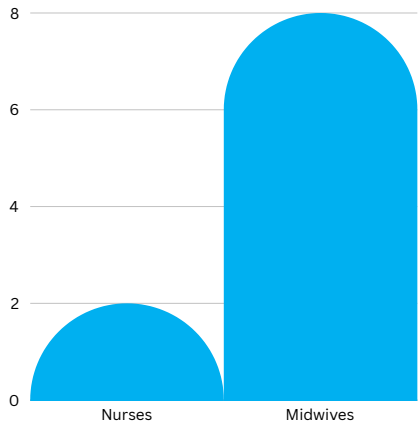
Participants

Figure 1. Showing distribution of participants by gender.



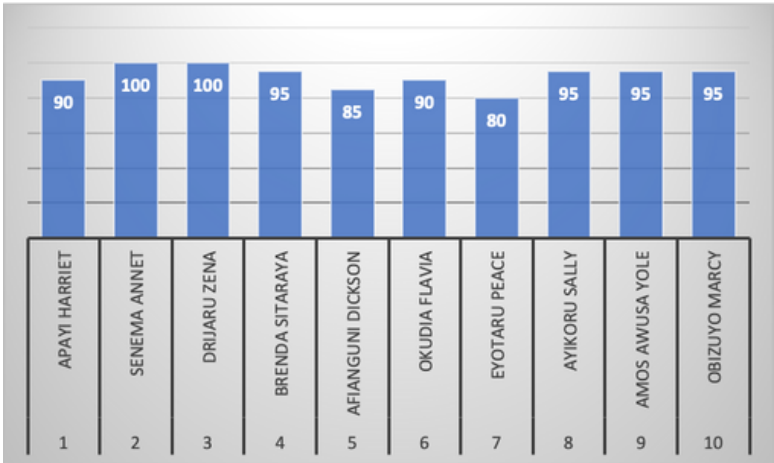
A total of 13 frontline health workers were trained. Majority 80% (8) were females and only 20% (2) was male.

Figure 3: Showing Participants' distribution by cadre.



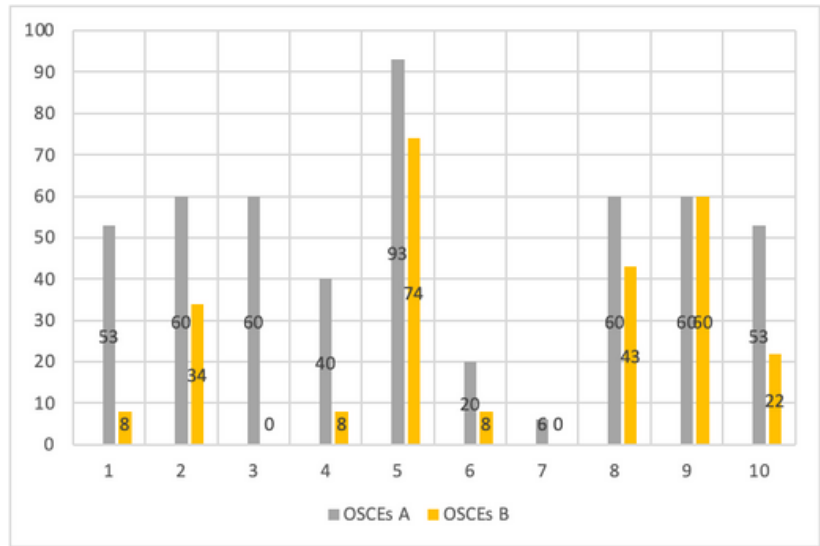
Majority, of the participants (8) were midwives and (2) Nurses.

Figure 3: showing participants Knowledge assessment scores



The average score for the pre-test knowledge assessment was 92.5%, with the lowest score at 80% and the highest at 100%.

Figure 4 showing participants skills assessment on OSEC A and B Pre Test



Essential new-born care skills assessment presented a variation in the practices in relation to the knowledge scores for the different categories of health workers, with an average score of 50.3% is OSCEs A and 25.7% in OSCEs B.

Yumbe Regional Referral Hospital

Yumbe District



Date: Tuesday, 28th May 2024

Location: Yumbe Regional Referral Hospital Board room

Participants: 12

Overview

The training session at Yumbe Regional Referral Hospital was part of the vENC (Virtual Essential Newborn Care) initiative aimed at enhancing neonatal care through virtual reality simulations. The session was attended by 12 healthcare professionals, comprising 7 nurses and 5 midwives, but one participant quit the training because she had a mother to attend to

Morning Session: Helping Babies Breathe (HBB) Course

The morning was dedicated to the Helping Babies Breathe (HBB) course, where participants underwent a comprehensive training module. Key activities included:

- **Knowledge Check:** A pre-training knowledge assessment was conducted to gauge the participants' baseline understanding of neonatal resuscitation and essential newborn care.
- **OSCES ENC 1 Pre-Test:** Participants also completed a pre-test on Objective Structured Clinical Examination (OSCES) for Essential Newborn Care (ENC 1) to assess their practical skills.





Afternoon Session: vENC Training

The afternoon session focused on the vENC training, introducing participants to the virtual reality tool designed to simulate essential newborn care scenarios. This segment aimed to familiarize participants with the vENC application, its features, and its practical applications in daily clinical practice.



Team Structure

To ensure effective implementation and support, the team at Yumbe RRH designated focal leads for different departments:

- NICU Focal Lead: Asina Hawa
- Maternity Focal Lead: Sumbua Amina

These focal leads will oversee the use of vENC in their respective departments, ensuring consistent application and providing support to their colleagues.

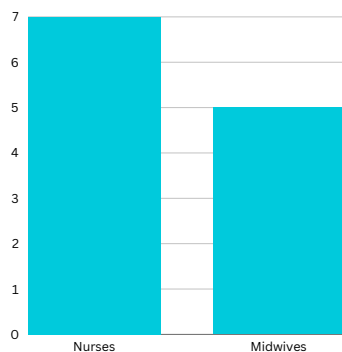
Equipment Distribution

The team at Yumbe RRH received two VR headsets to facilitate the vENC training and practice. Both focal leads, Asina Hawa and Sumbua Amina, signed for the receipt of these headsets, acknowledging their responsibility for maintaining and utilizing the equipment effectively.

The training at Yumbe Regional Referral Hospital was a successful step towards integrating advanced technology into neonatal care. The active participation and enthusiasm of the team members, combined with the structured training and support, are expected to significantly enhance the quality of newborn care in the facility.

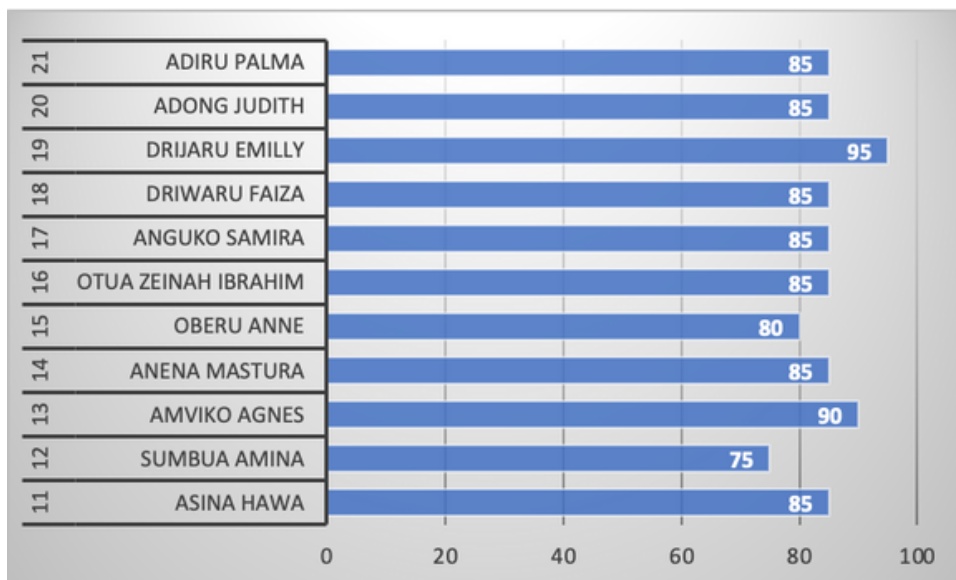
Participants

Figure 2: Showing Participants' distribution by cadre.



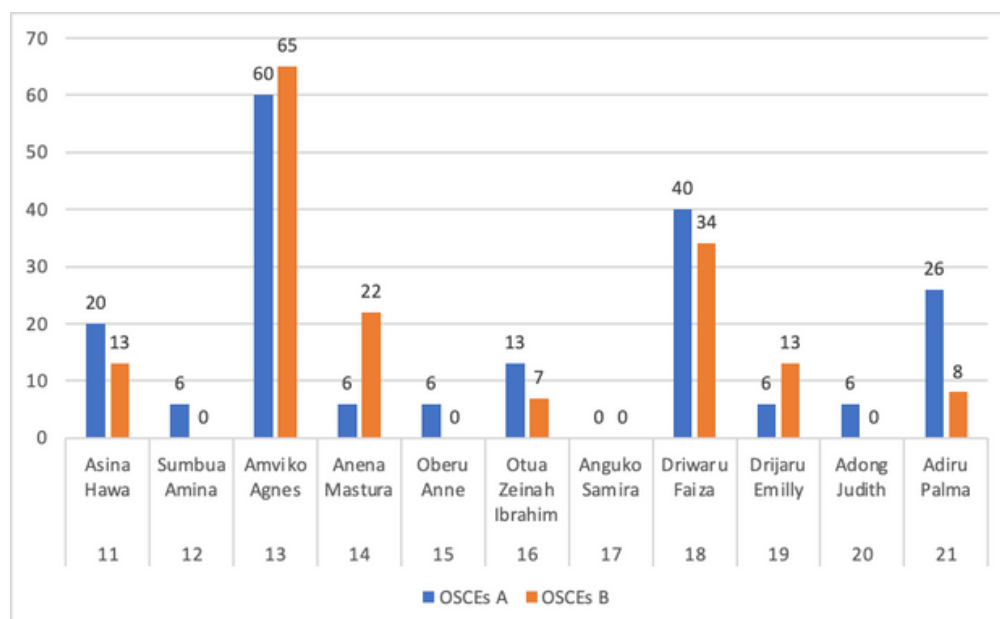
Majority, of the participants (8) were midwives and (2) Nurses.

Figure 2: showing participants Knowledge assessment scores



The average score for the pre-test knowledge assessment was 85%, with the lowest score at 75% and the highest at 95%.

Figure 3 showing participants skills assessment on OSEC A and B Pre Test



Essential new-born care skills assessment presented a variation in the practices in relation to the knowledge scores for the different categories of health workers, with an average score of 17.1% in OSECs A and 14.7% in OSECs B.

Moyo General Hospital

Moyo District



Date: Monday, 28th May 2024

Location: Moyo General Hospital Board Room

Participants: 10

Overview

The training session at Moyo General Hospital was part of the vENC (Virtual Essential Newborn Care) initiative aimed at enhancing neonatal care through virtual reality simulations. The session was attended by 10 healthcare professionals, comprising 9 female and 1 male participant.

Morning Session: Helping Babies Breathe (HBB) Course

The morning was dedicated to the Helping Babies Breathe (HBB) course, where participants underwent a comprehensive training module. Key activities included:

- **Knowledge Check:** A pre-training knowledge assessment was conducted to gauge the participants' baseline understanding of neonatal resuscitation and essential newborn care.
- **OSCES ENC 1 Pre-Test:** Participants also completed a pre-test on Objective Structured Clinical Examination (OSCES) for Essential Newborn Care (ENC 1) to assess their practical skills.





Afternoon Session: vENC Training

The afternoon session focused on the vENC training, introducing participants to the virtual reality tool designed to simulate essential newborn care scenarios. This segment aimed to familiarize participants with the vENC application, its features, and its practical applications in daily clinical practice.



Team Structure

To ensure effective implementation and support, the team at Yumbe RRH designated focal leads for different departments:

- NICU Focal Lead: Asina Wasswa Christopher
- Maternity Focal Lead: Baako Lizzy

These focal leads will oversee the use of vENC in their respective departments, ensuring consistent application and providing support to their colleagues.

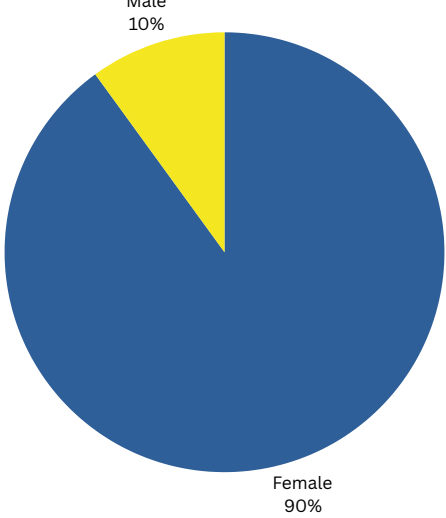
Equipment Distribution

The team at Moyo General Hospital received two VR headsets to facilitate the vENC training and practice. Both focal leads Wasswa Christopher and Baako Lizzy signed for the receipt of these headsets, acknowledging their responsibility for maintaining and utilizing the equipment effectively.

The training at Moyo General Hospital was a successful step towards integrating advanced technology into neonatal care. The active participation and enthusiasm of the team members, combined with the structured training and support, are expected to significantly enhance the quality of newborn care in the facility.

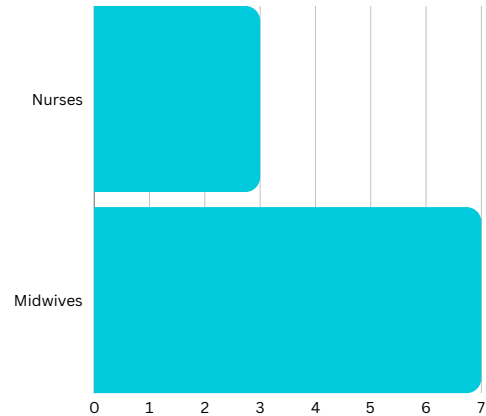
Participants

Figure 1. Showing distribution of participants by gender.



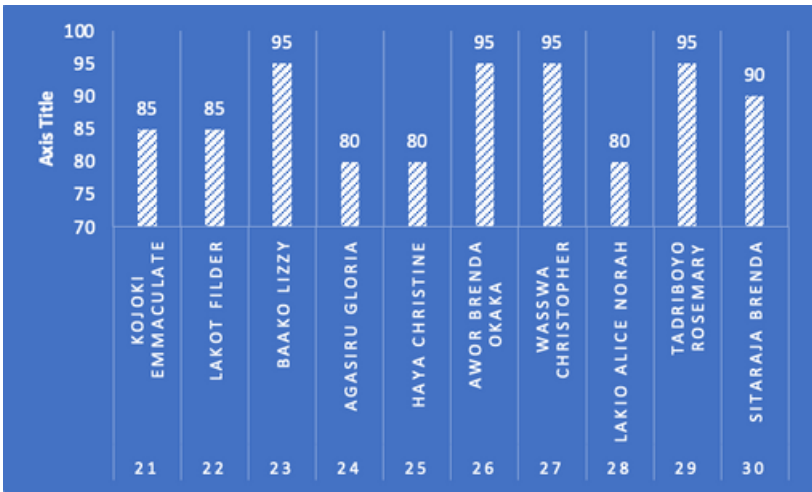
A total of 13 frontline health workers were trained. Majority 90% (9) were females and only 10% (1) was male.

Figure 3: Showing Participants' distribution by cadre.



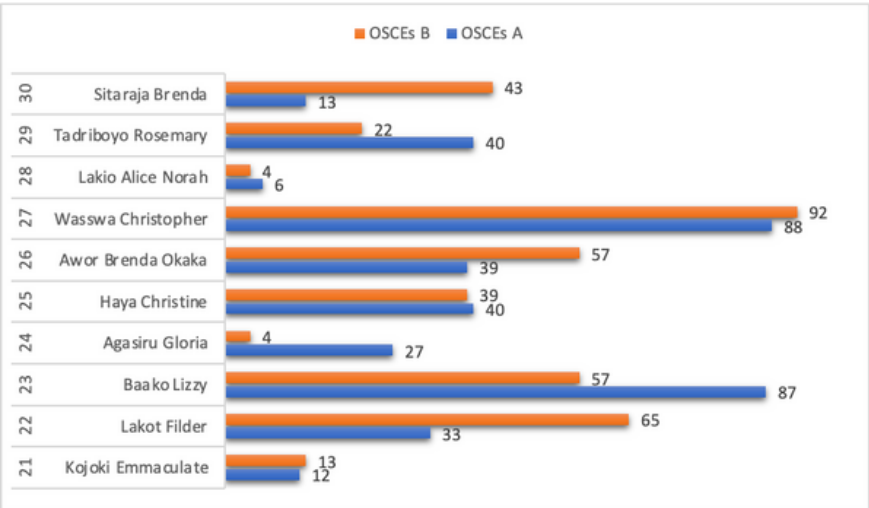
Majority, of the participants (7) were midwives and (3) Nurses.

Figure 3: showing participants Knowledge assessment scores



The average score for the pre-test knowledge assessment was 88%, with the lowest score at 80% and the highest at 95%.

Figure 4 showing participants skills assessment on OSEC A and B Pre Test



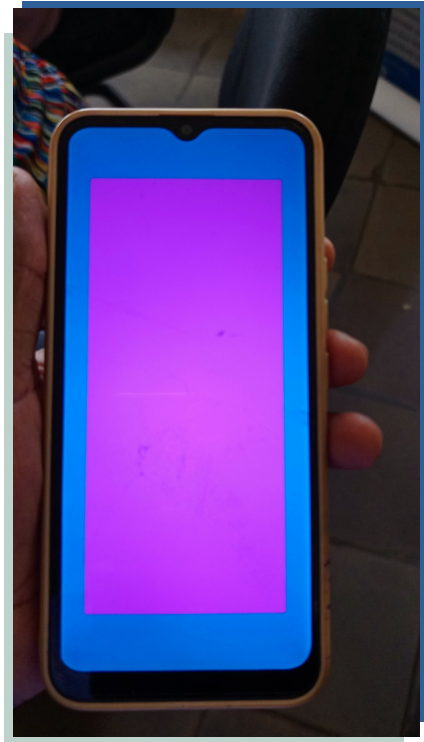
Essential new-born care skills assessment presented a variation in the practices in relation to the knowledge scores for the different categories of health workers, with an average score of 38.5% is OSECs A and 39.6% in OSECs B.



CHALLENGES

1. LIMITED TRAINING TIME:

The training session had to cover both the Helping Babies Breathe (HBB) course and the vENC application within a single day. This division of focus between two trainers meant there was insufficient time to cover each topic in-depth, affecting the overall effectiveness of the training.



2. PHONE COMPATIBILITY ISSUES:

Many participants' phones were not compatible with the vENC application. This led to the need for sharing devices among those with compatible phones, which limited the hands-on experience for some participants.

RECOMMENDATIONS

1. Ensure Phone Compatibility:

- Before future training sessions, conduct a survey to identify the types of phones participants use. Ensure the vENC application is compatible with these devices or provide compatible devices for participants to use during training.

2. Increase Number of Trainers to 3:

- Having additional trainers for each module can help ensure that participants receive more personalized attention and guidance. This can enhance the learning experience and allow for more hands-on practice with the vENC application.

3. Follow-Up Support:

- Establish a follow-up support system where participants can reach out with questions or issues they encounter while using the vENC application post-training. This can help reinforce learning and address any challenges that arise.

4. Evaluate and Adapt Training Methods:

- Continuously evaluate the effectiveness of the training methods and content. Gather feedback from participants and adapt the training approach based on their input to improve future sessions.



vENC | Virtual Essential Newborn Care



Henry demonstrating the vENC application to trainees, showcasing its features on a widescreen for an immersive learning experience.

ANNEX 1: USER IDS AND DETAILS

S/N	USER IDS	GROUP ASSIGNED TO	INDIVIDUAL ASSIGNED	FACILITY
Test 1	UPS8909I	Uganda-West Nile Team	Dr. Margaret	Testing
Test 2	UPS4793M	Uganda-West Nile Team	Henry	Testing
1	DQK8281K	Uganda-West Nile Team	Apayi Harriet	Koboko GH
2	DQK3694U	Uganda-West Nile Team	Senema Annet	Koboko GH
3	DQK1621W	Uganda-West Nile Team	Drijaru Zena	Koboko GH
4	DQK2635O	Uganda-West Nile Team	Brenda Sitaraya	Koboko GH
5	DQK2223R	Uganda-West Nile Team	Afianguni Dickson	Koboko GH
6	DQK3161O	Uganda-West Nile Team	Okudia Flavia	Koboko GH
7	DQK7006N	Uganda-West Nile Team	Eyotaru Peace	Koboko GH
8	DQK4676F	Uganda-West Nile Team	Ayikoru Sally	Koboko GH
9	DQK5963H	Uganda-West Nile Team	Amos Awusa Yole	Koboko GH
10	DQK9932H	Uganda-West Nile Team	Obizuyo Marcy	Koboko GH
11	BUY2810E	Uganda-West Nile Team	Asina Hawa	Yumbe RRH
12	BUY7673Z	Uganda-West Nile Team	Sumbua Amina	Yumbe RRH
13	BUY8435W	Uganda-West Nile Team	Amviko Agnes	Yumbe RRH
14	BUY2640C	Uganda-West Nile Team	Anena Mastura	Yumbe RRH
15	BUY9379J	Uganda-West Nile Team	Oberu Anne	Yumbe RRH
16	BUY9668I	Uganda-West Nile Team	Otua Zeinah Ibrahim	Yumbe RRH
17	BUY1281L	Uganda-West Nile Team	Anguko Samira	Yumbe RRH
18	BUY6250I	Uganda-West Nile Team	Driwaru Faiza	Yumbe RRH
19	BUY4968D	Uganda-West Nile Team	Drijaru Emily	Yumbe RRH
20	BUY8528M	Uganda-West Nile Team	Adong Judith	Yumbe RRH
Additional	BUY8697I	Uganda-West Nile Team	Adiru Palma	Yumbe RRH
Additional	BUY1426E	Uganda-West Nile Team	Dr. Mubarak Nusur	Yumbe RRH
21	QKG3093T	Uganda-West Nile Team	Kojoki Emmaculate	Moyo GH
22	QKG4026K	Uganda-West Nile Team	Lakot Filder	Moyo GH
23	QKG3784P	Uganda-West Nile Team	Baako Lizzy	Moyo GH
23	QKG6790G	Uganda-West Nile Team	Agasiru Gloria	Moyo GH
25	QKG2430E	Uganda-West Nile Team	Haya Christine	Moyo GH
26	QKG9398C	Uganda-West Nile Team	Awor Brenda Okaka	Moyo GH
27	QKG4584E	Uganda-West Nile Team	Wasswa Christopher	Moyo GH
28	QKG3220X	Uganda-West Nile Team	Lakio Alice Norah	Moyo GH
29	QKG4886L	Uganda-West Nile Team	Tadriboy Rosemary	Moyo GH
30	QKG7379F	Uganda-West Nile Team	Sitaraja Brenda	Moyo GH

CONCLUSION

The vENC training sessions held from 27th to 29th May 2024 at Koboko General Hospital, Yumbe Regional Referral Hospital, and Moyo General Hospital were highly successful and impactful. Over the course of three days, 32 healthcare professionals, including midwives and nurses, received comprehensive training in both Helping Babies Breathe (HBB) and the Virtual Essential Newborn Care (vENC) application.

The training was meticulously facilitated by Dr. Margaret Nakakeeto and Waligo Henry, ensuring that participants gained a deep understanding of essential newborn care techniques and the innovative vENC tool. Despite challenges such as phone compatibility issues, the sessions were well-received, with participants actively engaging in demonstrations, lectures, and practical exercises.

The vENC application proved to be a valuable tool, enhancing the participants' skills and confidence in neonatal resuscitation and early newborn care. The feedback from the participants was overwhelmingly positive, highlighting the relevance and practicality of the vENC scenarios in real-life clinical settings.

Moving forward, the training has laid a solid foundation for continuous improvement in newborn care practices in the West Nile region. The focal leads at each site, supported by the VR headsets, will play a crucial role in the ongoing use and assessment of the vENC tool.

In conclusion, this training initiative, organized by the Nakakeeto Foundation and funded by the vENC Project, marks a significant step towards enhancing newborn care services in Uganda. It reflects our commitment to leveraging innovative technologies to improve healthcare outcomes and underscores the importance of ongoing education and support for healthcare professionals.



VIRTUAL ESSENTIAL NEWBORN CARE

TRAINING REPORT
IN WEST NILE REGION
27th-29th, May 2024