IDI CDC WASH Project in Kotido District

Handover Report

Strengthening Partnerships for Preparedness and Response in Uganda Project

MAY 2021- SEPT 2023

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Acronyms

CDC	Centers for Disease Control and Prevention
FGD	Focus Group Discussion
HCWs	Health care workers
IDI	Infectious Diseases Institute
IPC	Infection Prevention and Control
KII	Key Informant interview
IEC	Information Education and Communication
C&D	Cleaning and disinfection
ABHR	Alcohol Based Hand Rub
CME	Continuous Medical Education
MOH	Ministry of Health
HCFs	Health Care Facilities

Message from Program Manager Judith Nanyondo S

Practicing appropriate hand hygiene (HH) through handwashing with soap and water or using alcohol-based hand rub (ABHR) is a key prevention measure recommended to reduce the disease burden worldwide. Hand hygiene adherence (HHA) among healthcare workers (HCWs) is particularly important to reduce disease transmission in healthcare settings. Health facilities in low and middle-income countries (LMICs) often lack the necessary funds to purchase commercial Alcohol Based Hand Rub (ABHR) and local production may be a more economical option. The WHO developed a protocol for local production of ABHR to guide the production procedure within health facilities.

The Infectious Diseases Institute (IDI) received funding from the Centres for Diseases Control and Prevention (CDC) under the Strengthening Partnerships for Preparedness and Response project to scale up handwashing and Alcohol Based Hand-Rub (ABHR) use in priority health facilities in six districts in Uganda (Kabarole, Kasese, Amuru, Tororo, Moroto and Kotido). This included setting up ABHR production units, training producers, and establishing distribution structures as well as hand hygiene mentorship and impact evaluation.

This report provides an account of project activities in Kotido district from inception in 2021 to September 2023. We extend our sincere thanks to the Ministry of Health Environmental Department (EHD) for the project above-site oversight and continuous technical support throughout the implementation. Special thanks to the Kotido District Local Government for leading the implementation through the office of the District Health Officer, all in charge of supported health facilities and community locations as well as the producers and quality assurance team for ABHR in the district. Finally, as a project, we thank the IDI project staff who have provided technical support in the implementation of the project especially Mr. Fred Tusabe and Ms. Sauda Yapswale, who successfully coordinated the district-level activities throughout the implementation period with enthusiasm and diligence.

As we hand over the project to the district, we are confident that the capacity that has been built, complimented by the structures and supportive environment, the project will continue to thrive, and IDI will continue to provide technical assistance whenever there is a need.

Thank you.

Strengthening Partnerships for Preparedness and Response in Uganda Project

Project Staff

Maureen Kesande
IDI CDC
WASH Project
Coordinator

Fred Tusabe
WASH
Management
project Coordinator

Sauda Yapswale
IDI CDC WASH
Project Officer for
Kotido, Kabarole
and Kasese districts

Mr. Francis Ocitti
IDI CDC WASH
Project Officer,
Amuru District

Executive Summary

Background:
The CDC WASH project 'to locally produce Alcohol-Based Hand Sanitizer (ABHS)' that was piloted as a study in Kabarole was extended to Kasese district during the Ebola outbreak that spilled over from Congo to Uganda in 2019.
According to the study, the intervention supported the improvement of hand hygiene compliance among health workers. Based on these results, IDI with support from CDC has expanded production to border districts of Tororo and Amuru targeting Points of Entry, health facilities, and other community locations along truck routes.
The project extended to the Karamoja region, set up a production unit in Kotido where ABHR is being produced and distributed to all government-aided health facilities. District staff, preferably laboratory Techs/ Pharmacists and district IPC focal persons were trained on the modalities of ABHR production and quality control.
Methods:
Kotido district health staff were trained on local ABHR production and ABHR supplies were provided. Three Assessments of hand hygiene were conducted using the Kobo collect tool and hard copy for hand hygiene observations in the 21 healthcare facilities. After the 2nd (Midpoint) assessment a, drop in hand hygiene compliance was very evident and this vitalized an intervention hence onsite hand hygiene mentorship to identify challenges and to mitigate them.
Assessment and Training training on Cleaning and disinfection of ABHR bottles in July and August 2023 Kotido district. Quantitative data was collected from 21 HCFs using the Kobo collect tool and the following materials were provided after the training (sops, job aids, and IECs for cleaning and disinfection).
Results:
A total of 6680 liters of ABHR were produced of which 4440 liters were distributed among the selected HCFs in Kotido districts. There was a noticeable improvement in hand hygiene practices from 32.7% at baseline, 21% at midpoint, and 40.1%at the end-line assessment
Conclusion:
Implementation of WASH activities in Kotido was a success as observed by the continued production and consumption of ABHR, improvement in hand-hygiene

Project Staff

Herbert Isabirye
IDI CDC WASH
Project officer for
Tororo and Moroto
districts

John Twesige

WASH Facilities
Engineer

Adeline Twimukye
Behavioural
Scientist and
qualitative
researcher

Ivan Tubanone

Logistics specialist

1.0 WASH I 2020/2021

Baseline Assessment In selected HCFs in kotido

Together with the Ministry of Health, IDI and CDC embarked on a baseline assessment of the hand hygiene compliance level in Kotido district and availability of hand hygiene materials.

Goal/Main Objective

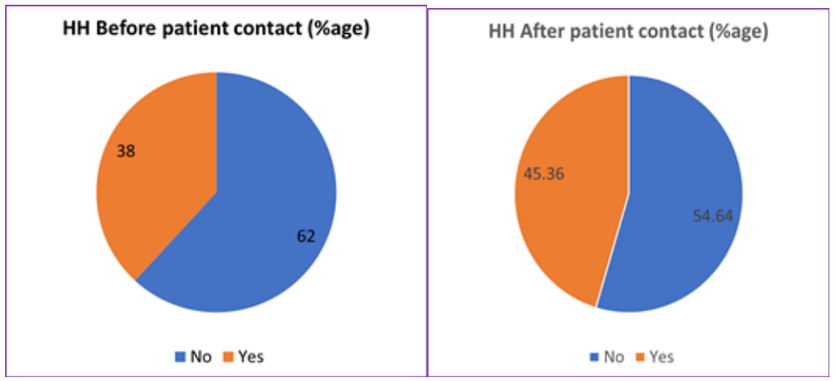
To improve access and use of alcohol-based hand-rub in 21 facilities in Kotido district in the Karamoja region

Specific Objectives

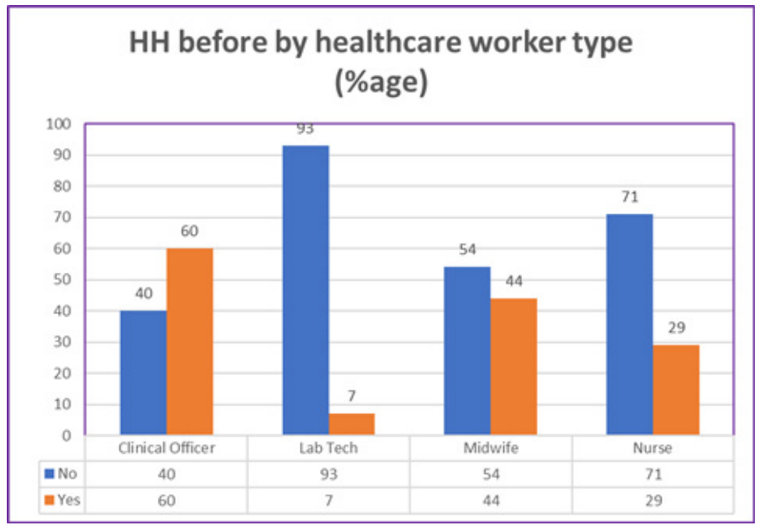
- To Support the district, establish an Alcohol-Based Hand Rub (ABHR) production unit and commence production
- To Strengthen external quality control measures for Alcohol-Based Hand Rub (ABHR).
- Support Initial distribution of ABHR to priority sites.

Results

At baseline, hand hygiene before and after patient contact was sub optimal at 38% and 45% respectively.



Majority of the health workers especially laboratory technicians indicated poor hand hygiene compliance before patient contact



1.2. Dissemination of baseline results in a stakeholder engagement and project inception meeting

A memorandum of understanding was signed between IDI and the Kotido District Local Government.

IDI and CDC conducted a stakeholder meeting with the district leadership and focal persons from the target sites with an objective to further introduce the project and disseminate the baseline findings. A Memorandum of Understanding with the district was signed to flag off the intervention.

1.3 Activity outcomes

Establishment of ABHR Production Unit

The District Health Offices (local government) provided space for a production and storage unit at Kotido health centre IVThis unit was an existing structure that was assessed by a technical person using a checklist adapted from the WHO protocol. A pre-qualified vendor by the Kotido Municipality was seconded to renovate the Unit. Upon completion of the renovations, the unit met the minimum requirements to be utilized as an ABHR production Unit.

Before Renovation

During Renovation

The established Production unit in Kotido

Training District Staff on Local Production of Alcohol-Based Hand-Rub (ABHR):

The facilitator delivered the content using the theoretical and practical approach for Five days (3 and 2 days for district producers and EQC officers respectively). Kotido HCIV provided space for both theory and practical sessions.

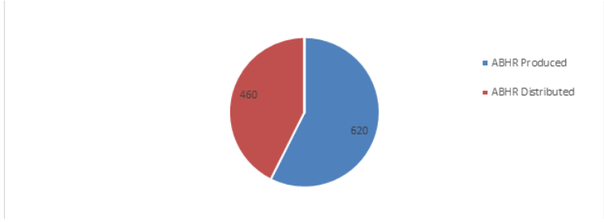
Training on the local production of ABHR was based on the IDI training curriculum 'Local manufacture of Alcohol-Based Hand Rub (ABHR) to sustain Hand Hygiene programs' adapted from the WHO protocol on local production of ABHR.

Table 1 List of trainees with their respective cadres and District/place of work

First Name	Last Name	Cadre	District/Hospital
Jennifer	Aanyu	ADHO-Environment	Kotido LG
Jimmy W	Ocitti	Lab Technician	Kotido HCIV
Joseph Biolos	Munyos	Lab Tech	Panyangara HCIII
Callisto	Awuar	Sen. Env. Officer	Kotido Municipality

ABHR Production

IDI provided all materials and ingredients involved in the production of ABHR (shown in pictorials). 620 litres (31 batches) of ABHR were produced following the standard operating procedures. Internal quality control was performed by the district producers. All batches passed the internal QC with an average alcohol content of 80% and the External QC which was performed by the district and municipality environment officers.



ABHR Distribution

The first cycle of distribution in Kotido was facilitated by IDI using hired vehicles. ABHR was distributed in 20 L jerrycan and each HCF received 1 L and 60 ml dispenser bottles as in Table2.

Table 2.ABHR Distribution to HCF in Kotido District, August 2021

Name of HCF	ABHR (L) Distributed	1Litre Dispenser distributed	60ml bottles
KDDO	20	06	15
Kanawat HCIII	20	08	20
Kotido police clinic	20	02	04
Panyangara HCIII	20	05	20
Prison HCII	20	02	04
Lookorok HCII	20	04	08
Nakaperimorou HCIII	20	06	16
405 Brigade HCIII	20	04	12
Rikhtae HC II	20	02	07
Napumpum HCIII	20	05	15
Kamoru HCII	20	04	04
Lokiterabu HCIII	20	04	04
Nakwakwa HCII	20	02	05
Lopuyo HCII	20	02	02
Kacheri Hciii	20	20	22
Lokiding HCII	20	00	05
Losakucha HCII	20	00	05
Kotido HCIV	40	06	20
Rengen HCIII	20	05	10
Kotido prison clinic HCII	20	02	03
Apa Lopus HCII	20	02	03

2.0. WASH II 2021/2022
ABHR Produced and Distributed in 2021

The amount of ABHR produced in 2021 was 2980 liters and 1420 liters distributed Within the HCFs in the districts. This was made possible by the trained district staff and medical stores manager.

2.1. IDI-CDC WASH Mid-point Assessment Across Healthcare Facilities in Kotido District

This intervention was accompanied by the distribution of soap and hand washing stations

Goal/Main Objective

To conduct a WASH mid-point assessment at 21 healthcare facilities (HCFs) in the Kotido district.

Specific Objectives

- To observe hand hygiene compliance among healthcare workers.
- To observe hand hygiene practices at latrines and Entrances/Exits of healthcare facilities.
- To administer a general WASH assessment tool to the Healthcare Facility focal person.
- To conduct intercept interviews (to guide on Hand hygiene behavioral change interventions) at Entrances/Exits of HCFs

Activity out comes
Hand hygiene Compliance among Healthcare workers

This assessment involved observing hand hygiene materials present at the point of care, following healthcare workers and recording what type of hand hygiene they performed during physical contact with patients. Two critical moments were observed, before patient contact and after patient contact. The data was collected using a standardized paper form version and letter exported to Microsoft Excel.

Hand hygiene practices at latrines and Entrances/Exits of healthcare facilities

The assessors noted the hand hygiene, IEC materials, and the presence or absence of a hand hygiene attendant at these locations using a digital tool. Further, the assessors stood at a distance and observed the hand hygiene practices of the participants at these locations. In the absence of hand hygiene materials or participants, no observations were made.

Administration of a general WASH assessment tool.

The assessors sought consent from the facility in charge/ Healthcare facility IPC lead before administering the questions. The tool focused on the patient number, staffing, and availability of sanitary supplies among others. Data was collected and uploaded to the server.
Intercept interviews (to guide on Hand hygiene behavioural change interventions) at Entrances/Exits of HCFs.

Intercept interviews were conducted at healthcare facilities that had functional HH stations (either a hand washing station with water only, chlorine or soap and or ABHR)

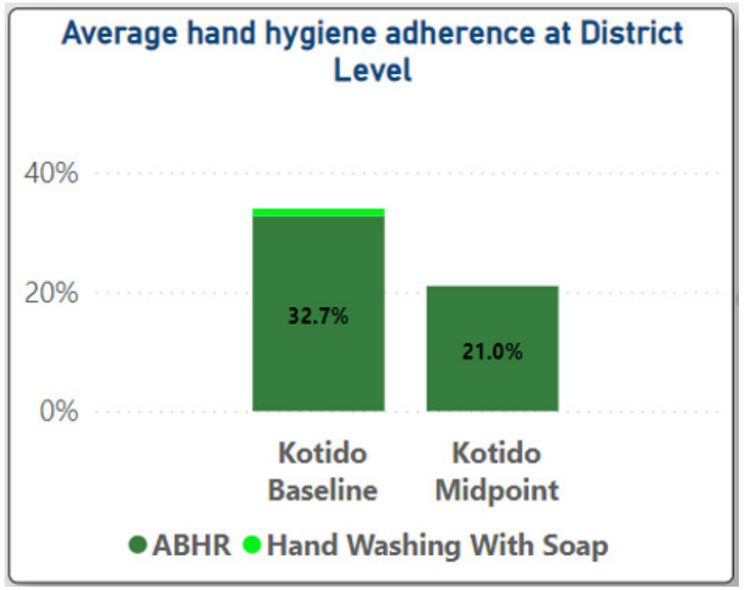
Participants above 18 years were considered and entrances were given priority compared to exits. This assessment focused on identifying barriers and enablers of hand hygiene among patients, visitors, and or caretakers at healthcare facilities.

Data collected was uploaded to the server using the Kobo Collect a digital tool.

Name of HCF	Entrance/Exit	WASH Assmt	HH Compliance	Intercept Interviews
KDDO	yes	yes	yes	yes
Kotido police clinic	yes	yes	yes	yes
Panyangara HCIII	yes	yes	yes	yes
Prison HCII	yes	yes	yes	yes
Lookorok HCII	yes	yes	yes	x
Nakaperimorou HCIII	yes	yes	yes	yes
405 Brigade HCIII	yes	yes	yes	yes
Rikhtae HC II	yes	yes	x	x
Napumpum HCIII	yes	yes	yes	yes
Kamoru HCII	x	x	yes	x
Lokiterabu HCIII	yes	yes	yes	yes
Nakwakwa HCII	yes	yes	yes	yes
Lopuyo HCII	x	x	x	x
Kacheri Hciii	yes	yes	yes	yes
Lokiding HCII	x	yes	x	x
Losakucha HCII	yes	yes	yes	yes
Kotido HCIV	yes	yes	yes	yes
Rengen HCIII	yes	yes	yes	yes
Apalo opama	x	x	x	x
Apa Lopus HCII	x	x	x	x
Losilang HCII	yes	yes	x	x

Results

There was a marked drop in the hand hygiene compliance across all the health facilities at the mid point.



2.2. Onsite Hand Hygiene Behavioral Change Activities in Kotido Health Care Facilities January 23rd, 27th 2022

Following sub optimal hand hygiene compliance at the baseline assessment, the project embarked on a behavioral change activity to provide hand hygiene mentorship to health workers onsite.

General Objective:

To conduct onsite hand hygiene behavioral change activities on hand hygiene in all healthcare facilities in Kotido district

Specific Objectives:

To strengthen hand hygiene champions, CME in all healthcare facilities and encourage utilization of ABHR

To find out hand hygiene barriers and solutions to the barriers

To distribute hand hygiene ICE materials

Activity Outcomes:

Item	Findings From most HCFs
Experience in implementing Hand hygiene activities at HCF	1. Decreased COVID-19 cases led to the reduction of hand hygiene compliance in HCFs 2. Out breaks reinforce HH Compliance as this was observed during the outbreak of Ebola where HCWs revitalized 3. There are insecurities and so the worriers also take the hand washing stations along with other facility items. 4. Hand hygiene at facility HCFs COVID-19 reduced as HCWs tended to relaxed. 5. Most HCFs receive Hand Sanitizer from the district stores whenever they need. 6. Most HCFs received Hand washing stations and a few are still functional 7. Most HCFs receive Hand Sanitizer from the district medical store. 8. Some HCFs had Hand hygiene IEC materials present although some had grown old. 9. HCFS with guards at the entrances like the Prison, Hand hygiene is a must before accessing the facility. 10. Other organizations like CARITAS supported some HCFs with hand sanitizer during the last Ebola outbreak in Uganda 11. Most Health Assistants trained on WASH FIT by MOH with support from UNICEF.

Barriers to HH and other challenges	• There is limited access to water at Most HCFs. • Limited to No IPC/WASH CMEs conducted at HCFs. • Broken handwashing facilities • Broken ABHR dispensers leading to limited dispensers • Poor hand hygiene behaviours Observed among the health care workers and the community. • Theft of the handwashing stations. • HCWs just have a poor attitude to perform hand hygiene • Inadequate water for the facility • Very far water source about 3KM • Staff lost their 60ml ABHR dispenser bottles • Inadequate dispenser bottles for ABHR
Solutions to the barriers to HH	• Continues sensitization of the health workers and the community on good hand hygiene practices • Repair broken handwashing stations and cement them to the walls of the facility. • Installation of a reliable water source. • IPC focal to organize Routine CMEs on Hand Hygiene. • Fencing of HCFs to beef-up the security • Head of a given department to take charge of ABHR dispensers in their department • IPC/WASH budgets at each HCF to support in timely replenishment hand hygiene commodities.
Presence of IPC focal person	• Most HCFs have IPC FPs however majority of them are not trained in IPC hence affecting the scoop of their responsibilities. • A few HCFs had present and functional IPC FPs • Unsystematic handovers after the transfer of staff specifically the IPC FPs limits the predecessors to execute IPC duties efficiently.
Presence of IPC focal person Champion of HH	• Most HCFs selected the IPC focal person to be the HH Champion.
CME on HH	• Most HCFs had not had CMEs on hand hygiene for more than six months

IEC materials	All HCFs received the following Posters/IECs • Hand wash • Hand rub • 5 moments of hand hygiene. • How to prepare chlorine solution A few HCFs received the following items • ABHR wall mounts. • 20 litters of ABHR. • Hand washing stations • 20 litres of ABHR • 20 litres of liquid soap • 60mls Bottle dispensers of ABHR.

Courtesy visit at Kotido DHOs' office before DHO flagged off the mentorship.

Ocitti Francis WASH Project Officer conducting mentorship on hand hygiene at Apalopama HC II.

2.3. Hand Washing Stations distributed in Kotido district

A total of 25 hand washing stations of which 20 small size with the capacity of 50 liters and 05 large size with the capacity of 150 liters were distributed to the selected 22 health facilities. All HCFs received one Hand washing station each except Kanawat HC II (02), Panyangara HC III (02) and Kotido District Hospital (03).

3.0 WASH III 2022/2023

3.1ABHR Produced and Distributed in 2022

Amount of ABHR produced in 2022 was 1160 liters and 1820 liters distributed in kotido district. This was supported by the district staff.

3.2 WASH End Line Assessment in Kotido District

IDI conducted end-point assessments in all IDI supported healthcare facilities within the district using KoboCollect and hard copies of hand hygiene observation assessment tools.
assessments in all selected healthcare facilities in the district.
Goal/Main Objective
To conduct a WASH End-point assessment at 21 healthcare facilities (HCFs) in the Kotido district.

Specific Observations

To observe hand hygiene compliance among healthcare workers.
To observe hand hygiene practices at Entrances/Exits of healthcare facilities.
To administer a general WASH assessment tool to Healthcare Facility focal person.

The table below shows the summary of the assessment done for the endline.

ASSESSMENT	NO. OF LOCATIONS TARGETED	NO. OF LOCATIONS ASSESSED	PERCENTAGE ASSESSED
WASH HCFs Assessment	22	21	95
Observations entrances, exits at HCFs	22	21	95
HCWs Hand Hygiene observations	22	18	82
Roll out of C & D SOPs	22	21	95

Results of the end point assessment

Average Hand hygiene adherence at district level baseline was fairly performed with 32.7% which was associated to HH campaigns of covid-19. At the midpoint, hand hygiene compliance dropped to 21% which could be associated to low risk perception follwing the drop in covid-19 cases.
The project innovated a hand hygiene behavioral change intervention to improve hand hygiene compliance. End pit results indicate an improvement that could be attributed to the intervention.

4.0. Logistical support to Kotido

ABHR Ingredients and Other Supplies received at Kotido ABHR Production Unit

Table 1 below shows the ABHR ingredients and other supplies received at kotido ABHR production unit from August 2021 to February 2023.

Table 1 below shows the ABHR ingredients and other supplies received at kotido ABHR production unit from August 2021 to February 2023.

Item	Unit of Measure	Quantity
96% Absoute Ethanol	20 litres	3300
3% Hydrogen Peroxide	200 ml	826
98% Glycerol	5 litres	12
Deionized water	20 litres	22
An alcoholmeter	Piece	4
Wooden, plastic or metal paddles for mixing.	Piece	2
Plastic or glass funnel	Piece	1
Measuring jars (2 litres capacity)	Piece	1
Stainless steel or plastic tanks with a capacity of 80 -100 litres (Translucent for mixing without overflowing)	Piece	1
20-litre jerrycans (translucent or graduated to see the liquid level)	Piece	200
2000 ML Measuring cylinder	Piece	10
N95 face mask	50 Pieces	1
Gaggoles/Face shield	Piece	10
Gumboots	Pairs	2
Examination gloves	50 Piece	10
Flip Chart	Piece	2
Marker pens	12 piecs	2
Disposable Apron	Piece	100
Pens	Piece	100
Box File	Piece	1
File seperator	Piece	20

Key Lessons Learnt and continuity plan

The key lessons learnt are

- Improving access to hand hygiene materials alone may not mprove hand hygiene adherence among health workers.
- There is need for integrated approaches such as frequent reminders through mentorship to support improved compliance.

6.0. . Sustainability and continuity plan

Proposed ABHR Sustainability plan.

ABHR Raw materials.

- Lobby support from other implementing partners either through ingredients, facilitation for ABHR producers, and maintenance and repair of the production unit. Human Resources.

Human Resources.

- Support the already existing District staff who were trained on ABHR production to continue.
- Incorporate facilitation for the ABHR producers into the District WASH work plan and budget.
- The ADHO environmental to recommend staff for the online ABHR training opportunities to increase the district capacity to produce ABHR.

ABHR Distribution.

- Use of existing structures like the NMS trucks to distribute ABHR during their routine distribution cycles.
- HCF I/Cs to collect ABHR from the district medicine store on demand as they the usually do for other medical supplies.
- Leverage on IP activities within in the district that target HCFs to transport ABHR.

Use of district vehicles during routine support supervision at HCFs7.0. Existing opportunities and activities for continuity

- Health Assistants trained on WASH FIT: This was done with support from UNICEF, constant emphasis into implementation can yield great improvement of WASH at HCFs

8.0. Conclusion

The need to improve WASH status in Kotido district HCFs through local production of ABHR was a Necessity. The ABHR produced reached all the intended 22 HCFs and this lessened the gap of poor adherence to Hand hygiene due to water challenges and other supplies.

Improving access to hand hygiene materials alone may not mprove hand hygiene adherence among health workers.

There is need for integrated approaches such as frequent reminders through mentorship to support improved compliance.

ABHR Production and distribution within the district can be sustained by the district with minimum resources but yet with greater impact. This already existing intervention can be leveraged on to activate other existing structures and opportunities with-in the district to improve WASH within HCFs at a cost effective and timely way.

Theoretical training of the Kotido district staff

Practical Training (District ABHR Prodn Officers)

Annex

Renovations for the ABHR production unit at Kotido HCIV

Prepared Soapy water foe cleaning

Preparing for C&D of ABHR containers

The IDI Global Health Security Head of Department, Mr. Francis Kakooza gives remarks at the stakeholder meeting

Administering general digital WASH tool in one of the facilities

HH observation at Kaceri

Practical Training (EQC Officers)

Infectious Diseases Institute
P.O. Box 22418
Kampala, Uganda
IDI-McKinnell Knowledge Centre (Main Office)
Telephone: +(256) 312-211-422
Email: office@idi.mak.ug
Website: www.idi.mak.ac.ug

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