



Safeguarding the Health Workforce: Challenges and Implications for Differentiated Service Delivery

A CQUIN Webinar
June 7, 2022

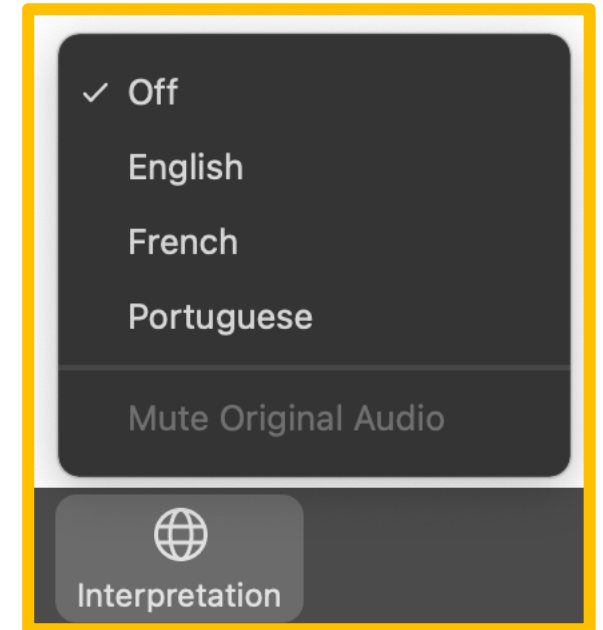
Welcome



Miriam Rabkin MD, MPH
ICAP Director for Health Systems Strategies
Associate Professor of Medicine & Epidemiology
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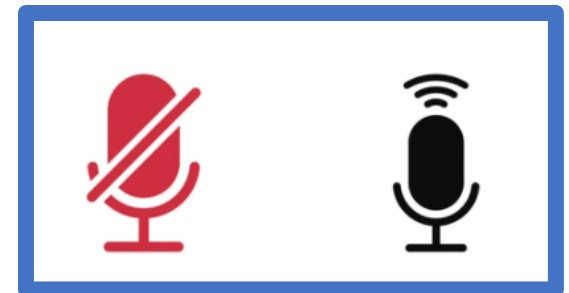
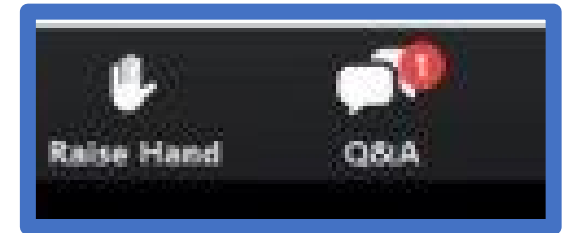
Welcome/Bienvenue/Bem-vindos

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- Assurez-vous d’avoir sélectionné la langue de votre choix à l’aide du menu <<Interprétation>> en bas de votre écran Zoom.
- Certifique-se de ter selecionado o idioma à sua escolha usando o menu de interpretação na parte inferior do seu ecrã



Housekeeping

- 60-minute webinar
- Please type all questions in the Q&A box located on the toolbar
- We will have live Q&A after presentations
- If you would like to speak, please use the “raise hand” function on the toolbar and we will unmute you so that you have control of your microphone
- If you are a French, English, or Portuguese speaker, please ask your question in the language of your choice and our interpreters will translate to English/Portuguese/French



Agenda

- **Welcome: Miriam Rabkin, ICAP/CQUIN**
- **Presentations: Catherine Godfrey, OGAC & Susan Michaels-Strasser, ICAP (co-moderators)**
 - Ismail Lawal, Care and Treatment Lead, US Army Medical Research Directorate Africa - Nigeria
 - Rebecca Namaleah Wangusi, Program Director, CiHEB Kenya CONNECT project
- **Panel Discussion: Catherine Godfrey, OGAC & Susan Michaels-Strasser, ICAP (co-moderators)**
 - Ismail Lawal, Care and Treatment Lead, US Army Medical Research Directorate Africa - Nigeria
 - Rebecca Namaleah Wangusi, Program Director, CiHEB Kenya CONNECT project
 - Lonia Mwape, Dean, School of Nursing Sciences, Levy Mwanawasa Medical University, Zambia
 - Christopher Lee, Director, Global Preparedness and Response, Resolve to Save Lives

Co-Moderators



Catherine Godfrey, MD, FRACP
Senior Technical Advisor, HIV Care and Treatment,
PEPFAR / Office of the Global AIDS Coordinator



Susan Michaels-Strasser, PhD, MPH, RN, FAAN
Senior Director, Human Resources for Health Development
ICAP at Columbia University

Presenters



Ismail Lawal, MD, MPH, MBA
Care and Treatment Lead
US Army Medical Research Directorate Africa – Nigeria
Walter Reed Army Institute of Research (WRAIR)



Rebeccah Namalea Wangusi, MD, MBA
Program Director, CONNECT
CiHEB Kenya

COVID-19 Exposure, Testing, and Quarantine Behaviors among Healthcare Providers supporting HIV Services in Four Nigeria Military Health Facilities

Presented by
Dr. Ismail Lawal

On behalf of study team members including:

Usman Adekanye, Ayesha Rashid, Catherine Godfrey, Yakubu Adamu, Patricia Agaba, Laura Chittenden, Nathan Okeji, Priyanka Desai, Elizabeth H. Lee

Disclaimer: The views expressed are those of the authors and should not be construed to represent the positions of the U.S. Army or the Department of Defense. The investigators have adhered to the policies for protection of human subjects as prescribed in AR 70-25

Background

- During the COVID-19 pandemic, PEPFAR endeavored to protect the HIV workforce in supported countries.
- Following reports of high COVID-19 transmission in Nigerian health care staff, the Nigeria Ministry of Defense-Health Implementation Program and the U.S. Military HIV Research Program implemented an infection prevention and control intervention in supported military health facilities.
- The selected facilities include 68 Nigerian Army Reference Hospital (NARH), Yaba and Nigeria Navy Reference Hospital, Ojo (NNRH Ojo) in Lagos State, 44 NARH Kaduna and 063 Nigeria Air force Hospital (NAFH) in Abuja. All three states account for over 50% of all reported COVID-19 cases in Nigeria

Objectives

- To improve IPC practices in Nigerian military facilities to prevent and control SARS-COV-2 infection among NMOD staffs working in select PEPFAR-supported health facilities
- The intervention was aimed at assessing gaps in IPC practices in selected Nigerian military facilities and identifying ways to improve COVID-19 transmission specific IPC practices for NMOD staff of selected departments, working in select PEPFAR-supported health facilities.
- The selected departments include the General Outpatient department (GOPD), Accident and Emergency (A&E), Records Department (RD), Laboratory Department, (LD) and the HIV care Department (HD) and Accident and Emergency unit (A&E).

Methods

- The project aimed to determine the effect of an enhanced, multipronged public health intervention via a pre-post assessment design and document costs of implementation.
- We report COVID-19 screening responses, quarantine, and testing behavior of HIV and related departments staff.
- Purposive sampling was used to enroll 247 healthcare workers including physicians, nurses, pharmacists, counselors, health records staff, phlebotomists, and cleaning attendants working in the GOPD, RD, LD, HD and A & E sections of the selected facilities
- The facilities deployed a daily COVID-19 self-screening checklist from January to April 2021.
- The checklist included yes/no questions about recent exposures to confirmed or presumptive cases & biological material known to contain COVID-19, travel, signs & symptoms, COVID-19 testing in the prior 14 days, & current quarantine.
- Staff responding ‘yes’ to any question were prompted to test for COVID-19.
- Frequencies and proportions were calculated by cadre in Excel.

By Facility: Reasons for needing a COVID-19 test

Tool #	Screening Checklist	Facility 1 (n=72)	Facility 2 (n=51)	Facility 3 (n=84)	Facility 4 (n=47)	Total (n=254)
1	No. of staff who reported one or more symptoms during this period	21 (29%)	9 (18%)	38 (45%)	21 (45%)	89 (35%)
2	Close contact with known COVID case	14 (19%)	6 (12%)	12 (14%)	26 (55%)	58 (23%)
2a.	No. of staff who had close contact with case and reported symptoms	6 (8%)	2 (4%)	6 (7%)	4 (9%)	18 (7%)
3	No. of staff who reported contact with any biological material know to contain COVID	8 (11%)	7 (14%)	6 (7%)	16 (34%)	37 (15%)
3a.	Staff reported contact with any biological material and reported symptoms	2 (3%)	2 (4%)	4 (5%)	5 (11%)	13 (5%)
4	Traveled outside of this state in the past 14 days	7 (10%)	5 (10%)	13 (15%)	15 (32%)	40 (16%)
4a.	Traveled outside and reported symptoms	3 (4%)	2 (4%)	5 (6%)	6 (13%)	16 (6%)
5	Staff Isolating/quarantining due to exposure	6 (8%)	1 (2%)	7 (8%)	6 (13%)	20 (8%)
6	Tested for COVID-19 in the last 14 days	12 (17%)	2 (4%)	3 (4%)	11 (23%)	28 (11%)
	No. of staff who “screened positive” one or more times using the daily HCW screening tool	30 (42%)	17 (33%)	43 (51%)	39 (83%)	129 (51%)

By Cadre: Reasons for needing a COVID-19 test

Tool #	Screening Checklist	Admin. (n=67)	Environ Officer (n=44)	Lab (n=33)	Doctor (n=26)	Nurses (n=57)	*Other (n=27)	Total (n=254)
1	No. of staff who reported one or more symptoms during this period	19 (28%)	10 (23%)	6 (18%)	18 (69%)	24 (42%)	12 (44%)	89 (35%)
2	Close contact with known COVID case	8 (12%)	3 (7%)	6 (18%)	15 (58%)	23 (40%)	3 (11%)	58 (23%)
2a.	No. of staff who had close contact with case and reported symptoms	1 (1%)	0 (0%)	0 (0%)	10 (38%)	5 (9%)	2 (7%)	18 (7%)
3	No. of staff who reported contact with any biological material know to contain COVID	1 (1%)	3 (7%)	6 (18%)	9 (35%)	15 (26%)	3 (11%)	37 (15%)
3a.	Staff reported contact with any biological material and reported symptoms	0 (0%)	0 (0%)	2 (6%)	4 (15%)	5 (9%)	2 (7%)	13 (5%)
4	Traveled outside of this state in the past 14 days	11 (16%)	2 (5%)	2 (6%)	7 (27%)	14 (25%)	4 (15%)	40 (16%)
4a.	Traveled outside and reported symptoms	3 (4%)	0 (0%)	1 (3%)	4 (15%)	7 (12%)	2 (7%)	17 (7%)
5	Staff Isolating/quarantining due to exposure	0 (0%)	2 (5%)	1 (3%)	4 (15%)	10 (18%)	3 (11%)	20 (8%)
6	Tested for COVID in the last 14 days	1 (1%)	2 (5%)	2 (6%)	5 (19%)	14 (25%)	4 (15%)	28 (11%)
	No. of staff who “screened positive” one or more times using the daily HCW screening tool	28 (42%)	16 (36%)	11 (33%)	21 (81%)	40 (70%)	13 (48%)	129 (51%)

*Other (e.g., radiology/x-ray technician, nutritionist/dietician/kitchen staff)

Results

- Of 254 staff that were screened:
 - 83 (32.7%) were frontline staff (nurses, doctors)
 - 171 (67.3%) were administrative, lab, environmental, and other staff
- Frontline providers:
 - 61 (73.5%) answered yes to any question more often than Other screened cadres combined (68, 39.8%)
 - 42 (50.6%) with the frequent report of symptoms
 - 38 (45.8%) recent exposure to a confirmed or presumptive COVID-19 case
 - 24 (28.9%) exposure to biological material known to contain COVID-19
 - 14 (23.0%) reported currently quarantining
 - 19 (31.1%) were prompted to test or tested for COVID-19 in the 14 days
- From other cadres (6, 8.8%) Self-reported quarantine, While (9, 13.2%) tested for COVID-19, which is similarly low.

Conclusion

- Frontline cadres were exposed to COVID-19 and/or reported symptoms more often than other cadres, although all cadres were infrequently tested or quarantined.
 - Due probably to: Turn around time for testing, Workload, Income, fear of stigma, religious belief etc.
- Further work is needed to better protect the health workforce to reduce COVID-19 risk for staff and people with HIV, especially while vaccination coverage remains low and new COVID-19 variants emerge.
- IPC work has informed PEPFAR implementation during COVID, which emphasized the importance of and the need for robust implementation of infection prevention and control (IPC) at PEPFAR supported health facilities.
 - IPC MPR in COP22 (HR, guidelines, supply chain, Occupational health and safety)
 - This also informed the ARPA funding to support IPC training, PPEs provision and other laboratory support.

Acknowledgements

I acknowledge the support of the Team from :

1. Nigerian Ministry of Defense-Health Implementation Programme, Abuja, Nigeria
2. U.S. Army Medical Research Directorate-Africa, Walter Reed Army Institute of Research, Abuja, Nigeria
3. U.S. Military HIV Research Program, Walter Reed Army Institute of Research, Silver Spring, MD
4. USG PEPFAR

Thank you all

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Auxiliary slides

Daily Screening Checklist

Health Facility Staff COVID-19 Daily Screening Checklist

Name: _____

Job Cadre _____ Date: _____

PLEASE READ EACH QUESTION CAREFULLY	CIRCLE THE ANSWER THAT APPLIES TO YOU	
1. Record your temperature: _____. Is it above 38°C?	YES	NO
2. Have you experienced <i>any</i> of the following symptoms in the past 48 hours: <ul style="list-style-type: none"> • fever or chills • cough • shortness of breath or difficulty breathing • fatigue • muscle or body aches • headache • new loss of taste or smell • sore throat • congestion or runny nose • nausea or vomiting • diarrhea 	YES	NO
3. Within the past 14 days, have you been in close physical contact (2 meters or closer) for at least 15 minutes with a person who is known to have laboratory-confirmed COVID-19 or with anyone who has any symptoms consistent with COVID-19?	YES	NO
4. In the past 14 days, have you had contact with any biological material known to contain COVID-19 virus?	YES	NO
5. Have you traveled outside of this state in the past 14 days?	YES	NO
6. Are you isolating or quarantining because you may have been exposed to a person suspected or confirmed with COVID-19 and/or because you are worried that you may be sick with COVID-19?	YES	NO
7. Have you tested for COVID-19 in the last 14 days?	YES	NO
8. Are you currently waiting for a COVID-19 test result?	YES	NO
Did you answer NO to ALL QUESTIONS?	Minimal risk. Stay safe.	
Did you answer YES to ANY QUESTION?	Report to site leader for possible COVID-19 test.	

WRAIR

Walter Reed Army
Institute of Research



METHODOLOGY/ IMPLEMENTATION PLAN

PROCESS STEP 1

Finalize concept note and all the tools. (Sites readiness assessment, KAP questionnaire, commodities tracking card, daily health care worker's checklist and observation tool)

01

PROCESS STEP 2

WRAIR IRB and MODHREC Approval

02

03

PROCESS STEP 4

1. IPC Training
2. Pre-intervention KAP
3. Administration and collation of daily screening tool.
4. Daily tracking of the PPES usage
5. Administration of observation tool
6. Weekly check in call and possible site visit.

04

1. Conduct site Need assessment
2. Supply of PPES
3. Provision of job aids and SOPs if need be
4. IPC orientation for supporting staffs

PROCESS STEP 3

05

1. Administration of post intervention KAP
2. Collation and analysis of findings
3. Publication preparation
4. End of study close out meeting

PROCESS STEP 5

Safeguarding Healthcare workers against TB and other respiratory illnesses

County Ownership and Networks to maintain Nairobi Epidemic Control (CONNECT)

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Outline

1. Background
2. Results from the field
3. Lessons learned and Key recommendations

Background

- HCWs in LMIC with high TB prevalence are at increased risk of up to 3 times compared to the general population
- In 2020, randomly selected HCWs in one county in Kenya were screened for TB and those found to be asymptomatic were subjected to IGRA test to detect latent TB infection.
- 360 HCWs found to be asymptomatic for TB were tested and 280 (78%) turned positive for latent TB infection.

TABLE 1 Hospital staff TB case notification rates by year, Kenyatta National Hospital, Nairobi, Kenya, 2006–2011

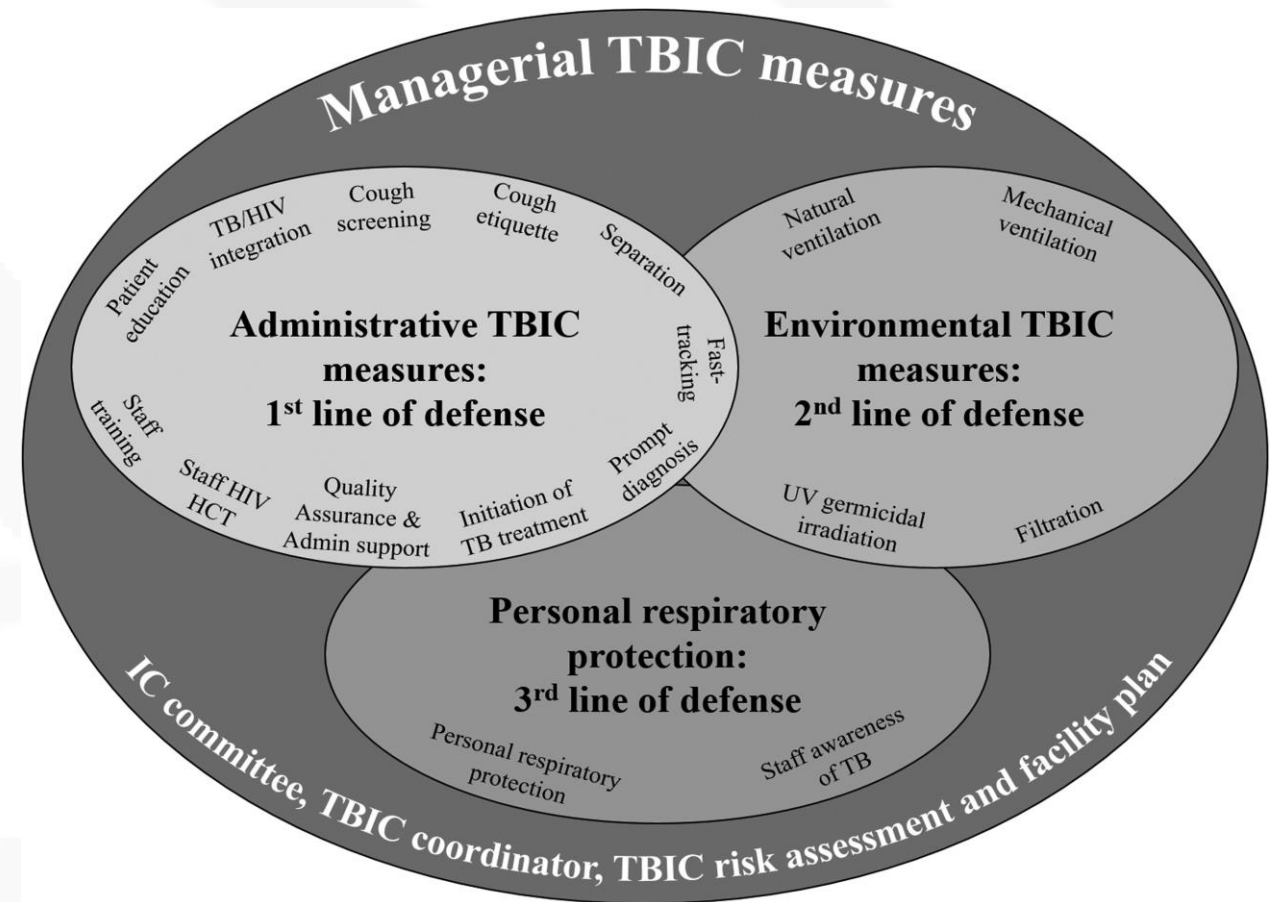
Year	TB cases <i>n</i>	Total hospital staff <i>n</i>	Rate /100 000
2006	42	4660	901
2007	35	4637	755
2008	34	4593	740
2009	19	4602	413
2010	25	4630	540
2011	35	4536	772

TB = tuberculosis.

TB case notification rate ranged between 413 and 901 per 100 000 staff members per year; Only 75% had a successful treatment outcome.

Evidence Based strategies

- Infection Prevention and Control practices
- Early diagnosis and Treatment
- Treatment of infection before it develops into active disease

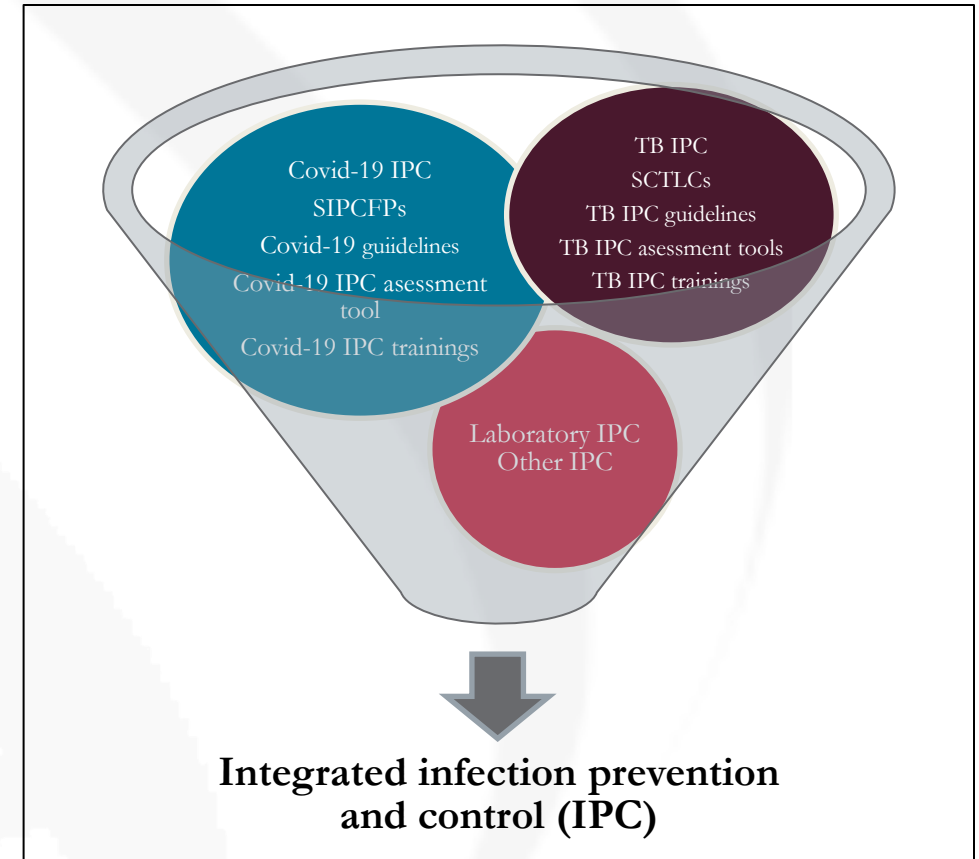


Clin Infect Dis, Volume 62, Issue suppl_3, May 2016, Pages S231–S237, <https://doi.org/10.1093/cid/civ1184>

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The PACT Endeleva IPC Project October 2020-September 2021

- Funded by IEI and CARES ACT through CDC to provide IPC services in 49 public health facilities in Nairobi
- Nairobi county accounts for 40% of the total confirmed COVID cases and 15% of TB cases notified in the country
- Utilized an Integrated IPC approach and CQI to improve uptake



What did we do?

- Developed an integrated assessment tool (*using the WHO IPC Readiness Assessment Framework , the Kenya national TB IPC assessment tool, and the COVID-19 health facility assessment tool.*)
- Trained the county and sub-county teams on the tool
- Based on the gaps identified, facilities were supported to develop IPC work plans, reactivate IPC committees , appoint facility-specific IPC focal persons and implement CQI activities
- The integrated assessment tool was administered quarterly to monitor facility improvements.
- Provided policies, job aids, equipments as per the need

What did we do?

National

- Support the integration of IPC measures into the guidelines
- Structured training curriculum
- standardization of monitoring and evaluation

County: Coordination & Oversight support

- Cascade trainings and facility staff capacity building
- Joint IPC support supervision and mentorship
- Joint facility IPC assessments and follow up plans
- Support Best practice sharing meetings and TWG

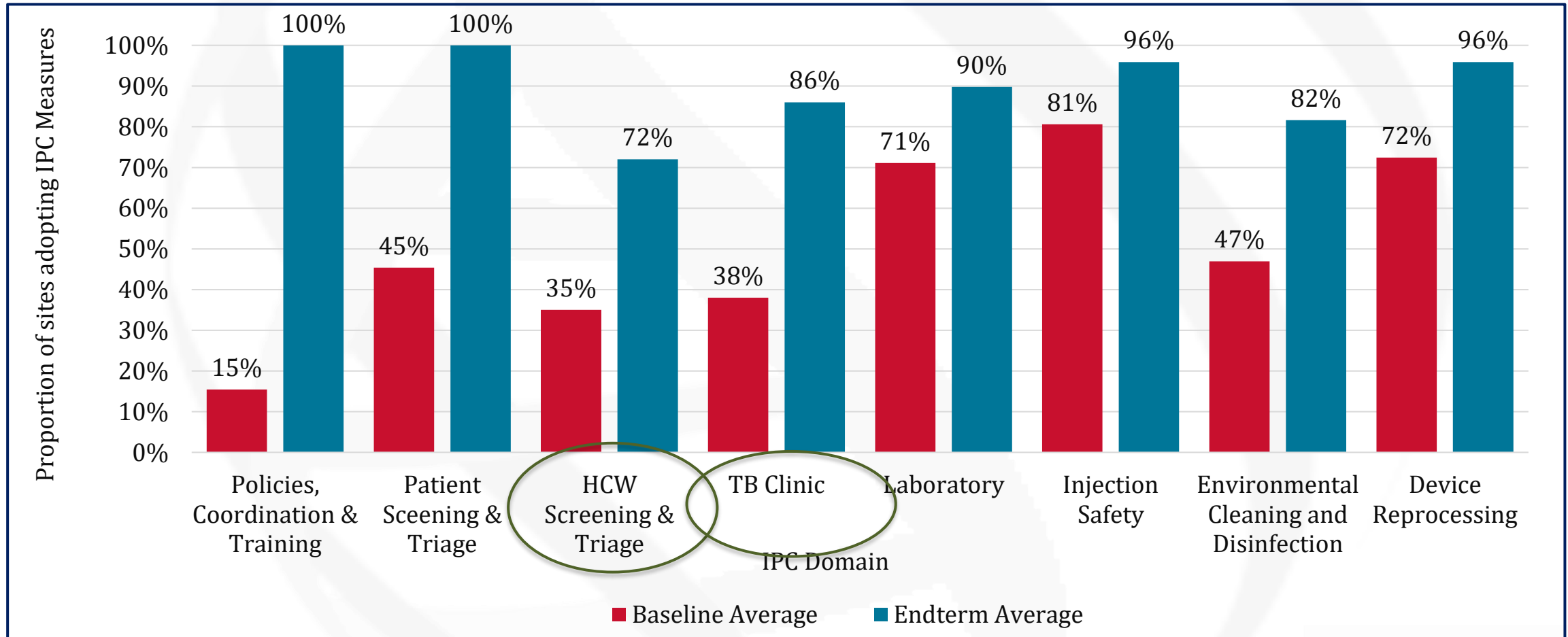
Facility: IPC Implementation & Practise

- Continuous capacity building
- Systems and structures in place
- Continuously improve IPC through use of CQI principles
- Progress monitoring and evaluation



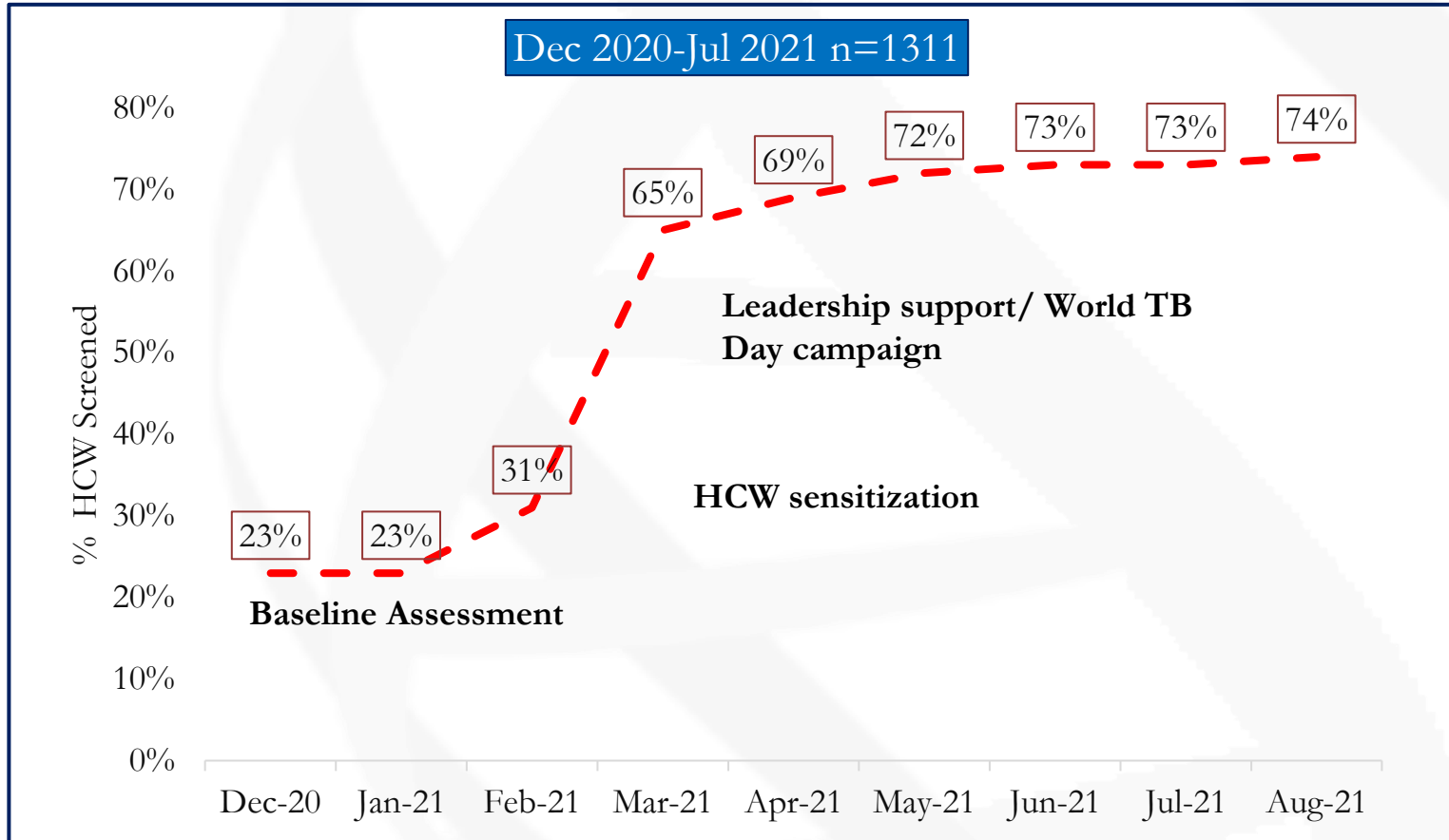
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Results 1: Uptake of IPC measures



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Results 2: HCW Screening for TB

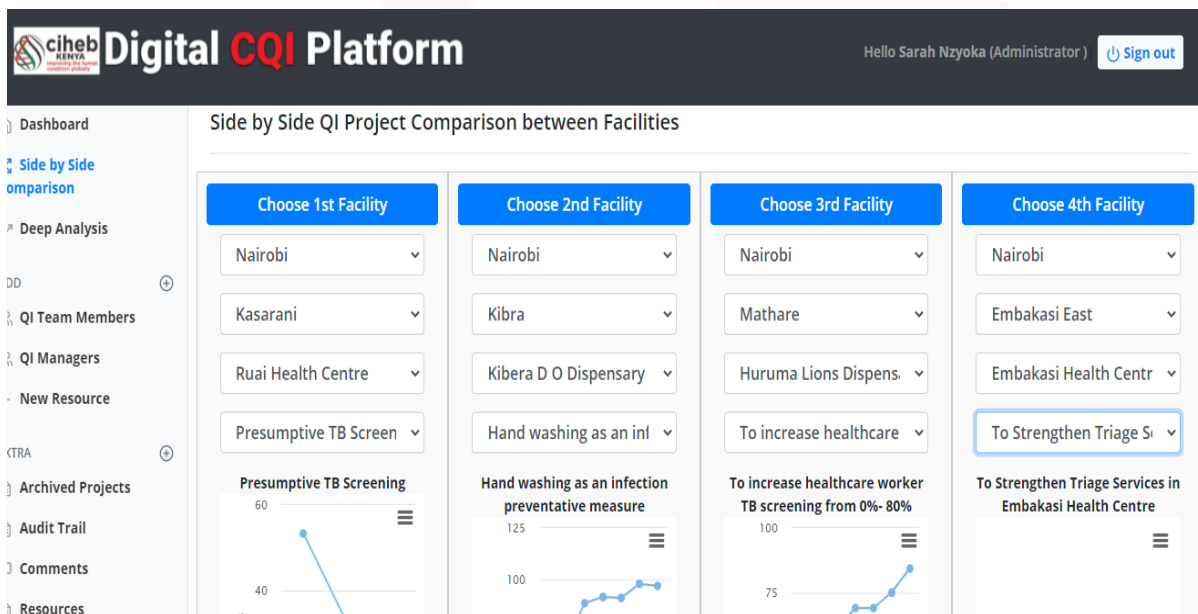


TB HCW SCREENING		
Year	2020	2021
Facility Staffs	1019	1311
# Screened	301 (23%)	786 (74%)
# TB Positive	3	1

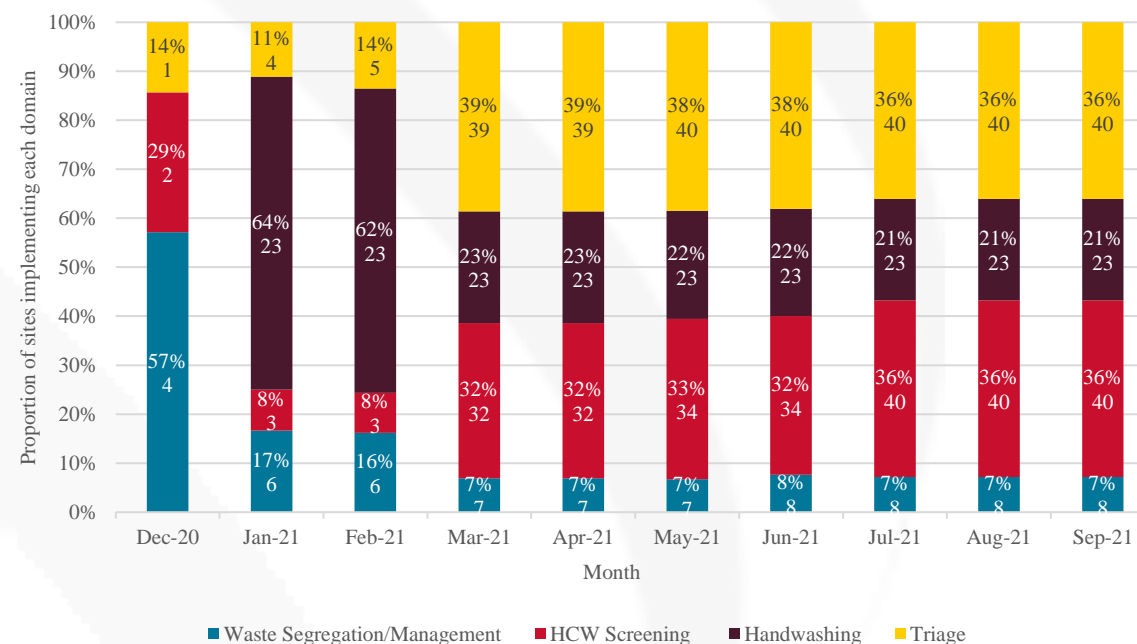
Assessment question and quarter*	Yes	%	p-value
Health talks are given to waiting clients about TB/COVID and other respiratory infections, symptoms, and diagnoses.			
Quarter 1	37	76%	< 0.001
Quarter 2	47	96%	
Quarter 3	47	96%	
Quarter 4	47	96%	
Patients are screened for cough at OPD			
Quarter 1	14	29%	< 0.001
Quarter 2	41	84%	
Quarter 3	46	94%	
Quarter 4	47	96%	
Presumptive TB /TB patients are separated from other patients			
Quarter 1	19	39%	< 0.001
Quarter 2	41	84%	
Quarter 3	45	92%	
Quarter 4	47	96%	
The facility screened all the HCWs for TB in the last 1 year			
Quarter 1	1	2%	< 0.001
Quarter 2	3	6%	
Quarter 3	11	22%	

Results 3: Improving IPC through CQI

UMB – CIHEB Digital CQI Platform with IPC projects displayed.



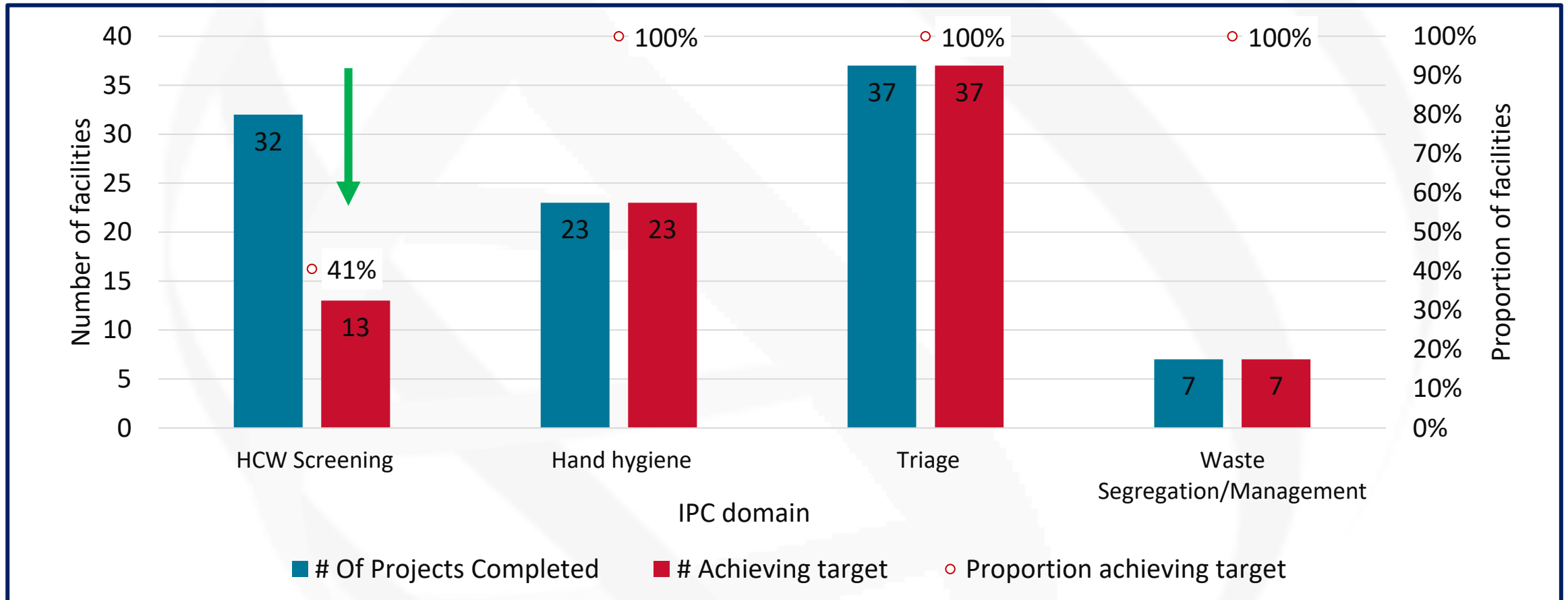
Distribution of IPC CQI project domains by month, December 2020-September 2021 (N=39 facilities).



- CQI as an organizing principle to enhance data use

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Outcomes of CQI projects



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TPT Uptake among HCWs in Nairobi

- In 2020, the Ministry of Health launched the LTBI policy and thereafter developed the guidelines on management of Latent TB infections to be used by HCWs.
- Training and sensitization of HCWs prior to actual roll out in July 201
- Strategies to improve adherence among HCWS
 - Group taking TPT together. This has motivated HCWs and they encourage each other.
 - Having a TPT champion in the facility. The person reminds others on timing of taking TPT
 - Involving the top management of the facility in TPT uptake

TPT Outcomes (July-Dec 2021 cohort)

Total HCWs in the sites taking TPT	No of HCWs on TPT (Jul-Dec 2021)	Completed Treatment	DC	NC
5266	1062 (20%)	1047 (98%)	13 due to ADR (1.2%)	52 (5%)

Household Contacts (HHC)	HHC on TPT	Completed Treatment	DC	LTFU	NC	TO
1822	1297	1137	11	4	141	4
	71%	88%	1%	0.3%	11%	0.3%

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Summary

- Overall, the uptake of IPC measures improved with the policy, coordination, and training domain showing the highest seven-fold increase coverage from 15% at baseline
- Without intervention, less than a third of the facilities had any dedicated triage staff and space. This improved to 100% at the end of September 2021
- Despite the national guidelines recommending biannual HCW TB screening, this was among the lowest at baseline (35%) with only three facilities having a documented procedure for HCW screening. Over the four quarters, we were able to increase the number of facilities with procedures, dedicated staff, and space for screening, and screening equipment to 72%.
- Knowledge gaps could be an underlying reason contributing to poor implementation and practice of the tuberculosis prevention and control programs for HCWs
- Good outcomes among HCWs on TPT

Key Recommendations

- Effective implementation of triage including fast tracking of patients with presumed TB, rapid diagnosis, and respiratory separation, use of data-recording tools for documentation
- Training of all staff and the facility management could contribute to improved implementation and practice of the tuberculosis prevention and control programs in the setting.
- Monitoring of implementation, regular audits/assessments and timely feedback of health care practices coupled with CQI should be performed to prevent and control TB transmission to the health care workers
- Integration of HCW behavior change interventions as part of IPC improvement strategies to improve HCW uptake of screening interventions
- Encourage TPT program for HCWs

Panelists



Christopher Lee, MD, MSc, MPH
Director, Global Preparedness and
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Resolve to Save Lives



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US Army Medical Research
Directorate Africa – Nigeria



Rebecca Namalea Wangusi, MD, MBA
Program Director, CONNECT
CiHEB Kenya



Next Steps

Slides and recordings from today's session will be posted on the CQUIN website:

<https://cquin.icap.columbia.edu/>

The next CQUIN Webinar will be August 5th on
Decentralized Drug Distribution: the Community Pharmacy
Model