

Case example: a community health worker-administered screening tool for family testing to close the pediatric case finding gap in Malawi

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In Malawi, where over 95% of women living with HIV (WLHIV) are receiving treatment, network-based testing focused on creating deliberate linkages between mothers and their HIV-exposed children is a logical and efficient approach to case finding for children living with HIV (CLHIV). We introduced the CHILD testing tool “cICT,” a simple family mapping tool, to systematically identify untested children of WLHIV, test them, and link them to HIV care.

Tingathe (‘yes we can’) is a program conducted by Baylor College of Medicine Children's Foundation Malawi working in collaboration with the Department of HIV/AIDS and viral hepatitis, and utilizing community health workers (CHWs) to conduct HIV testing and counselling (HTC) and support the national HIV program to deliver comprehensive HIV services at health facilities and in the community.

The cICT tool is a simple card designed to collect data about the mother and her living children in her household by integrating systematic documentation of children's HIV status into the routine network-based testing screening (Figure 1). In line with Malawi Ministry of Health (MOH) guidance and as part of routine network-based testing procedures, CHWs screen all PLHIV who are newly diagnosed, PLHIV with high viral load, and all PLHIV on their annual viral load collection date for family, sexual, and social contacts at risk of HIV for their HIV testing status. CHWs integrate the cICT into this routine process by completing the cICT tool for all women aged 15 years and above who are actively receiving HIV services in Tingathe-supported facilities.

CHWs used cICT to list children and document mother's (index client) name, age, date of initial screen, and the number of living children (biological and non-biological) in the household aged 0-19 years. For each child, the card collects name, age, HIV status (infected, uninfected, exposed, unknown), ART status, ART start date, and whether any child who was HIV positive or HIV-exposed was enrolled in HIV care. The tool was filed alongside the mother's MOH ART record for easy access and review at subsequent maternal ART clinic visits. Clients with untested children were advised to bring children to the clinic at their convenience for HIV testing or offered home-based testing in accordance with Malawi MOH protocol. Routine HIV testing was offered to children; HIV self-test kits were offered to those who requested as long as child was older than 13 years in alignment with Malawi HIV testing services guidance; nearly all testing conducted was through conventional blood-based provider testing. CHWs reviewed the card at each mother's subsequent visit and enquired about child HIV test results. All children found to be HIV-positive were linked to ART.

Confirmed and newly identified HIV-exposed infants had linkage to exposed infant care confirmed. Facility performance was monitored monthly through district-level dashboards depicting network-based testing screening coverage and successful documentation of children's HIV status; low- performing facilities implemented continuous quality improvement projects using PDSA ("plan-do-study-act") cycles to identify and address gaps in screening and follow-up.

101 273 women from 95 health facilities were screened, representing 92% of the cohort of WLHIV over 15 years of age in care. Of 75 275 women living with HIV who had children 0-19 years, 18 270 **(24%) identified at least one child with unknown HIV status**. Of the 193 454 children of WLHIV listed, **36 965 (19%) had an unknown HIV status at the time of their mother's screening**. Following referral for HIV testing, a total of 25 732 children were confirmed to be HIV uninfected and 442 new CLHIV were identified, with a 1.7% test positivity. **Most newly identified CLHIV were less than 15 years old: 73 (16.5%) 2-5 year-olds, 126 (28.5%) 5-9 year-olds, 144 (32.6%) 10-14 year-olds, and 99 (22.4%) 15-19 year-olds.**

Systematic documentation of children's HIV status using the cICT tool is a low-effort, high-impact approach to identify CLHIV, including school-aged CLHIV not previously identified. Integration of the tool into the mother's medical record allows facilities to ensure and monitor that they have provided testing to all children who need it.

Use this tool to document children of index women in ART clinic; all other index clients should be screened as usual and documented in ICT register. PIN TO THE CLIENT'S MASTERCARD FOR REVIEW AT THE NEXT CLINIC VISIT.

Index Client Name: _____ Index Client Age: _____ Date of Initial Screen: ____/____/____ ART Number: _____ Number of Living Children in Household 0-19 years: _____ Write the names of these children below and complete the "HIV status" column. Document ART # and ART start date for children living with HIV (CLHIV) in the "ART status" column. Have ALL of these children had an HIV test*? Circle Y or N : if Yes* → tool is complete. Check "tool complete" box to right and date and continue ICT screening. *circle yes if an exposed infant had ANY DBS or rapid test, even if their HIV status is "exposed." if No → offer FRS for each untested child and enter woman into ICT register with all contacts.						CHW: <div style="text-align: right;"> <input type="checkbox"/> Tick box when tool is complete </div> Date tool opened: ____/____/____ Date tool complete: (date that all children on tool have documented status): ____/____/____ For new infants born: Date new infant added to card: ____/____/____		
Data Clerk: UNIQUE ID ASSIGNED: _____ Card OPENED: date entered into database: ____/____/____ Card COMPLETE: date entered into database: ____/____/____ New infant born: date entered into database: ____/____/____								

						Client Linkage – Active in Care? (complete only ONE of the sections below for each child)		
Date child first entered on this card	Name of Child 0-19	Age (Years)	Has child been tested for HIV ever? (by the time of opening card) (Circle Yes or No)	Date of HIV Test	Child's HIV Status (circle one) (I=infected, U=uninfected, E=exposed)	CLHIV - ART status Document ART# and ART START DATE for CLHIV: If HIV uninfected write "NA"		Exposed Infants only Active in care? Circle Y/N If no, make a plan with mother/ guardian today to enroll in care
			Y N		I E U	ART #	ART start date	
			Y N		I E U			Y N
			Y N		I E U			Y N
			Y N		I E U			Y N
			Y N		I E U			Y N
			Y N		I E U			Y N

Enter any new infants born after CHILD ICT Card was closed here* (write date new infants added to card above):

Date infant entered on this card	Name of Infant	Date of birth	Has child been tested for HIV yet? (Circle Yes or No)	Date of HIV Test	HIV Status (circle)	CLHIV only- ART status		Active in care? Y/N If no, make a plan with mother/ guardian today to enroll in care
			Y N		I U E	ART #	ART start date	
			Y N		I U E			Y N
			Y N		I U E			Y N