RAPID ASSESSMENT OF **TRAINING NEEDS AND MENTORSHIP APPROACHES OF HEALTH CARE WORKERS** INVOLVED IN CHILDREN AND ADOLESCENT HIV SERVICES IN ETHIOPIA

The Global Fund
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MINISTRY OF HEALTH

ANECCA
Healthy Children and Adolescents In Africa

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LIST OF ABBREVIATIONS AND ACRONYMS

AIDS	Acquired Immune Deficiency Syndrome
ALHIV	Adolescents Living with HIV
ANC	Ante Natal Care
ANECCA	African Network for the Care of Children Affected by HIV/AIDS
ART	Anti-retroviral therapy
ARV	Anti-Retroviral
CACA	Catalysing Access to quality services for Children and Adolescents living with HIV
CDC	Centres for Disease Control
CPT	Cotrimoxazole Prophylactic therapy
CLHIV	Child Living with HIV
DOTs	Directly Observed Therapy
EID	Exposed Infant Diagnosis
EPI	Expanded Program on Immunization
FHAPCO	Federal HIV/AIDS Prevention and Control Office
FMoH	Federal Ministry of Health
HC	Health Centre
HCT	HIV Counselling and Testing
HIV	Human Immune Deficiency Virus
HMIS	Health Information and Management system
HTC	HIV Testing and Counselling
ICAP	International centre for AIDS care Treatment programs
IMNCI	Integrated Management of New born and Childhood illness
INH	Isoniazid
KIIs	Key Informant Interviews
MOH	Ministry of Health
MTCT	Mother to Child Transmission
NGO	Non-Governmental Organization
OIs	Opportunistic Infections
PITC	Provider Initiated Testing and Counselling
PMTCT	Prevention of Mother to Child Transmission
PNC	Post Natal Care
PLHIV	People Living with HIV
QA	Quality Assessment
SNNPR	Southern Nations Nationalities and Peoples Region
STI	Sexually Transmitted Infection
TB	Tuberculosis
TOT	Training of Trainers
UNAIDS	United Nations program on HIV/AIDS
UNICEF	United Nations International Child Fund
VCT	Voluntary Counselling and Testing
WHO	World Health Organization
YPLHIV	Young People Living with HIV

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EXECUTIVE SUMMARY

Background: In 2016 there were an estimated 748,933 people living with HIV including 78,834 children in Ethiopia. The total estimated new HIV infections were 21, 565. Out of these 2,212 were children below 15 years of age. The adult ART coverage by the end of 2015 was 61.6% and 27.3% for children. New HIV infections among young adults (15-24 years) have been on the increase, with Ethiopia contributing 10% of the estimated 120,000 adolescent HIV related deaths globally. This is the highest from any single country, and a reflection of the gap in the provision of quality adolescent HIV services.

As part of a regional effort to address poor coverage of quality HIV services for children and adolescents, the African Network for the Care of Children Affected by HIV/AIDS (ANECCA) initiated a regional project aimed at improving the coverage and quality of HIV care, treatment and support for children and adolescents living with HIV in seven sub-Saharan African countries including Ethiopia. This report presents the findings of one of the components of this project – the assessment of the training needs and mentorship approaches among health care workers caring for children and adolescents living with HIV.

Methodology: The study employed descriptive study design with stratified purposive sampling. A total of 20 hospitals and 15 health centers providing comprehensive HIV care from nine regions and two city administrations were included. Key informant interviews with the heads of participating facilities, and structured questionnaires were administered to HIV/AIDS clinic health care providers. Both tape recording and manual note taking were used to document the key informant interviews. The desk review was done to identify existing training and mentorship approaches, identify the standards of HIV care for pediatrics and adolescents, and generate the core competencies expected to be attained and to identify any gap in the delivery of comprehensive HIV services.

Results:

Results from Desk-review of training and mentoring documents

The existing training/mentoring documents include; "National comprehensive HIV care and treatment training for health care providers' participant and facilitator manuals, 2014", "National Psychosocial support training, Participant Manual, 2016" and "National Comprehensive PMTCT competency based training package, FMOH April, 2016."

Recommended HIV standard of care: According to these training materials recommended HIV standard of care were, identification of HIV infected children and adolescents, Identification of HIV exposed infants and HEI diagnostic care and Care package for HIV infected clients: linkage with HIV care, ART initiation and follow-up.

Expected Core competencies: Trained staffs were expected to organize and run HIV care / ART clinics through performing PITC, clinical evaluation, diagnosis and treatment of HIV infected infants, children and adolescents. They are also expected to diagnose and manage exposed infants & pregnant women. They are expected to diagnose treatment failure refer for possible second line regimen. They should be able to provide palliative care, age appropriate HIV disclosure to children, patient tracking outreach services, TB –DOTS, linking ART patients to other services and practice universal infection prevention protocols.

Gaps identified: Major gaps identified through the desk-review included the following areas; video skill demonstration on how to do disclosure and psychosocial support is lacking; Gap in the delivery of paediatrics and adolescent friendly care; The service package for adolescents are not well outlined; and on how to capture mother—baby pairs delivered at home, and in nomad community for PMTCT are not in these training materials.

Results of Key informant interview with facility heads

In public facilities, there are separate VCT, ART, PMTCT /ANC services, but in private facilities these services are integrated into the outpatient/inpatient care. Majority do not have separate rooms for paediatrics/adolescent HIV services. Most

of the respondents recommended having separate rooms for paediatric and adolescent clients for reasons of confidentiality, peculiarity of their needs and to give them appropriate attention. Most facilities are supported by either internal or external mentors.

A major challenge identified by the respondents was the paucity of health care workers, mainly because of a high attrition rate. Common avenues for continuous professional development among the heath care workers were case discussions, mentoring, experience sharing visits, reading online resources and in-service trainings. Almost all private and public facility providers indicated the need for specialized paediatrics/adolescent HIV care training.

Results of questionnaire-based Interviews

The respondents were presented with scenarios related to paediatric and adolescent HIV so as to assess their knowledge and skills. The questions were in two batches: for clinicians and non-clinicians. The scores were calculated as a fraction of 100% and then divided into quintiles as follows: 0–20%, 21–40%, 41–60%, 61–80%, and 81–100%. Ninety-four percent (31/33) of the clinicians scored between 41% and 60% and only 6% of the clinicians scored between 61% and 80%. Among the non-clinicians, 71% (24/34) scored between 61% and 80%, 23% (8/34) scored between 41% and 60% while 6% (2/34) scored between 81% and 90%. Overall, the non-clinicians had a higher mean score of 66.5% (SD 10.3) than the clinicians (mean score: 51.2%; SD 4.8); two-tailed t-test = 6.554, p-value <0.05. Several negative perceptions and opinions were identified, with a potential of negatively impacting on the quality of care provided the

Conclusion:

There is a clear gap in knowledge and skills of health care workers in Ethiopia who are caring for children and adolescents living with HIV. This gap is greater among clinicians compared to non-clinicians. Observed negative attitudes and perceptions related to paediatric and adolescent HIV among the health care workers could be linked to this knowledge and skills gap. Ending AIDS by 2030 would require, among other things, building a critical mass of health care workers that are well trained and motivated to care for children and adolescents living with HIV.

Recommendations:

Based on the findings, the following are recommended.

1. There is urgent need to build a critical mass of health care workers trained in the provision of HIV services to children and adolescents.
2. The Government should institute context-specific continuous professional education and in-service training for health care worker caring for children and adolescents living with HIV, with clear minimum standards necessary for re-certification.
3. Health care workers should be sensitized and educated on the on the impact of their negative attitudes and perceptions on the uptake of HIV services, especially by adolescents.
4. All components of the health system structure need to be strengthened, with particular attention paid to the establishment of adolescent-friendly health services.
5. Mentorship within the health sector as a whole, and among health care workers caring for children and adolescents living with HIV needs to be restructured and strengthened, with an in-built mechanism for continuous quality improvement.
6. Adolescent care package and adolescent-friendly services need to be defined at each level of care in Ethiopia

INTRODUCTION

Globally, as of December 2016, 17.3 million adults and children were receiving lifesaving anti-retroviral therapy[1], majority of who reside in sub-Saharan Africa[2]. However, compared to about 50% of adults in Africa with access to ART, only about 30% of children requiring ART were on therapy as of December 2014[3]. Moreover, increases in the number of adolescents (10–19 years old) dying from HIV-related causes indicate that preventive and ART services are inadequate and inefficient for this age group in the region.[4] This study is part of a regional effort by The African Network for the Care of Children Affected by HIV/AIDS (ANECCA), a not-for-profit Pan African network of clinicians and social scientists to enhance the coverage and quality of HIV services for children and adolescents in the seven countries, including Ethiopia.

Country HIV epidemiology

In 2016, in Ethiopia there were an estimated 748,933 people living with HIV including 78,834 children. The total estimated new HIV infections were 21,565 with children under 15 years old contributing 2,2125. The pediatric HIV populations in Ethiopia are mostly older children who were vertically infected in earlier years when the coverage and effectiveness of PMTCT in the country was low, and MTCT rates high. New HIV infections among young adults (15-24 years) has been on the increase, with Ethiopia contributing 10% of the estimated 120,000 adolescent deaths globally, the highest from any single country. Infection among adolescent girls far outnumbers those among the males. In addition, an increasing number of children on HIV care and treatment are surviving to adolescence further increasing the number of adolescents living with HIV. Despite the increasing number of adolescents living with HIV, there is a clear gap in the provision of quality adolescent HIV services6. As of the end of 2015, the ART coverage in Ethiopia was 61.6% for adults and 27.3% for children7.

1 UNAIDS. Number of people receiving ART. Data sheet AIDSinfo. Available online at http://aidsinfo.unaids.org/. Accessed 16 May 2017
2 UNAIDS, "15 by 15" target achieved, 2015
3 UNAIDS, World AIDS Day Report Beginning of the end of AIDS Epidemics , 2015
4 World Health Organization, Progress Report, Global Health Sector Response to HIV, Focus on Innovations in Africa 2000-2015.p-9
5 HIV related estimates and projections for Ethiopia , EPHI, July 2015 p-6
6 Participants Manual for National Pediatrics Psychosocial Support Training, pp 2-3
7 HIV related estimates and projections for Ethiopia , EPHI, July 2015 p-6

National HIV Care and support mechanisms

The HIV/AIDS program in Ethiopia is coordinated at the national level by the Federal HIV/AIDS Prevention and Control Office (HAPCO) with local coordinators at regional, Zonal and Woreda/district levels. HCT, PMTCT, ART clinics operate at the facility levels. The Ethiopian health care system is composed of three tires. The lowest level of referral system in Ethiopia is the primary health care unit, which is composed of five satellite health posts, one health centre and one primary hospital. Each health post is staffed by two health extension workers who provide preventive, promoting and basic curative services, to deliver selected parts of the Health Extension Program during household visits and outreach services. Health posts provide counselling and testing for HIV, preventive and promoting services like condom provision, linking HIV positive pregnant mother to HIV care and making mass campaigns etc. A health post is expected to serve about 5000 populations.

Health centres are staffed by around 20 professionals and provide preventive, curative, inpatient and ambulatory services, treatment of common psychiatric disorders and dental services. Some selected health centres at high HIV case load areas give comprehensive HIV care for both adults and children. Primary/ district hospitals are staffed by around 53 persons and provide preventive, curative, inpatient and ambulatory services, and emergency surgical services, including caesarean section and blood transfusion. They also serve as referral centres for health centres and practical training centres for nurses and paramedical health professionals. Most district hospitals provide comprehensive HIV care except those who are recently built.

In the second tier are general hospitals which are staffed by around 234 persons including six or more specialists providing inpatient and ambulatory services. They are also referral centres for primary hospitals and training centres for health officers, nurses, emergency surgeons and other categories of health workers. Almost all general Hospitals provide comprehensive HIV care.

The third tier is the specialized hospital which is staffed by around 440 professionals and serves as a referral centre for the

general hospitals and provides inpatient services. All specialized hospitals provide comprehensive HIV care some including special adolescent HIV youth group activities.8This training need assessment involved first and second level facilities.

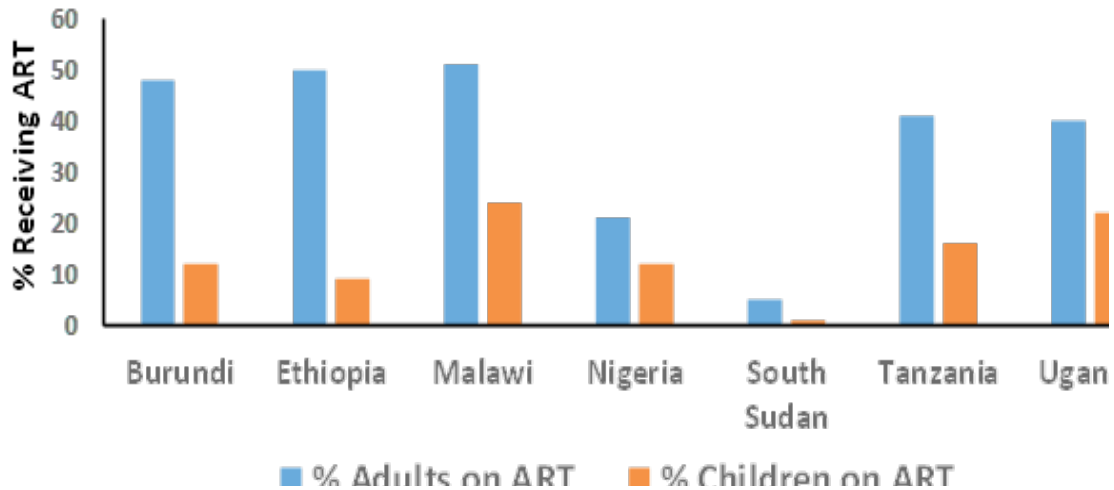
PROJECT BACKGROUND

The following factors have been identified as contributing to the limited access to HIV treatment, care and support of children and adolescents across Africa 9 10 11. Limited early infant diagnosis (EID) services, insufficient number of trained service providers, inadequate health system infrastructure and socio-cultural factors such as stigma, limited knowledge about PMTCT and ART for children, limited training on management of adolescents living with HIV, lack of confidence among different cadres of health care workers in managing ART among adolescents living with HIV and strong community belief in traditional birth attendant system which encourages pregnant mothers to seek antenatal care, birth assistance and postnatal care outside the health system.

The adoption of the 90-90-90 strategy requires broader regional efforts to address the poor coverage and quality of treatment, care and support for children and adolescents living with HIV. The fact that most HIV-infected children will die before their 5th birthdays if not receiving ART makes the situation even more desperate. To fill this need for a regional effort, the African Network for the Care of Children Affected by HIV/AIDS (ANECCA) initiated the project "Catalyzing Improvement in the Policy Environment, Human Resources Capacity and Knowledge Management about Care, Treatment and Support for Children and Adolescents Living with HIV in Africa" with funding from the Global Fund to Fight AIDS, Tuberculosis and Malaria. ANECCA is a not-for-profit Pan African network of clinicians and social scientists with a mission to improve access to quality and comprehensive HIV prevention, care, treatment and support services for children, integrated within the broader maternal and child health framework.

This regional project provides a unique opportunity to capitalize on paediatric and adolescent expertise across the continent to address disparities in access to care and treatment for children and adolescents. For this phase of the project, seven countries (Burundi, Ethiopia, Malawi, Nigeria, South Sudan,

Figure 1: Bar Chart showing the percentage of adults and children receiving Anti-retroviral treatment in 2013 (source: UNAIDS GAP Report, 2014)



8 WHO , African Observatory : Analytical summary service delivery , Ethiopia : available at : http://www.aho.afro.who.int/profiles_information/index.php/Ethiopia:Analytical_summary_-_Service_delivery, accessed 6/3/2016

9 TMOH/NACP (July 2014). Rapid assessment of the pediatric HIV treatment service delivery in Tanzania. Dar-es-Salaam: Ministry of health and social welfare (as cited in the ANECCA Regional Concept Note to the Global Fund for Tuberculosis, AIDS and Malaria).

10 MOH (2014). Assessment of adolescent HIV care and treatment services in Uganda. Kampala: Ministry of Health (as cited in the ANECCA Regional Concept Note to the Global Fund for Tuberculosis, AIDS and Malaria).

11 THSHSP (2014). Tanzania Third Health Sector HIV and AIDS Strategic Plan (HSHSP- III) 2013 – 2017 (as cited in the ANECCA Regional Concept Note to the Global Fund for Tuberculosis, AIDS and Malaria)

Tanzania and Uganda) with the least antiretroviral treatment coverage for children and adolescents living with HIV, compared to adults (Figure 1)[12], have been selected.

Human resource capacity for provision of paediatric and adolescent HIV care and treatment services is a gap that is common across all the 7 countries. In Ethiopia, while there are indications of increased decentralization and integration of HIV services and sporadic mentoring of health care workers, there are still visible implementation gaps and challenges which necessitate action in order to improve the number of children receiving HIV care. The peripheral health facilities are still hugely understaffed, few health workers know how to test, treat, counsel and retain children and adolescents in HIV care; there is high attrition rate of the trained staff who move to other countries or relocate to other departments, including non-HIV departments or leave for further education thus compromising the care. Mentoring health care providers on paediatrics HIV care in primary health care facilities has proven to be effective in improving their competence [13] however its implementation coverage is only in limited areas.

To enhance the coverage and quality of care provided to children and adolescents living with HIV, ANECCA commissioned a rapid assessment of training needs of health care workers in Ethiopia. The results of this assessment is expected to inform the development of regional training and mentorship frameworks and materials for health care and psychosocial workers in the provision of Paediatric and adolescent HIV care/support and treatment services.

Project Goal and Objectives

The goal of this project was to conduct rapid assessments of training needs and mentorship approaches of health care workers to deliver quality care, treatment and support services for children and adolescent living with HIV in Ethiopia.

The specific objectives of the project include:

1. Review existing training curricula and guidelines for adolescent HIV services, and especially for counselling and psychosocial support.
- Identify existing trainings and mentorship approaches
- Identify the standards of care for children and adolescents living with HIV in Ethiopia
- Generate a list of core competencies expected to be attained by the trainees
- Identify any gap in the delivery of comprehensive HIV services.
2. Review the mentorship approaches for children and adolescent HIV services.
3. To identify performance gaps among health care workers responsible for providing treatment, care and support services to children and adolescents living with HIV in Ethiopia that can be addressed through appropriate training and/or mentorship programmes.
4. To determine the types of trainings and mentorship approaches required to address identified performance gaps.

METHODOLOGY

Study Design

This was a cross-sectional study, which combined both primary and secondary research methods. The secondary research was conducted by desk review of training materials. The primary research utilised both qualitative and quantitative research methods. The qualitative method was used to collect data from the national HIV programme managers and facility heads while the quantitative method was used to collect data from the Health Care Workers providing care to people living with HIV.

Study setting and population

Health facilities from tiers 1 and 2 providing comprehensive HIV services were selected through multi-stage sampling. A comprehensive HIV facility was defined as a facility offering a complete package of HIV services: anti-retroviral treatment, PMTCT, HIV testing services, and other care and support services. Fifteen districts were first selected purposively from the 11 regions. Thereafter, 30 government-owned health care facilities – 2 per district (15 district/primary and 15 general hospitals) and five private hospitals were purposively selected from the 15 districts (Table 1). All the clinicians (medical doctors and health officers), nurses, midwives, social workers, counsellors and community health workers who provide care and support to people living with HIV in all the selected health care facilities were invited to complete the structured questionnaire.

12 UNAIDS GAP Report, 2014

13 S.Jebessa et.al. Pediatrics HIV care and services at Primary Health Care Level in Ethiopia, Ethiopian Journal of pediatrics and child health, November 2014, Vol X, Number 10; page 4

Table 1: Study sites selected in Ethiopia for Training need assessment on pediatrics and adolescent HIV services, 2016 (n=35)

Regions	Name of selected district	Names of selected HIV testing /ART/PMTCT facilities	
		Primary/district / general Hospital	Health centers
Afar	Dubti	Dubeti	Semera HC
Addis Ababa	Akaki Kaliti	Tirunesh-Beging Hosp	Saris HC
Amhara	Efrata Gidem	Ataye Hosp.	Ataye HC
	Woldia	Dessie Hospital	Dessie HC
Benishangul Gumuz	Assosa	Assosa Hospital	Assosa HC
Diredewa	Sabian	Sabian district Hosp	Lagehare HC
Gambella	Gambela	Gambela Hospital	Gambela HC
Harari	Abadir	Jugula Hospital	Jenela HC
Oromia	Jimma	Shenen Gibe Hospital	Jimma HC
	Fitche	Fitche Hospital	Fitche no 1
Somali	Jigjiga	Jigjiga Hospital	Jigjiga HC
SNNPR	Yirgalem	Yirgalem Hosp	Yirgalem HC
	Hawassa town	Adare Hospital	Loke HC
Tigray	Axum town	Kidist Mariam Hosp	Axum HC
	Semen	Mekele Hospital	Semen HC
Addis Ababa	Kirkos	Bethezatha Hospital	
Addis Ababa	Bole	Saint Yared Hospital	
Addis Ababa	Bole	Meungsang Hospital	
Addis Ababa	Kolfe Keranio	Bethel Hospital	
Addis Ababa	Gulele	Girum Hospital	
Total		**20**	**15**

Data Collection Methods

Desk review:

HIV/AIDS training materials were collected from the Federal Ministry of health disease prevention and health promotion directorate, HIV AIDS case team and from Federal HIV/AIDS prevention and control office. Only the most recent (2014-2016) training materials and guidelines were included in the review.

Key informant interviews:

Key informant interviews (KII) was conducted with the heads of participating health care facilities to assess their perception of the performance issues within their health care facilities, training needs and environmental factors affecting performance. In addition to the facility heads, KIIs were also conducted for national level programme managers, development partners, NGOs and others, as well as at the sub-national level programme managers. The interviews were conducted using a semi-structured/open-ended interview guide. The interviews were audio recorded and notes were taken by the data collectors.

Structured questionnaire-based Interviews;

Structured questionnaire-based Interviews was conducted to establish the adequacy and depth of knowledge and skills of service providers and beneficiaries of the existing training

programmes, attitudes and opinions of health care workers directly responsible for the treatment, care and support of children and adolescents living with HIV. The key informant interview (qualitative data) and the structured questionnaire-based Interviews (quantitative data) were collected by trained data collectors.

Data Management and Analysis

A qualitative data analyst transcribed and entered the data into Atlas.ti software for management. Analysis was done based on predefined themes and emerging codes. Finally, draft report was generated by describing the themes and codes supported by quotes from the key informants. Excel sheet was used to analyse some of the data such as background characteristics.

The responses to the structured questionnaires were entered into a web based database and analysed using SPSS Version 22 data software. Discrete data were described using proportions and percentages while continuous variables were described using means and standard deviations for normally distributed data and median and inter-quartile ranges for non-normally distributed data.

The result of the analysis was used to generate a list of gaps, and to determine the gaps caused by limited knowledge and skills and those caused by environmental factors. Discussions from the stakeholder review forum were used to enrich the results and recommendations identified.

Quality Assurance

The lead consultant in conjunction with the ANECCA secretariat supported the national consultant and ANECCA in country team throughout the study period to carry out this review and assessment. The national consultant and ANECCA project officer selected competent field assistant who have experience on paediatrics /adolescent HIV care and research. The study assistants received three days data collection training in both didactic and practical sessions. The training had the following components:

1. Orientation on the overall project and study protocol
2. Introduction and practice on study tools
3. How to take qualitative data with proper techniques for conducting key informant interviews including practical session using tape recorders and feedback sessions
4. Maintaining confidentiality and obtaining informed consent
5. How to Secure data storage while in the field

Pretesting of the data tools was done in Addis Ababa health facilities and comments were incorporated and modifications done to produce the final data collection tools. Facility level Key informant interviews (KIIs) were carried out by the trained data collectors supervised by the national consultant and ANECCA project officer. All the tape recorded and note forms of the data were checked for completeness and clarity by the qualitative data analyst and stored securely for data entry.

Ethical Considerations

The study protocol was submitted to the Ministry of Health of Ethiopia Disease Prevention Control Directorate who actively revised and commented on the methodology and activities of the study. After getting the final revised and agreed upon protocol, support letter and letter of collaboration to the regions was provided by the ministry of health to undertake this study.

The field data collectors carried consent forms written both in English and Amharic and explained to each participant, in their local language before obtaining consent. They explained the purpose of the study, procedures, risks, benefits, rights of the participant, and protecting data confidentiality.

The study participants were allowed to ask questions if they required further clarifications. Thereafter, consent to participate in the study was obtained from the participant before proceeding with the interview. Three participants did not want their voice recorded so the data collectors deferred tape recording in those cases and took detailed notes during the interview.

Privacy and confidentiality were maintained during the interviews through ensuring records are kept in safe storage and interview rooms were selected to be convenient and private. Personal identification of all interviewees was kept anonymous and data were coded prepared based on the regions and facilities. Completed questionnaires were stored in a locked cabinet and were only accessible to the study team.

RESULTS

The findings of the assessment are presented in three sections based on the methods employed; desk review, key informant interviews and structured questionnaire survey.

Desk review

The desk review revealed important documents for mentorship and training which were reviewed critically for their content.

Existing training and mentorship approach

The following three training manuals are being used to train health workers on the comprehensive HIV care and support:

i) "National comprehensive HIV care and treatment training for health care providers' participant and facilitator manuals, 2014"[14] This training material is intended to be used to train all health workers at all levels of health care including physicians, health officers and nurses. The duration of the training is for 2 weeks. Trainees are expected to attain core competencies to enable them to provide detailed comprehensive HIV care for all age group of clients.

ii) "National Psychosocial support training, Participant Manual, 2016"[15] was recently published and is not yet used widely. This manual was produced to bridge the gap observed in the comprehensive manual in the area of paediatrics and adolescent psychosocial care. The training is designed for three days.

iii) "National Comprehensive PMTCT competency based training package, FMOH April, 2016"[16]. This manual is comprised of four modules designed to deliver all the necessary knowledge and skills in competency based manner with interactive didactic and practical sessions. The duration of training is for 12 days and the intended participants are midwives, nurses and physicians working at the ANC/PMTCT/delivery services.

14 FMOH, Comprehensive HIV care and Treatment training Manual for health care providers participant Manual , June 2014

15 FMOH, Participant Manual for National Psychosocial support Training, February, 2016

16 Federal Ministry of health Ethiopia (FMOH),National Comprehensive PMTCT/MNCH/RH Training package , April, 2016

HIV standard of care as identified in the training materials

The following areas were assessed in the training materials and the results are presented in the following six thematic areas.

Identification of HIV infected children and adolescents: The standard care starts with voluntary process adhering to the five C's: consent, confidentiality, counselling, correct test results and connections to care, treatment and prevention services. Two major HIV testing and counselling service delivery models are used at facility and community levels. The models used in the facility are: (1) Client initiated HIV testing and counselling (VCT), and (2) Provider initiated HIV testing and counseling (PITC) which is provided by the opt-out approach at clinical service points for eligible patients who come to the facility for other medical reasons.

The training material stipulates that opportunities to identify children who are in need of HIV testing should not be missed. The potential entry points are: PMTCT program, EPI units, Nutritional therapy units, TB clinics, Paediatrics outpatient and inpatient units, children of adults on ART/HIV care, siblings of children enrolled into HIV care and orphanages. All children below five years of age attending health facilities were supposed to be screened for HIV. All family members of HIV infected children were also to be screened[17].

Special emphasis for adolescents and young adults is given on the current psychosocial training manual and is stipulated as:[18] a) *HIV testing and counselling with other prevention services and linkage to treatment and care is recommended for all adolescents and youth age 15-24 years; b) Adolescents should be counselled about the potential benefits and risks of disclosure of their HIV status and empowered and supported to determine if, when, how and to whom to disclose; and c)* Consent for HIV test is obtained from i) *parent /legal guardian should consent for children < 15 years of age (exception "b") or ii) mature minors (age 13-15 years) can consent for themselves for HIV testing*

17 FMOH, Comprehensive HIV care and Treatment training Manual for health care providers participant Manual , June 2014

18 FMOH, Participant Manual for National Psychosocial support Training, February, 2016

Identification of HIV exposed infants and EID care: screening of pregnant mothers, identification of positive mothers and starting them with Option B+, and prophylaxis for the infant as well proper follow up and exposed infant diagnosis service, infant feeding advice are well outlined in the training guideline, including the integrative approach with ANC, delivery and post-natal services and male involvement.

Linkage with care: The standard of care makes sure that every identified HIV infected adult, adolescent, child or infant is linked to proper HIV/ART service through escorting/referring each patient to the proper facility rendering the service.

Care package for HIV infected clients: Key elements at enrolment into chronic HIV care include the following:

- Complete assessment (history taking, complete physical examination and relevant laboratory tests)
- Screening and management of opportunistic infection and co-morbidities
- WHO clinical staging
- Pregnancy status, family planning and contraception
- Support for disclosure and partner notification
- Risk reduction, counselling and combination HIV prevention approaches
- Screening for and managing mental health problems and substance use
- Adherence and psychosocial counselling and support
- Nutritional assessment and counselling
- Screening for STIs
- Prevention of and screening Cervical cancer
- Management of pain and symptoms

ART initiation and follow-up: The standard requirements for initiation of ART in the guidelines are: (a) HIV positive test result with written documentation; (b) Start only patients with medical eligibility for ART and (c) Ensure readiness of patient for ARV therapy. Each patient is worked up for common investigations before the start-up of ARV treatment and will receive counselling for treatment readiness. ART is recommended for all children HIV infected less than 15 years of age regardless of CD4 count and WHO clinical stage. ART is recommended for all adolescents above 15 years of age and young adults if they have CD4 count of ≤500 cells/mm3 or those who have any AIDS defining illness (stage 3 or 4 regardless of their CD4 counts, and all pregnant and breast feeding women irrespective of CD4 counts.

Once started on the proper ART regimen and/or prophylaxis for opportunistic infections, scheduled visits will be given to the patient using a nationally printed appointment pocket card. For children all the above procedures are followed with parents / reliable guardians. All scheduled visits are followed according to the guideline with the necessary investigations, evaluations, measurements and drug dose adjustments. In case patients develop any toxicity of the drugs or resistance; the drugs will be switched based on the specific guidance on the national treatment guidelines. Disclosures and adherence counselling are done by trained health care providers based on the national guidelines.

Core competencies expected:

The following are list of 'ideal' skills required to provide quality HIV counselling, testing, treatment, care and support to children and adolescents:

- Organize and run HIV care / ART services delivery
- Perform PITC
- Do clinical evaluation of patients coming to the HIV care / ART clinic
- Diagnosis OIs
- Provide prophylaxis in particular CPT and INH
- Manage exposed and infected infants and children
- Request and interpret laboratory tests
- Prepare patients to be started on ART, adherence counselling, patient tracking outreach services
- Prescribe 1st line ART for adults and children in uncomplicated including patients' eligible pregnant women
- Diagnose treatment failure /send for possible second line regimen
- Provide comprehensive palliative care
- Provide age appropriate HIV disclosure to children
- Refer patients who need referral to a better setup
- Have sufficient knowledge on PMTCT, TB –DOTS and linking ART patients to other services
- Practice universal infection protocols

Gap identified in the training materials in the delivery of comprehensive HIV services

HIV psychosocial care in paediatrics and adolescent age groups: The Comprehensive HIV care and Treatment Training Manual for health care providers' participant Manual did not adequately cover materials related to the psychosocial care for

children and adolescents. Efforts have to been made to bridge this gap by preparing the psychosocial care training material. The gaps observed in the training manuals can be divided into three thematic areas pertaining to why HIV psychosocial care is unique in paediatrics and adolescent age groups and what needs to be done.

a) The training material tried to address the burden of paediatrics and adolescent HIV both in sub-Saharan Africa and Ethiopia, however it is ***lacking in age disaggregated specific data*** hence adolescent age groups are partly embedded in paediatrics and partly embedded in young adult population.

b) The training material has clearly described the cognitive, social and emotional development of children and the effect of HIV on their psychosocial development. Though the importance of ***peer interaction and play*** in the psychosocial development of children is mentioned it is not well outlined how to make it effective in the health care setting, and to create ***paediatrics and adolescent friendly service delivery.***

c) The manual presented in detail the psychosocial problems of children and the associated factors interacting, however it does not clearly indicate; what is the ***service package*** of adolescent friendly care and how to organise and make it happen within the health care system and It does not present an ***example of psychosocial assessment*** or show role play or an example using video clip.

Communication with children and adolescents: The manual talks in detail principles, procedures and factors affecting communication with children and adolescents however it does not show the skill "how to do it" so it lacks again proper role play sessions and video demonstration as well.

Adolescent friendly care: ***No specificity on the components of adolescent friendly service,*** at least it could have been better to mention other country activities as best practices preferable with short video clip

Disclosure of HIV status: The manual talks about definitions of disclosure , the need /importance of disclosure, the age based approaches, the process and procedure of disclosure however it lack skill demonstration using short video clips.

Adherence support and positive living in children and adolescents: The manual describes retention to care and adherence factors affecting procedures of adherence plan and how to improve adherence, again the skill demonstration using role plays and video clip is lacking

Gap in PMTCT activities: The issue of mothers delivering at home and mother-baby pairs within the community of mobile /emerging underserved region still need special focus.

Results of Key informant interview with facility heads

Paediatric and adolescents HIV/AIDS service delivery and mentorship:

All the health centres and majority of the hospitals reported that they have centralized VCT centre and ART rooms for both adults and paediatrics and adolescents HIV service. On the other hand, few health centres and hospitals have VCT services at different outpatient departments. Most reported that they have PMTCT units with ANC follow-up room separate from the ART clinic.

There are good initiatives for delivering psycho-social support services for paediatric and adolescents at the hospitals than the health centres. In one of the regions they also have referral service from health centre to hospital for psycho-social rehabilitation purpose. Provider initiated counselling and testing service is becoming rare in some hospitals.

Except few hospitals from Addis Ababa, Dessie and Mekelle, all the health centres and hospitals do not have separate room/ clinic for paediatric and adolescent HIV services. All paediatric and adolescents with HIV are tested and managed together with Adults at ART units. Almost all the health centres and hospitals (except one key informant participant) recommended having special/separate clinic/room for paediatrics and adolescents HIV care and support. The reasons mentioned by participants for the need of having separate clinic was that: the care for paediatrics and adolescents is not given appropriate attention like that of adults, their needs are different from adults, sensitivity/ confidentiality of the service, poor service provision and high patient load also affect the delivery of proper paediatrics and adolescent HIV care .

Only one participant from a hospital disagreed on the need to have a separate room/clinic since the number of paediatrics and adolescents with HIV are very few in his facility. One hospital reported to have four rooms for HIV /ART service; and these are ART pharmacy, Adult ART room and special paediatric and adolescent ART room and additionally another room for PMTCT services.

Three of the hospitals have internal mentorship arrangement like consultations of paediatrics and child health specialists while some health centres have mentorship from other sites. Some of them have a meeting called 'catchment area meeting' to assess the progress and challenges every three months. The mentorship programs are supported by NGOs such as ICAP and CDC. One participant recommended that mentorship should be done by senior paediatricians with continuous consultations whenever needed.

Additionally, five private Hospitals were assessed. All of them provide paediatric and adolescent HIV services at the general paediatric units since the case load is not high. The internal referral and linkage are reported to be good. Patients have the privilege to come at any time even without an appointment to collect their medications. Two out of five respondents suggested that it would be more convenient to have separate paediatric and adolescent HIV clinic to keep their privacy.

"Our care starts from ANC or delivery room. As soon as we get an HIV positive pregnant /labouring mother we initiate her on ART. Most of them prefer caesarean section for delivery and immediately after birth, we start the new-born on prophylaxis and we do DBS at 6 weeks; fortunately, up to now most of the infants have turned out to be HIV negative. Similarly, we do PITC at OPD and also, we screen children whose mothers are being followed up at the ART clinic."

There are two modalities of HCT in the hospitals; some provide HCT based on risk assessment (targeted HCT) others provide for every client. Some hospitals reported that before they do HIV test for children, they check if the person accompanying is biological parent or not. If they are not biological parents they will be requested to present legal document which indicates their legal guardianship. In one of the private hospitals HIV testing is also done for child adoption.

Most of them reported that they tell/ disclose adolescents about their HIV status when they are 15-16 years of age. The issue of disclosure is one of the challenges mentioned frequently. Only one of the private hospitals mentioned mentorship specific to paediatric and adolescent HIV from Addis Ababa health bureau. Most of them reported that they refer the clients to public hospitals for nutritional support since they don't have nutritional therapy services. One of the respondents complained that less attention is given to private hospitals compared to public hospitals. One of the participants also suggested that laboratory tests like CD4 and viral load should be available for free.

Human resources for pediatric and adolescent HIV/ADIS care and support

Health officers and bachelor degree nurses are middle level health workers; they are the ones involved in providing paediatric and adolescent HIV services. Many hospitals have paediatricians and few have nurse and health officer with master's degree on child health however these people are not involved frequently in routine HIV care and support. They are mostly involved in consultation works whenever they are requested by the ART providers. The paediatricians usually work at general paediatrics wards; two paediatricians showed interest to have active involvement in the HIV care and support if they are assigned. Generally, most facilities complain that there is only limited number of staffs at the ART clinics and claimed that there is shortage of skilled staff for paediatrics and adolescent patients specifically.

They also reported that they face difficulty in managing cases whenever the ART providers are on leave. High staff attrition rate is also presented as one of the challenges. Lack of motivation of the staffs and leaving the institution for career development were also the reasons mentioned for staff attrition.

All of the ART providers took general paediatrics and child health trainings during their undergraduate studies. Few of them have got limited in-service trainings like integrated management of childhood illness (IMCI). Almost all took the comprehensive HIV care training except one staff from new ART Hospital in Amhara region. Only few took special paediatric and adolescent HIV care training.

To solve their skill and knowledge gaps: some hospitals use mechanisms like case presentations, case reviews, mentoring, and experience sharing visits to other sites. Others use online self-reading and update and in-service trainings prepared by senior physicians.

In most private hospitals paediatric and adolescent HIV services are provided by paediatricians. Only one of the private hospitals reported to have a person who is specially trained in disclosure and adherence counselling. Most of the private hospital health care providers took HIV related training while they were working at public health institutions; as reported by one of them:

"I took HIV training 7 years back, while I was working at public facility"

The Paediatricians complained that they never get the chance to have HIV training, even if they wanted to pay for it. One of them reported:

"The HIV trainings are usually designed for nurses and health officers (mid-level health workers) so we did not get the chance to be trained"

Training needs to provide pediatric and adolescent HIV/AID services

All the key informant interview participants from health centres and hospitals requested for special training on paediatric and adolescent HIV care. There was also a need for continuous on-the-job training for newly assigned staffs on general as well as paediatric and adolescent HIV care. Some providers suggested training of all health care providers in their institution on HIV care and support so that gap/interruptions will not occur when staffs are rotated to other units or leave the institutions. They also suggested that trainings should be done whenever guidelines/policies are up-dated/changed.

Trainings are said to be mostly organized by regional health bureau, Federal Ministry of Health, University Teaching Hospitals and partners such as ICAP and CDC for the health centres and hospital staffs. Trainees are mostly identified by mentors and regional health bureaus. The trainings are provided by physicians and nurses who took training of trainers (TOT) courses.

The private hospital health care providers indicated that there is a need for training especially in the area of disclosure, adherence counselling, mental health and psycho-social care for paediatric and adolescent HIV clients. Additionally, they requested that they need to be refreshed on paediatrics and adolescent HIV care trainings as the HIV science is changing a lot and new developments could be there. They claimed that they try to update themselves through reading online materials and they also do consultation to seniors within their hospitals.

Though trainings are reported to become rare events in the private hospitals, whenever any training was organised it is usually done by MOH, health bureau and partners like Ethiopian society of Obstetricians and Gynaecologists (ESOG) and Ethiopian Paediatrics society (EPS).

Knowledge and skill gap for providing pediatric and adolescent HIV/AID service

Most respondents reported that staff currently in their facility's employment had been trained on comprehensive HIV care; however, the most frequently observed gap was on psychosocial care and disclosure, and practical knowledge and skill. Health centres' respondents reported that their new staffs have not yet been yet trained. The participants also reported that the duration of psychosocial care trainings, which is only three days, is not adequate with respect to the scope of psychosocial care issues to be discussed. The remaining knowledge and skill gaps mentioned by the key informant interview participants regarding paediatric and adolescent HIV were:

- General knowledge and skills in communicating with adolescents
- HIV Counselling skills for adolescents and paediatrics age groups
- HIV disclosure and persuasion skill gap for positive living
- Gap in documentation (HMIS) about adolescents with HIV
- Gaps in calculation / preparation of paediatrics HIV drugs doses
- Gaps in management of ART drug toxicity in paediatrics/ adolescent clients.
- Gaps in the nutritional management for paediatric and adolescent clients
- Gaps in the details of IPT administration and
- Gaps in management of STIs in adolescents

Some of the private hospital respondents reported that they have knowledge and skills gap since they were trained several years previously, and a lot of changes have occurred in the HIV science and management of patients. Specifically they indicated that there are gaps in Knowledge and skill in the areas of disclosure and adherence counseling, psychosocial rehabilitation and mental health for pediatric and adolescent HIV clients.

Results of Structured questionnaire-based Interviews

Health facilities surveyed

A total of 67 HIV/ART health care providers participated in the questionnaire-based Interviews from 15 health centres and 20 hospitals (15 government and 5 private), in the nine regions and two city administrations of Ethiopia. Forty-five (67%) of the health care workers worked in primary health care facilities while the rest worked in secondary health care facilities.

Socio-demographic Characteristics of Respondents

Nurses and midwives trained on HIV care composed majority (47.8 %) of the participants followed by trained Health officers (22.4%). Physicians accounted for 20.9% of trained HIV care providers and were all from hospitals (secondary health care facilities). Community counsellors accounted for only 1.5% of the participants. Minority (4.5 %) of the participants claimed that they were not trained on HIV care (Figure 2). Female health care providers outnumbered the males (60% versus 40%). Nearly two third (64%) of participants were married, 33% were single and 3% were divorced. The mean age of participants was 33 years (±8.4) with range between 23 to 53 years (Figure 3).

MOST RESPONDENTS REPORTED THAT STAFF CURRENTLY IN THEIR FACILITY'S EMPLOYMENT HAD BEEN TRAINED ON COMPREHENSIVE HIV CARE. THE MOST FREQUENTLY OBSERVED GAP HOWEVER, WAS ON PSYCHO-SOCIAL CARE AND DISCLOSURE, AND PRACTICAL KNOWLEDGE AND SKILL

Figure 2: Distribution of Health Care Workers surveyed, Nov, 2016 (n = 67)

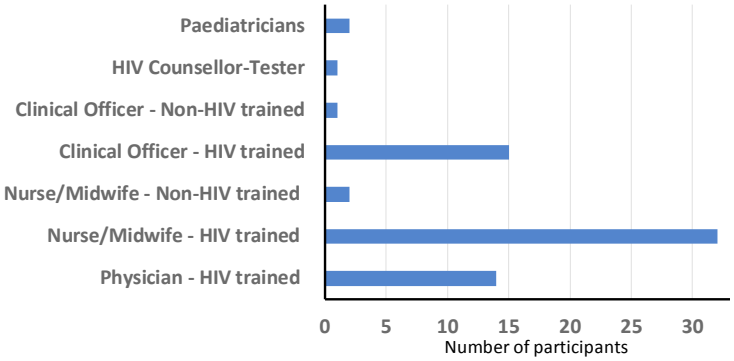
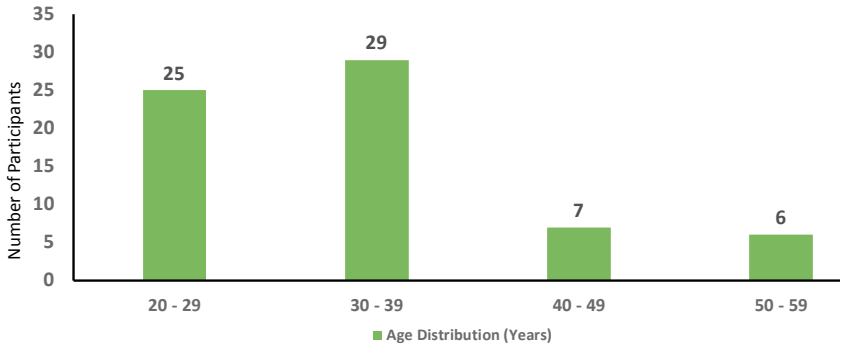


Figure 3: Age distribution in years of participants from the selected facilities in the eleven regions of Ethiopia, Nov, 2016 (n= 67)



The median of total years in their profession of the participants was 8 years with a range of 1 to 32 years; the median of total number of service years on HIV care was 2 years with a range of 1 to 15 years, and the median of total number of service years in the facility was 4 years with a range of 1 to 30 years (Figure 4).

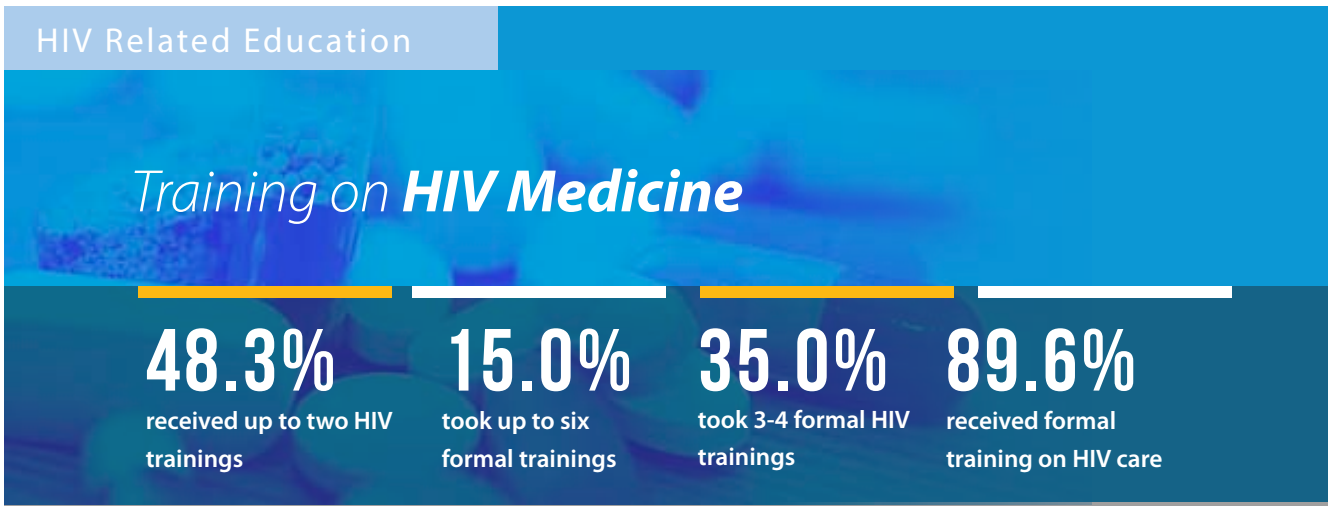


Figure 4: Working experience of participants from the selected facilities in the eleven regions of Ethiopia, Nov, 2016 (n= 67)

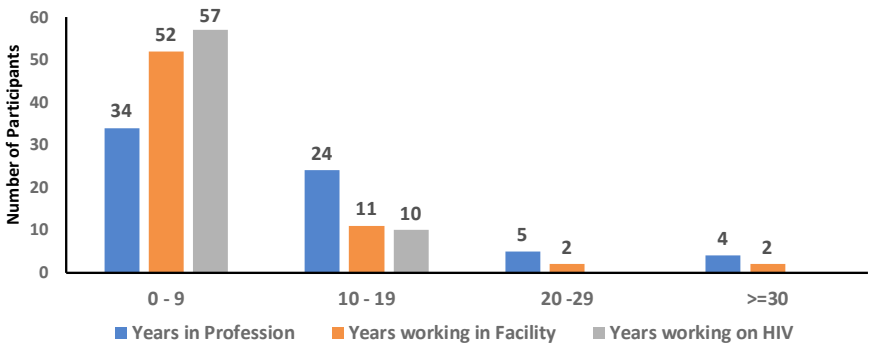


Table 2: Formal Training of participants on HIV medicine from the selected facilities in the eleven regions of Ethiopia (n = 67)

Variables	Number (percent)
Ever Received Formal Training on HIV Medicine	
Yes	60 (89.6%)
No	7(10.4%)
Number of HIV Medicine Trainings received	
1 – 2	29 (48.3%)
3 – 4	21 (35.0%)
5 – 6	9 (15.0%)
> 6	1 (1.7%)
Cumulative Duration of Formal HIV Medicine Training	
Less than 1 month	21 (35.0%)
1 – 2 months	33 (55.0%)
More than 2 months	6 (10.0 %)

Training on Care and Support of Children and Adolescents Living with HIV (CLHIV and ALHIV)

About 60% (40/67) of the participants reported having received formal training on care of children living with HIV, with most of them (78.6%) receiving training for a duration less than one month. Only seven (10.4%) of the participants said that they had received formal training on care of adolescents living with HIV, with all of them receiving only one training, mostly for a duration of less than one month (Table 3).

Table 3: Formal Training of participants on HIV care and support for children and adolescents living with HIV from the selected facilities in the eleven regions of Ethiopia, Nov, 2016 (n= 67)

Variables	Number (Percent)
Ever Received Formal Training on Care and Support of CLHIV	
Yes	28 (41.8%)
No	39 (58.2%)
Number of Trainings on Care and Support of CLHIV received	
One	22 (78.6%)
Two	5 (17.9%)
Three and more	1 (3.5%)
Cumulative Duration of Training on Care and Support of CLHIV received	
Less than 1 month	22 (78.6%)
More than 1 month	6 (21.4%)
Ever Received Formal Training on Care and Support of ALHIV	
Yes	7 (10.4 %)
No	60 (89.5%)
Number of Trainings on Care and Support of ALHIV received	
One	7 (100.0 %)
Cumulative Duration of Training on Care and Support of ALHIV received	
Less than 1 month	5 (71.4%)
More than 1 month	2 (28.6%)

Training on HIV counselling

Almost Half (49.3%) of the participants said that they had received training on general HIV counselling and testing and majority said that they had received the training once and for a duration of less than a month (Table 4).

Table 4: Formal Training of participants on HIV counseling from the selected facilities in the eleven regions of Ethiopia, Nov, 2016 (n=67)

Variables	Number (Percent)
Ever Received Formal Training on HIV Counseling (n=67)	
Yes	33 (49.3%)
No	34 (50.7%)
Number of Trainings on HIV Counseling received (n=33)	
One	28 (84.8%)
Two	2 (6.1%)
Three and more	3 (9.1%)
Cumulative Duration of Training on HIV Counseling received (n=33)	
Less than 1 month	28 (84.8%)
More than 1 month	5 (15.2 %)

Formal Training on HIV counselling for children and adolescents

Nine (13.4%) participants reported that they had received formal training on HIV counselling for children (Table 5).

Table 5: Formal Training of participants on HIV counseling for children and adolescents from the selected facilities in the eleven regions of Ethiopia, Nov, 2016 (n= 67)

Variable	Number(percent)
Ever Received Formal Training on HIV Counseling for Children	
Yes	9 (13.4%)
No	58 (86.6%)
Number of Trainings on HIV Counseling for Children received	
One	7 (77.8%)
Two	2 (22.2%)
Cumulative Duration of Training on HIV Counseling for Children received	
Less than 1 month	7 (77.8%)
More than 1 month	2 (22.2%)
Ever Received Formal Training on HIV Counseling for Adolescents	
Yes	3(4.5%)
No	64 (95.5%)
Number of Trainings on HIV Counseling for Adolescents received	
One	3 (100%)
Two and more	0
Cumulative Duration of Training on HIV Counseling for Adolescents received	
Less than 1 month	3(100.0%)

Mentoring on HIV care and treatment

Majority (68.7%) of the participants reported that they had received formal mentoring, with more than half (52.2%) having been mentored up to 12 times over the last 24 months. About one-third (31.3%) of the participants reported having mentored another health care provider (Table 6).

Table 6: Formal Mentoring of participants on HIV counseling for children and adolescents from the selected facilities in the eleven regions of Ethiopia, Nov 2016 (n= 67)

Variable	Number(percent)
Ever Received Formal Mentoring on Treatment, Care and Support of PLHIV	
Yes	46 (68.7%)
No	21 (31.3%)
Number of Times Mentored in the Last 24 Months	
1 – 12	24 (52.2%)
13 – 24	22 (47.8 %)
Ever Provided Formal Mentoring on Treatment, Care and Support of PLHIV	
Yes	21 (31.3%)
No	46 (68.7%)
Number of People Mentored in the Last 24 Months	
1 – 10	13 (61.9%)
>10	8 (38.1 %)

Capacity building practices

Formal trainings on comprehensive HIV and specifically on paediatric HIV were the commonest means of acquisition of skill and knowledge by health care providers. Using journals and literatures were also mentioned as common means of self-training of the health care providers on adolescent HIV care (Table 7)

Table 7: Self-learning practices of the participants on HIV care for children and adolescents from the selected facilities in the eleven regions of Ethiopia, Nov, 2016 (n=67)

Variables	Number (%)
Attended formal training session on **HIV medicine** and received certificate	60 (89.6%)
Did self-training on **HIV medicine** using journals and other literature	38 (56.7%)
Took courses on **HIV medicine** during pre-service training	36 (53.7%)
Used web-based learning to get instructions on **HIV medicine**	20 (29.9%)
Got instructions on **HIV medicine** through conferences on HIV/AIDS	19 (28.4%)
Took courses on **HIV medicine** as part of a continuing professional development (CPD) programme	11 (16.4%)
Attended formal training session on **paediatric** HIV and received certificate	36 (53.7%)
Did self-training on **paediatric** HIV using journals and other literature	35 (52.2%)
Took courses on **paediatric** HIV during pre-service training	25 (37.3%)
Got instructions on **paediatric** HIV through conferences on HIV/AIDS	18 (26.9%)
Took courses on **paediatric** HIV as part of a CPD programme	7 (10.4%)
Did self-training on **adolescent** HIV using journals and other literature	32 (47.8%)
Took courses on **adolescent** HIV during pre-service training	20 (29.9%)
Got instructions on **adolescent** HIV through conferences on HIV/AIDS	15 (22.4%)
Attended formal training session on **adolescent** HIV and received certificate	14 (20.9%)
Took courses on **adolescent** HIV as part of a CPD programme	7 (10.4%)

Attitudes and opinions about pediatric and adolescent HIV

Nineteen participants (28.4%) believe that children and adolescents can be managed by any HIV clinician regardless of whether such clinician has specific training on management of HIV positive children and adolescents (Figures 5 & 6). On the other hand, 52.2% either agreed or strongly agreed with the suggestion that 'Children living with HIV should ideally only be managed by an HIV trained paediatrician because children are too complicated' (Figure 7). However, nearly all the respondents support the idea that children and adolescents living with HIV deserve special treatment compared to adults (Figure 8).

Figure 5: Responses of the participants to the question "A CLHIV can be effectively managed by HIV clinician whether or not that clinician has specific training on management of HIV positive children" Nov, 2016 (n= 67)

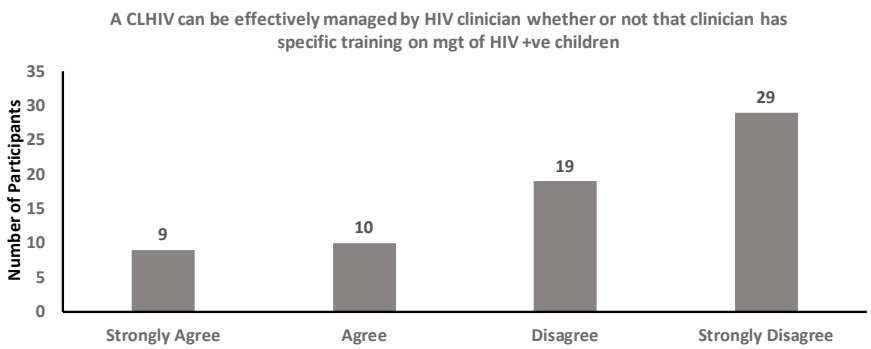


Figure 6: Responses of the participants to the question "An ALHIV can be effectively managed by HIV clinician whether or not that clinician has specific training on management of HIV positive adolescents", Nov, 2016 (n= 67)

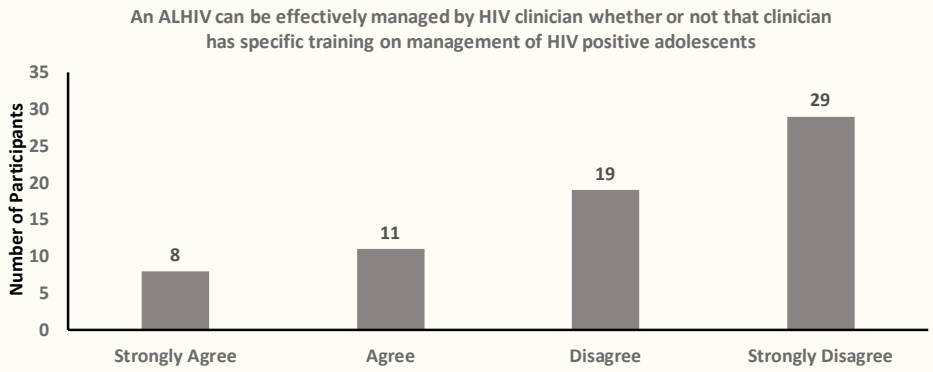


Figure 7: Responses of participants to the question "Children living with HIV should ideally only be managed by an HIV trained pediatrician because children are too complicated", November 2016 (n = 67)

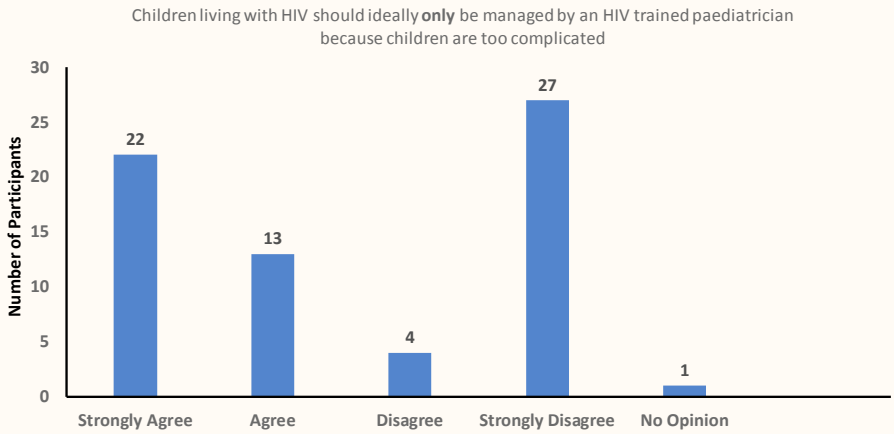


Figure 8: Responses to the suggestion that children and adolescents living with HIV deserve special treatment compared to adults, November 2016 (n = 67)

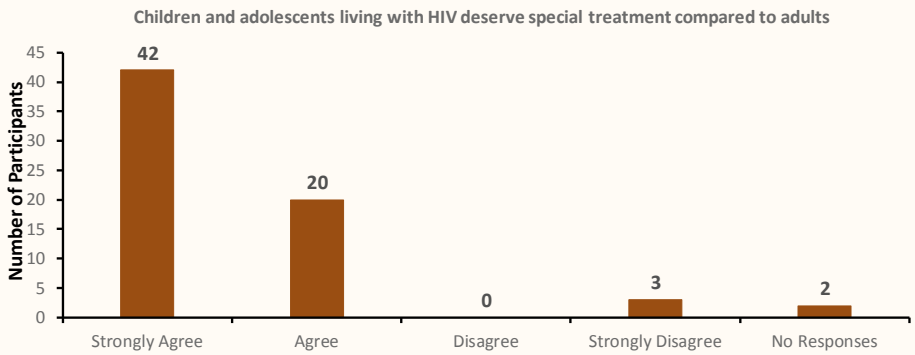


Figure 9: Respondents' perceptions of the effect of anti-HIV drugs on the child's body, Nov 2016, n = 67)

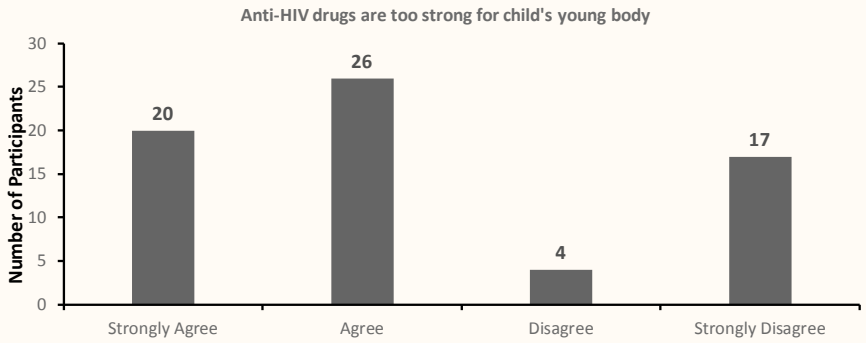


Figure 10: Attitudes of the participating Health Care Workers towards adolescents living with HIV, November 2016 (n = 67)

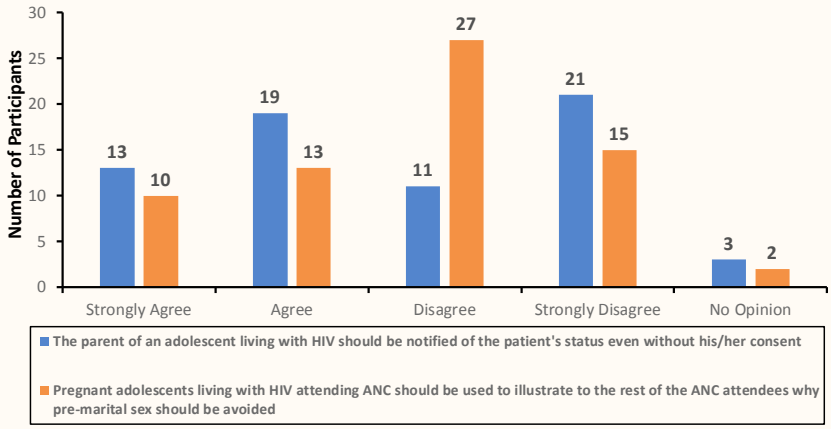
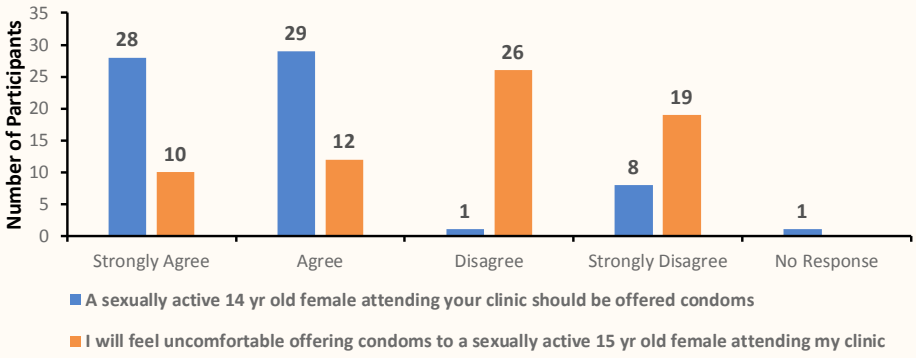


Figure 11: Attitudes of the respondents towards offering condoms to sexually active adolescents, November 2016 (n = 67)



Most of the participants either strongly agree (20) or agree (26) to the suggestion that anti-HIV drugs are too strong for child's young body (Figure 9). Nearly half (48%) of the respondents agree or strongly agree with the suggestion that the HIV status of an adolescent living with HIV should be disclosed to his or her parents even without his/her consent (Figure 10). A slightly lower proportion of the respondents (34.3%) agree/strongly agree that pregnant adolescents living with HIV and attending an antenatal clinic should be used to illustrate why pre-marital sex should be avoided (Figure 10). While most of the respondents (85.1%) believe that condoms should be offered to a sexually active 14-year-old attending the clinic, a substantial proportion of the respondents (32.8%) would feel uncomfortable offering condoms to a 15-year-old attending the clinic (Figure 11).

Knowledge and Skill related to pediatric and adolescent HIV

The respondents were presented with scenarios related to paediatric and adolescent HIV, to assess their knowledge and skills. The questions were in two batches: the first batch for clinicians and the second batch for non-clinicians. The scores were calculated as a fraction of 100% and then divided into quintiles as follows: 0–20%, 21–40%, 41–60%, 61–80%, and 81–100%. Ninety-four percent (31/33) of the clinicians scored between 41% and 60% and only 6% of the clinicians scored between 61% and 80%. Among the non-clinicians, 71% (24/34) scored between 61% and 80%, 23% (8/34) scored between 41% and 60% while 6% (2/34) scored between 81% and 90%. Overall, the non-clinicians had a higher mean score of 66.5% (SD 10.3) than the clinicians (mean score: 51.2%; SD 4.8); two-tailed t-test = 6.554, p-value <0.05.

DISCUSSION

This project set out to assess the training needs of healthcare workers in Ethiopia that could adversely affect their performances in providing quality care to children and adolescents living with HIV, as well as existing mentorship frameworks. We are not aware of any similar study conducted in Ethiopia.

The major finding from the assessment was the relatively poor knowledge and skills among clinicians in relation to paediatric and adolescent HIV compared to non-clinicians. This finding is difficult to explain even as it is very troubling considering that the clinicians, as the head of the clinical team are responsible for treatment initiation and providing mentorship to the rest of the team. We are not aware of any other study that compared the knowledge and skills scores of clinicians and non-clinicians; however, this finding was similar to findings of studies from other countries conducted as part of this regional project.

One major consequence of this poor knowledge and skills in paediatric and adolescent HIV care is the low number of children and adolescents being tested and started on ART[19]. The training materials reviewed recommended that children and adolescents should receive standard care for HIV counselling and testing in a 'paediatric and adolescent friendly way', stressing that opportunities to identify children who are in need of HIV testing should not be missed especially at the following entry points: PMTCT program, EPI units, Nutritional therapy units, TB clinics, paediatrics outpatient and inpatient units, children of adults on ART/HIV care, siblings of children enrolled into HIV care and orphanages. Despite these opportunities, however, the current number of children who are tested and started on ART compared with the estimated unmet needs are few (27.3%)[20].

The limited skill set is also linked to the limited psychosocial support provided to paediatric and adolescent patients as reported by most of the key informants interviewed. For example, most of the key informants reported that they conduct disclosure counselling after the child turns 15 or 6 years of age rather than at 6 years of age as stipulated in the training manual[21]. This finding mirrors two reports from the Northwest of Ethiopia[22],[23] which reported rates of disclosure to children of between 33% and 39 % at age 6-15 years.

19 HIV related estimates and projections for Ethiopia, EPHI, July 2015 p-6
20. ibid
21. FMOH, Participant Manual for National Psychosocial support Training, February, 2016
22. Negese .D. et.al HIV positive status Disclosure and associated Factors among children in north Gondar, Northwest Ethiopia , 2012 available at https://www.hindawi.com/journals/isrn/2012/485720/
23. Tamir.Y et.al, Disclosure status and associated factors among children living with HIV in East Gojam , Northwest of Ethiopia , 2014, available at : http://primarycare.imedpub.com/disclosure-status-and-associated-factors-among-children-living-with-hiv-in-east-gojjam-northwest-of-ethiopia-2014.php?aid=6954

The poor knowledge and skills score could be partly explained by findings around the pre-service and in-service training of health care workers. Although a large majority of the participants claimed to have received trainings on HIV medicine, 90% of these trainings lasted for two months or less. Most importantly, less than two-thirds of the respondents had ever received specific trainings on paediatric HIV, and only 10% had been trained on adolescent HIV. The numbers were even poorer with trainings on counselling. Further examination of the data indicated that only about half of the respondents had taken course on HIV medicine and paediatric HIV during the pre-service training. Far fewer had taken courses on adolescent HIV during the pre-service training. Considering the importance of pre-service training in laying the foundation for the yet undifferentiated students, and the public health importance of HIV in Ethiopia, this is a clear missed opportunity. It might be necessary for the government of Ethiopia to revisit the pre-service training curricula of health care workers to address this gap.

Although most of the health care workers surveyed had poor HIV background, little efforts were being made by them to fill in the knowledge and skill gap through continuous professional development (CPD), a strategy that has been globally accepted for professionals to stay up-to-date with developments within their professions. This strategy has been particularly shown to be effective in improving the knowledge scores among health care workers[24].

In this study, only about 10% of the respondents had taken courses on paediatric and adolescent HIV as part of CPD. While this study did not explore the reasons for this poor utilisation of CPD to fill knowledge gaps on paediatric and adolescent HIV, nor the mechanisms for providing CPD in Ethiopia, this is a clear area for intervention with a potential for a quick win. One recommendation would be to develop guidelines on CPD requiring context-specific trainings before re-certification of the relevant HCWs. Such context-specific trainings would require that HCWs working in the HIV field ensure that a certain minimum percentage of their CPD trainings are on their current job roles within field. This would be particularly important for doctors and other clinicians, nurses and midwives. The government should take deliberate steps to address some bottlenecks to rural HCWs' access to CPE such as geographic isolation, poor technological and telecommunications infrastructure. Funding support for travel and to defray cost of attendance to such trainings might need to be considered[25].

Over the last decade, the internet has increasingly become an important source of information and knowledge, facilitated by an increase in the number of persons with access to mobile phones with internet facilities. Unfortunately, access this technology is very limited in Ethiopia, which could explain the finding that less than 30% of the respondents in this study utilised web-based training to access information on HIV medicine. According to The Economist magazine[26] mobile phone penetration was only about 25 % in 2013; with 2.5% of Ethiopians have access to the internet; although Tadesse and Bahiigwa (2015)[27] found a village-level penetration rate of mobile phones of ranges from 23% to 88%.

Some studies[28],[29]have reported that web-based training compares favourably to face-to-face training in imparting HIV-related knowledge to nurses. The limited access to the internet, including mobile phone internet facilities, could be a hindrance to the effective utilisation of web-based learning, and an area that would require government's urgent intervention. However, any attempt to intervene in this regard would need to take into consideration the report by Atack[30] that there are usually challenges during the initial weeks of taking an online course, and incorporate extensive sensitisation and support of the health care workers to encourage uptake of such web-based training[31].

The negative attitudes and opinions expressed by the respondents in this study could potentially compromise the quality of

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care provided to children and adolescents living with HIV. More than a quarter of the respondents did not seem to appreciate the fact children and adolescents are not mini-adults, and therefore should only be managed by a health care worker with training on the care and support of children and adolescents living with HIV. On the other hand, more than half may not support task shifting because they believe that children living with HIV are so complicated that they should only be managed by HIV-trained paediatricians; more than two-thirds of the HCWs are unlikely to place a child on ARVs because they believe that ARVs are too strong for the child's young body.

Studies in Ethiopia[32] ,[33] and other parts of Africa[34] indicates that HIV-related stigma is common among health care workers. In this study, nearly half of the respondents would notify the parents of an HIV positive adolescent of their child's HIV status even if that adolescent does not provide consent. The World Health Organisation (WHO) recommends that adolescents should be counselled about the potential benefits and risks of disclosure of their HIV status and should be empowered and supported to determine if, when, how and to whom to disclose.[35]

More than one-third will use a pregnant adolescent attending ANC to illustrate why pre-marital sex should be avoided. Chilinda, et al. (2014) [36], in a systematic review of studies published between 1994 and 2012, reported that unprofessional attitudes of HCWs inhibit access to sexual and reproductive health services by adolescents in developing countries. Since few health systems provide adolescent-specific services the negative sentiments towards adolescents seeking reproductive health care services as expressed by the respondents in this study could make it very challenging for adolescents, affecting both access to health care and adherence to treatment regimens. This challenge could be mitigated by providing separate rooms for counselling and consultation for adolescents[37].

The commitment by the global community to end AIDS by the year 2030 through the 90-90-90 strategy[38] can only be achieved in a sustainable manner if all age groups, including children and adolescents are taken along. HIV-related stigma and discrimination such as reported in this and other studies would need to be addressed urgently to enhance uptake and quality of HIV services for children and adolescents.

STUDIES IN ETHIOPIA AND OTHER PARTS OF AFRICA INDICATES THAT HIV-RELATED STIGMA IS COMMON AMONG HEALTH CARE WORKERS.

32. Feyissa, G. T., Abebe, L., Girma, E. and Woldie, M. (2012) 'Stigma and discrimination against people living with HIV by healthcare providers, Southwest Ethiopia'. BMC Public Health, 12, p.522. (Online). Available at https://bmcpublichealth.biomedcentral.com/articles/10.1186/1471-2458-12-522 (Accessed 20 April 2017).
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37. WHO, Consolidated guideline, on the use of Antiretroviral drugs for treating and preventing HIV infection what's new , Nov, 2015 page 14
38. UNAIDS. 90-90-90 - An ambitious treatment target to help end the AIDS epidemic. Available at http://www.unaids.org/en/resources/documents/2014/90-90-90. Accessed 24/10/2016

CONCLUSIONS

There is a clear gap in knowledge and skills of health care workers in Ethiopia caring for children and adolescents living with HIV. This gap is greater among clinicians compared to non-clinicians. Observed negative attitudes and perceptions related to paediatric and adolescent HIV among the health care workers could be linked to this knowledge and skills gap. Ending AIDS by 2030 would require, among other things, building a critical mass of health care workers that are well trained and motivated to care for children and adolescents living with HIV.

RECOMMENDATIONS

1. There is urgent need to build a critical mass of health care workers trained in the provision of HIV services to children and adolescents.
2. The Government should institute context-specific continuous professional education and in-service training for health care worker caring for children and adolescents living with HIV, with clear minimum standards necessary for re-certification.
3. Health care workers should be sensitized and educated on the on the impact of their negative attitudes and perceptions on the uptake of HIV services, especially by adolescents.
4. All components of the health system structure need to be strengthened, with particular attention paid to the establishment of adolescent-friendly health services.
5. Mentorship within the health sector as a whole, and among health care workers caring for children and adolescents living with HIV needs to be restructured and strengthened, with an in-built mechanism for continuous quality improvement.
6. Adolescent care package and adolescent-friendly services need to be defined at each level of care in Ethiopia

Key suggestions from the stakeholders meeting held in Addis Ababa, October 6, 2016

The stakeholders' meeting to share the results of the training needs assessment was conducted in Ethiopia on October 6, 2016, with twenty four participants from various institutions attended this meeting. Even though the number of peoples called for this meeting were many due to the security issues most of the regional people could not attend. The following comments were given from the attendees:

- The Ethiopian Ministry of health should be the one catalyzing this paediatric and adolescent policy and guideline agenda

- Stakeholders suggested that they need to device a special focus to effectively the paediatric and adolescent agenda
- In addition to the low paediatric and adolescent HIV care service coverage, the quality of care at the facility level is compromised
- Though government led mentorship have been started in some facilities, there is still gap in the coverage
- Though youth and adolescents are emphasized for HIV testing coverage, clear target is not set for them
- The national level target of 90% works for all age groups including children and adolescents; at sub national level there are target set for HIV testing , however these may not have been mentioned in the policy and strategic documents
- The new HMIS has now age disaggregation for HIV testing and ART coverage ; for HIV testing report the age disaggregation is < 1 yr, 1-4 yrs , 5-9 yrs, 10-14 yrs, 15-19 yrs, 20-24 yrs and for ART coverage the age disaggregation is < 1 yr, 1-4 yrs, 5-14 yrs ,and those > 15 years are included along with adults.
- The issue of orphan testing has been a complex issue for the ministry as well since from the legal point of view it is the ministry of women and children affair that is mandated to take responsibility for orphans. There is clear direction/guidance on the SPM that there has to be a collaborative activity between several stakeholders to deal with Orphan testing issues but has not been achieved as it should be.
- The national nutrition guideline, has been included within the non-communicable disease guidelines and some of the issues of paediatric HIV and nutritional support is updated
- Stakeholders agreed that there is now a prepared psychosocial training material , it still lack visual modality of training
- Assent/consent issue for HIV testing has been found to have some gaps like clashing with the legal codes as well as assent has never been mentioned in the policies or guidelines hence need to be seen critically and inclusion/modification has to be made.
- Community testing for adolescents : though the principle is there , has not been well worked on/operationalized
- Stakeholders have requested that they want to see and compare this assessment with other African country assessments

Final recommendations from stakeholders meeting, Addis Ababa, October 6, 2016

- Health care providers need special trainings to handle children and adolescents with HIV
- The paediatric and adolescent issue should be emphasized during trainings
- Even though most participants claimed that they have been mentored and even though they are practicing managing children and adolescents with HIV they scored low on the knowledge assessment questions; more effective way of mentoring should be devised.
- Adolescent care package need to be defined at each level of tier in Ethiopia
- Testing for Orphans and vulnerable kids should be addressed clearly in the policies and guidelines and the concerned stakeholders need to device collaborative / synergistic guides which will be easy and operational at the facility levels
- We need to further work on how to make a standard for adolescent friendly care which will need a separate room and trained health care provider
- The issue of child friendly care need to be contextualized among health centres and hospitals , Hospitals may have the capacity and space to create such service , however health centres may not have the space , hence facility can make it operational based on their infrastructure capacity
- Revised regional targets for paediatric and adolescent HIV testing need to be incorporated in to strategic documents
- Retention to care : the FMOH has been working on separate strategy to improve retention to care for paediatric and adolescent patients
- Additional strategies need to be devised taking into consideration the issue of the complexity of adolescents care and the problem of tracing lost to follow up.
- The other countries' experience of setting up transition clinics from childhood to adolescence and from adolescence to adulthood need to be focused
- The Ministry of health has already started quantitative study to ascertain adult patients who failed on second line treatment so that the country can strategize to avail third line ART drugs as WHO suggested
- In order to improve the coverage of PMTCT at the underserved population and women who are delivering at home , the government is trying to improve the health seeking behaviour and health institutional delivery using different interventions in the context of MNCH services
- When we think of increasing coverage of facility deliver for HIV positive mothers we also need to see critically the quality and safety of facility delivery
- Consent / assent issues need to be clarified and put in the guidelines for front level health care providers
- Continuous quality improvement need to be done in the areas of mentorship activities
- Dissemination of guidelines and updates should be done regularly/periodically at facility level so that new staffs will not be challenged by lacking these documents

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ANNEXES

Annex 1: Information sheet

Rapid Assessment of Policy Gaps and Training Needs and Mentorship Approaches for Children and Adolescent HIV Services in Ethiopia

In Collaboration with The African Network for the Care of Children Affected by HIV/AIDS Funded by The Global Fund to Fight AIDS, Tuberculosis and Malaria

Information sheet

This study is designed by the African Network for the Care of Children Affected by HIV/AIDS (ANECCA) to do the policy gap analysis and Rapid training need assessment on the areas of paediatrics and adolescent HIV care in Ethiopia. The data generated will form part of the information needed to design regional training and mentorship materials and will assist identify strengths and gaps in national policies, as well as identify best practices for purpose of developing national and regional plans to improve coverage and quality of services for children and adolescents living with HIV in Ethiopia.

The study will be conducted at selected health centres and hospitals of the all regions and the two city administrations of Ethiopia. As a result, you are identified among the key personnel who can give us relevant information to the study. Participation in this study is completely based on voluntary bases. There is no risk associated with participating or not participating in this study to you or others who are associated with you. You have full right not to answer the whole or any part of the questions or you can withdraw from the interview at any time. But the information that you will give us will be very essential input for identifying challenges related with care of children and adolescents affected by HIV/AIDS. There is no wrong or write answer in our discussion. Therefore, please give be honest in giving us the information that you know. All the information you will give us will be maintained confidential and will be used for the study purpose. You will not be identified as an individual in the study as the finding will be presented as an aggregate with other interviews.

The interview may last from 30 to 45 minutes which will be conducted using face to face interview. The interview will be tape recorded if you fully agree and notes will be taken by the interviewer during the interview process.

If you have any problem regarding to the study you can also contact Dr.Solomie Deribessa (Phone Number: 0911407063)

Annex 2: Informed Consent Form

Policy gap analysis , Rapid Assessment of Training Needs for Children and Adolescent HIV Services and Mentorship Approaches for Children and Adolescent HIV Services in Ethiopia

Informed Consent Form

I, ……., a staff of ……. have read and understood the information contained in the accompanying information sheet of the above study. I have been allowed to ask questions regarding the study, and I am satisfied all with the answers provided.

I hereby willingly consent to participate in this study.

Signed: _____ _____

Name and signature of the participant **Name and signature of consenter**

_____

Name and signature of witness

Consent to have interview audio taped

The need to have my interview audio taped has been explained to me. I, ……., a staff of …… hereby willingly give the interviewers the permission/refuse the interviewers the permission (delete as appropriate) to record the interview using an audio recorder.

Signed: _____ _____

Name and signature of the participant **Name and signature of consenter**

_____

Name and signature of witness

Annex 3: Number of Health Care Workers per Facility Surveyed in Ethiopia

Name of the health facility surveyed	Number of HCWs
Adare Hospital	2
Assosa HC	1
Assosa Hospital	2
Axum HC	2
DeberetaborHosp	2
Debretabor HC	2
Dessie HC	2
Dessie Hospital	2
Detbahari HC	2
Dubeti	2
Fitche Hospital	2
Fitche no 1	2
Gambela HC	2
Gambela Hospital	1
Jenela HC	2
Jigjiga HC	2
Jigjiga Hospital	2
Jimma HC	2
Jugula Hospital	2
Kidist Mariam Hospital	2
Lagehare HC	2
Loke HC	2
Mekele Hospital	2
Sabian district Hosp	2
Saris HC	2
Semen HC	1
Shenen Gibe Hospital	2
Tirunesh-Beging Hospital	2
Yirgalem HC	2
Yirgalem Hospital	2
Bethezatha Hospital	2
Saint Yared Hospital	2
Meungsang Hospital	2
Bethel Hospital	2
Girum Hospital	2
Total	**67**

Annex 4: Health Care Workers Key Informant Interview (KII) Guide for TNA

Rapid Assessment of Training Needs for Children and Adolescent HIV Services and Mentorship Approaches for Children and Adolescent HIV Services in Ethiopia

Key Informant Interview (KII) Guide

Background, rational and informed consent – see informed consent information sheet (have the interviewee sign the informed consent form, including consent for audio taping the interview).

Demographic details

Interviewer's name: _____ Date of interview_____

Name of the facility _____ facility code _____

Interviewee's Name: _____ Sex: _____ Age: _____

Professional Role: _____Participant ID _____

Office Address: _____

Phone number: _____ Email: _____

Tell us about how HIV+ children and adolescents are managed in this facility/country?

Probing questions:

a) Do you have special arrangements for conducting HCT for children?

b) In this facility do you have special clinic for managing children and adolescents with HIV?

c) In this facility are there areas that may require improvements in your perception?

d) What are some of the challenges you have encountered with managing children and adolescents living with HIV?

e) Are there pediatricians/ nurses /health officers trained on pediatrics in this facility?

f) If yes to Q " e" have these people received additional training on managing children and adolescents with HIV

g) Is there any particular support you may require to improve the management of children and adolescents living with HIV?

h) Are there any skills gap that you have observed among your staff working with children and adolescents living with HIV?

i) Is there any knowledge gap that you have observed among your staff working with children and adolescents living with HIV?

j) How do you train your staff on children living with HIV and who does the training for you?

Annex 5 : Structured Questionnaire for TNA

Rapid Assessment of Training Needs for Children and Adolescent HIV Services and Mentorship Approaches for Children and Adolescent HIV Services in Ethiopia

Structured Questionnaire

Facility code _____Participant ID _____

Interviewer: _____

Date of interview: _____

Data entry clerk: _____

Date entered: _____

Demographic information *(For All Health Care Worker Respondents)*

1. Health facility: _____

2. Type of Facility

a.	Primary	[ ]	1
b.	Secondary	[ ]	2
c.	Tertiary	[ ]	3

3. Respondent's Job role

a.	HIV-trained physician (in-service)	[ ]	1
b.	Non-HIV-trained physician (in-service)	[ ]	2
c.	Physician Assistants – HIV trained	[ ]	3
d.	Physician Assistants – non-HIV trained	[ ]	4
e.	Nurse/midwife – HIV trained	[ ]	5
f.	Nurse/midwife – non-HIV trained	[ ]	6
g.	Clinical Officer – HIV trained	[ ]	7
h.	Clinical Officer – non-HIV trained	[ ]	8
i.	Community health worker	[ ]	9
j.	Social Worker	[ ]	10

k. HIV Counselling and –testing personnel [ ] 11

l. Others [ ] Please specify: _____ 99

4. Sex: Male [ ] (1) Female [ ] (2)

5. Age (years): _____

6. No of years in profession: _____

7. No of years working on HIV: _____

8. No of years working in this facility: _____

9. Marital Status

a. Single – never married [ ] 1

b. Married [ ] 2

c. Divorced [ ] 3

d. Separated [ ] 4

e. Co-habiting [ ] 5

f. Widowed [ ] 6

10. Omitted

HIV Educational Background *(For All , {Medical doctors , health officers degree and diploma nurses , counsellors} Health Care Worker Respondents)*

11. Have you ever received any formal ***training on HIV medicine, excluding pre-service training***? Yes [ ] (1) No [ ] (2) (If No, go to question 14)

12. If yes to question 11 above, approximately how many trainings have you received?

_____

_____

_____

_____

13. If yes to question 11 above, what is the cumulative duration of the training?

_____

14. Have you ever received any formal training ***on care and support of children living with HIV*** Yes [ ] (1) No [ ] (2) (If No, go to question 17)

15. If yes to question 14 above, approximately how many trainings have you received?

_____

_____

_____

_____

16. If yes to question 14 above, what is the cumulative duration of the training?

_____

17. Have you ever received any formal training on ***care and support of adolescents living with HIV***? Yes [ ] (1) No [ ] (2) (If No, go to question 20)

18. If yes to question 17 above, approximately how many trainings have you received?

_____

_____

19. If yes to question 17 above, what is the cumulative duration of the training?

20. Have you ever received any formal training ***on HIV counseling***? 1. Yes [ ] 2. No [ ] (If No, go to question 23)

21. If yes to question 20 above, approximately how many trainings have you received?

22. If yes to question 20 above, what is the cumulative duration of the training?

23. Have you ever received any formal training **on HIV counseling for children living with HIV** Yes [ ] (1) No [ ] (2) (If No, go to question 26)

24. If yes to question 23 above, approximately how many trainings have you received?

25. If yes to question 23 above, what is the cumulative duration of the training?

26. Have you ever received any formal training ***on HIV counselling for adolescents living with HIV*** Yes [ ] (1) No [ ] (2) (If No, go to question 29)

27. If yes to question 26 above, approximately how many trainings have you received?

28. If yes to question 26 above, what is the cumulative duration of the training?

29. Have you ever **received** any form of formal **mentoring** on treatment, care and support of people living with HIV? Yes [ ] (1) No [ ] (1) (If No, go to question 19)

30. If yes to question 29 above, approximately how many times have you been mentored in the last 24 months?

31. Have you ever **given** any form of formal **mentoring** on treatment, care and support of people living with HIV? Yes [ ] (1) No [ ] (2) (If No, go to question 19)

32. If yes to question 31 above, approximately how many people have you mentored in the last 24 months?

33. Which of the following scenarios applies to you (***Mark True or False as appropriate***)?

a. I did self-training on HIV medicine using journals and other literature (1)

b. I did self-training on paediatric HIV using journals and other literature (2)

c. I did self-training on adolescent HIV using journals and other literature (3)

d. I got instructions on HIV medicine through conferences on HIV/AIDS (4)
e. I got instructions on paediatric HIV through conferences on HIV/AIDS (5)
f. I got instructions on adolescent HIV through conferences on HIV/AIDS (6)
g. I took courses on HIV medicine during pre-service training (7)
h. I took courses on paediatric HIV as pre-service student (8}
i. I took courses on adolescent HIV as a pre-service student (9)
j. I took courses on HIV medicine as part of a continuing professional development
k. programme(CME sessions) (10)
l. I took courses on paediatric HIV as part of a continuing professional development programme (11)
m. I took courses on adolescent HIV as part of a continuing professional development programme (12)
n. I attended a formal training session on HIV medicine and received certificate (13)
o. I attended a formal training session on paediatric HIV and received certificate (14)
p. I attended a formal training session on adolescent HIV and received certificate (15)
q. I used web-based learning to get instructions on HIV medicine (16)

HIV Educational Background ***(For only Clinicians){ Clinician means : Medical Doctor or Health officer}***

34. Have you ever received any formal training ***on treatment of children living with HIV*** Yes [ ] (1) No [ ] (2) (If No, go to question 17)
35. If yes to question 34 above, approximately how many trainings have you received?

_____
_____
_____
_____

36. If yes to question 34 above, what is the cumulative duration of the training?

_____

37. Have you ever received any formal training ***on treatment of adolescents living with HIV*** Yes [ ] (1) No [ ] (2) (If No, go to question 17)
38. If yes to question 34 above, approximately how many trainings have you received?

_____
_____
_____
_____

39. If yes to question 34 above, what is the cumulative duration of the training?

_____

Attitudes and opinions about paediatric and adolescent HIV ***(For All Health Care Worker Respondents: means Medical doctors , Health officers , Nurses (both degree and Diploma, HIV counselor)***

NB : the interviewer should orient the respondents what the choices 1-5, means)

40. A child living with HIV can be effectively managed by HIV clinician whether or not that clinician has specific training on management of HIV positive children

a. Strongly agree 1

b. Agree 2
c. Disagree 3
d. Strongly disagree 4
e. No opinion 5

41. An adolescent living with HIV can be effectively managed by HIV clinician whether or not that clinician has specific training on management of HIV positive adolescents

a. Strongly agree 1
b. Agree 2
c. Disagree 3
d. Strongly disagree 4
e. No opinion 5

42. Children with HIV should ideally only be managed by an HIV-trained paediatrician because children are too complicated

a. Strongly agree 1
b. Agree 2
c. Disagree 3
d. Strongly disagree 4
e. No opinion 5

43. Children/adolescents living with HIV deserve special treatment compared to adults

a. Strongly agree 1
b. Agree 2
c. Disagree 3
d. Strongly disagree 4
e. No opinion 5

44. Anti-HIV drugs are too strong for child's young body (this could be related to pill burden , toxicity , short/ long term side effects of ARVs)

a. Strongly agree 1
b. Agree 2
c. Disagree 3
d. Strongly disagree 4
e. No opinion 5

45. The parents of an adolescent with HIV should be notified of the patient's status even without his/her consent

a. Strongly agree 1
b. Agree 2
c. Disagree 3
d. Strongly disagree 4
e. No opinion 5

46. Pregnant adolescents with HIV attending an antenatal clinic should be used to illustrate to the rest of the antenatal clinic attendees why pre-marital sex should be avoided

a. Strongly agree 1

b. Agree 2
c. Disagree 3
d. Strongly disagree 4
e. No opinion 5

47. A sexually active14-year-old female attending your clinic should be offered condoms

a. Strongly agree 1
b. Agree 2
c. Disagree 3
d. Strongly disagree 4
e. No opinion 5

48. I will feel uncomfortable offering condoms to a sexually active 15-year-old female attending my clinic

a. Strongly agree 1
b. Agree 2
c. Disagree 3
d. Strongly disagree 4
e. No opinion 5

Knowledge of paediatric and adolescent HIV *(For clinicians only) (Clinician means : Medical Doctor or Health officer)*

49. According to the 2013 WHO recommendations on management of children with HIV, HIV positive children below five years of age should be commenced on ARVs once their CD4 count falls below 500 cells/mm^3 True [ ] (1) False [ ] (2)

50. According to the 2013 WHO recommendations on management of adolescents with HIV, HIV positive adolescents should be commenced on ARVs once their CD4 count falls below 500 cells/mm^3 True [ ] (1) False [ ] (2)

For Questions 51 – 65, indicate whether the statement is true (1) or false (2)

51. Concerning HIV infections in children:

a. When using CD4 estimation to monitor disease progression and treatment response in infants, it is better to use the absolute number rather than CD4 Cell percentage
b. Virologic set-point occurs early in infection when CD4 cells are produced and the HIV virus is actively replicating
c. The presence of HIV antibody in a child less than 12 months of age defines HIV infection
d. Infection before 4 months of life increases HIV disease progression in infants
e. Breastfeeding accounts for more than 50% of HIV transmission in children

52. Concerning paediatric HIV counselling and testing:

a. For effective counselling all relevant information should be given at first contact or visit
b. Counselling should not include nutritional support and growth monitoring
c. It is right to test a critically ill child whose parent refuses to consent for HIV testing for the purpose of immediate clinical management
d. Post-test counselling should be provided by the same care provider who conducted the pre-test counselling
e. In provider initiated testing and counselling, HIV testing is offered to all in-patient and out-patients seen in health facilities

53. Regarding mother-to-child transmission (MTCT) of HIV

a. More than 95% of paediatric HIV infections are due to MTCT of HIV
b. All HIV infected women transmit HIV to their babies

c. Sexually transmitted diseases increase risk of MTCT of HIV

d. Babies are at risk of breast milk transmission of HIV only in the first 6 months of life

e. Mixed feeding does not pose a higher risk for infants of HIV infected women

54. Lomi was diagnosed with HIV during pregnancy and gave birth to a daughter 6 weeks ago. Today she brings her to the under-5 clinic for her first immunization visit. There is no access to virologic tests available at your clinic. In addition to giving her immunizations, what else should you do?

a. Prescribe single-dose nevirapine only

b. Prescribe zidovudine for 6 weeks only

c. Prescribe cotrimoxazole if her growth and development are appropriate

d. Prescribe cotrimoxazole when the child is 3-month old

e. Developmental assessment should be performed at every visit

55. A 3-year-old HIV infected child presents with lymphadenopathy, severe oral candidiasis and severe pneumonia. Her CD4 is 20%

a. She has WHO stage II disease

b. She is severely immunosuppressed

c. Defer starting her on antiretroviral therapy

d. The priority here is to manage opportunistic infections first

e. Screen the child for tuberculosis

56. Regarding immunological and virological assessment

a. A CD4 percentage of 12 in a 4-year-old girl is suggestive of severe immunosuppression

b. Advanced immunosuppression in a child less than 1 year is defined as CD4 percentage of 25 – 30

c. Severe immunosuppression in a child older than 5 years is defined as CD4 count < 200

d. At 1 years old with a CD4 count of 700 is not immunosuppressed

e. An HIV virologic test is necessary to make a diagnosis of HIV in children of all ages

57. In a TB/HIV co-infected child;

a. There is an increased risk of developing primary progressive infection

b. Most diagnostic criteria would have higher sensitivity and specificity

c. NNRTIs are absolutely contraindicated

d. It is possible to have a deteriorating clinical condition despite improving CD4+ count and suppression of viral load

e. If TB develops while a child is on AZT, NVP and 3TC; a possible option is to substitute NVP with EFV or ABC

58. In management of OIs;

a. Cotrimoxozole prophylaxis lowers the risk of pneumocystis jirovecii pneumonia (PCP), toxoplasmosis, salmonella species and malaria

b. LIP occurs in less than 5% of HIV infected children

c. Prednisolone is useful in treating LIP

d. In a child with white patches in the mouth, retrosternal pain on swallowing, refusal of food and excessive salivation; oral nystain should be the drug of choice

59. Aisha is a 3-year-old girl who was recently diagnosed with HIV infection in a private hospital. She has been having recurrent illness with pneumonia, oesophageal candidiasis and recurrent diarrhoea. Her weight is 10kg with a CD% of 15%. Aisha lives with grandma as she had lost her mother to HIV last year. The following statements are true:

a. Aisha is in WHO clinical stage 3

b. Prior to initiation of ART, identification of a secondary care giver is not desirable
c. The following regimen is best recommended as first line AZT/3TC/NVP
d. The following regimen is best recommended as first line D4T/3TC/NVP

60. Tayo is a five years old boy with HIV infection that was commended on ZDV/3TC/NVP about 6 weeks ago. The following statements are true:

a. If his Hb is 7g/dl all his ARVs should be stopped
b. If his haemoglobin is 7g/dl, zidovudine should be substituted with an alternative drug
c. If he develops a severe rash all over his body, it should be treated with hydrocortisone and antifungals, and he should continue ART
d. If his mother reports that most of his time he vomits out the ARV drugs, the ARVs should be withdrawn immediately
e. If after 6 months of ART with good adherence his CD4 has dropped, he should continue on the same ARV drugs

61. Supportive care for infected and affected children include

a. Psychosocial support in homes and communities
b. Disclosure to all children at the age of 5 years
c. Administration of BCG vaccine to all HIV exposed infants
d. Administration of Measles vaccine twice at 6 and 9 months to all HIV infected/exposed children
e. Basic essential services identified by the National Plan on Action on OVC focuses on health and psychosocial support only

62. About Nutrition and HIV

a. Exclusive breastfeeding for the first 3 months of life is an option for babies of HIV-infected mothers
b. Breast milk substitutes can be used if AFASS, which means affordable, feasible, adaptable, secure and safe criteria if fulfilled
c. Low birth weight is a common manifestation of HIV in the new born
d. Nausea in HIV infected children may be managed with feeding small meals frequently and the avoidance of high fat and greasy diets
e. A 3-year-old weighing 11kg is well nourished

63. The following statements are true about the care of adolescents with HIV and AIDS

a. Adherence to care and treatment can be a challenge
b. Relationship with peers and family is developmental stage dependent
c. Obtaining consent for medical treatment is easy
d. Are unable to appreciate the long-term implications of diseases
e. They often lack social skills

64. Concerning care of adolescents with HIV;

a. Those in Tanner Stages I and II are managed using paediatric ARV guidelines, while those in stages III and above are managed using adult ARV guidelines
b. Pill burden and lifestyle may be barriers to adherence
c. Having treatment partners may not be useful to adolescents
d. Life skills training should be part of any adolescent care program
e. Developing self-awareness and managing emotions are components of life skills

65. The minimum health services package for paediatric HIV and AIDS care should include the following:

a. Confirmation of HIV status as early as possible

b. Advocacy to policy makers
c. Monitoring growth and development
d. Diagnosis and early treatment of other infectious (Malaria, TB and ARI)
e. Appointment of a paediatrician for paediatric OPD care.

Knowledge of paediatric and adolescent HIV *(For All Health Care Workers except Clinicians/except Medical Doctors or health officers)*

66. According to the 2013 WHO recommendations on management of children with HIV, HIV positive children below five years of age should be commenced on ARVs once their CD4 count falls below 500 cells/mm^3 True [ ] (1) False [ ] (2)
67. According to the 2013 WHO recommendations on management of adolescents with HIV, HIV positive adolescents should be commenced on ARVs once their CD4 count falls below 500 cells/mm^3 True [ ] (1) False [ ] (2)

For Questions 68 – 75, indicate whether the statement is True (1) or false (2)

68. Concerning paediatric HIV counselling and testing:
a. For effective counselling all relevant information should be given at first contact or visit
b. Counselling should not include nutritional support and growth monitoring
c. It is right to test a critically ill child whose parent refuses to consent for HIV testing for the purpose of immediate clinical management
d. Post-test counselling should be provided by the same care provider who conducted the pre-test counselling
e. In provider initiated testing and counselling, HIV testing is offered to all in-patient and out-patients seen in health facilities

69. Regarding mother-to-child transmission (MTCT) of HIV
a. More than 95% of paediatric HIV infections are due to MTCT of HIV
b. All HIV infected women transmit HIV to their babies
c. Sexually transmitted diseases increase risk of MTCT of HIV
d. Babies are at risk of breast milk transmission of HIV only in the first 6 months of life
e. Mixed feeding does not pose a higher risk for infants of HIV infected women

70. Ngozi was diagnosed with HIV during pregnancy and gave birth to a daughter 6 weeks ago. Today she brings her to the under-5 clinic for her first immunization visit. There is no access to virologic tests available at your clinic. In addition to giving her immunizations, what else should you do?
a. Prescribe single-dose nevirapine only
b. Prescribe zidovudine for 6 weeks only
c. Prescribe cotrimoxazole if her growth and development are appropriate
d. Prescribe cotrimoxazole when the child is 3-month old
e. Developmental assessment should be performed at every visit

71. Supportive care for infected and affected children include
a. Psychosocial support in homes and communities
b. Disclosure to all children at the age of 5 years
c. Administration of BCG vaccine to all HIV exposed infants
d. Administration of Measles vaccine twice at 6 and 9 months to all HIV infected/exposed children
e. Basic essential services identified by the National Plan on Action on OVC focuses on health and psychosocial support only

72. About Nutrition and HIV

a. Exclusive breastfeeding for the first 3 months of life is an option for babies of HIV-infected mothers

b. Breast milk substitutes can be used if AFASS, which means affordable, feasible, adaptable, secure and safe

c. Low birth weight is a common manifestation of HIV in the new born

d. Nausea in HIV infected children may be managed with feeding small meals frequently and the avoidance of high fat and greasy diets

e. A 3-year-old weighing 11kg is well nourished

73. The following statements are true about the care of adolescents with HIV and AIDS

a. Adherence to care and treatment can be a challenge

b. Relationship with peers and family is developmental stage dependent

c. Obtaining consent for medical treatment is easy

d. Are unable to appreciate the long-term implications of diseases

e. They often lack social skills

74. Concerning care of adolescents with HIV;

a. Those in Tanner Stages 1 and 11 are managed using paediatric ARV guidelines, while those in stages 111 and above are managed using adult ARV guidelines

b. Pill burden and lifestyle may be barriers to adherence

c. Having treatment partners may not be useful to adolescents

d. Life skills training should be part of any adolescent care program

e. Developing self-awareness and managing emotions are components of life skills

75. The minimum health services package for paediatric HIV and AIDS care should include the following:

a. Confirmation of HIV status as early as possible

b. Advocacy to policy makers

c. Monitoring growth and development

d. Diagnosis and early treatment of other infectious (Malaria, TB and ARI)

e. Appointment of a paediatrician for paediatric OPD care.

Thank you for your time.

Annex 6: Final action Plan:

Action plans drawn for Ethiopia to improve Pediatrics and adolescent HIV Care as presented by the representatives from FMOH on the regional dialog / meeting Nov 30, 2016 Kampala Uganda

List of the problems /gap identified	Action plan	Responsible body	Time Frame
1. No clear strategy to operationalize child and adolescent friendly care	Develop national strategy to operationalization child friendly care and adolescent friendly care	**FMOH**	TBD
2. Operational and logistic challenges in establishing adolescent friendly care	Identify and address the logistics and supply problems in relation to the establishment of adolescent friendly care including allocation of government led budget	**FMOH;PFSA**	TBD
3. No clearly defined minimum care package for adolescent	Define adolescent care package	**FMOH;FHAPCO**	TBD
4. No specific strategy for orphan consent to testing and linkage to HIV care	Revise the OVC care and support guideline including consent for testing and linkage to HIV care	**FMOH; Women's and Children Affairs Ministry**	TBD
5. No clear strategy for pediatric and adolescent retention to HIV care	Revise the national strategic frame work for adherence and retention to care to refocus pediatrics and adolescents age groups	**FMOH**	TBD
6. No age disaggregated data for adolescent age group	Revise the national HMIS to disaggregate the child and adolescent age groups and indicators (0-4;5-9;10-14;15-19;20-24;24+)	**FMOH esp. Policy Plan Directorate;**	TBD
	Revise the national MRIS to disaggregate the adolescents age groups	**FHAPCO**	
7. No adolescent specific HTC or Care andTreatment target	Include adolescent specific HTC and HIV care targets	**FMOH(HIV team, and Policy plan directorate)**	TBD
8. Contradiction between age of consent for testing adolescents in the HIV guideline and Ethiopian law and regulation	Advocate to legislation body for harmonization of adolescent specific age for consent to testing and HIV care linkage	**FMOH; Women, Children Affair's ;Parliament**	TBD
9. ART guidelines do not mention of third line ART regimen	Finalize the assessment for third line ART regimen demand and revise the guideline accordingly	**FMOH;EPHI; PFSA; Partners**	TBD
10. PMTCT strategy gap to access mothers delivering at home and living in underserved areas	Strengthen the strategy of linking home delivering mothers to PMTCT service through the health post outreach program	**FMOH(Health extension program)**	TBD

List of the problems /gap identified	Action plan	Responsible body	Time Frame
11. Psychosocial care (adherence and disclosure) is not adequately addressed	Revise the national care and support guide-line to include all aspects of psychosocial support to children and adolescents	**FHAPCO;FMOH**	TBD
12. Gap in collaboration between ministries of Health, Education, and Women and	Strengthen the collaboration across relevant sectors in terms of addressing the issues of child and adolescent HIV care	**FMOH; FHAPO; FMOE; Relevant Ministries; higher education forum**	TBD
13. No system in place to reach OVCs and street children for testing and HIV care	Advocate and develop joint strategic frame-work with social and Women and Children as well as education sectors	**FMOH; FHAPCO; RELEVANT MINIS-TRIES; partners**	TBD
14. Gaps in health worker skills and attitude, lack of confidence to manage pediatrics /adolescents with HIV; attrition of trained staffs	Provide training to Health care providers based on the revised curriculum on care, treatment and psychosocial support to children and adolescents	**FMOH**	TBD

*MRIS : Multi sectoral response Information system

Annex 7: List of Investigators

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