



# Prevalence of Pregnancy among Adolescent Living with HIV in Muhoroni Sub County Kisumu County, Kenya

Silas Onyango Awuor<sup>1,2</sup>

<sup>1</sup>Ministry of Health- Masogo sub-county hospital-Kisumu County, Kenya- Laboratory in-charge.

<sup>2</sup>O'lessos Technical Training and Institute-Health Department, O'lessos-Kenya.

**\*Corresponding Author(s): Silas Onyango Awuor**

Ministry of Health- Masogo sub-county hospital-  
Kisumu County, Kenya- Laboratory in-charge.

Email: silasawuor@gmail.com

Received: Jan 07, 2021

Accepted: Mar 05, 2021

Published Online: Mar 08, 2021

Journal: Annals of Obstetrics and Gynecology

Publisher: MedDocs Publishers LLC

Online edition: <http://meddocsonline.org/>

Copyright: © Awuor SO (2021). *This Article is distributed under the terms of Creative Commons Attribution 4.0 International License*

**Keywords:** Pregnant adolescents; HIV; Antenatal care; Infant outcomes; Partner Notification Services.

**Abstract**

**Background:** HIV-infected pregnant and breastfeeding adolescents are a particularly vulnerable group that require special attention and enhanced support to achieve optimal maternal and infant outcomes. The main aim of the study was to find out the prevalence of pregnancy in adolescent living with HIV, review evidence about Antenatal Care (ANC) service delivery and outcomes for HIV-infected pregnant adolescents in Muhoroni Sub County.

**Method:** Questionnaire was used on the total 98 girls who were on care at the Referral center containing the adolescents' center which was Masogo sub-county hospital and Muhoroni County Hospital within the sub-county to obtain the results.

**Result:** Of the 98 girls 25 (25.5%) had pregnancy history in which 10 (10.2%) had knowledge on PMTCT, while only 4 (4.1%) were having knowledge on PNS and lastly all the pregnant girls were having knowledge on both ANC and Drug adherence and only 10 (10.2%) pregnancy were planned while 15 (15.3%) were unplanned in which 10 (10.2%) pregnancy were aborted and 11 (11.2%) were delivered safely while 4 (4.1%) of the girls were currently pregnant.

**Conclusions:** Reasons for the poor outcome among adolescents in ANC and PNS need to be further explored and addressed, there is enough evidence that immediate action is needed to address the unique needs of this population. Such changes could include integration of adolescent-friendly services into PMTCT settings and PNS among the HIV infected adolescents youths who are sexually active with enhanced retention and follow-up activities.



## Introduction

Globally, around 1 in 6 people are adolescents aged 10 to 19 years old [1]. Adolescent pregnancy is defined as a pregnancy in girls 10–19 years of age. It is estimated that about 16 million girls 15–19 years old give birth each year, contributing nearly 11% of all births worldwide [2]. Although adolescent fertility rates are falling globally, approximately 18 million girls under the age of 20 give birth each year. Two million of these births are from girls under 15 years of age [3]. More than 90% of these births occur in low and middle-income countries [2–3]. Most teenage pregnancies and childbirths take place in west and central Africa, east and southern Africa, South Asia and Latin America [4].

Different literature show that the prevalence of teenage pregnancy varies across regions of the world. In the Asia Pacific regions, it ranges up to 43% in Bangladesh [5] and from 11.1% to 47.3% in Nepal [6-7]. In Jordan, the prevalence is 25%. [8] The prevalence of teenage pregnancy also varies in Africa; for instance, in Nigeria, it ranges from 6.2% in Niger Delta state [9] to 49% in Abia State [10]. In South Africa [11], East Africa (Kenya) [12], Assossa (Ethiopia) [13], and Sudan [13], it ranges from 2.3 to 19.2%, 31%, 20.4%, and 31%, respectively.

Teenage pregnancy is very common in Kenya, and it is an important demographic factor making the country in the top ten most populous in Africa, with a total population of around 45 million in 2019 [14]. According to the KDHS 2019 finding, the prevalence of teenage pregnancy is 20% [15].

In the past three years, there has been an increase in global resources and advocacy targeting HIV prevention, care and treatment for adolescents worldwide. Through a public–private partnership, the US President’s Emergency Plan for AIDS Relief (PEPFAR) launched the DREAMS Initiative in 2014 to reduce new HIV infections among adolescent girls and young women in 10 sub-Saharan African countries [16]. Similarly, the Joint United Nations Programme on HIV/AIDS (UNAIDS) and The United Nations Children’s Fund (UNICEF) announced in July 2014 the All In Initiative, aiming to ensure that adolescents infected and affected by HIV are adequately included in the global HIV response [17].

Although these global initiatives have focused energy and resources on the large and vulnerable population of adolescents within Kisumu County, special attention is needed for a subgroup of this population - the pregnant and breastfeeding adolescents living with HIV. Prevention of mother-to-child HIV transmission (PMTCT) programmes must join the global momentum to focus on the needs of HIV-infected pregnant adolescent girls aged 10–19 years, develop service delivery packages which address their needs as both HIV-infected adolescents and HIV-infected mothers and Partner Notification Services (PNS) programmes should also be considered.

## Materials and methods

### Study design and setting

This Hospital-based cross-sectional study was conducted in Muhoroni Sub County from January to March 2020. Muhoroni Sub County is one of the sub county in Kisumu County, is 100 km to the East of County headquarter. According to the national census report of 2019, the projected population of Muhoroni Sub County for the year 2018 was 52,459 of whom 24.5% were adolescents 15-19 years of age. The study was conducted in

the Adolescent facility within the sub county that is Muhoroni County hospital and Masogo sub county hospital.

### Source and study population

All female adolescents 15-19 years of age who are on care in the Adolescent facility were the source population of the study. All prospective and retrospective cohort studies, cross-sectional studies, case control and Demographic and Health Survey (DHS) reports of Sub County were included in this study.

### Data collection instruments and procedures

Data were collected using a pretested, structured, interviewer administered questionnaire which was first prepared in English and translated into the local language by a language expert. Then, the local language was again translated back to English to check for consistency. The structured, interviewer-administered questionnaire was adapted from the WHO (Illustrative-questionnaire for interview survey with young people developed by John Cleland) standard tool which was developed to assess the sexual and reproductive health of adolescents and youth.

Appropriate modifications were made to fit with the local set up. In addition I conducted a pretest and have made some simple analysis to see if I can address the desired objectives or not, from the results of the pretest.

Moreover, some language corrections and rearrangements on the order of questions were made to keep the logical flow of the questions, based on the comments from the pretest I got. Two data collectors, with diploma in nursing and data collection experience were Adolescent facility. One supervisor, with a diploma of public health was employed. The supervisor and data collectors were females chosen in order to minimize participant discomfort.

### Sample size

The sample size was the total female adolescent attending the Adolescent facility within the study area which was giving the total sample of 98 girls.

### Study Variables

#### Dependent variable

Teenage pregnancy.

#### Independent variables

Sociodemographic variables, like age, sex, marital status, occupation, education, and income were considered. History of sexual and reproductive health, like age at first sexual intercourse, early marriage, and contraceptive use, perception on teenage pregnancy, family income, family education, peer pressure, and casual sex assessed.

#### Data analysis

Statistical analysis was performed using Stata software. Data on socio-demographics were summarized by frequencies and percentages.

#### Ethical considerations

Confidentiality and privacy were strictly adhered to and no names of individuals were recorded or made known in the collection or reporting of information. The study was granted ethical clearance by Kisumu County ministry of health department and from the sub county MOH office.

## Result

There was high prevalence of HIV at the age of 18 with 30 (30.6%), followed by age 19 with 25 (25.5%), age 17 with 18 (18.4%), age 16 with 15 (15.3%) and lastly age 15 with 10 (10.2%). Out of 98 girls 10 (10.2%) were married in which 8 of them were housewife, while 88 (89.8%) were single where 20 (20.4%) were in college, 38 (38.8%) were in secondary level, 25 (25.5%) were in primary level and lastly 15 (15.3%) of the girls were non educated one. On occupation 17 (17.3%) of the girls were housemaid, 8 (8.2%) were housewife and 73 (74.5%) were student in all the levels. Out of the total girls 83 (84.7%) lives with the parents/guardians while 10 (10.2%) with husband and 5 (5.1%) live alone (**Table 1**).

**Table 1:** Sociodemographic characteristics of Adolescent girls living with HIV in Muhoroni sub-county Kenya, 2020.

Variables	Frequency (N=98)	Percent (%)
Age in years		
15	10	10.2
16	15	15.3
17	18	18.4
18	30	30.6
19	25	25.5
Marital status		
Married	10	10.2
Single	88	89.8
Education status		
College	20	20.4
Secondary	38	38.8
Primary	25	25.5
None	15	15.3
Occupation		
Housewife	08	8.2
Housemaid	17	17.3
Student	73	74.5
Live with		
Parent/Guardians	83	84.7
Alone	5	5.1
Husband	10	10.2

On sexual and reproductive I find that they was high rate of sexual at age >18 with 31 (31.6%), followed by 16-18 with 24 (24.4%) and lastly 13-15 with 10 (10.2%) girls who have ever hard sex making a total of 65 (66.4%) girls ever hard sex. On contraceptive use 58 (59.2%) of girls were not using any method in which 18 (18.4%) of them have no knowledge, 40 (40.8%) have no access while 10 (10.2%) of them wanted to be pregnant. Out of 25 girls who have been pregnant 10 (10.2%) pregnancy were planned while 15 (15.3%) were unplanned in which 10 pregnancy were aborted and 11 were delivered safely while 4 (4.1%) of the girls were currently pregnant (**Table 2**).

**Table 2:** Sexual and reproductive health characteristics of Adolescent girls living with HIV in Muhoroni sub-county, Kenya 2020.

Variables	Frequency (N=98)	Percent (%)
Ever hard sex		
NO	33	33.6
YES	65	66.4
Age at first sex		
13-15	10	10.2
16-18	24	24.4
>18	31	31.6
Contraceptive use		
YES	40	40.8
NO	58	59.2
Reason for contraceptive non use		
Do not have knowledge	18	18.4
Do not have access	40	40.8
want to be pregnant	10	10.2
Ever had pregnant		
YES	25	25.5
NO	73	74.5
Currently pregnant		
YES	4	4.1
NO	94	95.9
Condition of pregnancy		
Planned	10	10.2
unplanned	15	15.3
Outcome of pregnancy		
Delivered ( live birth)	11	11.2
Aborted	10	10.2

Knowledge on care among the 25 pregnant girls I find that 10 (40%) hard knowledge on PMTCT, while only 4 (16%) were having knowledge on PNS and lastly all the pregnant girls (100%) were having knowledge on both ANC and Drug adherence (**Table 3**).

**Table 3:** Knowledge on care among the Pregnant and Breast feeding Adolescent living with HIV in Muhoroni sub-county, Kenya 2020.

Variables	Frequency (N=25)	Percent (%)
knowledge on		
ANC	25	100
PMTCT	10	40
PNS	4	16
Drug Adherence	25	100

## Discussion

The study highlight that HIV-infected pregnant adolescents have poorer prevention of mother-to-child HIV transmission (PMTCT) service outcomes including lower PMTCT service uptake where only 10 (40%) girls had knowledge on it, and PNS uptake in which only 4 (16%) girls had knowledge compared to HIV-infected pregnant adults. This finding concurs with a previous study conducted on comparative among adult and adolescents living with HIV in which high percentage of 92% of the total adult living with HIV were high PMTCT and PNS uptake as compare to the adolescents [10]. In addition, the findings suggests that there may be higher rates of mother-to-child HIV transmission among infants of HIV-infected pregnant adolescents and increase transmission among the adolescent youths themselves due to the poor knowledge on care among them.

It was also highlighted that 10 (40%) of the girls had planned pregnancy while 15 (60%) of them had unplanned pregnancy which leads to abortion of 40% among the pregnant one. This finding concurs with a previous study conducted in Nigeria, where it ranges from 6.2% in Niger Delta state [9].

The study also find out that there was a high prevalence of HIV infection at the age of 18 years with 30 (30.6%), followed by age 19 with 25 (25.5%), age 17 with 18 (18.4%), age 16 with 15 (15.3%) and lastly age 15 (10.2%). This increased as per the age increase was due to exposure of the adolescent and increase personal demand leading them to sex for the exchange to their demands. This finding concurs with a previous study conducted in East Africa (Kenya) which reveal high percentage of infection at age group of 16-19 years old [12].

## Acknowledgements

The author would like to thank the two data collectors, supervisor for the data collection and adolescent department members of Muhoroni county hospital and Masogo sub county hospital for offering me the data information required.

## Competing interests

The author declare that they is no financial or personal relationships that may have inappropriately influenced him in writing this article.

## Authors' contributions

S.O. Awuor was the principal investigator and was the scientist involved in study methodology and design.

## Data availability statement

Data sharing is not applicable to this article as no new data were created or analyzed in this study.

## Disclaimer

The views and opinions expressed in this article are those of the authors and do not necessarily reflect the official policy or position of any affiliated agency of the authors.

## References

1. World Health Organization. Family planning evidence brief: reducing early and unintended pregnancies among adolescents. World Health Organization. 2017.
2. Kassa GM, Arowojolu AO, Odukogbe AA, Yalew AW. Prevalence and determinants of adolescent pregnancy in Africa: a systematic review and meta-analysis. *Reproductive health*. 2018; 15: 195.
3. Kefale B, Yalew M, Damtie Y, Adane B. A Multilevel Analysis of Factors Associated with Teenage Pregnancy in Ethiopia. *International Journal of Women's Health*. 2020; 12: 785.
4. Chandra-Mouli V, Camacho AV, Michaud PA. WHO guidelines on preventing early pregnancy and poor reproductive outcomes among adolescents in developing countries. *Journal of adolescent health*. 2013; 52: 517-522.
5. Presler-Marshall E, Jones N. Empowering girls to prevent early pregnancy. Overseas Development Institute. 2012.
6. Lama L, Rijal P, Budathoki S, Shrestha AD. Profile of neonates born to adolescent mothers at. *Nepal Med Coll J*. 2012; 14: 294-297.
7. Dagadu F. The Magnitude and Determinants of Teenage Pregnancy in the Cape Coast Municipality (Doctoral dissertation, University of Ghana). 1997.
8. Ziadeh S. Obstetric outcome of teenage pregnancies in North Jordan. *Archives of gynecology and obstetrics*. 2001; 265: 26-29.
9. Ayuba II, Gani O. Outcome of teenage pregnancy in the Niger Delta of Nigeria. *Ethiopian journal of health sciences*. 2012; 22: 45-50.
10. Nwosu UM. Contemporary factors of teenage pregnancy in rural communities of Abia state, Nigeria. *International Journal Of Community Medicine And Public Health*. 2017; 4: 588-592.
11. Mchunu G, Peltzer K, Tutshana B, Seutlwadi L. Adolescent pregnancy and associated factors in South African youth. *African health sciences*. 2012; 12: 426-434.
12. Were M. Determinants of teenage pregnancies: The case of Busia District in Kenya. *Economics & Human Biology*. 2007; 5: 322-339.
13. Beyene A, Muhiye A, Getachew Y, Hiruye A, Haile Mariam D, Derbew M. Assessment of the magnitude of teenage pregnancy and its associated factors among teenage females visiting As-sosa General Hospital. *EMJ*. 2015: 25-37.
14. Dessie ZB, Fentie M, Abebe Z, Ayele TA, Muchie KF. Maternal characteristics and nutritional status among 6–59 months of children in Ethiopia: further analysis of demographic and health survey. *BMC pediatrics*. 2019; 19: 83.
15. Getaneh Z, Melku M, Geta M, Melak T, Hunegnaw MT. Prevalence and determinants of stunting and wasting among public primary school children in Gondar town, northwest, Ethiopia. *BMC pediatrics*. 2019; 19: 207.
16. US Presidents Emergency Plan for AIDS Relief. Working together for an AIDS-free future for girls and women. 2016.
17. Sam-Agudu NA, Folayan MO, Ezeanolue EE. Seeking wider access to HIV testing for adolescents in sub-Saharan Africa. *Pediatric research*. 2016; 79: 838-845.