

STRATEGY FOR IMPROVING ACCESS TO HIV CARE FOR ADOLESCENTS AND YOUTH: THE EXPERIENCE TOOK PLACE IN BEIRA, MOZAMBIQUE.

Tiziana Serena¹, Alexandra George², Graciana Pita³, Guillermo Marquez⁴, Francesco Di Gennaro⁵⁻⁷, Daniele Trevisanuto¹, Giovanni Putoto⁶, Damiano Pizzol⁷.

1. Department of Woman and Child Health, Medical School, University of Padua, Padova, Italy

2. Community Unit, Doctors with Africa CUAMM; Beira- Mozambique

3. District Health Department (DDS) Beira, Sofala- Mozambique

4. Unicef, Mozambique

5. Clinic of Infectious Diseases, University of Bari, Bari, Italy

6. Operative Research Unit, Doctors with Africa CUAMM; Padova- Italy

7. Operative Research Unit, Doctors with Africa CUAMM; Beira- Mozambique

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ABSTRACT

The objective of this paper is to respond to the urgent need for an increase in access to HIV care among adolescents and young people in Sub-Saharan Africa. Since 2014, doctors with Africa CUAMM in collaboration with UNICEF have been supporting specific ambulatories for the youth population (between the ages of 10- 24) aiming to improve health education, specifically in relation to HIV prevention. Mozambique has the eighth highest prevalence of HIV in the world. It represents one of the six countries in which half of the adolescents living with HIV reside. Beira is Mozambique's second largest city, and in 2009 it had the most women and men between the ages of 15-49 were living with HIV. This study retrospectively analyzes data collected between 2013 and 2014, which described the impact of a new health service in a low resource setting with high HIV prevalence. The specificity of the service, only dedicated to young people, is the basis for this paper. We observed a significant increase in counseling in 2014 compared to 2013 (102,533 vs 63,959, $p < 0.01$), confirming that strengthening specific youth services is an effective intervention for improving access to care of this target population. Youth ambulatories are great instruments to improve access to HIV care among young people.

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1. Introduction

It is estimated that 36,9 million people worldwide were living with HIV by the end of 2014 (1). Around 2 million people are newly infected with HIV and 26 new infections occur every hour in older adolescents (between the ages of 15-19) (2). Sub-Saharan Africa represents the most affected continent, where 85% of all adolescents were living with HIV in 2012 (3).

Mozambique has the eighth highest prevalence of HIV in the world, where 1,5 million people were living with HIV in 2014. The prevalence of HIV was estimated to be 10,6% by the end of 2014 (4), and it represents one of the six countries in which half of the adolescents living with HIV reside (2). Beira, the capital of the Sofala Province, is Mozambique's second largest city, with 17,8% of women and 12,6% of men between the ages of 15-49 were living with HIV in 2009 (5).

Currently, AIDS-related causes represent the first reason of death in the adolescent population in Sub-Saharan Africa and the second in the

* Corresponding author: Francesco Di Gennaro, cicciodigennaro@yahoo.it

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worldwide context (globally 120,000 adolescents died of AIDS in 2013) (1-2). This dramatic data is more worrying in the context where AIDS-related deaths are in decline for all ages, except for 10-19 year olds (2-6). Many factors have contributed in making young people particularly vulnerable, including lack of knowledge about HIV/AIDS, lack of education and life skills, early sexual experiences, early marriage, sexual coercion and violence, trafficking and growing up without parents or other forms of protection from exploitation and abuse (7). Above all, poor access to health services (7) and insufficient specialized services for this target population in offering HIV testing and care represent important contributing factors (8).

Therefore, to decrease HIV transmission, in addition to assuring HIV test, early treatment and follow up, it is necessary to educate young people and to prevent as much as possible new infections (9). Moreover, in countries where HIV prevalence has declined, a change in sexual behavior among young people has been cited as an important contributing factor (10).

To reach these goals and to respond to the urgent need for an increase in access to health services among adolescents and young people in difficult economic situations, (11), Doctors with Africa CUAMM (DwA), an Italian non-governmental organization (12), in collaboration with UNICEF, have been supporting specific ambulatories for adolescents and young people since 2014, named “Serviço amigo do adolescente e jovem” (Saaj), which means “friendly health services for adolescents and young people”. This service has been developed for individuals between the ages of 10-24, aiming to improve health education as well as access and health care. The Saaj intervention field involves sexual and reproductive health, giving great attention to HIV prevention and treatment.

In this retrospective study, we describe the impact of a new health service dedicated to youth in a low resource setting with high HIV prevalence.

2. Material and methods

Study design

We retrospectively analyzed the data collected between 2013 and 2014 (before and after the intervention supported by DwA and UNICEF) in 4 Saaj ambulatories in Beira, Mozambique.

Study setting

The Saaj ambulatories involved in our study were in 4 districts of Beira: Ponta Gea, Macurungu, Munhava and Nhaconjo, involving 225,661 people living in the area by the end of 2014 (Ponta Gea 71,212, Macurungu 33,848, Munhava 71 949, Nhaconjo 48,654) (13).

Saaj are specific ambulatories placed inside a public health center and dedicated exclusively to the health and care of adolescents and young people where they have free and voluntary access. Saaj offers the opportunity to receive counseling about reproductive and sexual health and offers specific support in the prevention and care of HIV. The group of health caregivers working within the Saaj is represented by general doctors, nurses, local psychologists. In addition to these professionals, there is a community young operators (between the ages of 16-24) who work inside and outside the Saaj, called “activistas”.

They received basic training on adolescent health issues with a focus on ways of preventing sexually transmitted diseases and attended a course, held in the city of Beira, which was funded by DwA and UNICEF. The course lasted 80 hours (8 hours a day for 10 days in January and December 2013) and allowed the participation and training of 50 activists. The primary task on an activista was to facilitate participation and to promote access to the care of adolescents and young people in different contexts. At the Saaj level, the activista welcomes the young and is a key person during counseling; at the community level, the activista is involved in the implementation of information campaigns on HIV and the prevention of sexually transmitted diseases in areas of increased social discomfort through different strategies. Strategies included street theatre to communicate with young people in a simple and direct way by creating an equal footing in the relationship between the activista and the youth, to facilitate the educational process.

Study population

We analyzed individuals between the ages of 10-24, who accessed 4 Saaj ambulatories from January 2013 to December 2014.

The outcome of this study was the number of adolescents and young people utilizing Saaj, stratified by gender and age, interested in receiving HIV counseling, tested for HIV, diagnosed positive for HIV and eligible for ART (antiretroviral therapy) or living on ART.

We included in HIV counseling all issues regarding HIV: information, serological status check, doubts in therapy, regardless of patient serostatus.

If the patient was seronegative, the HIV test was always recommended. If the test result was positive, then a specific counseling was performed to communicate the meaning of the result. The patient was then referred for a CD4 dosage to the health center laboratory. The result was then communicated to the Saaj nurse who delivered the result and gave advice to the young patient. At the same time, the process was submitted to the ART commission relating to the same health center, which assessed the eligibility at the beginning of therapy. The follow-up was determined by the ART commission according to national guidelines. In the event of a negative test, the patient was invited to repeat it every 3 months.

We defined subjects as “being enrolled in therapy” the seropositive patients who returned to Saaj for any counseling, and patients recently directed towards therapy as well.

Data collection, statistical analysis and ethical considerations

The data used in our study was obtained from the written register of each center, which reported for each visit, gender, age and type of consultation that lead the subject to Saaj (HIV or other). When the HIV consultation was performed, the subject was asked if he/she had already received the test (run/not run) and the test result (positive / negative), which was then reported. If the consultation involved a previously known HIV case, who discovered his/her serostatus between 2013 or 2014, the patient was asked if he/she was continuing follow-up therapy (enrolled in therapy/or not). The data was registered monthly and entered in the Microsoft Excel program.

Differences in the data were determined by two-tailed student t-test after acceptance of normal distribution with the Kolmogorov-Smirnov test. p values (two sided) of less than 0.05 were considered to be statistically significant. Informed consent was not applicable.

Data utilization was approved by Health District Direction (Reference number 293/ 2015).

3. Results

In 2013 and 2014, consultations provided by the 4 Saaj were 63,959 and 102,533, respectively, with a significant increase of 60.3% ($p < 0.01$). The rise was recorded in each center. (Table 1).

We registered more females than males in each center during both years. During 2013, we observed 43,170 female vs 20,789 male accesses. In 2014, we documented 77,109 female and 25,424 male accesses, respectively.

However, during 2014, the number of males attending Saaj increased in three out of four centers: + 2,888 counseling in Ponta Gea, + 2,749 in Macurungu, + 1,858 in Nhaconjo. Only Munhava registered a decrease in male admittances (- 2,860). (Table 1).

Health Center	Counseling		Male		Female	
	2013	2014	2013	2014	2013	2014
	Ponta Gea	10,505	19,888	2,393	5,281	8,112
Munhava	23,438	26,242	9,767	6,907	13,671	19,335
Macurungu	16,017	19,659	5,380	8,129	10,637	11,530
Nhaconjo	13,999	36,744	3,249	5,107	10,750	31,637

Table 1 - Number of total counseling, male counseling, female counseling in each center during 2013 and 2014.

During 2013, the percentage of adolescents aged 10-14 who utilized Saaj were 13.5% versus 17% during 2014; the percentage between 15-19 years old was 40.9% during 2013 and 38.6% during 2014; among the age bracket 20-24, 45.6% in 2013 and 44.4% in 2014. (Table 2).

There was not any statistically significant difference between the percentage in 2013 and 2014 in any age group.

Age	2013			2014		
	Total (%)	Male (%)	Female (%)	Total (%)	Male (%)	Female (%)
10-14 y	13.5%	3.9%	9.6%	17%	5.2%	11.8%
15-19 y	40.9%	11.3%	29.6%	38.6%	17.1%	21.5%
20-24 y	45.6%	15.1%	30.5%	44.4%	12.1%	32.3%

Table 2 - Percentage of adolescents and young people accessing to Saaj divided by age, during 2013 and 2014

Considering half-yearly attendances, we observed no significant trend in the first half, $p = 0.3$ (2014 vs 2013), while a significant rise in the second half, $p < 0.01$ (2014 vs 2013).

Interestingly, we observed a steady increase in female counseling but only with a significant value in the second half, $p < 0.01$. Instead, considering male attendance, we observed a significant reduction in the first half, followed by a significant increase in the second one, $p < 0.01$ (2014 vs 2013).

Considering monthly attendance, in 2013, April registered the greatest value (8250), followed by January (6,526) and September (5,981). In contrast, during the same year the months with less turnout were August (3,649), June (3,712) and March (4,305). During 2014, we observed the highest attendance in October (14,974), August (13,895) and November (13,774) while the lowest was recorded in May (2,940), April (4,731) and February (4,849). (Table 3).

Month	2013		2014	
	Male	Female	Male	Female
January	2,698	3,828	1,369	3,536
February	2,084	3,663	1,319	3,530
March	1,649	2,656	1,432	4,359
April	2,761	5,489	1,348	3,383
May	2,213	3,367	396	2,544
June	1,380	2,332	1,895	6,569
July	2,078	2,934	2,245	6,932
August	1,249	2,400	4,091	9,804
September	1,156	4,825	1,940	6,438
October	1,270	4,264	3,358	11,616
November	899	3,816	3,283	10,491
December	1,352	3,596	2,748	7,907

Table 3 - Total of monthly attendance for all centers in male and female during 2013 and 2014

During 2013, 23,970 adolescents attended specific HIV counseling, this number was significantly lower than in 2014 when 32,251 specific counseling were registered, showing a rise of 8281 subjects.

In 2013, 20,320 HIV tests were performed, which represented 84.8% of people who received HIV counseling in that year at our centers. In 2014, the number of tests were 23,143, corresponding to 71.7% of all young people who received HIV counseling in 2014 in our centers.

In 2013, we recorded 1,653 positive tests corresponding to 8.1 % of all tests performed in that period.

During 2014, we observed a decrease in positive tests, recording 1,112 positive tests, that represented 4.8 % of all HIV tests performed during the year. (Table 4).

During 2013, 513 patients were recorded as enrolled in the therapy. During 2014, the number of patients recorded as being enrolled in the therapy was 462. (Table 4).

	HIV counseling (n)	HIV test (n)	Positive test (n)	Enrolled in therapy (n)
2013	23,970	20,320	1,653	513
2014	32,251	23,143	1,112	462

Table 4 - Total of HIV counseling, HIV test, positive test, and youths referred enrolled to therapy in all centers during 2013 and 2014.

4. Discussion

Adolescents and young people are at high risk of HIV infection and need specific attention from the Public Health (14). This must be addressed by a specific service dedicated to this target population.

Some studies show positive feedback if intervention for young people is done in a specific and informal setting (16) such as a Saaj.

Our study demonstrates a significant increase in the number of HIV consultations from before (2013) to after the DWA intervention (2014), confirming that strengthening specific youth services (including psychological support and dedicated counseling) is an effective intervention for improving access to care of this target population. The key points that have mainly contributed to achieve these results are: i) the peculiarity of the Saaj ambulatory, a structure exclusively dedicated to adolescents and the youth, and ii) the figure of the activista, in addition to the activity inside the Saaj, played a crucial role in maintaining the relationship with the young population living in the urban area.

During the periods this study used for its data, we observed an increase in the number requests for counseling, especially for females.

This finding can be explained not only in terms of HIV, but also in preventing pregnancy, which attracts a greater number of females. Moreover, females are more exposed to focused prevention and information campaigns, as the antenatal clinic represents a model (15), showing more readiness to access to health service (15). However, females are a critical and vulnerable population who frequently don't access health services because of social barriers or violence (16-17); the increase in female access represents positive feedback, which reinforces the need for supporting and propagating the Saaj ambulatories, especially to guarantee a higher universal health coverage in areas where it remains low.

Our data shows that early adolescents (between the ages of 10-14) have access to Saaj less than other age ranges (15- 19; 20-24). As school is the place where a wide number of early adolescent stay, this could represent the first step toward information and launching access to health public service. Starting from this hypothesis, we assessed the relationship between peak attendance at Saaj and the school calendar. However, no correlation was found probably due to low access to education, a high illiteracy rate and school desertion characterizing the population, especially for women who represent the most frequent users of Saaj (literacy rate for males 79.8%, literacy rate for females 56.5%) (18).

Nevertheless, school represents a milestone in the knowledge process (19), so by preventing school dispersion, promoting school attendance and building bridges between school and the health service, and placing Saaj ambulatories inside school areas, could be an efficient plan in increasing the rate of coverage in adolescent and young people.

Regarding prevalence of HIV tests, in 2014, despite an increase in absolute numbers of HIV testing, we recorded a lower percentage compared to 2013. This can be explained in part because the whole HIV counseling number (in which the percentage is calculated) also includes the follow-up counseling.

Moreover, other and more complex reasons can explain this low adherence to HIV test: failure to perceive to be at risk, not being ready to do the test, fear of knowing the result (20-21). Again, among adolescents the problem of communicating with parents if the result was positive and the fear of being stigmatized is higher than in adults. There is a consensus that any strategy to improve knowledge about transmission, therapy and prognosis of HIV disease is a successful key in fighting stigmatization (22). In this context, the measures implemented within the Saaj ambulatories, including psychological support and listening groups, aim at reducing the fear of adolescents and young people and the feeling of being stigmatized in the event of a positive test result.

When compared to studies referred to the same geographical region (23), our data shows a higher percentage of patients enrolled in the therapy. However, it must be notice that, in the present study, "subjects enrolled in the therapy" consisted of two groups: a first group involved young people newly diagnosed with HIV, who had carried out the CD4 and with the eligibility criteria, and a second group including patients undergoing ART treatment, who returned for counseling related to therapy itself.

This data suggests a problem of acceptability among this target population. Although receiving counseling, most young patients do not perform an HIV test and when they result positive, a part of them are susceptible to being lost to follow-up before starting or after beginning ART therapy (24-17).

The main priorities are: improving knowledge about prevention of the HIV infection, adhering to therapy in seropositive patients and preventing the loss to follow-up, which remains a high priority at every step of the therapy (25), using target interventions through strategies which appeal to the young to facilitate the achievement of these goals (26-27-28). Moreover, adolescents and youth are a complex and heterogeneous population, characterized by different social and sexual behavior (16), reflecting different ways of acquiring the infection (infection at birth or acquired by high risk behavior); for these reasons a specific and varied approach is necessary to reach this target population.

The main limitation of our study is the lack of the number of young people directed towards therapy who start the therapeutic journey. In any case, also in our study, the percentage of patients referred to the therapy remains low, according to previous experiences. More efforts are required to work on strategies targeted at not losing patients in this delicate phase of the therapy. We do not have the data of young people who, after knowing their HIV status, do not continue the therapeutic journey, which includes the CD4 execution. This finding is extremely important because it represents one of the key moments of drop-out in the therapeutic cascade in the youngest population (23). Therefore, we need more data to understand the reasons for this drop-out at this stage of the therapeutic cascade (25). Another limitation is the lack of data about the timing between the test execution, the CD4 execution and the start of ART therapy, in addition to the absence of data about the follow-up and the percentage of loss to clinic.

Despite the various limitations, the results of the present study give important information: the strengthening of the specific services for young people is an effective strategy in increasing access to care in this sensitive segment of the population, which, although highly affected by HIV, is also the segment with less access to services for diagnosis and treatment. The development of a specific service for increasing access to healthcare by youth also for surgical issues (29). Increasing investments to fight stigmatization by knowledge campaigns, lead people newly diagnosed to care and assure the follow-up could encourage HIV test execution, and promote the completion of “HIV cascade of care”.

5. Conclusion

In our study, we underline how specific ambulatories for young people can improve access to health services. Much remains to be done in increasing awareness about HIV, HIV tests and therapeutic compliance in this target population.

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