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The HIV/AIDS Response Succeeds When Integrated in the Reproductive Maternal Newborn Child and Adolescent Health Platform: The Experience of the Kingdom of Eswatini

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Abstract

Background: The need to link HIV/AIDS and Sexual Reproductive Health (SRH) response is important due to the interconnectedness of HIV and SRH. Swaziland is implementing the Primary Health Care strategy which involves integration of a number of health services. However, in the early years of the HIV/AIDS epidemic, its programming and funding was prioritized in a vertical manner due to the scale and scare of the epidemic. Over the years, the country recognized that addressing HIV/AIDS and Sexual Reproductive Health and Rights (SRHR) services as totally separate entities is counterproductive in achieving targets for both HIV and SRHR. This assessment was aimed at documenting the extent of SRH and HIV integration in Swaziland.

Methods: A mixed-methods approach was used to document the extent of SRHR and HIV integration. The quantitative approach included secondary data analysis using national data and reports on SRHR and HIV integration indicators between 2009 and 2016. The qualitative approach included in-depth desk review of documents as well as key informant interviews.

Results: RMNCAH and HIV integration is supported by enabling policy environment across all levels. In 2016, 94% accessed HIV services and 95% of those testing HIV positive were initiated within the RMNCAH platform, while 92% of clients attending FP services eligible for HIV testing were tested and 75% of those tested HIV positive linked to care and treatment. An observed increasing trend of HIV testing within TB clinics from 66% in 2012 to 92% in 2016. A significant p-value ($pr>Chi^2 \leq 0.0001$) indicating HIV testing in STI clinics.

Conclusion: The bi-directional integration of RMNCAH and HIV provides a concrete ground for reaching the ambitious UNAIDS targets (90-90-90). This integration is not only logic to the health delivery system; it's also beneficial to the clients. Having one strategy, one coordinating structure and one M&E system may significantly lead to attainment of the UN-SDGs.

Recommendations: Programmers should outline a minimum package of integration is paramount in scaling up HIV and RMNCAH integration. Continuous capacity building including supportive supervision and mentorship is needed to integrate health services.

Keywords: RMNCAH; Sexual and Reproductive Health (SRH); HIV; AIDS; Integration

Introduction

The need to link the responses to HIV and AIDS and Sexual and Reproductive Health (SRH) is recognized as important due to the interconnectedness of HIV and SRH. Most HIV infections are sexually transmitted [1]. Moreover, both HIV and sexual reproductive ill-health strive in societies where social ills like vulnerable populations, discriminatory cultural norms as well as limited access to appropriate information exist [2]. The benefits of linking SRH and HIV responses include improved access to and uptake of SRH and HIV/AIDS services. This linkage may also result in increased utilization and improved health outcomes, effective use of limited resources. HIV and SRH integration can improve the quality and coverage of service to underserved and marginalised populations, through reduced duplication of service delivery functions as well as convenience and cost savings for clients [3]. It is also argued that integration assures that the reproductive health and rights of people living with HIV/AIDS are addressed and respected.

The linkages and integration of SRH and HIV is especially critical in developing countries which have high rates of HIV prevalence, high unmet needs of reproductive health, and limited resources in addressing these issues [4]. Global estimates show that Eastern and Southern African countries bear the biggest burden of HIV prevalence, accounting for 52% (19 million) of all the people living with HIV five

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percent (960,000). These are estimated to be pregnant women which are the highest number globally [2]. Eswatini continues to have the highest HIV prevalence rate of 27%, with a higher gender discrepancy among females than males (32.5% and 20.4%, respectively) [5]. It's noteworthy that young females age 15 – 24 years carry higher risk of HIV infection (1.9%) when compared to males of the same age (0.8%). SRH and HIV integration in such a setting will ensure that clients receive comprehensive and quality care.

Swaziland is implementing the Primary Health Care strategy which involves integration of a number of health services that are provided at primary level of health services. As such, integration as a model of service delivery is not new in the context of public health services for the Kingdom of Swaziland. However, in early the 1990's HIV/AIDS epidemic was recognized as an important component of SRH, but its programming and funding was prioritized in a vertical manner due to the scale and scare of the epidemic. Over the years, the Ministry of Health in Swaziland recognized that addressing HIV/AIDS and Sexual and Reproductive Health and Rights (SRHR) services as totally separate entities is counterproductive and cannot assist in achieving goals and targets for both HIV and SRHR. As such incrementally integration of health services particularly SRH and HIV has been prioritized in Swaziland. Between 2010- 2017, Swaziland implemented a Joint UNFPA and UNAIDS Programme on SRH and HIV Linkages; and made considerable progress on integration, as the country scaled-up the provision of integrated services nationally cascading from a five centers of excellence model for integrated services provision piloted through the project. The purpose of this assessment was to document the extent of HIV & SRH integration in Swaziland.

Methods

A mixed-methods approach was used for the assessment, where quantitative secondary data was obtained and analysed concurrently with qualitative data collected. The quantitative approach included conducting secondary data analysis using national data and reports on established global SRHR and HIV integration indicators to determine the levels of linkage and integration between 2010 and 2016 in Swaziland. The qualitative approach was used to complement the quantitative data and included in-depth desk review of existing policies and documents related to SRH and HIV integration as well as key informant interviews (KIIs) with service providers, Ministry of Health officials and development partners were conducted. Semi-structured discussion guides were developed for the KIIs informed by the desk review of relevant documents with questions tailored for each type of key informant.

Data analysis and triangulation

For the SRHR and HIV Linkage indicators, a trend analysis regression of proportions was used to test for true trends in observed changes over the years of the integration period. An approximation of the One-way Analysis of Variance (ANOVA) was used to test for true trends between regions based on the trend regression in STATA 14. Data from key informant interviews was used to supplement or clarify results from the secondary analysis. Thematic analysis was used to identify common themes which were then grouped and analyzed. Different datasets were used as proxies in the estimation of the extent of the integration along the global SRH and HIV integration indicators whenever applicable and data trends were available. This allowed for a better understanding of the strength and weaknesses in the data recording and reporting of the integration.

Summary of Results and Findings

Family planning and HIV integration

To evaluate the extent to which SRHR and HIV integration was successful at client output levels, the assessment focused on the trend in number of clients receiving integrated SRHR-HIV-TB services in the country based on data from the Health Management Information System (HMIS). The number of clients who were seen in FP clinics and provided HIV testing and TB screening services during the period 2014-2016 was analyzed. A total of about 92% of clients attending FP services eligible for HIV testing were tested and 75% of those tested HIV positive linked to care and treatment in 2016 within the Reproductive Maternal Newborn Child and Adolescent Health (RMNCAH).

The data suggests that in 2014 there was high uptake of integrated services in FP clinics compared to any other years. Thereafter and this being a general trend for all regions seems to suggest that specific interventions as stated in the key informants' interviews were implemented. These interventions attracted clients for the services. Though multifaceted, the steady decline after 2014 is to be expected as at inception of the services, more clients were eligible for HIV testing hence the peak; however, as services become routinely offered and more HIV positive clients get linked to antiretroviral therapy (ART), fewer of the clients attending FP will be eligible hence the decline in subsequent years. The trend analysis for proportions found that the observed trends between regions was statistically significant ($pr>Chi^2=0.0075$) as shown in Table 1.

Family planning clients provided with condoms

The number of FP clients receiving condoms increased from 271,624 receiving male condoms in 2013 to 769,637 in 2016 while that of those receiving female condoms increased from 11,433 in 2013 to 52,893 in 2016. These increases can also be noted for the number of condoms distributed during the same period across all regions (Table 2).

Antenatal care and HIV integration

The integration of HIV services in antenatal care (ANC) clinics is a necessary key pillar to the reduction of mother to child transmission (MTCT) for the country. As a standard, all pregnant women attending ANC clinics must be tested for HIV, screened and treated for STIs and provided with antiretroviral treatment (ART) for those HIV positive in order to reduce MTCT [6]. To evaluate the extent of the SRHR and HIV integration in ANC clinics, data on HIV testing coverage, ART

Region	Number of Clients	_Prop	Year	p-value
Hhohho	7547	0.000	2014	Pr>Chi²=0.0075
	4257	0.000	2015	
	2614	0.000	2016	
Manzini	9694	0.000	2014	
	4773	0.000	2015	
	2571	0.001	2016	
Lubombo	6946	0.000	2014	
	4731	0.001	2015	
	2523	0.001	2016	
Shiselweni	7511	0.001	2014	
	4342	0.001	2015	
	2147	0.002	2016	

Table 1: Trend analysis for proportions: Regression of region on number of HIV treatment sites providing modern contraceptives.

Region	Number of FP clients receiving condoms					Number of Condoms distributed			
	Type	2013	2014	2015	2016	2013	2014	2015	2016
Hhohho	Female	2610	6059	11921	11546	5220	15504	28065	19320
	Male	71023	111045	369475	297338	282268	412753	1171497	476234
Lubombo	Female	3378	7555	8032	4836	6756	20188	20021	14056
	Male	40110	101546	106111	61009	242115	410182	381206	260590
Manzini	Female	3414	4724	65814	36028	4062	13345	64307	35795
	Male	156103	242750	631997	407045	401356	585595	979118	576964
Shiselweni	Female	2031	7502	767	483	22932	6773	7342	4690
	Male	4388	13695	5106	4245	188506	229873	197501	149996
Total	**Female**	11433	25840	86534	52893	38970	55810	119735	73861
	Male	271624	469036	1112689	769637	1114245	1638403	2729322	1463784

Table 2: Number of FP clients receiving condoms by type and number of condoms distributed.

Table 3: The extent of ANC and HIV integration: 2012-2016.

Year	# of women making at least 1 ANC Visit	# of women with known HIV positive status prior to ANC	# of women offered HTC at ANC	Women Testing HIV+ at ANC for the 1st time	# of women who tested for HIV
2012	32,434	6,337 (20%)	23,514	4827	29,851 (92%)
2013	29,835	6,809 (23%)	22,742	4496	29,551 (99%)
2014	29,740	7,102 (24%)	21,978	3458	29,080 (97%)
2015	30,751	6,373 (21%)	20,829	4140	27,202 (88%)
2016	30,515	7,160 (23%)	21,818	2749	28,978 (94%)

coverage and STI screening was analyzed and results are presented in the following sub sections. In 2016, there was an improved uptake and delivery of integrated quality services for SRHR and HIV as 94% of clients accessed HIV services and 95% of those testing HIV positive were initiated on ART within the Reproductive Maternal Newborn Child and Adolescent Health platform. Table 3 presents the trend over a period of years (2012-2016).

ANC eligible clients initiated on ART

Almost all (95%) ANC attendants eligible for ART initiations were started on the lifelong treatment within the Reproductive Maternal Newborn Child and Adolescent health (RMNCAH) platform in 2016 (Figure 1). However, a consistent gradual increase in the proportion of women coming to ANC already on ART is noted. In 2012, 27% of women on ART at ANC came already on ART and the proportion increased in 2013 and 2014 to 32% and 43% respectively. By the end of 2016, the women coming to ANC already on ART increased to 58%. Figure 2 shows the trend in the ART uptake among HIV-positive women within the RMNCAH platform from 2012-2016.

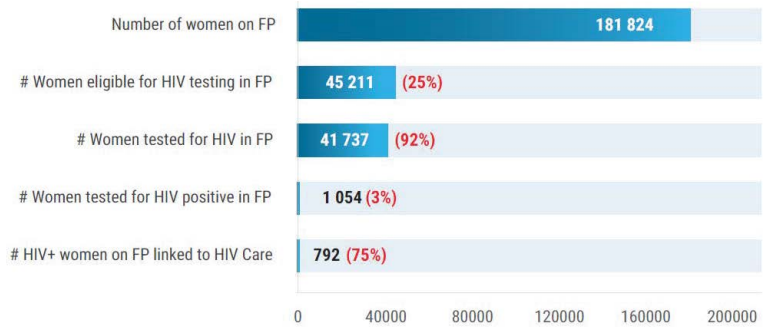

Figure 1: Percentage of FP clients tested for HIV within the RMNCAH platform.

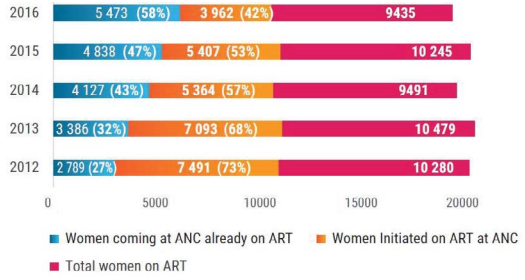

Figure 2: Percentage of ANC clients tested for syphilis within RMNCAH platform.

ANC clients tested for syphilis

The proportion of ANC attendees who received syphilis testing in the RMNCAH platform for the last four years increased from 58% in 2013 to 89% in 2016 nationally. On average, of all ANC attendees tested for syphilis, 3% test positive and approximately 90% of them receive appropriate treatment for syphilis.

Post natal care/HIV integration indicators

Integration of HIV services in post natal care is a critical component for the reduction of mother to child transmission of HIV during breastfeeding period. This section presents findings on the PNC and HIV integration across the country. Most PNC clients tested for HIV received such services in Manzini region compared to the other regions. The numbers receiving HIV testing are generally low and do not seem to provide evidence that the integration in PNC is a strong point for the country (Figure 3).

STI clients tested for HIV

Using data from the STI entry point in the HTS dataset as a proxy, there data shows an increasing trend across all regions for number of STI clients receiving HIV testing. These results are suggestive that the integration is STI clinics is happening especially because the test for the regional trend yielded a significant p-value ($pr>Chi^2 \leq 0.0001$).

Tuberculosis clients tested for HIV

HIV screening in TB is recommended under the World Health Organization Stop tuberculosis strategy and continue to be a pillar for early ART initiation in tuberculosis TB clinics under the END-TB strategy adopted by the TB Control Program. The evidence suggest that as early as 2012, HIV services were mainstreamed in TB clinics and the integration improved yearly thereafter as shown in the trend graph below. The proportion of TB patients who are tested for HIV increased from 91.7% in 2012 to 99.2% in 2016 as shown in Figure 4. ART initiation among TB/HIV co-infected patients also increased in the period from 66% in 2012 to 92% in 2016. This shows a strong evidence of HIV integration in TB clinics as aspired in the TB/HIV guidelines.

Discussion

The assessment attempts to show that the HIV and AIDS response can succeed when integrated into the RMNCAH platform. The integration of HIV into the RMNCAH platform presents greater benefits for clients accessing either HIV and or HIV services. Such an approach allows people to access both HIV and SRH services under the same roof or in the same facility increasing the opportunities for a continuity of care without being externally referred [7]. On the other hand, HIV integration into SRH services expands the range of clinical services provided beyond HIV treatment and care. These include management and treatment of sexually transmitted infections, congenital syphilis, family planning, cervical cancer screening and treatment, prevention of mother-to-child transmission and other related services while reducing the frequency and costs of health related appointments [8].

The SRH and HIV integration provided an opportunity for Swaziland to achieve great strides in the HIV and AIDS response. Considering the results as presented in this article, linkages of SRH and HIV was a

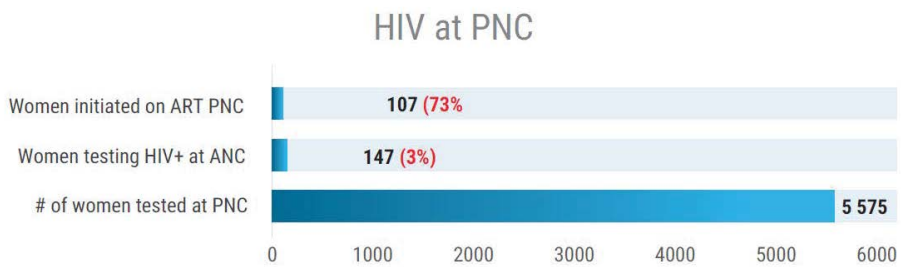

Figure 3: Number of PNC clients Initiated on ART within the RMNCAH platform.

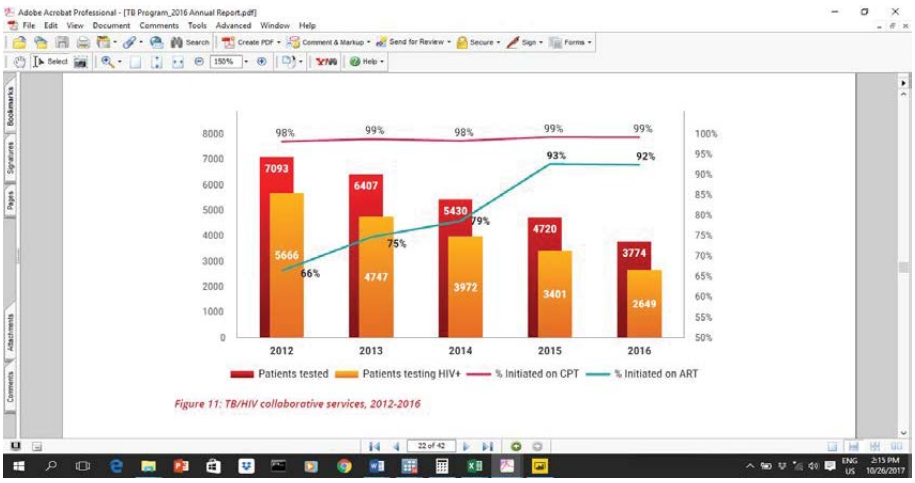

Figure 4: Trend of HIV testing among TB patients.

springboard for all the wonderful achievements in both SRH and HIV results. The high ART coverage of about 75% of all PLHIV and 87% of all people who know their status as well as the high (95%) TB enrolment rate in treatment. The country continues to have a high HIV prevalence rate; however, through the integration, the epidemic has been stabilized. Over the years, the country as almost halved the HIV incidence from 2.5% to 1.4% between 2010 and 2017 [9]. In addition, the country has managed to achieve the pediatric HIV elimination status as the current mother to child transmission of HIV stands at 2% [10].

Furthermore, there has been a constant increase of national coverage of integrated SRHR/HIV services, from 57% in 2009 to 94% of health facilities in 2016. This has resulted to improved uptake and delivery of integrated quality services for SRHR and HIV. In 2016, 94% accessed HIV services and 95% of those testing HIV positive were initiated on ART within the RMNCAH platform, while 92% of clients attending FP services eligible for HIV testing were tested and 75% of those tested HIV positive linked to care and treatment. There has been an observed increasing trend of HIV testing within TB clinics from 66% in 2012 to 92% in 2016. In addition, a significant increase for HIV testing in STI clinics is observed.

In all these achievements, government's leadership is the key for sustainability of SRHR/HIV integration. When policies are in place it is much easier to implement SRHR/HIV integrated services as it ensures that everyone moves and implements in the same direction. Collaboration between governments, development partners led to achievements of goals within a short period.

Conclusion

This assessment has reported a potential game changer in the fight of the HIV and AIDS response. If the gains and achievements are to be sustained as we target an AIDS free generation by 2030, HIV integration into the Reproductive Maternal Newborn Child and Adolescent health platform is to be prioritized. This should not be in papers, but must be translated into actions.

Competing Interests

The authors declare that funding to conduct the study was received from the East Southern Africa Regional Office of UNFPA (ESARO). Beyond this the authors declare that they have no competing interests.

Authors' Contributions

- Bongani Robert Dlamini made substantial contributions to conception, protocol writing and design of the research. He also played a pivotal role in data collection, analysis and interpretation of data and writing up the research report.
- Nompumelelo Dlamini played a pivotal role in data collection, analysis and interpretation of data and writing up the research report.
- Bonisile Nhalabatsi played a pivotal during report writing.
- Margaret Thwala-Tembe has been useful in critically revising the manuscript for important intellectual content.
- Sebentile Myeni played a pivotal role in data collection, analysis and interpretation of data and writing up the research report.
- Lindiwe Malaza has been useful in critically revising the manuscript for important intellectual content.

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