



The Contributions of Faith-based Health
Providers in Kenya
Toward the 95-95-95 Treatment Goals:
An Analysis of
Health Services Data in Kenya

*A Report of the Academic Consortium of the
UNAIDS-PEPFAR Faith Initiative*

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October 2022

This report documents the percentage of contributions of faith-based health providers to HIV clinical care in Kenya. The report analyzed waves of health services data gathered at four points in time: 2013, 2017, 2019, and 2021. This analysis revealed a steady in growth in HIV treatment visits overall as well as among faith-based health providers with the percentage of HIV visits provided by those faith-based providers in the nation as a whole remarkably consistent at 17.2% (2013), 20.7% (2017), 21% (2019), and 20.8% (2021). In addition, the report examines the number of HIV treatment visits provided in during the period when the global COVID-19 pandemic impacted health services-- 2019, 2020, and 2021—to identify troubling downward trends in pediatric HIV treatment visits.

Background:

There is widespread agreement that faith-based health providers provide a significant proportion of health services in many of the nations of sub-Saharan Africa but surprisingly few efforts to actually calculate the scale of those services. In the introduction to the 2012 report on the PEPFAR consultation on the role of faith-based organizations in sustaining community and country leadership in the response to HIV, Ambassador Eric Goosby, then the United States Global AIDS Coordinator, wrote that “in sub-Saharan Africa, it is estimated that 40 percent of health care services are provided by FBOs....”¹ While Ambassador Goosby was able to reference a number of sources in making this claim, an analysis of these sources reveals that they are anecdotal and rely most often on a series of calculations conducted by the Christian Medical Commission of the World Council of Churches in the early 1960s.²

In 2013, the Interfaith Health Program (IHP), one of the members of the academic consortium of the UNIADS-PEPFAR Faith Initiative, conducted a secondary analysis of HIV health services data in Kenya with funding from the Division of Global HIV and Tuberculosis at the US Centers for Disease Control and Prevention.³ In 2017, IHP recalculated these data as an activity of the UNAIDS-PEPFAR Faith Initiative to determine any changes in those percentages. In 2021-2022, as part of an effort to document the contributions of faith-based partners in progress toward achieving the 95/95/95 goals that have guided the coordinated global response to HIV. These goals have three

¹ U.S. President’s Emergency Plan for AIDS Relief (2012). *A Firm Foundation: The PEPFAR Consultation on the role of Faith-based Organizations in Sustainin Community and Country Leadership in the Response to HIV/AIDS*. Washington, DC: U.S. Department of State.

² Olivier, J. and Wodon, Q. (2012). “Playing broken telephone: assessing faith-inspired health care provision in Africa,” *Development in Practice* 22 (5/6): 819-834.

³ See. Blevins, J. and Griswold, E. (2013). *Essential Partners: The Scope of the Contribution of Faith-Based Health Systems to HIV Prevention, Treatment, and Support in Kenya*. Atlanta: Interfaith Health Program. Available at <https://ihpemory.org/wp-content/uploads/2014/08/Essential-Partners-Kenya-Country-Report-Final.pdf>.



focuses: 1) 95% of those living with HIV are aware of their status; 2) of those aware of their HIV infection, 95% access ongoing clinical care for the treatment of HIV infection; and 3) of those enrolled in clinical care, 95% achieve and maintain suppressed viral load below the level of detectability in the bloodstream. The 95/95/95 goals serve as the 2030 benchmark targets for progress in eliminating HIV as a global health threat and they represent a revision to the initial 90/90/90 model first developed by UNAIDS in 2015 as the 2020 global targets.⁴ In 2019, Kenya calculated that 92% of people living with HIV were aware of their status, 84% of those living with HIV were enrolled in ongoing clinical care, and 92% of those in ongoing care had achieved viral suppression. In 2020, those percentages had changed slightly to 92%-84%-92%.⁵ These are the most recent two years in which data on all three indicators is available.

Kenya has achieved greater progress toward the 95/95/95 goals than its regional neighbors on 2 of the 3 indicators, though it lagged just behind the average for the second indicator, the percentage of people living with HIV enrolled in HIV clinical care. The regional average for East and Southern Africa region, toward these targets was 88%-85%-89% in 2019 and 89%-86%-91%.⁶ The national percentages obscure widespread differences in progress toward the 95/95/95 goals at sub-national levels. Table 1 lists the percentages by province in Kenya.⁷

Table 1: Progress toward the 95/95/95 goals in Kenya by province in 2019 and 2020.

Province	2019			2020		
	1 st 95	2 nd 95	3 rd 95	1 st 95	2 nd 95	3 rd 95
Central	90	90	95	90	93	94
Coast	88	80	88	88	80	92
Eastern	89	83	89	89	86	93
Nairobi	>98	>98	93	>98	>98	94
North Eastern	64	70	?	64	72	?
Nyanza	95	87	94	95	88	95
Rift Valley	87	67	89	87	69	92
Western	92	83	92	91	82	94
National	92	84	92	92	85	94

⁴ See “90-90-90: Treatment of all.” Available at <https://www.unaids.org/en/resources/909090>.

⁵ These data are generated from the UNAIDS data center: <https://aidsinfo.unaids.org>.

⁶ <https://aidsinfo.unaids.org>.

⁷ The UNAIDS data platform continues to report on the sub-national data in Kenya by province, and does not break down the percentages according to the county system adopted by the country in 2010.



Kenya has gained ground in its HIV response since the initial 90/90/90 strategic plan was announced, but much work still remains in reaching 95/95/95 targets, especially in some regions of the country. To meet these targets, all available resources must be identified, aligned, and mobilized so understanding the contribution of faith partners is essential.

Methodology

In order to calculate the contribution of those partners, we conducted a secondary data analysis of health services data offered by facilities in Kenya using the DHIS2 data platform.⁸ The DHIS2 platform has been implemented in Kenya and other countries over the last decade to provide a web-based structure for entering, downloading, and analyzing health services data. For the first time, the platforms offer a way for comprehensive, standardized data reporting and analysis on a variety of health conditions. Countries can determine their own needs and priorities for health services data by creating country-specific data sets and related indicators; because the DHIS2 platform received significant funding from PEPFAR through US AID, the HIV data sets and indicators reflect priority service areas for each country's HIV strategic plan.

In the 2013 and 2017 analysis, we looked at indicators from the "Ministry of Health 731 HIV Care and Treatment Program" data set. When we returned to the platform to conduct the current analysis, we found that no new data had been entered since 2018 and determined that a new data set, "Ministry of Health 731-3 HIV and TB Treatment Revision 2018" had supplanted the earlier data.

This change in data sets offered some opportunities for more granular analysis (for example in regard to adolescent data) but also created challenges in analysis. There were some differences in the indicators between the two sets; for example, the newer data set disaggregated overall data more granularly. Neither data sets disaggregated overall infant or pediatric visits by gender but did provide counts by gender for other cases. For each of the two data sets, we defined and calculated infant, pediatric, adolescent (only possible in the second data set), and adult visits according to the following indicators:

MOH 731 731 HIV Care and Treatment Program

- **Infant indicator:** Treatment visits for PLHIV currently on ART below 1 year
- **Pediatric indicator:** Treatment visits for PLHIV currently on ART below 15 yrs. (by male and female)
- **Adult indicator:** Treatment visits for PLHIV currently on ART >15 yrs. (by male and female)

⁸ The home portal to Kenya's DHIS2 platform can be found at hiskenya.org. The data on the platform can only be accessed by a registered user. IHP was granted access as a registered user in order to conduct the 2013 analysis and has retained access since that time.



MOH 731-3 HIV and TB Treatment Revision 2018

- **Infant indicator:** Treatment visits for PLHIV currently on ART <1
- **Pediatric indicator:** Treatment visits for PLHIV currently on ART 1-9 yrs
- **Adolescent indicators:** Treatment visits for PLHIV currently on ART 10-14 yrs (by male and female); Treatment visits for PLHIV currently on ART 15-19 yrs (by male and female)
- **Adult indicators:** Treatment visits for PLHIV currently on ART 20-24 yrs (by male and female); Treatment visits for PLHIV currently on ART 25+ yrs (by male and female)

When comparing changes in annual visits that required us to look at the two different data sets, we used the definitions from the initial data sets (infant (<1), pediatric (<15), and adult (>15)) in order to compare like age cohorts.

We developed a master list of faith-based health facilities, drawing on the existing list from the 2017 study. We compared that list to the currently licensed health facilities in Kenya, which is available on a web-based site, <http://kmhfl.health.go.ke/#/home>. This site allows the user to filter facilities by “county” and “facility owner,” with the ownership category allowing the user to filter by faith-based organizations. Any new facilities were added to the existing master list. About 15% of facilities on the existing master list were not identified as faith-based with most identified as non-governmental and a small number identified as private practice. In all instances, we sought outside evidence (usually from the websites of organizations supporting these individual facilities) that indicated whether these facilities were indeed faith-based according to two criteria: 1) the facility and/or larger supporting organization specifically references the influences of religious beliefs in their mission, and 2) the facility and/or larger supporting organization has direct financial, administrative, or programmatic ties to religious bodies or authorities. We classified an organization as faith-based if it met either of these two criteria and added it to our facility master list.

With a complete faith-based health facility master list, we then calculated HIV services (using the indicators listed above) for each county to provide us with an overall number of the HIV treatment visits (the denominator) and then calculated those same services provided by faith-based facilities included on the master list for each county.

Results

The percentage of HIV treatment visits to people living with HIV on antiretroviral therapy (ART) provided by faith-based health facilities is remarkably consistent over time. Table 2, below, shows these percentages. The total number of visits recorded between 2013 and 2017 increased dramatically, from 3.7 million to 9.7 million and the number of visits provided by faith facilities grew by 810,000 to over 2 million. While these numbers reflect a growth in the overall number of treatment visits, the sharp increase is more the



result of facilities implementing the necessary processes to report their visits on the DHIS2 platform. Regardless, from 2013, 2017, 2019, and 2021, the percentage of services provided by faith-based health facilities was largely unchanged despite the sharp uptick in reported visits between 2013 and 2017 and the change in data sets and related indicators in Kenya’s DHIS2 platform that occurred in 2018.

Table 2: Percentage of HIV treatment visits by people living with HIV on antiretroviral therapy provided by faith-based facilities in 2013, 2017, 2019, and 2021.

	2,013	2,017	2,019	2,021	%change 2019-2021 (COVID)
All Facilities	3,665,111	9,710,688	13,441,562	15,013,531	11.7%
FB facilities	810,082	2,011,790	2,824,319	3,128,954	10.8%
% by FB facilities	22.1%	20.7%	21.0%	20.8%	

In the 2017 study, we identified the ten counties in the 2014 Kenya National AIDS Strategic Plan with the highest number of new HIV infections in the previous calendar year and the ten counties with the greatest number of residents living with HIV. Thirteen counties appeared on one or both of these lists: Bomet, Homa Bay, Kakamega, Kiambu, Kisii, Kisumu, Migori, Mombasa, Nairobi, Nakuru, Nyamira, Siaya, and Turkana. Faith-based health facilities provided 24.5% of all HIV treatment visits for people (both adults and children) living with HIV who were on ART. For this study, we consulted a newer document published by Kenya’s National AIDS Control Council, the *2018 Kenya HIV Estimates*,⁹ to identify the priority counties using the same inclusion criteria (see table 3 below for these numbers). This process yielded a list of 11 priority counties: Busia, Homa Bay, Kakamega, Kiambu, Kisumu, Migori, Mombasa, Murang'a, Nairobi, Nakuru, and Siaya

⁹ National AIDS Control Council (2018). *2018 Kenya HIV Estimates*. Nairobi: Kenya Ministry of Health. Available online: <https://nacc.or.ke/wp-content/uploads/2018/11/HIV-estimates-report-Kenya-20182.pdf>.



Table 3: Top ten counties by total HIV cases and number of new HIV cases in 2018

County	Total HIV cases (2018)	County	New HIV cases (2018)
1. Nairobi	190,993	1. Nairobi	7,159
2. Homa Bay	138,921	2. Homa Bay	4,558
3. Siaya	123,107	3. Siaya	4,039
4. Kisumu	122,301	4. Kisumu	4,012
5. Migori	85,765	5. Migori	2,814
6. Kiambu	59,016	6. Kiambu	2,763
7. Kakamega	52,976	7. Kakamega	2,197
8. Mombasa	41,599	8. Mombasa	1,738
9. Busia	38,606	9. Busia	1,601
10. Murang'a	30,376	10. Nairobi	7,159
<i>Priority counties appearing on one or both of these lists: Busia, Homa Bay, Kakamega, Kiambu, Kisumu, Migori, Mombasa, Murang'a, Nairobi, Nakuru, and Siaya</i>			

The percentage of HIV treatment visits by people living with HIV on ART provided by faith-based health facilities in these eleven counties was 24.4% in 2017, 23.9% in 2019, and 23.8% in 2021. Table 4 shows the total numbers of visits and percentages in each of these eleven counties. Again, the percentages align closely with the 24.5% of visits provided by faith-based health facilities in the priority counties in the 2017 study, even though that study contained three counties—Kisii, Nyamira, and Turkana—not represented in this analysis and one county (Murang'a) represented in this study was not part of the 2017 study.

Table 4: Percentage of HIV treatment visits in eleven priority counties by faith-based health facilities

County	2017			2019			2021		
	Total cases FB	Total cases	%FB	Total cases FB	Total cases	%FB	Total cases FB	Total cases	%FB
Mombasa	203,305	415,975	48.9%	242,103	533,915	45.3%	270,910	579,528	46.7%
Nairobi	571,966	1,348,568	42.4%	717,304	1,810,767	39.6%	798,004	2,017,452	39.6%
Kiambu	107,870	312,088	34.6%	145,803	465,607	31.3%	162,108	509,317	31.8%
Migori	118,322	574,755	20.6%	179,559	843,943	21.3%	196,437	933,898	21.0%
Kakamega	74,818	348,515	21.5%	94,737	494,894	19.1%	101,210	541,281	18.7%
Homa Bay	182,161	910,343	20.0%	240,539	1,302,652	18.5%	264,353	1,424,152	18.6%
Kisumu	125,370	900,202	13.9%	238,629	1,240,656	19.2%	254,139	1,372,165	18.5%
Siaya	76,009	744,920	10.2%	126,760	1,024,810	12.4%	142,960	1,171,240	12.2%



County	2017			2019			2021		
	Total cases FB	Total cases	%FB	Total cases FB	Total cases	%FB	Total cases FB	Total cases	%FB
Nakuru	38,354	301,931	12.7%	52,452	455,305	11.5%	55,803	519,180	10.7%
Busia	29,463	318,199	9.3%	39,114	401,458	9.7%	39,808	423,541	9.4%
Murang'a	8,903	131,702	6.8%	14,790	178,980	8.3%	18,435	198,727	9.3%
Total	1,536,541	6,307,198	24.4%	2,091,790	8,752,987	23.9%	2,304,167	9,690,481	23.8%

Calculating percentages of visits by age cohorts

The total number of treatment visits remained quite consistent from 2017, 2019, to 2021. There was a sharp increase in the total number of visits recorded between 2013 and 2017 as more facilities adopted the technology to report on the DHIS2 platform between these two periods; the total number of visits grew by. The percentages, we wanted to disaggregate these numbers to determine the contributions of faith-based providers for different age cohorts. To do this, we first calculated the treatment visits of people living with HIV on ART using the MOH 731-3 HIV and TB Treatment Revision 2018 data set and related indicators. When possible, we compared these findings with the overall percentages of the same age cohort that were calculated in the 2017 study using the earlier MOH 731 731 HIV Care and Treatment Program data set.

Adult treatment visits

Nationally, all treatment visits by adults living with HIV on ART increased nationally by 4,928,383 visits from 2017 to 2021 (NOTE: this comparison assumes that the same indicator from two different data sets actually reflects the same information). This represents a 56.0% increase in visits over this time period. Visits for this cohort that were provided by faith-based facilities increased by 1,075,438, an increase of 60.2%. The percentage of these treatment visits provided by faith-based health facilities was 20.3% in 2017 and 20.8% in 2021.

The changes from 2019-2021 were more modest. All treatment visits increased by 1,589,075 from 2019-2021, an increase of 13.1%. Visits provided by faith-based facilities increased by 306,677, an increase of 12.0%. The percentage of all treatment visits provided by faith-based health facilities fell slightly during this period, from 21.0% to 20.8%; even though the total number of annual visits provided by faith-based facilities increased, the number in all facilities grew at a faster rate. See Table 5 for a tabular summary of these data.



Adolescent treatment visits

All treatment visits by adolescents (ages 15-24) living with HIV on ART also increased nationally by 56,690 from 2019-2021. This represents a 6.5% increase in visits during this period. Visits provided by faith-based facilities also increased by 12,719, an increase of 6.6%. The percentage of visits by faith-based providers remained stable at 22.1%

The data set provided information on adolescent treatment visits in two age cohorts—10-14 yo and 15-19 yo. For 10-14 yo, total treatment visits fell by 10,163 from 2019-2021, a decrease of 2.2%. These visits fell by 4,151 in faith-based facilities as well, a decrease of 4.2%. Visits among the 15-19 cohort increased during the time period. Total visits by 15-19 year old adolescents living with HIV on ART increased by 66,853, an increase of 16.2% and the number of these visits provided faith-based facilities increased by 16,870, an increase of 18.1%. The percentage of treatment visits for 15-19 provided by faith-based facilities increased slightly from 22.5% in 2019 to 22.9% in 2021.

We cannot report on the increase or decrease in adolescent treatment visits for any time period prior to 2019 because the earlier data set used in the 2013 and 2017 analysis did not report on adolescent cases but classified all case 0-15 as pediatric and all cases over 15 as adult. See Table 5 for a tabular summary of these data.

Table 5: Changes in adult and adolescent treatment visits over time

	2013	2017	2,019	2,021	%change 2019-2021 (COVID)
Treatment visits for ADULTS living with HIV on ART					
All facilities	3,283,544	8,808,542	12,147,850	13,736,925	13.1%
FB facilities	719,370	1,786,093	2,554,854	2,861,531	12.0%
<i>% by FB facilities</i>	<i>21.9%</i>	<i>20.3%</i>	<i>21.0%</i>	<i>20.8%</i>	
Treatment visits for ADOLESCENTS living with HIV on ART					
10-14 All facilities	<i>Data for adolescent visits are not available prior to 2019 because the earlier data set captured only pediatric (0-15) and adult (15+) age cohort data.</i>		453,018	442,855	-2.2%
10-14 FB facilities			98,238	94,087	-4.2%
<i>% 10-14 by FB facilities</i>			<i>21.7%</i>	<i>21.2%</i>	
15-19 All facilities			411,530	479,451	17.0%
15-19 FB facilities			95,941	109,862	18.1%
<i>% 15-19 by FB facilities</i>			<i>22.5%</i>	<i>22.9%</i>	
Adol. (10-19) All facilities			865,616	922,306	6.9%
Adol. (10-19) FB facilities			191,230	203,949	6.8%
<i>% Adol.(10-19) by FB facilities</i>			<i>22.1%</i>	<i>22.1%</i>	



Pediatric treatment visits

If the overall number of adult and adolescent visits increased over time from the 2017 to 2019 to 2021 studies and the overall percentages of treatment visits by faith-provided providers remained unchanged, the data reveals a more troubling trend with pediatric cases. In the 2013 and 2017 reports pediatric cases were defined as 0-15 years old. To compare the same cohorts, we calculated treatment visits for the 2019 and 2021 waves using the same age ranges. While the total number of treatment visits grew from 2013 to 2017 and 2017 to 2019, these numbers fell sharply from 2019 to 2021, by 73,315 in all facilities (8.3% decrease) and by 18,912 in faith-based facilities (an even sharper decline of 10.7%). The percentage of services provided by faith-based facilities also dropped, from a high of 29% in 2017 to 19.5% in 2021.

Table 6: The numbers of treatment visits for children (0-15) living with HIV on ART over time.

	2013	2017	2,019	2,021	%change 2019-2021 (COVID)
Treatment visits for CHILDREN (0-14) living with HIV on ART					
All facilities	381,567	554,713	881,114	807,799	-8.3%
FB facilities	90,712	161,003	176,473	157,561	-10.7%
<i>% by FB facilities</i>	<i>23.8%</i>	<i>29.0%</i>	<i>20.0%</i>	<i>19.5%</i>	

What is to account for these drastic decreases in treatment visits from 2019 to 2021? While these data cannot answer that question with certainty, the clearest hypothesis would be the global COVID-19 pandemic. What happened to overall HIV treatment numbers during the height of this global pandemic?

HIV visits during the COVID Pandemic

We analyzed the services data and found reasons for optimism and concern. The number of total treatment visits increased steadily, even in the midst of the pandemic and the percentage of visits provided by faith-based facilities remained stable as well. However, the picture for pediatric cases is alarming during this same timeframe. We summarize the data in 2019, 2020, and 2021 for adults, adolescents, and children below.

Treatment visits for adults in all facilities grew by 13.1% from 2019-2021 and by 12.0% in faith-based facilities. The rate of growth between 2020 and 2021 slowed significantly. From 2019-2020, 933,126 new visits were provided in all facilities (196,578 in faith-based facilities). From 2020-2021, 655,949 new visits were provided (110,099 in faith-based facilities). This represents a 29.7% reduction in all visits year-to-year and a 44.0% reduction in those visits offered by faith-based facilities. See table 7 for all of these data.



Table 7: Adult visits 2019-2021 (during COVID response)

	2,019	2020	2,021
Adult visits all facilities	12,147,850	13,080,976	13,736,925
Adult visits FB facilities	2,554,854	2,751,432	2,861,531
% by FB facilities	21.0%	21.0%	20.8%
% change in adult visits during the COVID response		2019-2020: +7.6 in all facilities; +7.7% in FB facilities	2020-2021: +5.0% in all facilities; 4.0% in FB facilities
	2019-2021: +13.1% in all facilities; +12.0% in FB facilities		

Adolescent visits tell a similar story, though troubling trends start to emerge more clearly among younger adolescents. Across all adolescents 10-19 years old, treatment visits increased year over year, with an overall increase of 6.5% in all facilities from 2019-2021 and 6.7% in faith-based facilities for the same period. The percentage of visits provided by faith-based facilities remained unchanged at 22.1%. Even though the total number of visits for all adolescents in each year, the rate of growth in the number of overall visits year-to-year decreased by 27.2%. In faith-based facilities, the decrease in the rate of growth was even steeper at 78.4%. The numbers for visits for 15-19 year olds was not so drastic, with visits increasing year to year and the rate of growth dropping by a more modest 4.6% among all facilities and 6.8% among faith-based facilities.

The most troubling decreases were seen in the younger adolescent cohort. In all facilities, the number of treatment visits actually fell by 895 from 2019-2020 and by 9,268 from 2020-2021. This represents a 2.2% reduction in all treatment visits from 2019-2021. The reduction in visits by faith-based providers was even more drastic. While visits in faith-based facilities for this cohort rose by 304 from 2019-2020, they fell sharply from 2020-2021, decreasing by 4,455. This represents an overall reduction of 4.4% from 2019-2021. See table 8 for all of these data.

Table 8: Adolescent treatment visits 2019-2021 (during COVID response)

	2,019	2020	2,021
Adol. (10-19) All facilities	865,616	898,414	922,306
Adol. (10-19) FB facilities	191,230	201,687	203,949
% Adol.(10-19) by FB facilities	22.1%	22.4%	22.1%
% change in adolescent visits (10-19) during the COVID response		2019-2020: =-+3.8% in all facilities; +5.4% in FB facilities	2020-2021: =+2.7% in all facilities; +1.1% in FB facilities



	2019-2021: +6.5% in all facilities; +6.7 in FB facilities		
10-14 All facilities	453,018	452,123	442,855
10-14 FB facilities	98,238	98,542	94,087
<i>% 10-14 by FB facilities</i>	<i>21.7%</i>	<i>21.8%</i>	<i>21.2%</i>
<i>% change in 10-14 yo visits during the COVID response</i>		<i>2019-2020: =-.2% in all facilities; +.3% in FB facilities</i>	<i>2020-2021: =-2.0% in all facilities; -4.5% in FB facilities</i>
	2019-2021: -2.2% in all facilities; -4.2% in FB facilities		
15-19 All facilities	411,530	446,291	479,451
15-19 FB facilities	95,941	103,145	109,862
<i>% 15-19 by FB facilities</i>	<i>23.3%</i>	<i>23.1%</i>	<i>22.9%</i>
<i>% change in 15-19 yo visits during the COVID response</i>		<i>2019-2020: =+8.4% in all facilities; +7.5% in FB facilities</i>	<i>2020-2021: =+7.4% in all facilities; +6.5% in FB facilities</i>
	2019-2021: +16.2% in all facilities; +18.1% in faith-based facilities		

The most troubling data is found among pediatric treatment visits. Because the timeframe of 2019-2021 uses only the data from the MOH 731-3 HIV and TB Treatment Revision 2018, these data reflect children 0-9 years old, with the 10-14 cohort defined as young adolescents and reported on above. The total number of treatment visits dropped each year, falling by 63,152 across all facilities between 2019-2021, a percentage decrease of 17.2%. Visits by faith-based facilities fell by 14,761, a decrease of 18.9%. See table 9 for all of these data.

Table 9: Pediatric visits 2019-2021 (during COVID response)

	2,019	2020	2,021
Ped. visits all facilities	428,096	388,444	354,300
Ped. visits FB facilities	78,235	69,111	63,474
<i>% by FB facilities</i>	<i>18.3%</i>	<i>17.8%</i>	<i>17.4%</i>
<i>% change in 0-9 yo visits during the COVID response</i>	2019-2021: -17.2% in all facilities; -18.9% in FB facilities		

This drastic drop in pediatric visits during COVID is worthy of further investigation. Limited by what this treatment data alone could tell us, we formulated various hypotheses and then analyzed the data available to see whether it supported each hypothesis.



Hypothesis: The decrease in pediatric visits is primarily due to the fewer numbers of pediatric cases as progress in the global response limits the number of new cases.

An analysis of data from the UNICEF data dashboard does show a drop in the number of children in Kenya living with HIV as fewer children are born with the virus and a higher number of children age into adolescence. In 2019, UNICEF estimated 54,000 children 0-9 living with HIV; 51,000 in 2020; and 48,000 in 2021.¹⁰ While these numbers are encouraging, they represent a decrease of 12.9% from 2019-2021 while pediatric visits dropped by 17.2% in the same period. This reduction in visits, then, might indeed be due in large part to an overall drop in new infections and a subsequent aging out of older children into the adolescent cohort. A closer look at these data, however, reveals significant gaps in services, either in pediatric cases or in young adolescents.

Data from the same UNICEF dashboard indicate that Kenya had 6,200 new pediatric infections in 2019, 6,000 in 2020, and 5,200 in 2021. Looking at annual incidence rates and overall disease burden together demonstrates that over 23,000 children either aged out of the pediatric cohort or died from 2019-2021. This number is derived from the 17,400 new pediatric infections from 2019-2021 even while the overall number of pediatric cases decreased by 6,000 in the same time period. While we cannot know the number of deaths in children 0-9, in many ways that data is moot because HIV infection should not be a terminal condition in children living with HIV enrolled in clinical care. Regardless, we actually see a decrease of 10,163 in treatment visits in 10-14 year olds (the adolescent cohort pediatric cases would age into) from 2019-2021. If visits decreased even as thousands of new 10-14 year-old adolescents living with HIV aged into this cohort, a reasonable conclusion from these data is that the gap in care is high not only in pediatric cases but also among young adolescents.

Hypothesis: The decrease in pediatric cases reflects difficulties in women living with HIV accessing HIV services during the pandemic and they could not bring their children for clinical care.

This may indeed be a factor but we were surprised to see that the treatment visits among older adolescent girls (15-19) and young women (20-24) actually increased in each year from 2019-2021; the rate of increase was higher in faith-based facilities though the increase was seen in the total number of visits as well. If the drop in pediatric visits indicates that women living with HIV may have experienced difficulties in accessing clinical care for their children living with the virus, these data would indicate that they nonetheless accessed services for themselves during the acute response phase of the pandemic. See Table 10 for these data.

¹⁰ <https://data.unicef.org/resources/hiv-estimates-for-children-dashboard/>



Table 10: Treatment visits by adolescent girls (15-19) and young women (20-24) living with HIV on ART in 2019, 2021

	2019	2021
All visits, female 15-19	238585	273581
FB facilities, female 15-19	53298	62367
<i>% by FB facilities</i>	22.3%	22.8%
% change in female 15-19 visits during the COVID response	2019-2021: +14.7% in all facilities; +17.0% in FB facilities	
All visits, female 20-24	481957	521517
FB facilities, female 20-24	77183	86906
<i>% by FB facilities</i>	16.0%	16.7%
% change in female 20-24 visits during the COVID response	2019-2021: +8.2% in all facilities; +12.6% in FB facilities	

Hypothesis: The overall decrease in pediatric visits is disproportionately due to the failure to ensure that neonates recently born to mothers living with HIV are referred into clinical care.

The data do seem to back up this hypothesis. If we disaggregate the 0-9 pediatric data to look only at the treatment visits for children <1, we find that the overall number of treatment visits fell sharply, from 10,624 in 2019 to 5,322 in 2021, a drop of 49.9%. Neonatal treatment visits by faith-based providers also fell from 2,743 to 1,185, or 56.8%. During this same time period, new infections among children decreased by 16.1% in Kenya according to the UNICEF dashboard. This drop in new infections is not sufficient to account for the 50% reduction in treatment visits.

Table 11: Treatment visits by infants <1 living with HIV on ART in 2019, 2021

	2,019	2,021
Infant (<1) all facilities	10,624	5,322
Infant (<1) FB facilities	2,743	1,185
<i>% by FB facilities</i>	25.8%	22.3%
% change in <1 yo visits during the COVID response	2019-2021: -49.9% in all facilities; -56.8% in faith-based facilities	

If treatment visits for newborns and infants dropped precipitously, but treatment visits of women living with HIV who are of childbearing age actually increased during the height of the pandemic, this raises questions about the adequacy of screening mothers during the antenatal period. We could not find any data on the percentage of women in Kenya



living with HIV who were aware of their HIV status (the “first 95” target) but UNAIDS does gather and report on other data elements related to prevention of mother-to-child transmission (PMTCT). According to the aidsinfo dashboard managed by UNAIDS,¹¹ PMTCT coverage among women in Kenya living with HIV on ART fell from 96% in 2019 to 91% in 2020 and 2021. HIV testing among all pregnant women dropped from 94% in 2019 to 89% in 2020 to 85% in 2021. Higher rates of screening among women aware of their status in comparison to HIV screening rates for all pregnant women are not surprising. Many women in this group, after all, are enrolled in HIV clinical care to manage their own health whereas women unaware of their status would by definition not be enrolled in care. And yet, even for this cohort of women aware of their status, the percentage enrolled in formal PMTCT protocols dropped during the acute phase of the pandemic from >95% in 2019 to 91% in 2020 and 90% in 2021. These data indicate that a significant gap exists in PMTCT coverage for all women, especially for women unaware of their status. If these data do indeed point to such a gap, then innovative initiatives that reach women who are not currently accessing HIV testing or antenatal care could lead to significant reductions in new neonatal and pediatric infections.

CONCLUSION

In all, the data analyzed in this study point to similar findings from the earlier studies. The percentage of HIV treatment visits for people living with HIV on ART that were provided by faith-based health facilities was 20.8% across the nation in 2021. This number was basically unchanged from 2017 when that percentage was 20.7%. Among the counties with the highest number of new infections and the greatest HIV caseload, those percentages were a bit higher. Faith-based facilities provided 23.8% of these visits in 2021, a slight decrease from 24.4% in 2017. The overall number of visits increased sharply from 2017 to 2021 period from 9,710,688 to 15,013,531, a percentage increase of 54.6%; visits provided by faith-based facilities increased at a similar rate of 55.5% during the same time period. In short, when looking at the population as a whole, the percentage of treatments visits for people living with HIV on ART provided by faith-based facilities has remained remarkably consistent from 2017 to present, standing at 20.8% of all treatment visits in 2021.

However, when examining age-specific cohorts across time—especially during the height of the COVID pandemic response from 2019-2021—the data tell a different story. Adult (25+) visits increased by 13.1% during this period in all facilities and 12.0% in faith-based facilities with the percentage of faith-based visits staying consistent at 21.0% in 2019 and 20.8% in 2021. Likewise, the total number of adolescent (10-19) treatment visits increased by 6.5% in all facilities and 6.7% in faith-based facilities with the percentage of visits provided by faith-based facilities unchanged at 22.1%. Pediatric

¹¹ <https://aidsinfo.unaids.org>.



visits paint a different picture. They fell by 17.2% across all facilities, with a greater decrease of 18.9% in faith-based facilities. The drop was sharpest among infants <1, with a striking 49.9% decrease in treatment visits from 2019-2021, the height of the COVID response. However, even among younger adolescents (10-14 yo) the number of treatment visits fell by 10,163 even as thousands of children aged into this cohort.

These data draw our attention not only to the need for comprehensive pediatric HIV services for the 0-9 age range in general, they draw our attention to the youngest group in the cohort (0-1 yo) and the group aging out of the cohort into adolescence. The devastating drop in neonatal/infant HIV treatment visits raises concern about gaps in clinical coverage for these infants. These numbers may point not only to the gap in service provision offered by pediatric treatment programs but also by PMTCT programs. Data from UNAIDS (aidsinfo.unaids.org) and UNICEF (data.unicef.org) would suggest that this may indeed be a factor. These data show that PMTCT coverage for pregnant women living with HIV and on ART in Kenya fell from 95% in 2019 to 90% in 2021. This percentage remains high (though not optimal), which indicates that most women aware of their HIV status sought to prevent the perinatal transmission of the virus to their child. Among all pregnant women in Kenya, PMTCT coverage more sharply, from 94% in 2019 to 85% in 2021.

On the opposite end of the age range for the cohort, we saw thousands of children living with HIV aging out of the pediatric cohort and into the young adolescent cohort even as more than 10,000 treatment visits for 10-14 year olds living with HIV were offered in the country between 2019-2021.

These data point to the need for comprehensive HIV screening for pregnant mothers and subsequent referral to ongoing PMTCT services throughout pregnancy and delivery. They also point to the need to equip pediatric HIV providers to increase their capacity to provide comprehensive psycho-social services for adolescents aged 10-14 since almost no young person transitions out of pediatric care at age 10. Such services could include providing emotional support for understanding a positive HIV status through the already turbulent transition into adolescence and offering age-appropriate, comprehensive sexual and reproductive health education and skills negotiation. Because these overall data demonstrate that faith-based facilities provide over 20% of the HIV services in Kenya, efforts to enhance such services—both antenatal screening/PMTCT follow-up and enhanced services for young adolescents living with HIV—needs to include these faith-based partners.

