

# HIV prevalence and incidence in adolescent girls and young women in Lesotho: results from the LePHIA survey 2016-2017

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## Background

HIV acquisition remains high among adolescent girls and young women (AGYW, aged 15-24 years) in sub-Saharan Africa. Few data are available on risk factors for HIV in a nationally representative sample of this population. A Population-based HIV Impact Assessment conducted in Lesotho (LePHIA) in 2016-2017 provides recent data on prevalence and the first assessment of national HIV incidence in AGYW.

## Methods

LePHIA used a two-stage sampling design to select a nationally representative sample of adults. Individuals completed an interview and HIV testing. Incidence was measured using HIV-1 LAg avidity paired with viral load data. The association between demographic and behavioral variables and HIV prevalence and incidence was assessed using logistic regression, incorporating survey weights. A time trend in prevalence and indicators of risk was estimated using weighted data from the Demographic Health Surveys (DHS) in 2009 and 2014.

## Results

- Of 2708 eligible AGYW, **2358** (87%) were interviewed and tested for HIV. Annualized incidence was high at **1.8%** (95% CI:0.8-2.8%), particularly in urban areas (**2.3%**, 95% CI:0.7-3.9%).
- Weighted HIV prevalence was **11.1%** (95% CI:9.7-12.5%) overall, **5.7%** in **15-19** year olds (64/1156; 95% CI:4.1-7.2%) and **16.7%** in **20-24** year olds (209/1202; 95% CI:14.4-19.0%). This translates into an estimated 5862 HIV-positive 15-19 year olds and 16707 20-24 year olds.
- Since 2009, there has been a decrease in overall prevalence (**13.6%** to **11.1%**), although there was an increase in **15-17** year olds (**2.7%** to **6.2%**,  $p_{trend}=0.02$ , Figure 1), possibly due to increased survival after vertical infection. The largest difference is seen in **23-24** year olds, where there has been a decrease from **31.6%** in 2009 to **19.9%** in 2017.
- Compared to 2009, there has been a **two-fold** increase in odds of attending secondary/tertiary education (**Odds Ratio [OR] 2.21**; 95% CI:1.90-2.56, Figure 2), and a **41%** reduction in the odds of sexual debut before 15 years (**OR 0.59**, 95% CI:0.44-0.79).

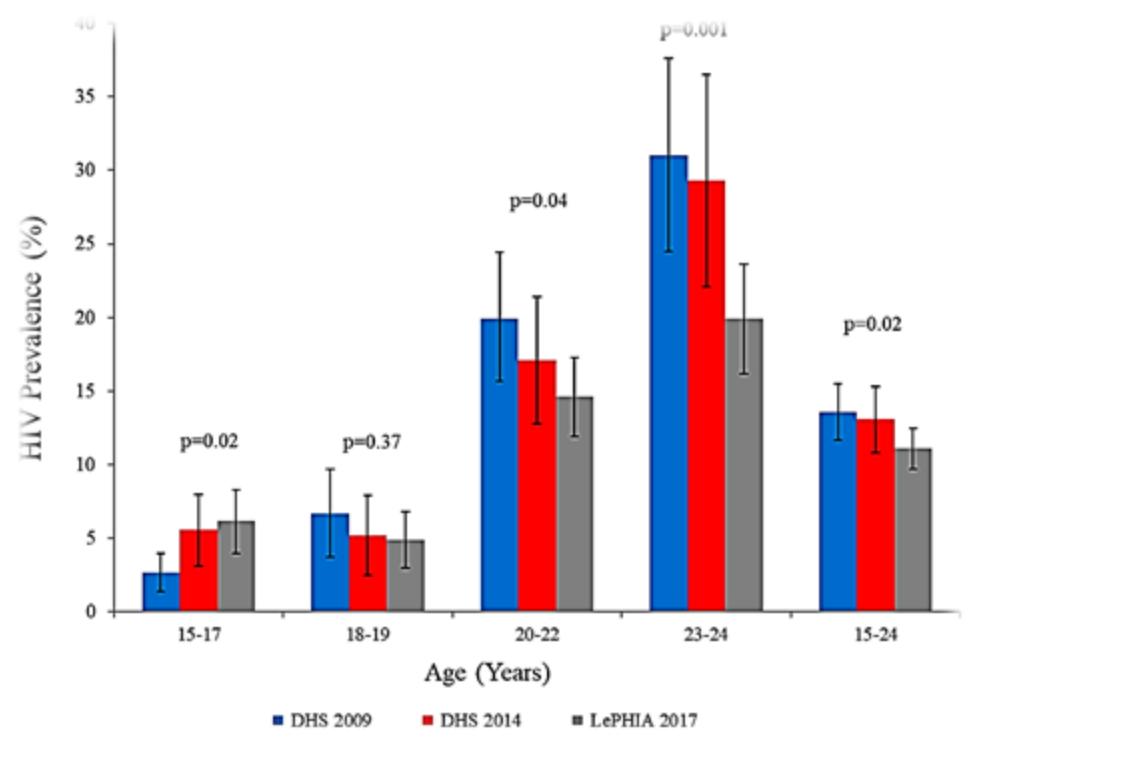


Figure 1: National weighted HIV prevalence (%) in AGYW in Lesotho from 2009-2017

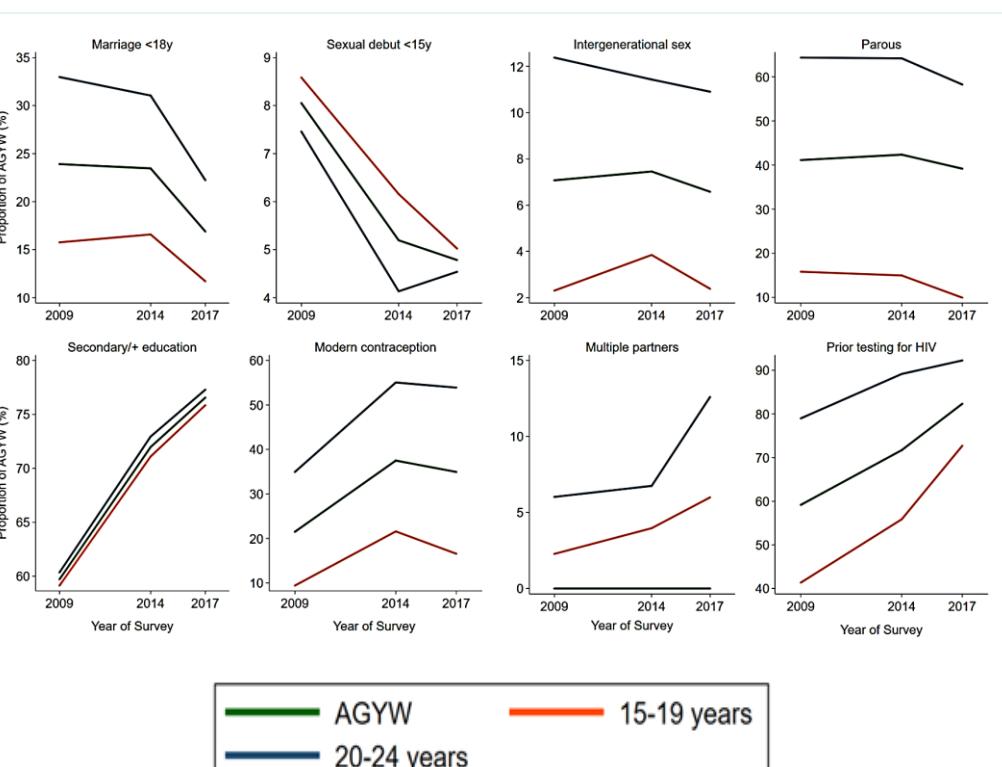


Figure 2. Changes in factors associated with HIV risk among AGYW in Lesotho, 2009-2017

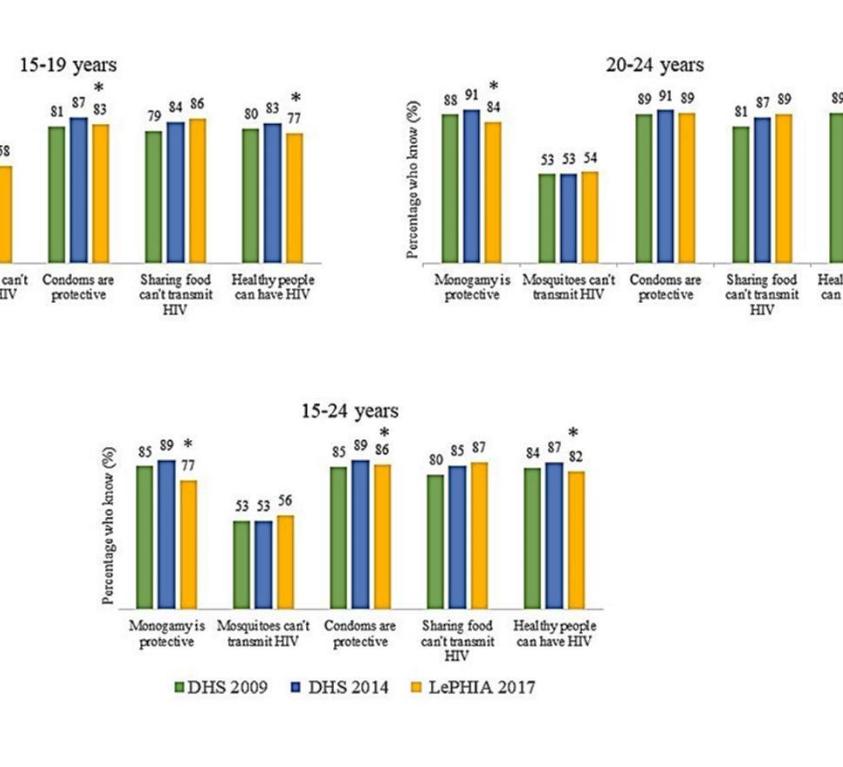


Figure 3. Changes in correct HIV knowledge among AGYW in Lesotho, 2009-2017

## Results (continued)

- However, there has been a significant decline in comprehensive HIV knowledge (from 38% in 2014 to 31% in 2017; Figure 3). This is primarily driven by a decrease in knowing that monogamy is protective and that a healthy-looking person could have HIV.
- Correlates of prevalent infection** include having an **HIV-positive partner** (adjusted OR (aOR) 11.72, 95%CI:6.07-22.62, Table 1), **anal sex history** (aOR 3.08, 95%CI:1.11-8.57), and **having migrated outside Lesotho in the past year** (aOR 1.82, 95%CI:1.01-3.31). **Intergenerational sex** in the past year was associated with an increased odds of infection, but this association was not upheld after adjusting for the suspected or known HIV status of the partner.

Table 1. Correlates of HIV infection in AGYW in Lesotho, 2016-2017

Characteristic (n=2,358)	OR (95% CI)*	aOR (95% CI)*	p value*
Migration			
Never left Lesotho	1	1	
Away for >1 month in lifetime, but not past year	1.23 (0.76-2.00)	1.36 (0.68-2.72)	0.37
Away for >1 month in past year	2.54 (1.56-4.14)	1.82 (1.01-3.31)	0.05
Education†			
None	1	1	
Primary	0.41 (0.13-1.32)	0.29 (0.06-1.36)	0.11
Secondary	0.28 (0.09-0.88)	0.22 (0.05-1.01)	0.05
Tertiary/ Above Secondary	0.20 (0.06-0.67)	0.09 (0.02-0.42)	0.04
Marital status			
Single	1	1	
Married or living with partner	2.35 (1.79-3.09)	1.09 (0.62-1.93)	0.75
Divorced, separated or widowed	5.4 (3.1-9.6)	1.56 (0.68-3.56)	0.28
Number of lifetime sexual partners			
1	1	1	
2 to 3	2.16 (1.51-3.10)	1.84 (1.21-2.78)	0.006
≥4	3.93 (2.43-6.36)	2.44 (1.45-4.08)	0.002
Sexual activity before 15	2.28 (1.31-3.98)	1.90 (0.91-3.96)	0.08
Ever had anal sex	3.17 (1.29-7.78)	3.08 (1.11-8.57)	0.03
Intergenerational sex (10+ years older) in past 12 months	1.85 (1.19-2.87)	1.00 (0.57-1.74)	0.98
HIV status of sexual partners in the past 12 months <sup>b,f</sup>			
All HIV-negative partners	1	1	
Any suspected or known HIV-positive partner	13.3 (7.9-22.4)	11.7 (6.1-22.6)	<0.001
Any partner with unknown status	1.11 (0.77-1.61)	1.29 (0.86-1.93)	0.21

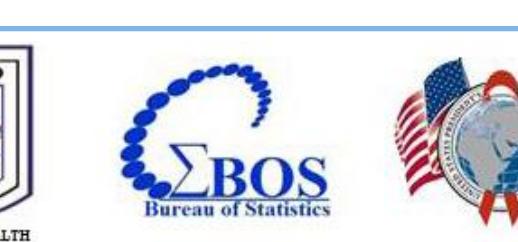
For the **642** AGYW living with parents, maternal education was strongly protective, even after adjusting for the AGYW's education, sexual behavior, and household wealth (Table 2).

Table 2. Parental correlates of HIV infection in AGYW in Lesotho, 2016-2017

AGYW living in households in which there is data from a parent (n=642)	Characteristic (n=2,358)	OR (95% CI)*	aOR (95% CI)*	p value*
Mean age	18.6 (18.4-18.9)			
Maternal education				
None	1	1		
Primary	0.65 (0.18-2.43)	0.16 (0.03-0.88)	0.04	
Secondary	0.33 (0.08-1.42)	0.06 (0.01-0.50)	0.01	
Tertiary/Above secondary	0.14 (0.02-1.00)	0.03 (0.01-0.62)	0.03	
Mother away >1 month in past year	0.38 (0.07-2.17)			
Paternal education				
None	1	1		
Primary	0.37 (0.15-0.92)	0.31 (0.07-1.33)		
Secondary	0.57 (0.13-2.59)			
Father outside of Lesotho >1 month in past 12 months	2.37 (0.31-18.02)			
Parents currently married	0.70 (0.40-1.23)	0.86 (0.33-2.27)	0.76	
Household wealth quintile				
Highest quintile	0.81 (0.36-1.83)	0.24 (0.05-1.33)	0.10	

## Conclusion

HIV prevalence appears to be declining in AGYW, but incidence remains high. Indicators of risk are improving, aside from HIV knowledge, which conveys risk for future acquisition.



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