Costs of providing pharmacy-initiated PrEP in Kenya: findings from a pilot study

1090

Alexandra P. Kuo[1], Obinna Ekwunife[2], Peter Mogere[3], Victor Omollo[4], Josephine Odoyo[4], Yilin Chen[5], Jared M. Baeten[6*], Elizabeth Bukusi[4,5,7], Kenneth Ngure[5,8], Katrina F. Ortblad[2], Monisha Sharma[5].

1 Department of Pharmacy, University of Washington, Seattle, USA, 2 Public Health Sciences Division, Fred Hutchinson Cancer Research Center, Seattle, USA, 3 Partners in Health and Research Development, Thika, Kenya, 4 Centre for Microbiology Research, Kenya Medical Research Institute, Nairobi, Kenya, 5 Department of Global Health, University of Washington, Seattle, USA, 6 Department of Medicine, University of Washington, Seattle, USA, *JMB is an employee of Gilead Sciences, outside of the present work, 7 Department of Obstetrics and Gynecology, University of Washington, Seattle, USA , 8 Department of Community Health, Jomo Kenyatta University of Agriculture and Technology, Nairobi, Kenya.

BACKGROUND:

- Providing oral HIV pre-exposure prophylaxis (PrEP) at pharmacies can expand access to PrEP; however, implementation costs are uncertain.
- Costing analyses of this novel PrEP delivery model of pharmacy-based PrEP delivery in Kenya may assist in implementation and comparison to standard-of-care.

OBJECTIVE:

To estimate the costs associated with pharmacy-based PrEP delivery in Kenya through activity-based microcosting.

METHODS:

- **Setting:** Five private pharmacies in Thika and Kisumu, Kenya delivering PrEP services to eligible clients ≥18 years
- **Data Collection:**
  - Time-and-motion observations of PrEP initiation and refill visits at the pilot pharmacies.
  - Costs (2021 USD) were collected from the provider perspective using study budgets, pharmacy expenditure records, and staff interviews.
  - To obtain financial and economic costs associated with pharmacy overhead, including salaries, we interviewed pharmacy owners.
- **Analysis:**
  - We categorized financial costs into core components of PrEP delivery: HIV risk screening, counseling, HIV testing, and prescribing/dispensing; we excluded research costs.
  - Costs that were not specific to pharmacy-based delivery (e.g., start-up costs such as furniture) were annualized as they were necessary for other activities outside of pharmacy-based PrEP delivery.

Acknowledgements: All study participants and the research team members at:.

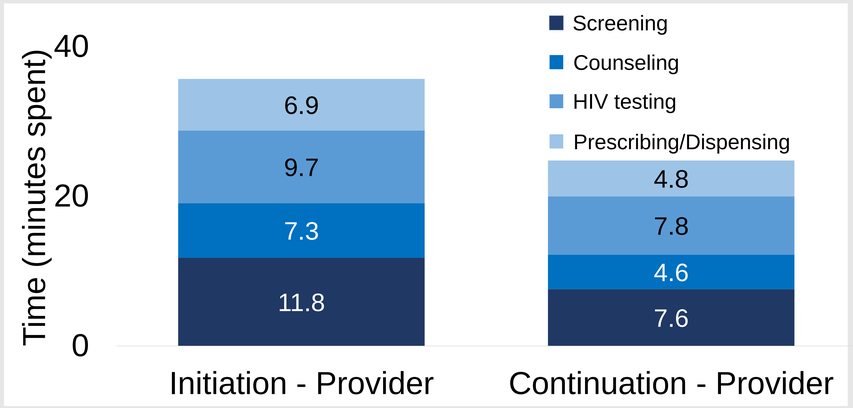

Fig. 1. Provider perspective time and motion

	Average provider financial cost, per visit[1]	
Delivery Category	**Initiation**	**Continuation**
Screening	$0.38	$0.25
Counseling	$0.31	$0.25
HIV testing[2]	$0.54	$0.45
Prescribing/ Dispensing[3]	$6.47	$18.91
Total	$7.70/ 1 month	$19.86/3 months

[1]Converted from KES to USD using conversion rate averaged from 11/2020 to 12/2021 ($1USD = 110.72 KSH)
[2]Includes hypothetical HIV test cost if acquired, as this was donated for the study
[3]Includes hypothetical PrEP cost if acquired, as this was donated for the study

Fig. 2. Financial costs of pharmacy-based PrEP delivery

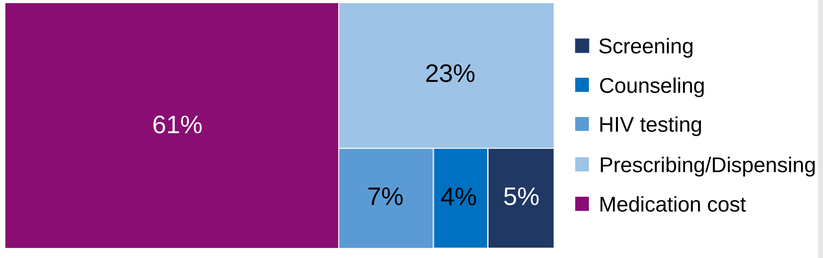

Fig. 3. Distribution of financial costs for initiation visits

Funding: U.S. NIH MH120106 **Contact:** alexk111@uw.edu

Daily oral PrEP can delivered at pharmacies at costs comprable to PrEP delivery at public clinics in Kenya

RESULTS:

- From July to October 2021, we conducted 64 time-and-motion observations of clients initiating (n=15) and continuing (n=49) PrEP at pharmacies. **Fig. 1**.
- Pharmacy PrEP initiation visits took providers a median of 36 minutes (IQR 27-38), with HIV risk screening accounting for a third of this time (median: 12 minutes, IQR 11-17); continuation visits were ~10 minutes shorter for providers, taking a median of 25 minutes (IQR 21-29), **Fig. 1**.
- The median financial cost per client for pharmacy providers to deliver PrEP was $7.70 per month (IQR $6.72-$9.41) at initiation and $19.86 per 3 months (IQR $17.21-$21.74) at continuation visits, **Fig. 2**, with PrEP drugs accounting for the greatest proportion of costs, **Fig. 3**.
- The monthly per client cost of pharmacy PrEP initiation visits was lower than continuation visits ($6.62, IQR $5.47-$7.29), which account for the majority of clients' visits.

CONCLUSION:

- Financial costs associated with pharmacy-based PrEP delivery may be comparable to facility-based PrEP service delivery models.
- Additional research is needed to optimize costs, such as cost-sharing models, government subsidized medications, fee-for-service models.
- Improving efficiencies in pharmacy-based PrEP delivery (e.g., provider multitasking) may help decrease cost.