



## Population Council Knowledge Commons

---

Reproductive Health

Social and Behavioral Science Research (SBSR)

---

2015

# Cost and technical efficiency of integrated HIV and SRH services in Kenya and Swaziland

Integra Initiative

Follow this and additional works at: [https://knowledgecommons.popcouncil.org/departments\\_sbsr-rh](https://knowledgecommons.popcouncil.org/departments_sbsr-rh)

 Part of the [Demography, Population, and Ecology Commons](#), [Family, Life Course, and Society Commons](#), [International Public Health Commons](#), [Maternal and Child Health Commons](#), and the [Women's Health Commons](#)

---

### Recommended Citation

"Cost and technical efficiency of integrated HIV and SRH services in Kenya and Swaziland," Steps to Integration, Issue 4. Washington, DC: Integra Initiative, 2015.

This Brief is brought to you for free and open access by the Population Council.



This Steps to Integration series provides a guide on how to integrate HIV and sexual and reproductive health (SRH) services based on findings from the Integra Initiative.

The Integra Initiative is a research project on the benefits and costs of a range of models for delivering integrated HIV and SRH services in high and medium HIV prevalence settings, to reduce HIV infection (and associated stigma) and unintended pregnancies. It was managed by the International Planned Parenthood Federation (IPPF) in partnership with the London School of Hygiene & Tropical Medicine (LSHTM) and the Population Council.

Findings from the project show that integrating HIV and SRH services has the potential to:

- ✓ Increase uptake of health services
- ✓ Increase range of services available
- ✓ Improve quality of services and efficient use of resources
- ✓ Enable health systems to respond to client needs and improve overall client satisfaction



# Cost and technical efficiency of integrated HIV and SRH services in Kenya and Swaziland

## Introduction

Policy makers and researchers have long hypothesized the potential benefits of integrating HIV prevention, treatment and care with sexual and reproductive health (SRH) services in settings with generalised HIV epidemics. In addition to improving health and social outcomes, integration of HIV and SRH services has been argued to hold the promise of increasing the efficiency of service delivery and thereby maximizing the use of scarce health care resources. Economic theory suggests several potential efficiency advantages at both the service and programmatic levels from the integration of HIV and SRH services. However, despite the well-articulated economic rationale for integrating these services, evidence on the unit cost and efficiency gains associated with integration remains scarce.

## Methods

A retrospective facility based costing study was conducted in 40 non-governmental organization and public health facilities in Kenya and Swaziland to estimate the unit costs of six integrated HIV and SRH services\*. Determinants of costs of integrated HIV and SRH services were evaluated and the existence of economies of scale and scope associated with integrated delivery of HIV and SRH services explored. Finally, the efficiency of health facilities delivering integrated HIV and SRH services taking into account structural and process measures of quality of care and the determinants of efficiency were explored.

## Findings

### COST AND RESOURCE USE ANALYSIS

This study found considerable variation in the relative proportion of visits and unit costs for the different HIV and SRH services by health facility and integration model.

The study results revealed a high proportion of fixed costs across all visit types with the exception of HIV treatment visits; these fixed costs are largely driven by human resource costs.

The unit costs per visit for family planning, cervical cancer screening and postnatal care (PNC) services were significantly higher in the NGO facilities compared to public facilities. When analyzed by service type, cervical cancer screenings had the highest proportion of fixed mean costs accounting for 69-92% in both countries.

Overall study findings reveal that typical measures of integration (such as the range of services provided in either the facility or the MCH unit) may increase average cost, with little impact on cost of increased service mix reported by clients (functional integration).

\*Services include: Family planning, postnatal care, cervical cancer screening, HIV counseling and testing, STI treatment and HIV treatment and care.

Improvements in the range of services provided by staff (HR integration) were more likely to be achieved in facilities which also improved other elements of integration. While there was no overall relationship between integration and workload at facilities, HIV and SRH integration may be most influential on staff workload for provider-initiated HIV testing and counselling (PITC) and PNC, particularly where HIV care and treatment services are being supported with extra SRH and HIV staffing. These findings suggest that there may be potential for further efficiency gains through integration, but overall the pace of improvement is slow.

## DETERMINANTS OF COSTS AND EXISTENCE OF ECONOMIES OF SCALE AND SCOPE

The analysis of economies of scale and scope reveal that at the current output levels, only HIV counselling and testing services are characterized by service specific economies of scale. No overall economies of scale exist as all outputs are increased. The results also indicate cost complementarities between cervical cancer screening and HIV care, PNC and HIV care, and FP and STI treatment; combinations only suggesting cost advantages from jointly providing these services.

The study results also reveal a complex relationship between integration and the costs of HIV and SRH service delivery. While integration may increase the overall costs of service delivery in certain circumstances, it can also improve the efficiency of the services delivered.

Physical integration, either by using room space to provide more services or the extent to which health workers provide multiple services, can reduce costs.

## EFFICIENCY

The results of the efficiency measurement model indicate low estimates of efficiency (mean 49%) suggesting that a substantial level of inefficiency exists across integrated HIV and SRH services in the facilities studied.

When quality and efficiency were examined as separate dimensions of performance, majority of the facilities were found to exhibit both low efficiency and quality of care.

When the structural aspects of integration were disaggregated, the results reveal a positive significant coefficient for the number of additional HIV services provided within the MCH and a negative significant coefficient for HIV services provided in the same room. However, no significant effect was found for the functional index of integration, the number of additional HIV and STI services within the facility, or the number of additional HIV services provided per clinical staff.

A negative and significant effect of the number of HIV services per clinical room suggests that integration of HIV and SRH services in one room may reduce efficiency of service delivery.

## Conclusion

For all HIV and SRH services, variability in unit costs and cost components suggest the potential to reduce costs of delivery through better use of both human and capital resources.

These findings reveal that contrary to expectation, efficiency gains from the integration of HIV and SRH services, if any, are likely to be modest. In addition, the results have shown that efficiency gains from joint production are dependent on the specific combination of resources used for different services. Efficiency gains are likely to be most achievable in settings with substantial fixed costs. The presence of cost complementarities for only three services combinations implies that careful consideration of setting, specific clinical practices, and the extent to which they can be combined should be made when deciding which services to integrate.

Regarding economies of scope, this study suggests that planners in all settings need to carefully consider the detailed processes and clinical practice required by each service, and which of these can be combined when services are integrated, before assuming substantial efficiency gains. The extent to which the specific findings of this study can be directly generalised will depend on how similar service delivery and clinical practice are to those observed here.

Finally, it should be noted that integration has many aims (and consequences) and that efficiency considerations are only one factor in optimal service design. Policy makers are advised to be cautious in the estimation of cost savings from integration to optimally balance cost with other service delivery arms.

## References

- i. Obure CD., S Sweeney, V Darsamo, C Michaels-Igbokwe, L Guinness, F Terris-Presthold, E Muketo, Z Nhlabatsi, Integra Initiative, CE Warren, S Mayhew, C Watts, A Vassell. "The Costs of Delivering Integrated HIV and Sexual Reproductive Health Services in Limited Resource Settings." *PLoS One* 2015, 10(5).
- ii. Obure, C.D., R. Jacobs., L. Guinness, S. Mayhew, Integra Initiative, and A. Vassall. "Does integration of HIV and Sexual Reproductive Health (SRH) services increase health facility technical efficiency? An application of a two-stage semi parametric approach incorporating quality measures" *Social Science and Medicine*.\*
- iii. Obure, C.D., L. Guinness, Integra Initiative, and A. Vassall. "Economies of scale and scope in the provision of integrated HIV and SRH services in Kenya and Swaziland." *Sexually Transmitted Infections Journal*.\*

\*Under review

FOR MORE INFORMATION PLEASE CONTACT



Population Council  
4301 Connecticut Avenue NW, Suite 280  
Washington DC 20008, USA  
[cwarren@popcouncil.org](mailto:cwarren@popcouncil.org)



International Planned Parenthood Federation  
4 Newhams Row  
London, SE1 3UZ, UK  
[jhopkins@ippf.org](http://jhopkins@ippf.org)



Centre for Population Studies  
London School of Hygiene and Tropical Medicine  
London WC1B 3DP, UK  
[Susannah.Mayhew@lshtm.ac.uk](mailto:Susannah.Mayhew@lshtm.ac.uk)