

EVALUATING EFFECTIVENESS

PPCP Works: Expand. Integrate. Optimize.

Strong evidence that service integration through PPCP increases service capacity, accelerates the HIV cascade, improves efficiency, and delivers high value for money.



Evaluation Period
Pre: 2022–2024
Post: 2025–2026



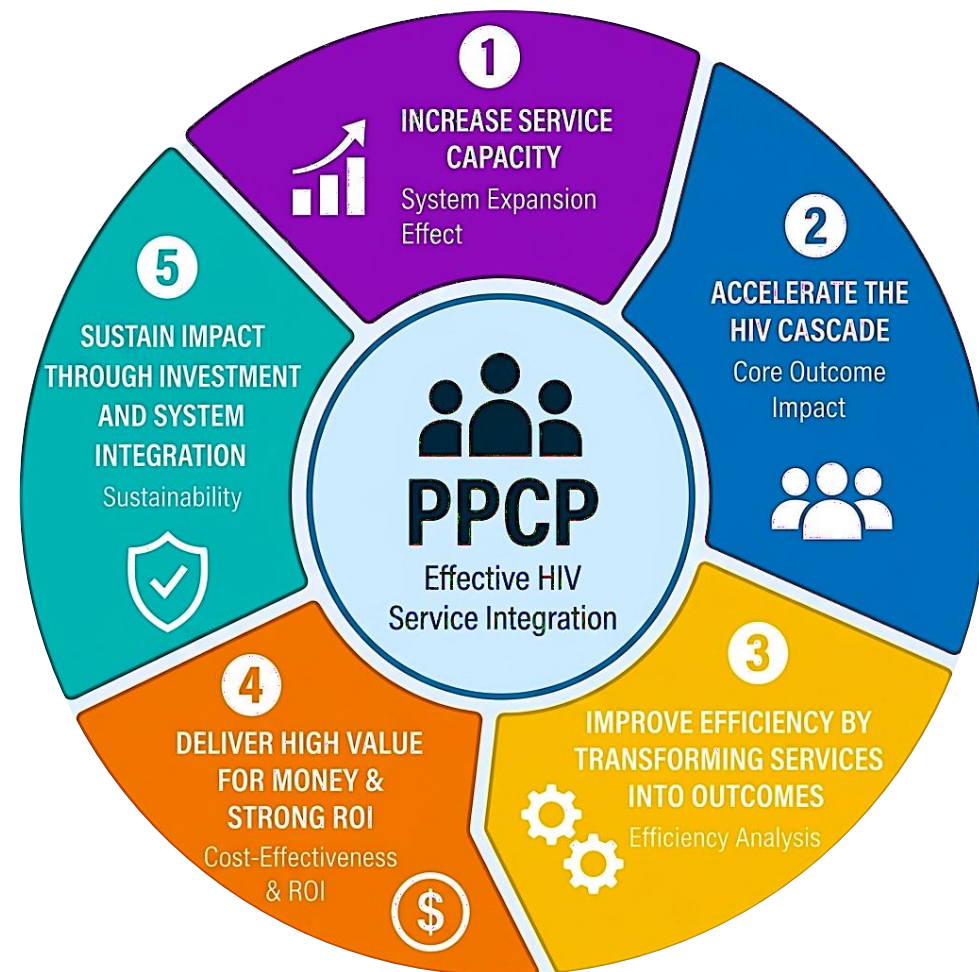
Unit of Analysis
Districts/Cities
in Indonesia



Approach
Quasi-experimental
& Advanced Methods

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DISCLAIMER

This work was developed as part of a consultancy assignment undertaken by the author in their role as Proposal Writer Consultant for the Global Fund Funding Request Grant Cycle 8 (Health Sector). The analysis synthesizes programmatic evidence from the implementation of the Public–Private–Community Partnership (PPCP) in Indonesia to inform strategic priorities, investment decisions, and the development of a robust, evidence-based funding proposal for GC-8.

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Strengthening HIV Response through Public–Private–Community Partnership (PPCP)

Evidence from Indonesia to Inform Global Fund GC-8 Investment Decisions

WHAT IS PPCP?

Public–Private–Community Partnership (PPCP) is an integrated approach to strengthen collaboration across:



Public Sector
Health system and government services



Private Sector
Private providers, facilities, and businesses



Community
Community organizations and key populations

Designed to improve:

- ✓ HIV & STI service delivery
- ✓ Access for key populations
- ✓ System coordination and integration

IMPLEMENTATION CONTEXT (INDONESIA)



Implemented under
Global Fund
GC-7 cycle



Period:
2024–2026



Focus on
high-burden
districts/cities



Strengthening
integrated services
for underserved
populations

WHY THIS ANALYSIS MATTERS



Indonesia is preparing for
Global Fund Funding Request
Cycle 8 (GC-8).



Critical questions:

- Does PPCP work?
- Does it improve outcomes?
- Is it efficient and worth scaling?



This evaluation provides rigorous
evidence to guide:

- Investment prioritization
- Program design
- Scale-up strategy

WHAT THIS ANALYSIS COVERS

Evaluation of PPCP across four strategic dimensions



SERVICE EXPANSION

Increase in the availability and reach of HIV and STI services.



HIV CASCADE OUTCOMES

Improvement across the cascade: status, ART initiation, and viral suppression.



SYSTEM EFFICIENCY

Stronger integration, coordination, and optimization of resources.



COST-EFFECTIVENESS & ROI

Lower cost per outcome with higher return on investment.

PURPOSE OF THIS PRESENTATION



To assess whether PPCP improves
HIV program performance



To examine its contribution to strengthening
health system effectiveness



To evaluate cost-effectiveness and
value for money



To determine whether PPCP should be
scaled under GC-8



KEY MESSAGE

This analysis positions PPCP not just as an intervention,
but as a system-level strategy to accelerate HIV impact in Indonesia.



Stronger partnerships.
Better services.
Healthier communities.

1

Did PPCP Increase Service Capacity?

(System Expansion Effect)

PPCP significantly increased the capacity of HIV services.

KEY FINDINGS



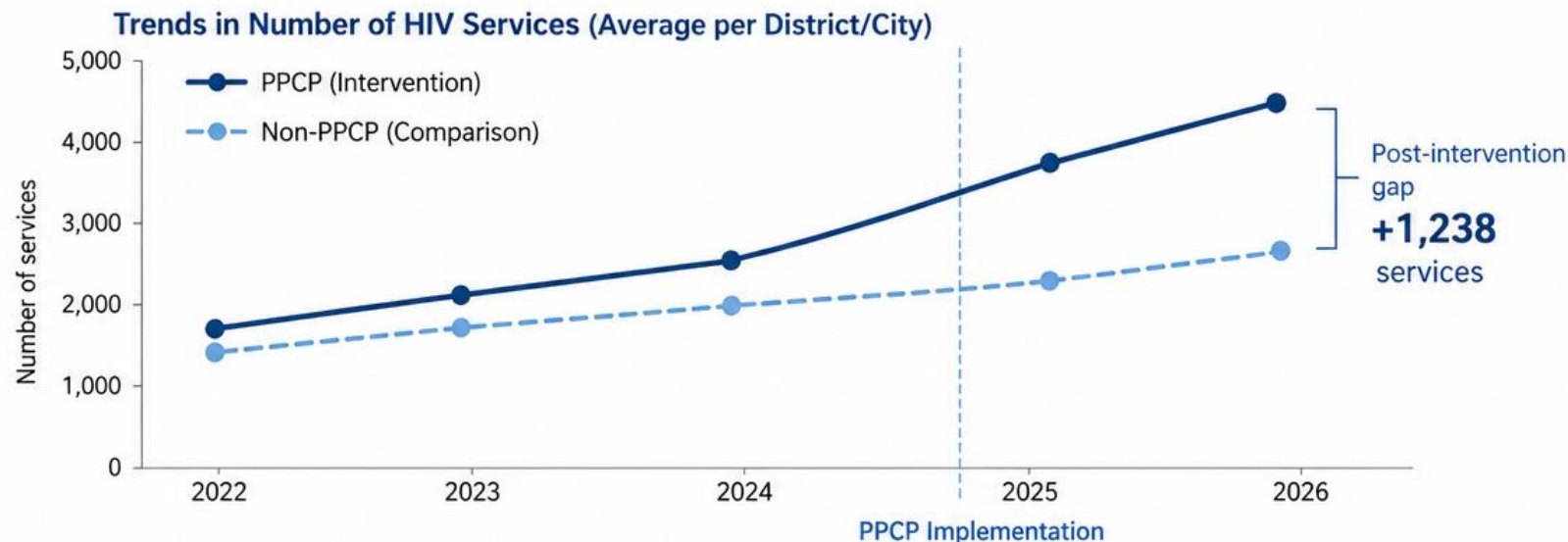
PPCP significantly increased the number of HIV services.



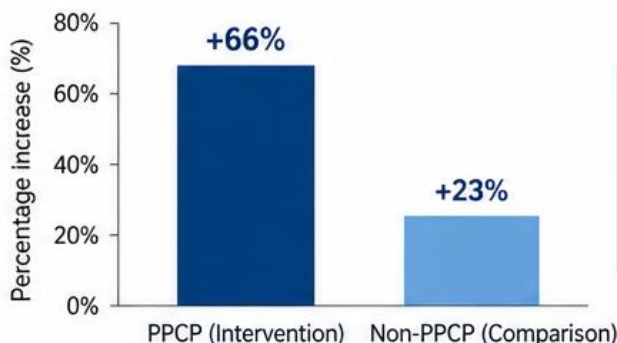
After implementation (2025), the number of services in PPCP areas was higher than in non-PPCP areas.



Difference-in-Differences analysis shows a strong and significant positive impact.









Increase in Number of Services (Change 2024–2026)
Average per District/City



Increase
difference

+43

percentage points

| | | |
|---|-------------------------------|--|
|  | Method | Difference-in-Differences (DiD) |
|  | Outcome | Number of HIV services (per district/city) |
|  | Period | Pre: 2022–2024 Post: 2025–2026 |
|  | Unit of analysis | District/City |
|  | Impact estimate (β_3) | +1,238 services ($p < 0.001$) |
|  | Interpretation | PPCP significantly increased the capacity of HIV services. |



KEY MESSAGE

PPCP significantly increased the capacity of HIV services at the district/city level compared with non-intervention areas.

Source: District/City Database, 2022–2026

Note: Results based on DiD model with robust standard errors.

Did PPCP Accelerate the HIV Cascade?

(Core Outcome)

PPCP significantly accelerated progress across the HIV cascade compared to non-intervention areas.

KEY FINDINGS



PPCP led to significant improvements across all HIV cascade indicators.



The largest impact was observed in increasing the proportion of people who know their status and who are on ART.



Improvements at each stage contribute to a meaningful increase in viral suppression.

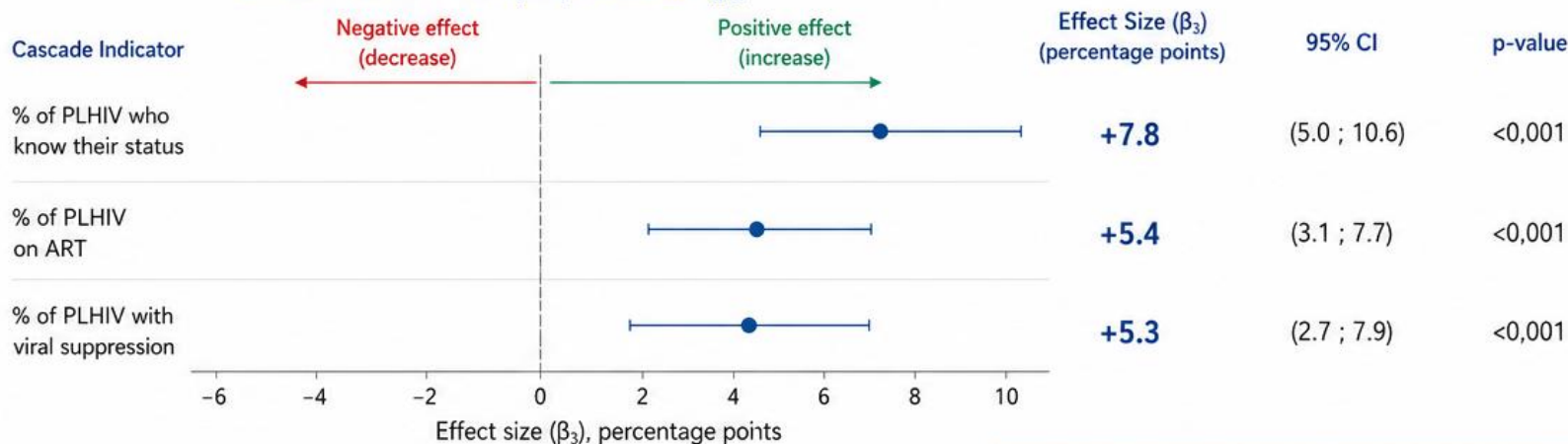
OVERALL CASCADE IMPACT (β_3)



+6.2
percentage points
($p < 0.001$)

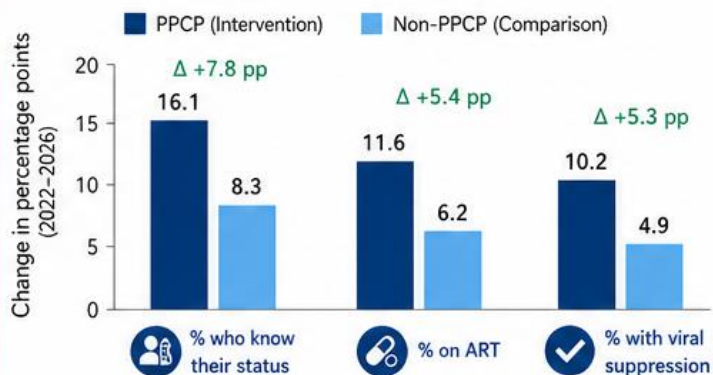
PPCP Effect on HIV Cascade Indicators

Difference-in-Differences (DiD) – Effect Size (β_3)



Change in HIV Cascade Indicators (2024–2026)

Change in percentage points (Δ post – pre)



pp = percentage points

↑ PPCP is more effective in advancing the HIV cascade across all stages

+5.6
percentage points
higher than non-PPCP on average

| | |
|-------------------------------|--|
| Method | Difference-in-Differences (DiD) |
| Indicators | % who know their status, % on ART, % with viral suppression |
| Period | Pre: 2022–2024 Post: 2025–2026 |
| Unit of analysis | District/City |
| Impact estimate (β_3) | Effect size (percentage points) with 95% CI |
| Interpretation | PPCP significantly accelerated progress across the HIV cascade compared to non-intervention areas. |



KEY MESSAGE

PPCP significantly accelerated progress across the entire HIV cascade, particularly in increasing awareness of status and ART initiation.

Source: District/City Database, 2022–2026

Note: Results based on DiD model with robust standard errors.

3

How Does PPCP Work?

(Mechanism Analysis)

PPCP impact is mediated by increased services and system integration

KEY FINDINGS



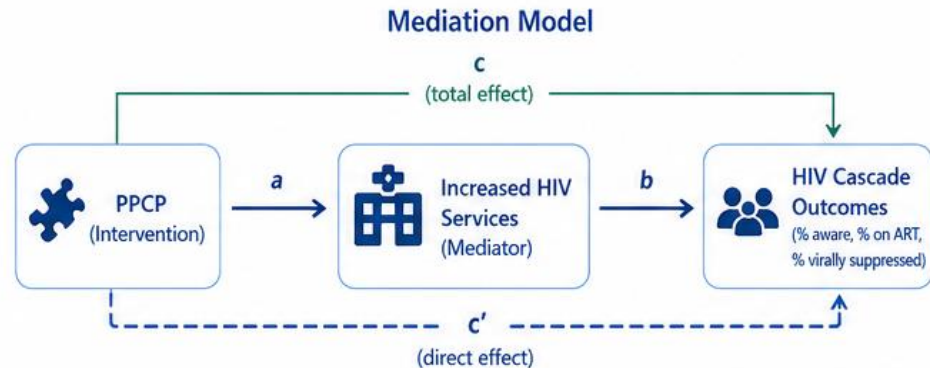
PPCP improves both the quantity and quality of HIV services.



Improved services significantly contribute to better HIV cascade outcomes.



In addition to higher service coverage, PPCP also has a direct impact through system integration.



a = Effect of PPCP on services

b = Effect of services on outcomes (controlling for PPCP)

c = Total effect (without mediator)

c' = Direct effect (after controlling for mediator)

Indirect effect (a*b) = Effect mediated by services

Direct effect (c') = Effect through system integration

Total effect (c) = c' + (a*b)

Mediation Analysis Results

(Average across Cascade Indicators)

| Effect Component | Effect Size (percentage points) | 95% CI | p-value |
|---|---------------------------------|--------------|---------|
| Total Effect (c) | +8.9 | (6.5 ; 11.3) | <0.001 |
| Indirect Effect (a*b) (via services) | +5.5 | (3.8 ; 7.2) | <0.001 |
| Direct Effect (c') (via system integration) | +3.4 | (2.0 ; 4.9) | <0.001 |
| Proportion Mediated | 62% | (52% ; 72%) | – |

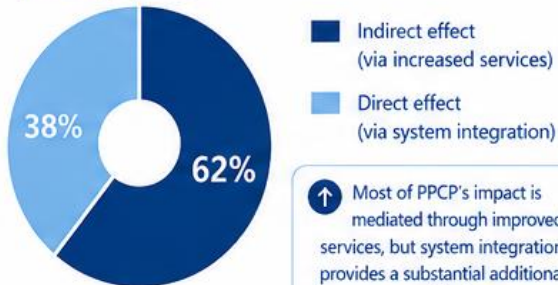
Proportion of Impact Mediated by Services



62%
(Indirect effect)

The remaining 38% is a direct effect through system integration and other factors.

Contribution Pathways to Outcomes (percentage points)



↑ Most of PPCP's impact is mediated through improved services, but system integration provides a substantial additional contribution.

Examples of System Integration Indicators that Contribute (Direct Effect)



Cross-program and sector coordination



Stronger management and supervision



Integrated data and information management



Improved quality of care and services



Continuity of services and referral systems



System integration strengthens program performance beyond service expansion alone.



KEY MESSAGE

PPCP works through two pathways: increasing HIV services and strengthening system integration. Together, they lead to meaningful improvements in the HIV cascade.

Source: District/City Database, 2022–2026

Note: Mediation analysis using two-step approach (Baron & Kenny) with robust standard errors.

Is PPCP More Efficient? (Efficiency Analysis)

PPCP districts/cities are more efficient in converting services into outcomes

KEY FINDINGS



PPCP areas have significantly higher efficiency scores compared to non-PPCP areas.



PPCP generates greater outcomes from the same level of services.



PPCP improves the “conversion rate” of services into outcomes.

AVERAGE EFFICIENCY SCORE (Actual / Expected Outcome)



1.28

PPCP (Intervention)

0.98

Non-PPCP (Comparison)

Difference +0.30 points (p < 0.001)

What is the Efficiency Score?

$$\text{Efficiency Score} = \frac{\text{Actual Outcome}}{\text{Expected Outcome}} \quad (\text{based on number of services})$$



> 1 : More efficient than expected



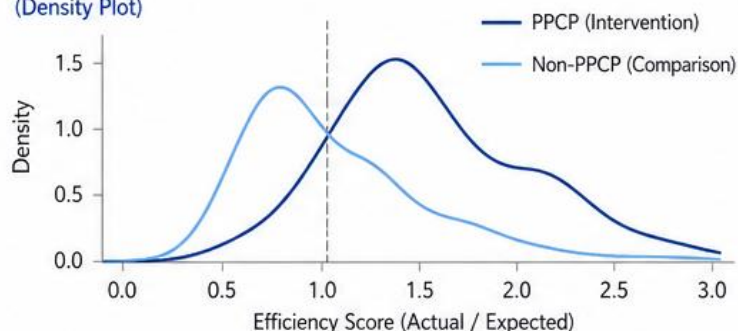
= 1 : As expected



< 1 : Less efficient than expected

Distribution of Efficiency Scores

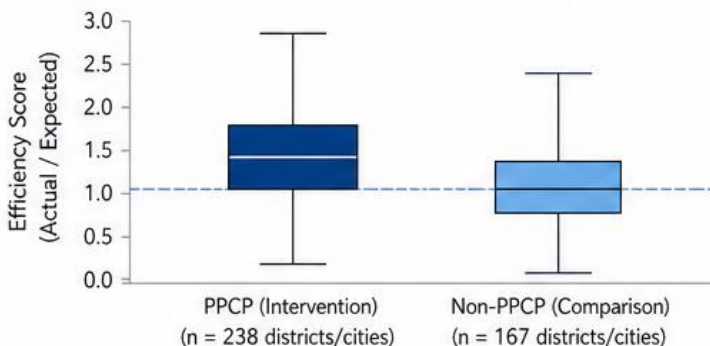
(Density Plot)



↑ The PPCP distribution is shifted to the right (>1), indicating higher efficiency scores.

Comparison of Efficiency Scores

(Boxplot)



Summary

(Average efficiency score)

**PPCP
1.28**

**Non-PPCP
0.98**

**Difference
+0.30 points
(p < 0.001)**

METHODS AND DEFINITIONS

| | |
|------------------|--|
| Method | Stochastic Frontier / Residual Analysis (simplified) |
| Expected Outcome | Predicted outcome based on the number of services using a frontier model |
| Actual Outcome | Actual outcome achieved (% aware of status, % ART, % viral suppression) |
| Efficiency Score | Actual / Expected > 1 = more efficient |
| Period | Pre: 2022–2024 Post: 2025–2026 |
| Unit of Analysis | District/City |



Interpretation

PPCP areas are 28% more efficient in converting services into outcomes compared to non-PPCP areas.
PPCP enhances system effectiveness, not only by increasing services.



KEY MESSAGE

PPCP improves system efficiency: generating greater outcomes from the same level of services.

Source: District/City Database, 2022–2026

Note: Expected outcome estimated using stochastic frontier model controlling for population, epidemic level, and socioeconomic factors.

Is PPCP Cost-Effective and a Good Investment?

(Cost-Effectiveness & ROI)

PPCP provides strong value for money and high return on investment

KEY FINDINGS



PPCP achieves greater outcomes at a lower cost per outcome.



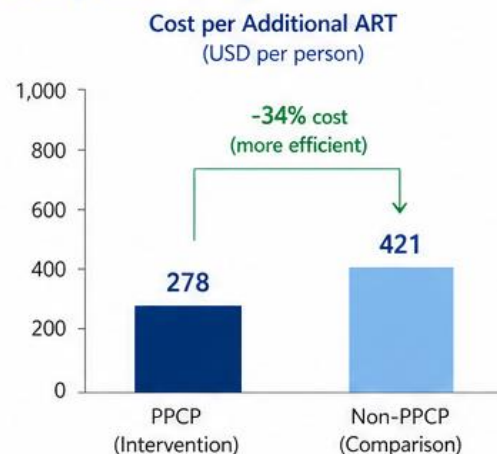
For every 1 USD invested, PPCP generates higher returns (additional outcomes) compared to non-PPCP areas.



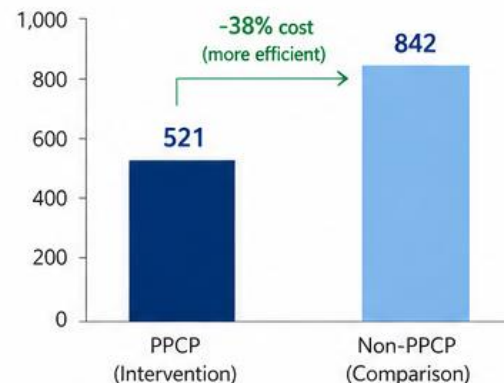
PPCP offers competitive value for money to improve ART initiation and viral suppression.

Cost per Additional Outcome (2024–2026)

Average per district/city



Cost per Additional Viral Suppression (USD per person)



METHODS



Formula

$$\text{Cost per outcome} = \frac{\text{Total Cost}}{\Delta \text{ Outcome (PPCP - Non-PPCP)}}$$



Outcome

Additional ART
Additional Viral Suppression



Period

Pre: 2022–2024
Post: 2025–2026



Unit of Analysis

District/City



Cost Approach

Total program cost (including system integration) allocated per district/city

HIGHLIGHTS



Cost per Additional ART (USD per person)

USD 278

34% lower cost compared to non-PPCP



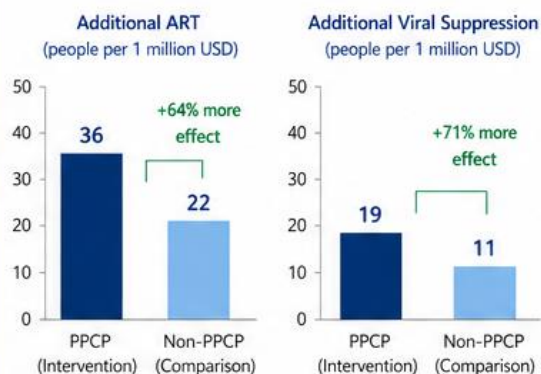
Cost per Additional Viral Suppression (USD per person)

USD 521

38% lower cost compared to non-PPCP

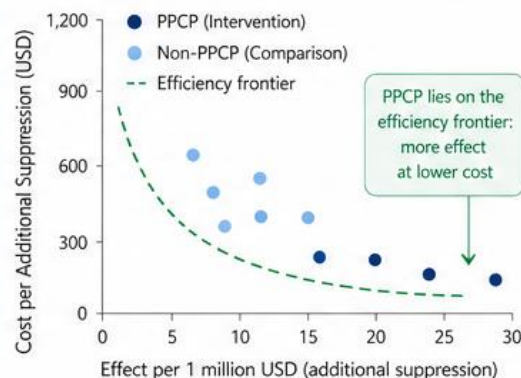
Return on Investment (Effect per 1 million USD invested)

Additional outcomes per 1 million USD



Cost-Effectiveness Plane

(Cost per Additional Suppression vs Effect per 1 million USD)



VALUE SUMMARY



PPCP is more cost-saving in achieving ART initiation and viral suppression.



PPCP generates greater effect per unit cost.



PPCP delivers high value for money and a strong return on investment for national HIV programs.



KEY MESSAGE

PPCP delivers greater outcomes at lower costs and higher returns compared to non-PPCP areas, making it a high-value investment.

Source: District/City Database, 2022–2026

Note: Costs in USD. Cost-effectiveness and ROI estimated using the stochastic frontier approach with robust standard errors.

6

RECOMMENDATIONS

Strengthen and Scale Up PPCP Impact

Strong evidence shows that PPCP increases service capacity, accelerates the HIV cascade, improves efficiency, and delivers high *value for money*.

1



EXPAND PPCP IMPLEMENTATION TO MORE DISTRICTS/CITIES

Prioritize districts/cities with high HIV burden and health system capacity to scale up through stronger service integration.

EXPECTED IMPACT



More people access better services and achieve better HIV outcomes.

2



STRENGTHEN SERVICE INTEGRATION AND CROSS-SECTOR COORDINATION

Strengthen governance, coordination mechanisms, and integrated referral pathways across all levels of care.

EXPECTED IMPACT



Higher system effectiveness and greater PPCP impact.

3



IMPROVE SERVICE QUALITY AND HUMAN RESOURCE CAPACITY

Focus on building workforce competencies, mentoring/coaching, and data-informed supervision.

EXPECTED IMPACT



Better service quality, client satisfaction, and retention.

4



ENHANCE DATA UTILIZATION FOR DECISION-MAKING

Use routine data and dashboards to monitor performance, identify gaps, and drive evidence-based improvements.

EXPECTED IMPACT



Faster, more accurate, and accountable program response.

5



SUSTAIN AND INCREASE INVESTMENT IN PPCP

Allocate adequate and sustained resources to support service integration and strengthen the health system.

EXPECTED IMPACT



Higher return on investment and sustainable long-term impact.

ENABLING FACTORS FOR PPCP SUCCESS



Strong leadership and commitment at all levels.



Solid collaboration across programs and sectors.



High-quality data and routine utilization.



Adequate and well-trained human resources.



Sufficient, flexible, and sustainable funding.

NEXT STEPS



Continue evaluation and dissemination of findings to key stakeholders.



Develop evidence-based action plans for sustainability and scale-up.



Conduct follow-up evaluations to monitor progress and long-term impact.



KEY MESSAGE

PPCP is proven to be effective, efficient, and cost-effective.
By strengthening, expanding, and sustaining service integration, we can accelerate progress towards HIV targets in Indonesia.



Service integration is the key to reaching more people, leaving no one behind.



Together for Healthier Indonesia
Integrated Services, Real Impact



Source: District/City Database, 2022–2026

Note: Recommendations are based on empirical analysis and evidence from the PPCP evaluation.

Policy & Investment Implications for GC-8 (Strategic Considerations)

PPCP is a high-impact, high-value investment for scaling the HIV response in Indonesia

WHY THIS MATTERS NOW (GC-8 CONTEXT)



Indonesia is entering Global Fund Funding Request Cycle 8 (GC-8).



Strategic prioritization is required for limited resources, high-burden districts, and system strengthening investments.



PPCP provides rigorous evidence across 4 key dimensions.

- ✓ ↑ Service capacity
- ✓ ↑ HIV cascade outcomes
- ✓ ↑ System efficiency
- ✓ ↑ Cost-effectiveness & ROI

EVIDENCE SUMMARY (FROM PPCP EVALUATION)



Significant increase in HIV services



Faster cascade achievement (status, ART, suppression)



28% higher system efficiency



Lower cost per outcome (ART & suppression)



Strong return on investment



Not just effective — system-transforming

STRATEGIC POSITIONING FOR GC-8

1

Core System Strengthening Intervention



Not a pilot or add-on. Embedded within the national HIV strategy.

2

Primary Delivery Platform for Key Populations



Especially for high-burden districts and hard-to-reach populations.

3

Integration Model Across Programs



Integrate HIV with STI, TB, and community health systems.

RECOMMENDED INVESTMENT DIRECTIONS



Scale-up PPCP geographically. Prioritize high-impact districts based on evidence.



Institutionalize integration mechanisms. Strengthen referral systems and coordination platforms.



Invest in community and private sector engagement. Expand and sustain multi-stakeholder collaboration.



Strengthen data systems for performance monitoring. Improve data quality, utilization, and real-time decision-making.

RISKS IF NOT PRIORITIZED



Fragmented service delivery persists.



Lower efficiency despite increased spending.



Missed HIV targets, especially cascade completion.

IMPACT (OUTCOME)

- Better services
- Faster cascade
- Improved health outcomes

INVESTMENT (VALUE)

- Lower cost per outcome
- Higher return on investment
- Sustainable impact



EFFICIENCY (SYSTEM)

- Stronger integration
- Better coordination
- Higher productivity

DECISION STATEMENT (BOTTOM LINE)



PPCP should be prioritized as a flagship investment in GC-8 to accelerate HIV impact, improve efficiency, and maximize value for money in Indonesia.



KEY MESSAGE

PPCP delivers greater impact, higher efficiency, and better value for money. Investing in PPCP is investing in a stronger, integrated, and sustainable HIV response in Indonesia.

Source: District/City Database, 2022–2026

Note: Recommendations are based on empirical analysis and evidence from the PPCP evaluation.



Integrated services are the key to reaching more people and leaving no one behind.