



Bridging the Distance: Telemedicine and Equitable Access to EMTCT Plus Services in Guyana

Presenter:

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Declarations

1. I declare that I hold a management position within the Ministry of Health Guyana and have obtained the appropriate institutional authorization ,ethical and administrative clearances required to publicly present the information and data contained in this presentation.
2. I declare that I am a co-author of the scientific work being presented. To strengthen objectivity, transparency, and analytical independence, the Ministry of Health engaged an independent external agency to conduct the data analysis.

Presentation Highlights

Geography And Health Equity

EMTCT Plus

The Elimination Benchmarks

Guyana's Primary Healthcare Platform

Guyana's Telemedicine Network

Telemedicine across the EMTCT continuum

Protecting the critical time windows

Telemedicine as a surveillance and quality-improvement tool

Guyana's telemedicine impact study 2025



Geography and Health Equity



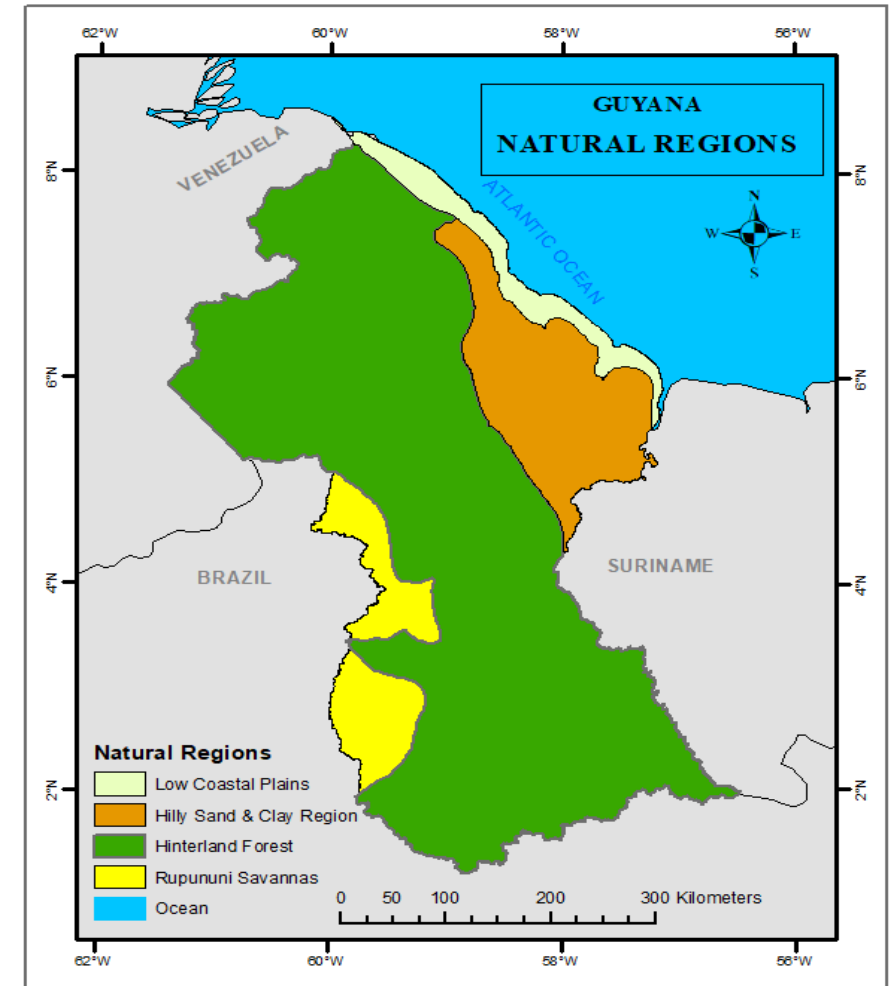
Guyana's population is distributed across coastal, riverine, forested and mountainous communities.

The 2022 Census recorded:



878,674 with a national population density of only 4.09 persons per km². [1,025,334 announced mid 2026]

The hinterland covers 67.61% of Guyana's landmass, but contains only 12.84% of the population approximately 112,822 people.



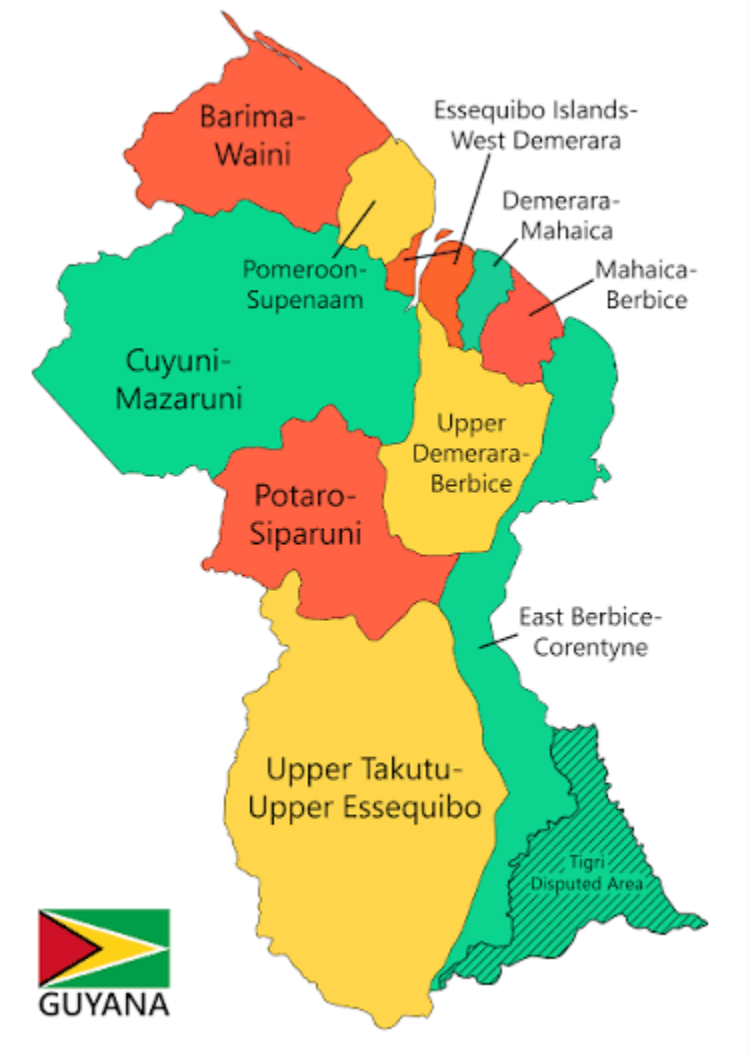
Source: Guyana 2022 Population and Housing Census

Geography and Health Equity

Hinterland population density is approximately 0.78 persons per km², making conventional specialist-service models costly and difficult to sustain.

Pregnant women in remote communities may face prolonged travel by river, road or air to access laboratory testing, specialist review and referral hospitals.

In Guyana, distance is not merely a geographic characteristic it is a determinant of maternal and newborn health.

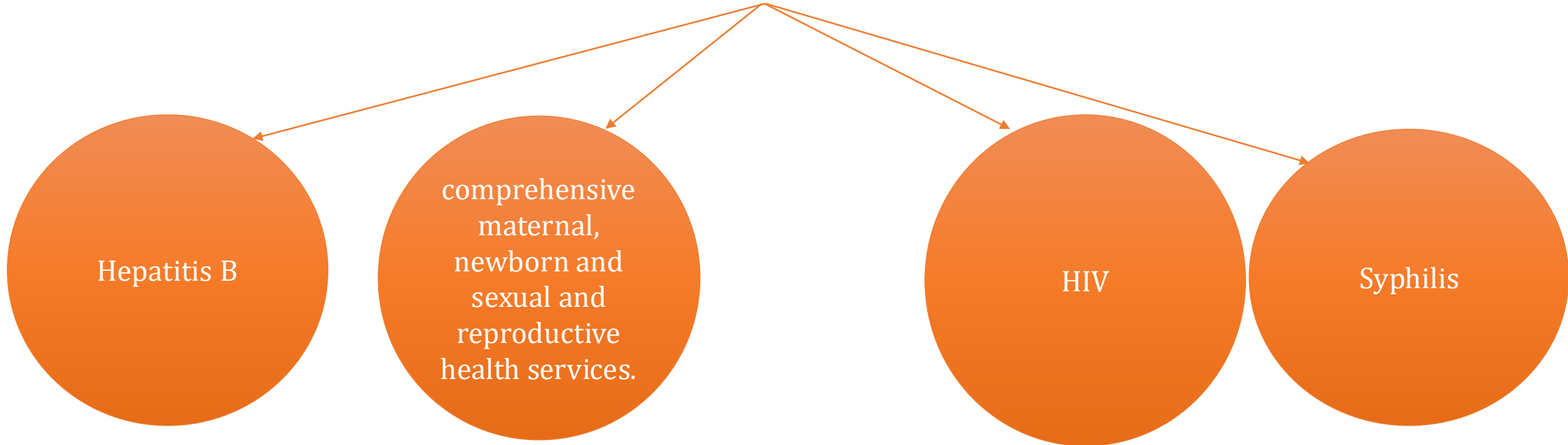


Source: Guyana 2022 Population and Housing Census

EMTCT Plus



EMTCT Plus expands the traditional prevention of mother-to-child transmission approach into an integrated elimination platform covering:



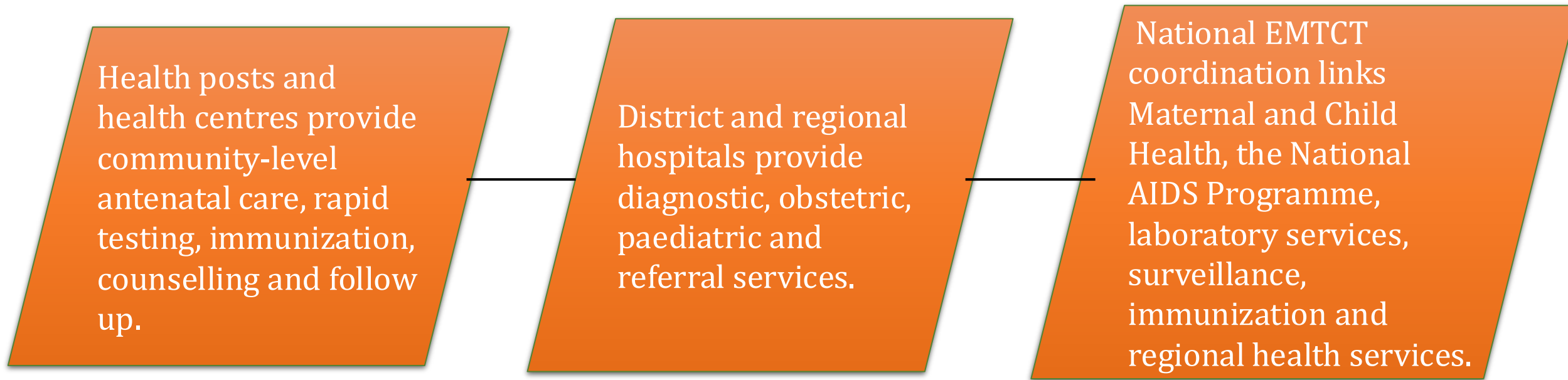
The service pathway extends from preconception and antenatal care through labour, delivery, the postnatal period and definitive infant outcome determination.

The objective is not simply to test pregnant women. It is to ensure that every positive result triggers timely treatment, safe delivery planning, neonatal prophylaxis, vaccination, infant testing and documented follow-up.

Guyana's primary healthcare platform



Guyana's EMTCT response is delivered through a tiered system:



Telemedicine connects these components into a more functional clinical network.

Guyana's primary healthcare platform



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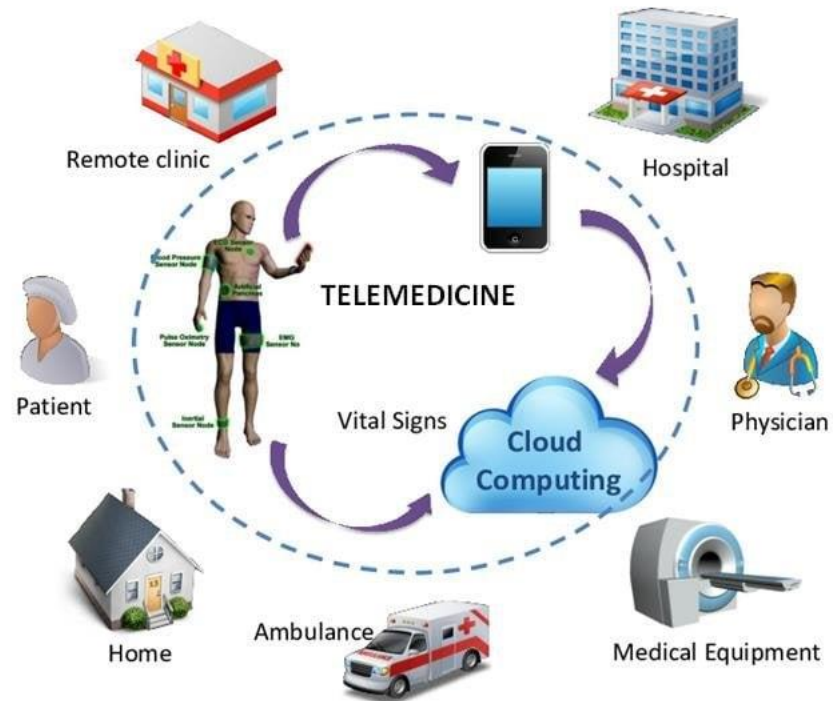
Community health workers, nurses, midwives and Medex personnel are often the first and sometimes the only point of care in remote communities.

National programmes provide specialist oversight, confirmatory testing, surveillance and policy direction.

Telemedicine connects these components into a more functional clinical network.

Telemedicine as a service ? Why?

Need for innovative, scalable solution



Remote regions → hours/days to reach care



High reliance on medical evacuations



Delays → worse outcomes + high costs



Guyana's Telemedicine Network

Guyana's national telemedicine programme was launched in 2022, initially serving a small number of remote communities.



The network expanded from approximately 14 sites in 2024, to more than 80 sites during 2025, and approximately 130 sites by early 2026.



The national trajectory is toward connecting approximately 200 remote communities by the end of 2026.



Satellite connectivity, including Starlink-supported sites, allows remote PHC teams to communicate with physicians and specialists in real time.



Telemedicine is also being used for clinical education, mental-health services and public-health surveillance.

Represents a transition from episodic outreach to a digitally connected PHC system.

Telemedicine across the EMTCT continuum



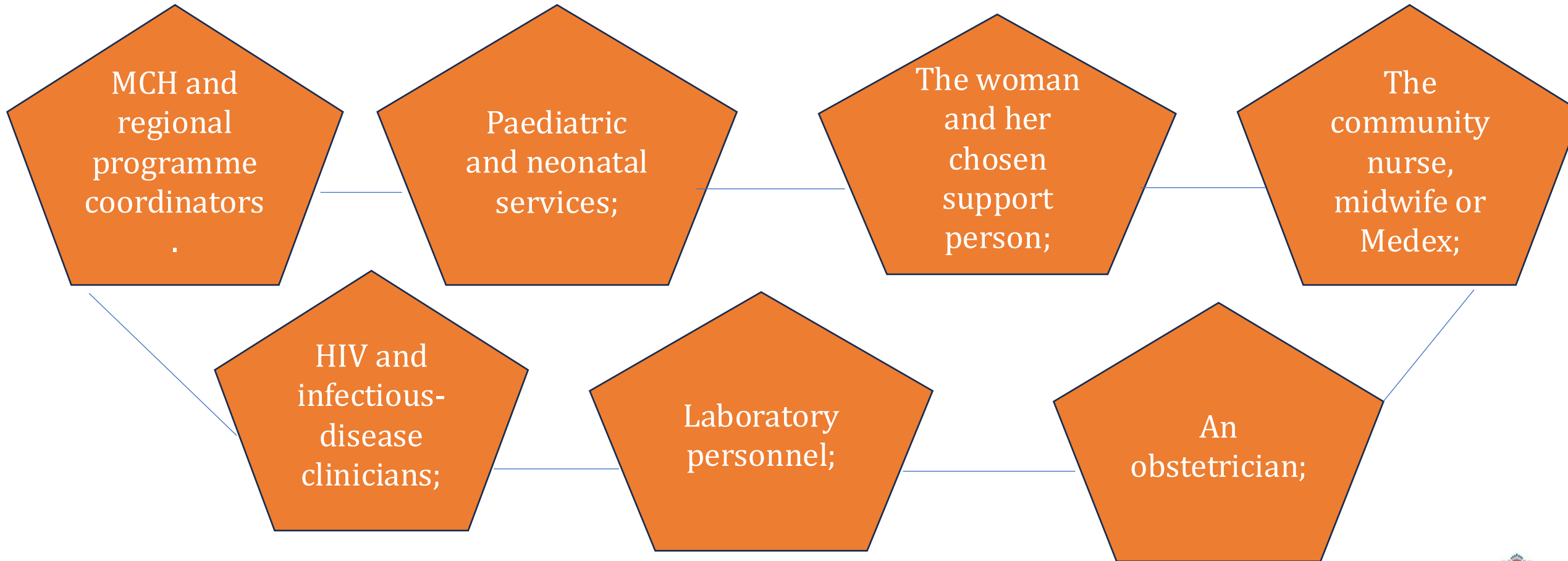
Telemedicine supports:

- ☐ Early antenatal booking and pregnancy risk assessment;
- ☐ Interpretation of HIV, syphilis and hepatitis B results;
- ☐ Rapid specialist review of positive or discordant results;
- ☐ ART initiation and viral load management;
- ☐ Confirmation of adequate syphilis treatment and titer follow up;
- ☐ Birth planning for high risk pregnancies;
- ☐ Timely infant prophylaxis and hepatitis B birth-dose vaccination;
- ☐ Early infant diagnosis and monitoring of HIV exposed infants;
- ☐ Postnatal follow up, breastfeeding counselling and maternal retention.

Telemedicine across the EMTCT continuum



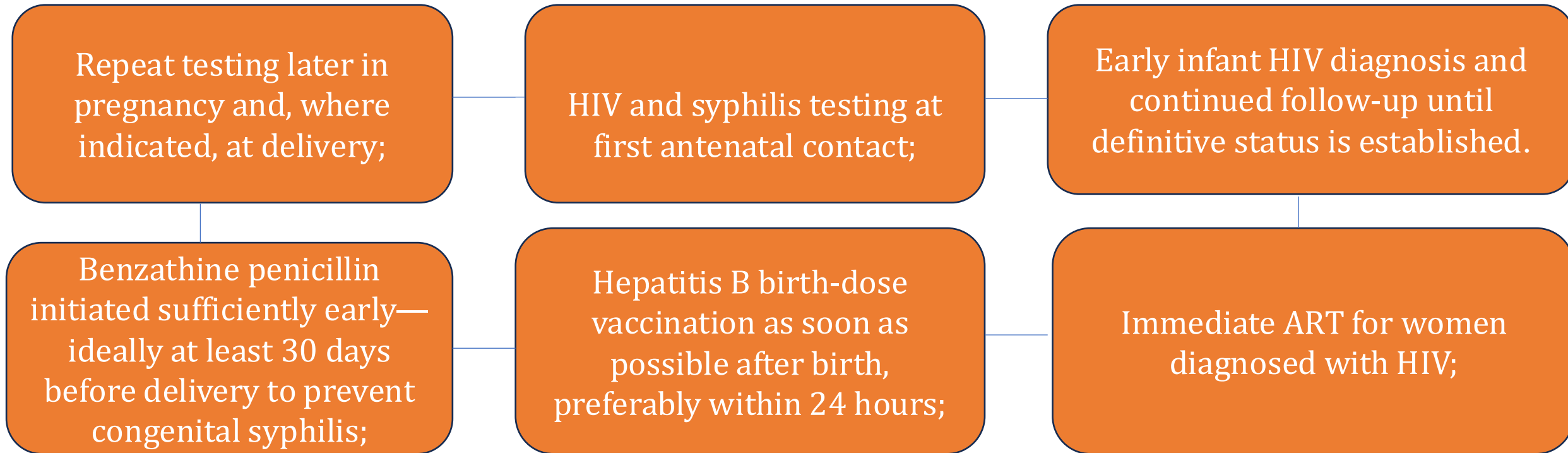
A structured virtual case conference can bring together



Protecting the critical time windows



EMTCT Plus depends on interventions delivered within specific time windows:



Telemedicine can identify approaching deadlines, escalate delayed laboratory results and activate referral before the opportunity for prevention is lost.



TELEMEDICINE AS A SURVEILLANCE AND QUALITY-IMPROVEMENT TOOL



The platform can support a national EMTCT Plus dashboard that tracks:



EMTCT PLUS NATIONAL DASHBOARD



Percentage of pregnant women booked in the first trimester



Positive women receiving appropriate treatment



Viral-load suppression before delivery



HIV-exposed infants receiving prophylaxis and early infant diagnosis



Laboratory turnaround time



Maternal and infant final outcomes



Real-time data. Better decisions.
Healthier mothers. HIV-free generation.



Secure Data



Real-time Monitoring



Data-driven Decisions



Better Care Coordination



HIV-free Generation



THE EVIDENCE

BASELINE STUDY



Aim & Objectives

Objectives

1

Impact of
Telemedicine

2

Cost-effectiveness
of Telemedicine

3

Patient Satisfaction
and Provider
Experience

Aim

To assess the impact of telemedicine on access, quality, and continuity of care in remote communities in Guyana (2024–2025).



Guyana's telemedicine impact study 2025



14,451

consultations recorded
across 2024–2025

81

active sites included
in the evaluation

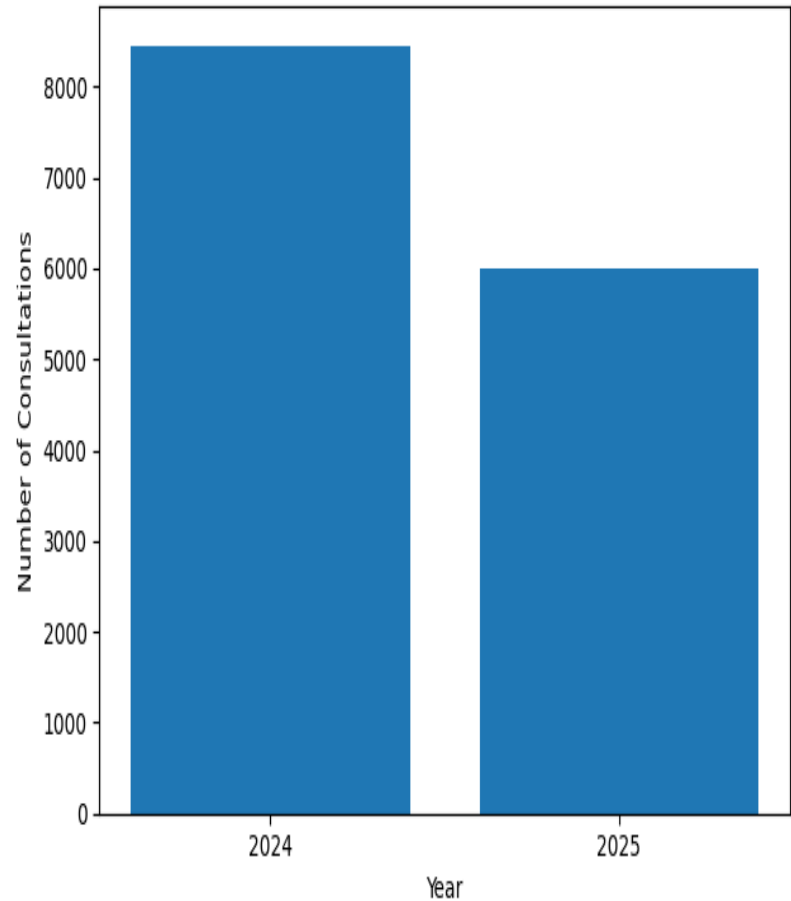
80%

of installations located in
Regions 1, 7, 8 and 9

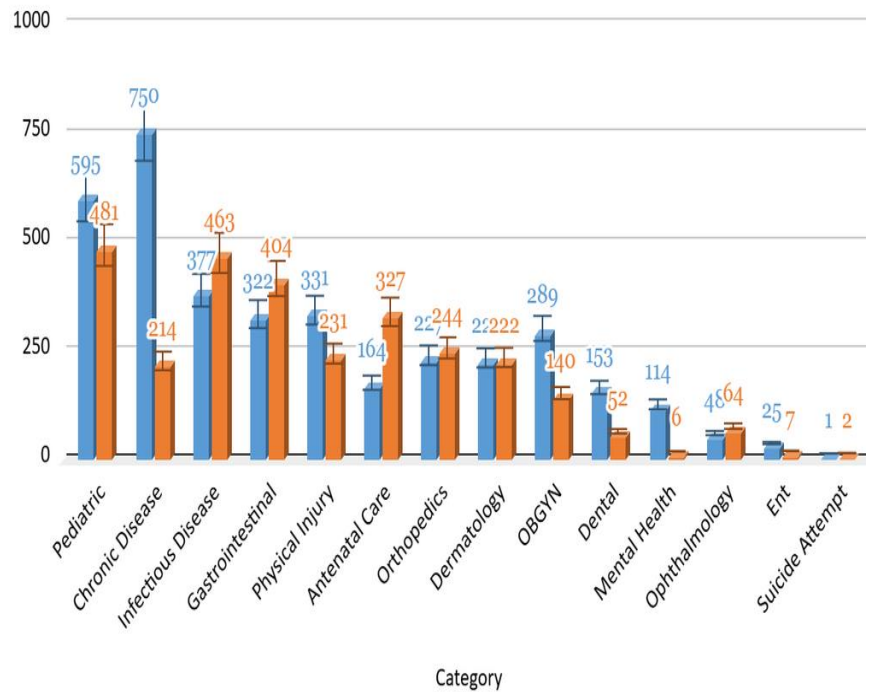
Strategic implication

The infrastructure for a tele-EMTCT Plus pathway is already embedded in the hinterland PHC network; the next step is to make maternal infection services an explicit clinical pathway.

Guyana's Telemedicine study



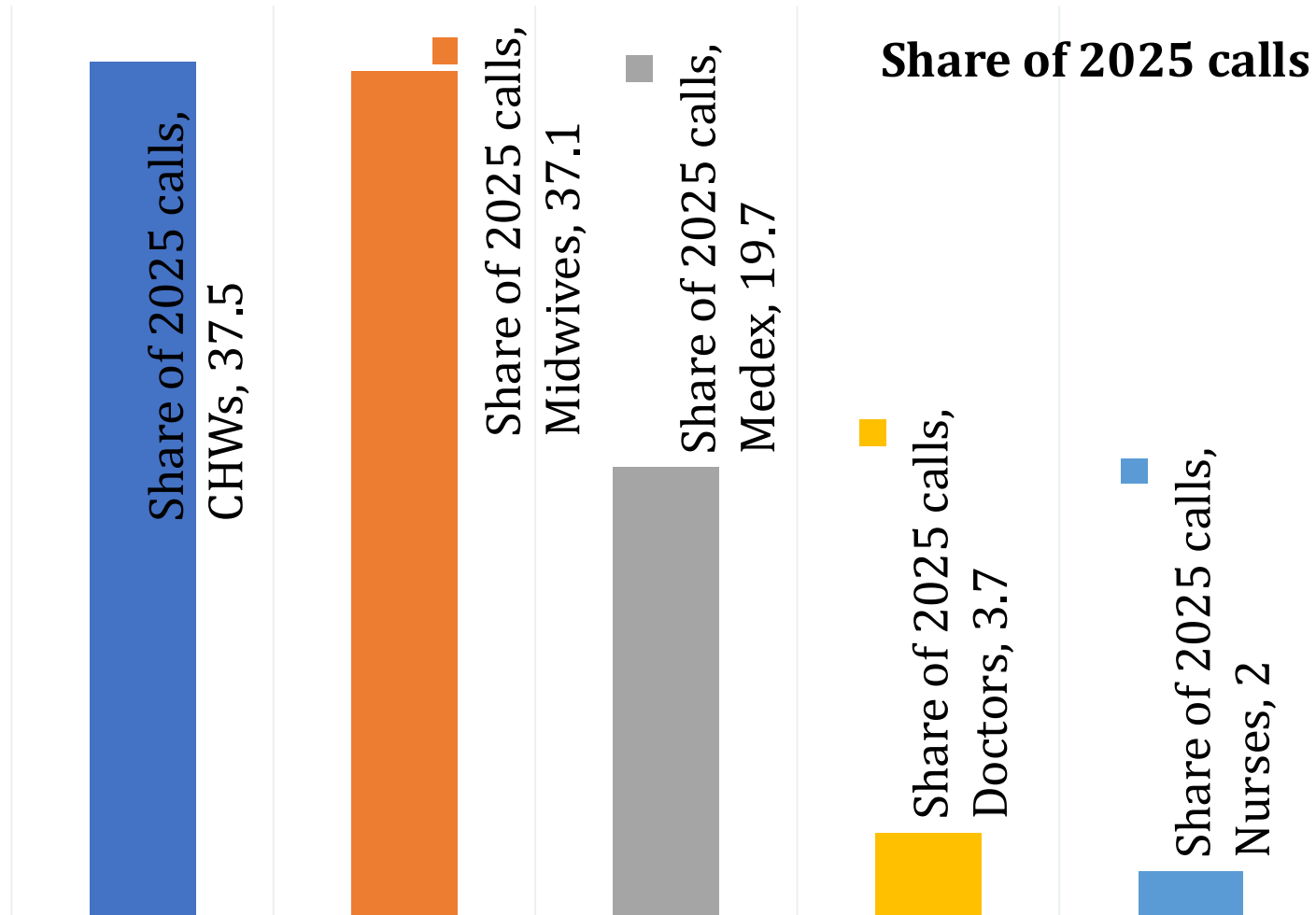
A. Total consultations (2024-2025)



B. Leading Medical Consultations

- 01 14,451 consultations (2024-2025)
- 02 74.7% improvement in early care access (2025)
- 03 Majority users: Females (58%) Ages 25-44
- 04 Majority of Pediatrics (2024) and Chronic cases (2025)

Community health workers and midwives are the digital front line



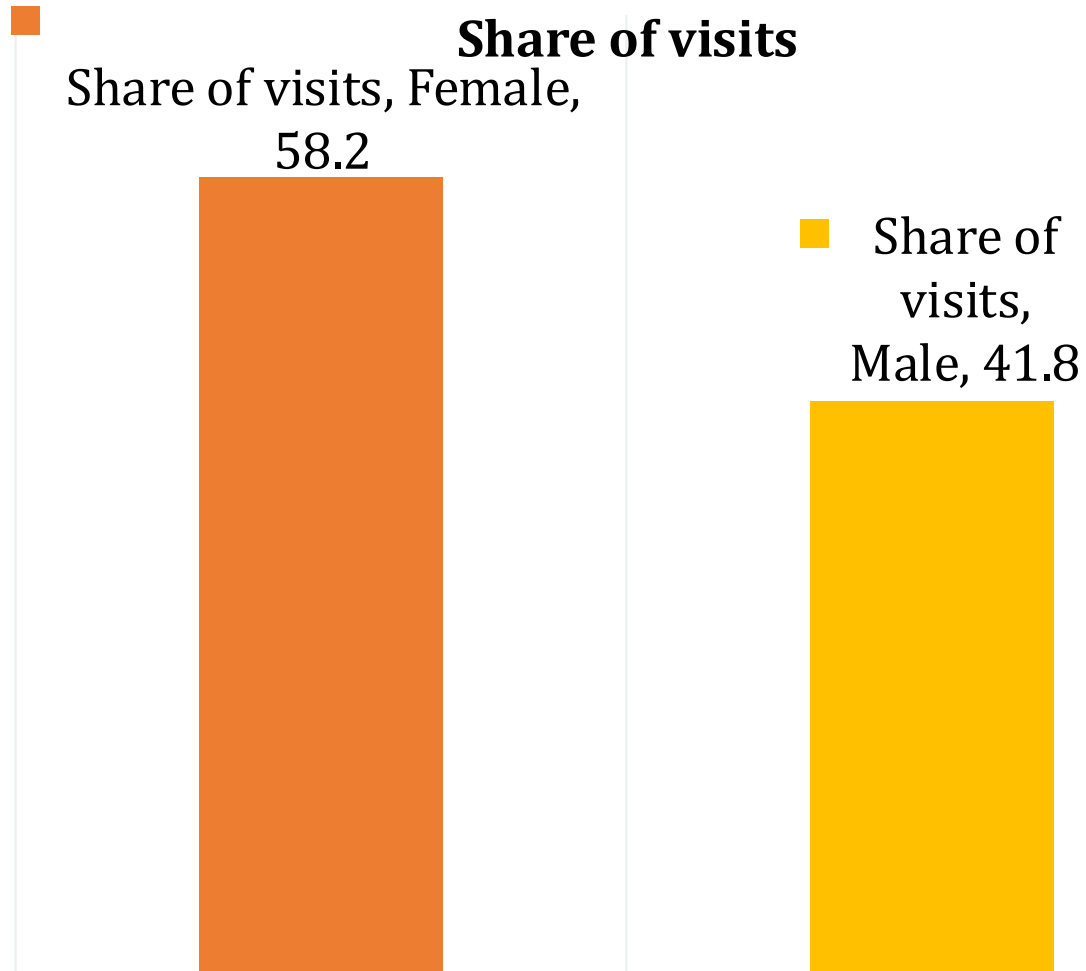
Nearly 75%

of call volume was generated by CHWs and midwives.

Training package to add

- EMTCT algorithms and red flags
- Consent and confidentiality
- Specimen collection and referral
- Birth-dose and infant follow-up
- Documentation for validation

Women of reproductive age are already major users of telemedicine



58.2%
of visits were made by females

25–44 years
was the largest age group, accounting for 27.4% of consultations.

EMTCT input: use this established contact with women to promote early ANC booking, repeat testing and postnatal retention.

Antenatal use nearly doubled in one year



+99.4%

year-over-year increase

Antenatal care became the fourth most frequent consultation category in 2025: 327 visits, or 11.4% of classified consultations.

This is the clearest operational entry point for tele-EMTCT Plus.

Maternal emergencies and medical evacuations



Maternal cases

were the highest-cost diagnostic category for medical evacuations.



GYD

217.0M
spent



- ✓ 70.3 % Gross savings as a percentage of investment ROI
- ✓ 26.4% overall reduction medevac
- ✓ Total of 834 med evacuations Prevented
- ✓ 12:1 success ratio (avoided vs actual evacuations) tracked by the 19 labs platform

Telemedicine strengthened local management and continuity



94.68%

said telemedicine
improved patient care

92.55%

said diagnosis or treatment
decisions improved

84.40%

reported improved follow-
up or continuity of care

EMTCT input: build an electronic mother–infant “closed loop” so every positive result, referral, treatment action and infant outcome is assigned, tracked and confirmed.

Survey N=94; findings are participant perceptions, not measured EMTCT outcomes.

The Caribbean significance



Guyana's experience offers several lessons for Caribbean states:

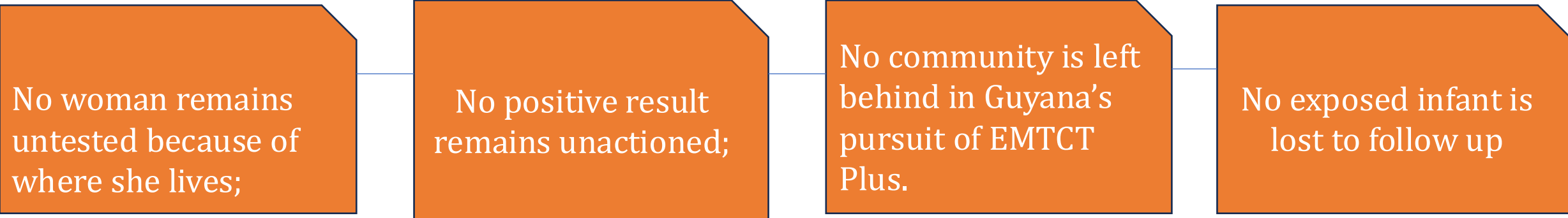
- Telemedicine can strengthen universal health coverage in geographically dispersed populations.
- It allows scarce specialist expertise to support multiple PHC teams.
- It can standardize clinical practice across regions.
- It can integrate HIV, syphilis, hepatitis B and maternal-newborn care rather than maintain separate vertical programmes.
- It strengthens regional preparedness for workforce shortages, climate emergencies and service disruption.
- Most importantly, it can help countries demonstrate that elimination outcomes are equitable not merely national averages.

Conclusion



“For Guyana, telemedicine is not simply healthcare delivered through a screen. It is a bridge between a pregnant woman in a remote community and the complete national system required to protect her health and the health of her child.”

The goal is to create a digitally connected, clinically integrated and rights based PHC system in which:



Bridging the distance must ultimately mean closing the equity gap.



Thank You!



Learn more about this topic

Credits: Hon. Dr. F Anthony, 19Labs, the Maternal and child Health department ,
Regional Health Services and telemedicine HCW.