



SCALING-UP ACCESS TO HIV VIRAL LOAD TESTING

Viral Load Scale-up and Decentralized Testing Experience in Botswana

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Presentation Format

- I. Background information
- II. Knowing Your Epidemic
- III. National Guidelines
- IV. Laboratory Referral System
- V. Issues to address
- VI. Strategic Partnerships

1. BACKGROUND



- **Botswana is a landlocked country in the centre of southern Africa.**

- **Population**

- **2,024,904**

- (2011 Pop. Census)

- **First case of AIDS**

- **Reported in 1985**

2. Knowing Your Epidemic

- Type of Technology?

Automated & High throughput
versus Point-of Care (POC)

2.1 Geographical Distribution

- **Geographical regions**
 - **Cities**
 - **Towns**
 - **Urban Villages, and**
 - **Rural Districts**
- **Defined as per the 2011 Population and Housing Census.**

HIV Prevalence by Locality BAIS 2004, 2008 and 2013



- **The HIV/AIDS epidemic in Botswana has affected all districts; rural areas are affected with equal (and in some cases, greater) intensity as urban areas (National AIDS Coordinating Agency, 2003).**
- **The challenge for Botswana has always been how to best reach those who need treatment urgently in both rural and urban areas.**

The High HIV Prevalence Districts in Botswana

District	Total population prevalence (%)	PLWHA
Kweneng East	21.5	57, 154
Gaborone	17.0	38, 647
Central - Serowe	17.1	32, 178
Central- Mahalapye	23.1	27,141
Central- Tutume	18.2	26, 371
Francistown	24.3	24, 319
Kgatleng	19.9	18, 357
Ngamiland South	15.2	14, 646
Selibe Phikwe	27.5	13, 674
Central- Bobonong	19.3	13, 666



2.2 HIV Epidemic In The Population

- Botswana has a generalized HIV epidemic.
 - **One of the countries with highest levels of HIV prevalence in the world,**
 - **Higher than any other country except Swaziland.**
- BAIS II – 2004 - 17.1%
- BAIS III – 2008 - 17.6%
- BAIS IV – 2013 - **18.5%** (18 months and above)

2.2.1. Various Populations

- **Adults aged 15 – 49 years**
 - 25%
- **Pregnant women**
(Ministry of Health ANC Surveillance Report, 2011)
 - 30.4%
- **Female sex workers (FSW)***
 - 61.9% (95% CI, 56.7-69.2)
- **Men who have sex with other men (MSM)***
 - 13.1% (95% CI, 10.0-16.2)
 - Adjusted HIV prevalence - 9.2%

- **2012 Mapping, Size Estimation, and Biological and Behavioral Surveillance Survey of HIV and Sexually Transmitted Infections Among Selected High-Risk Subpopulations In Botswana. Gaborone, Botswana: Ministry of Health 2013.*

3. National Guidelines

– regarding viral load testing and other tests

3.1 Laboratory Monitoring in Botswana

- **NATIONAL ART GUIDELINES 2002, 2004, 2008, 2012, 2016**
- **Standard of Care**
 - CD4 testing
 - **Viral Load Testing**
 - HIV Drug Resistance Testing

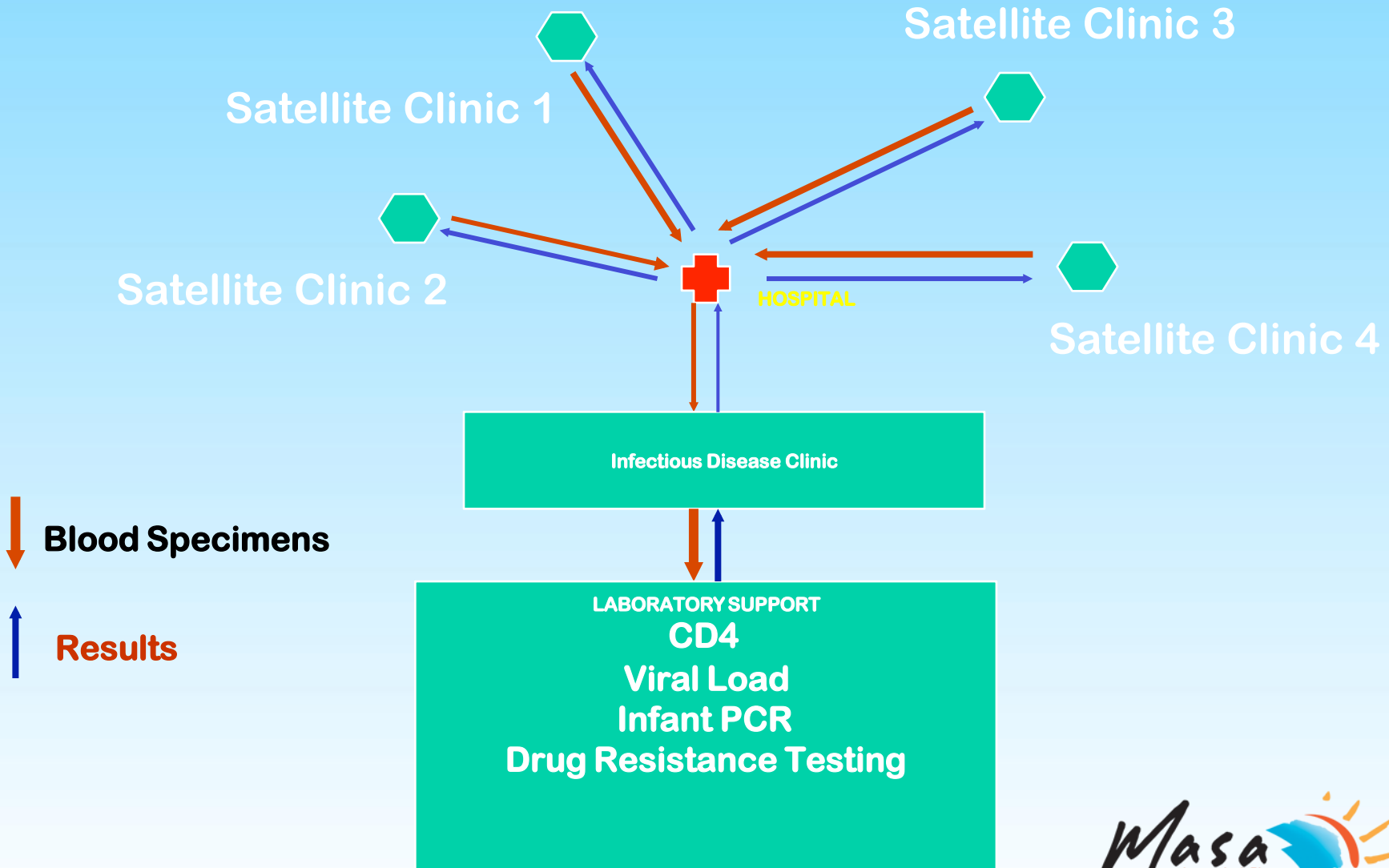
3.1.1 Botswana's Clinical Care Guidelines

- Since 2002, **STRONG POLITICAL WILL** allowed Botswana to improve upon WHO recommendations by adding:
 - ▮ Routine Viral Load Monitoring
 - ▮ Resistance Testing
 - ▮ Optimal ART Regimens
 - ▮ Universal HAART/Triple ARV Prophylaxis
 - ▮ Approaches in Integrative Care

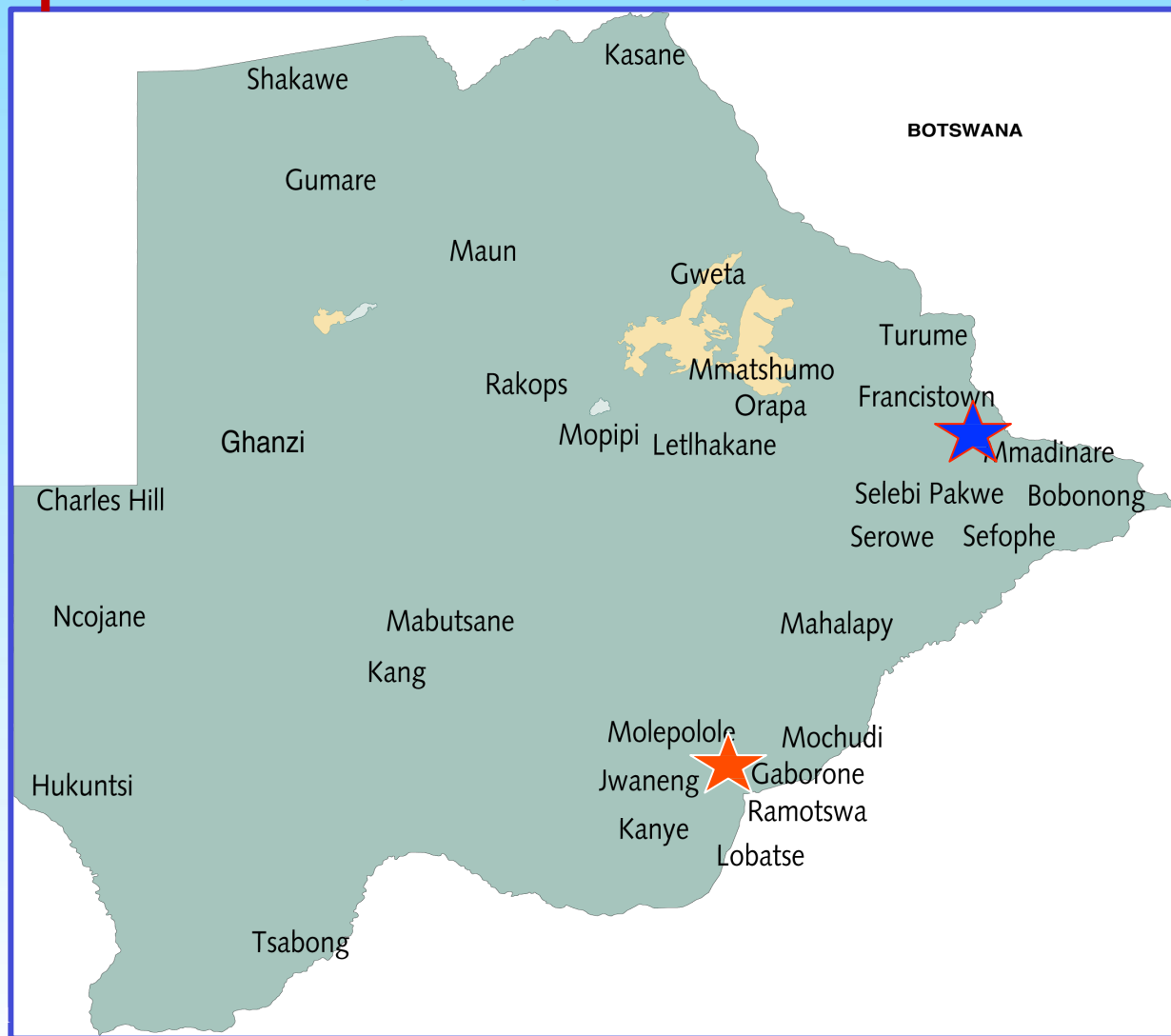
The 2012 Revisions build upon these strengths including improved eligibility criteria

4. Laboratory Referral System

Typical ARV Sites



Botswana started laboratory monitoring with 2 HIV Reference Laboratories with CD4 and Viral Load Capabilities 2002-2004



BHHRL



NHHRL

**BHHRL – Botswana
Harvard HIV
Reference
Laboratory**

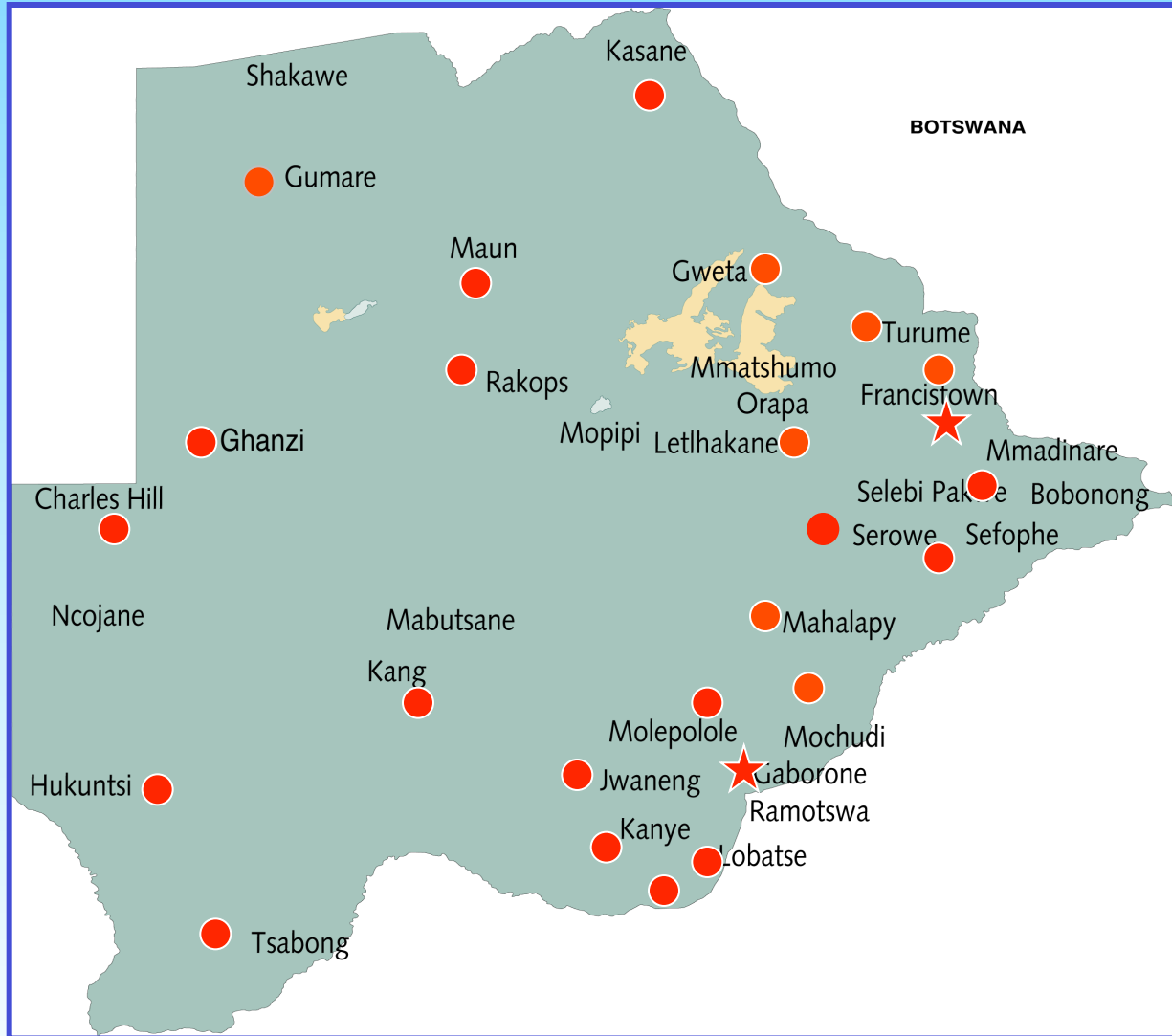
**NHHRL –
Nyangagbwe
Hospital HIV
Reference
Laboratory**



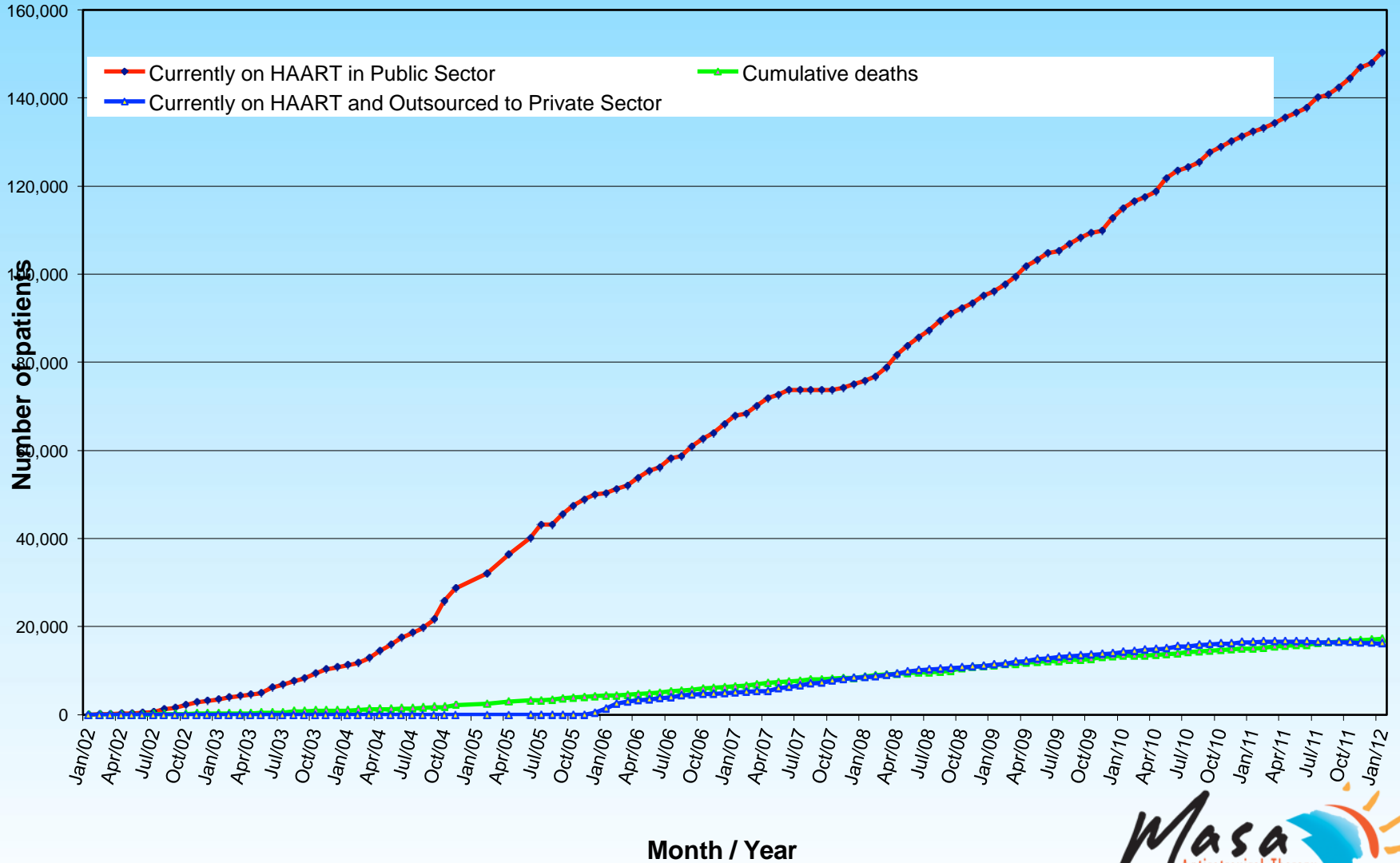
“Solution to Laboratory Problems”

- **Roll out the laboratory services to the district /primary hospitals and eventually to the clinics**
- ***“Taking the services closer to the people rather people coming to the services”*** .

Laboratory Capacity in 2016



Patients on HAART in the public sector and deaths in public sector, January 2002 - January 2012



4. Issues to Address

1. Human Resource

1. Training and mentoring
2. Support – particularly on site

2. Infrastructure

1. Buildings
2. Equipment
3. Services and maintenance

3. Reagents

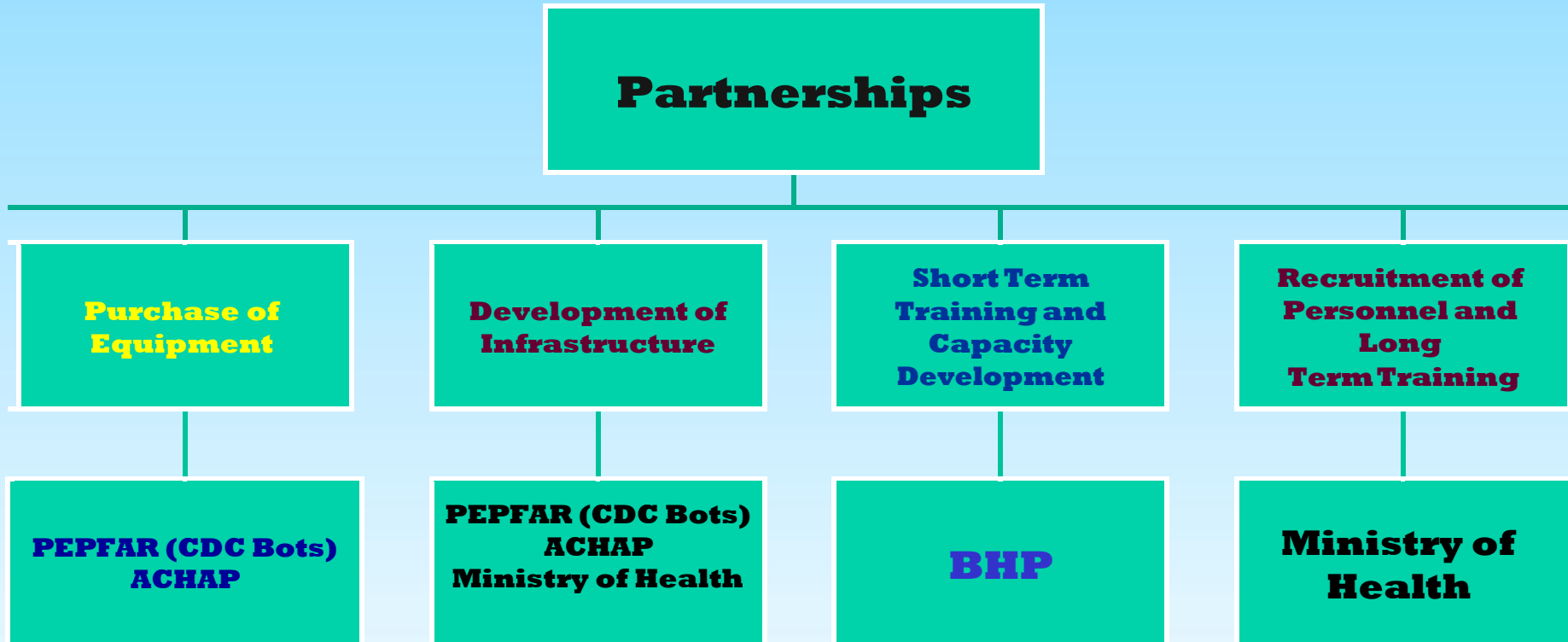
4. Logistics

6. Strategic Partnerships

- **Most of these issues can be addressed through:**

“Strategic Partnerships”

Collaboration between Ministry of Health and Partners



&. Laboratory Procedures

- **Quality Assurance**
 - Internal Quality control
 - External Quality Control
- **Training and Competence Assessments**
- **Data management**

8. Our Challenges

- **Specimen management**

- A. **TRANSPORTATION** -

- **road was the main mode of transport**
 - **Specimens were transported for long distances and under extreme weather conditions**
 - Specimen integrity compromised, thus affecting the quality of results

- B. **RETURNING OF THE RESULTS:** taking too long return results to patients particularly in rural areas

***Thank You for
Attention***

***Keep The Promise.
Stop AIDS***

