Laboratory Technology - the role of the WHO

HIV/AIDS
Diagnostic Support

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INCREASED ACCESS TO HIV ARV THERAPY ....

ACCESS TO APPROPRIATE DIAGNOSTIC SUPPORT ?
Why is diagnostic support so important?

- **BLOOD SAFETY**
- **SURVEILLANCE** - prevalence, drug resistance
- **DIAGNOSIS** - VCT, PMTC
- **MONITORING** - safety and efficacy of ARV therapy
- **QUALITY OF CARE** - opportunistic infections
Diagnostic testing is the entry point for provision of high quality, cost effective health care.
Prevention, treatment and care

Use HIV **diagnostic** test to identify an HIV infection

Initiate treatment with ARVs **minimal diagnostics** required

Monitor effectiveness of ARVs with **diagnostics** (viral load, CD4) and safety with basic laboratory tests
The strategy
1. Appropriate technology
2. Affordable prices
3. Capacity building
4. Reliable laboratory systems
Appropriate technology
Evaluate the quality of HIV diagnostic tests
- HIV test kits, whole blood, urine, saliva

Develop appropriate testing strategies
Focus - resource limited settings

- **SIMPLICITY** - HIV cartridge tests
- **HIGH QUALITY** - evaluated by WHO
- **APPROPRIATE** - no equipment or electricity required
- **ESSENTIAL** - very useful in VCT and antenatal clinics
Support operational research
- Multi-centre evaluation of CD4 methods:
  - Panleucogating, Dynabeads (light microscope versus IF), Cytosphere
- Viral load tests: p24 antigen tests

Novel and appropriate technologies
- EasyCount, Dipstick CD4
- Dipstick NAT tests
WHO Bulk Procurement
1999/2000
HIV tests purchased
6 million
Open Market Price
US$10 million
WHO Bulk Procurement Price
US$5 million
SAVINGS
US$5 million
Capacity building
Building capacity

- Provide guidelines for appropriate laboratory monitoring of ARV therapy
- Develop training materials for CD4 and Viral Load testing
- Provide training for CD4 and Viral load testing
- Provide training for basic laboratory tests and diagnosis of opportunistic infections
- Develop strategies for implementation of HIV/AIDS diagnostic support
Strengthening clinical laboratory services

- Screening for anaemia
- Basic clinical laboratory tests including liver and renal function tests
- Management of opportunistic infections
- Quality assurance and equipment maintenance
Reliable laboratory systems
Monitor the quality of laboratory performance
- EQAS for HIV testing
- Internal Quality Control Samples
- EQAS for CD4 measurements
- Reference preparations HIV NAT testing
- QC samples for Viral Load tests
Future perspectives
2002 - 2003 and beyond

- Provide information on appropriate diagnostics
- Expand bulk procurement scheme
- Provide guidelines and training for diagnostic laboratory monitoring at district and centralized hospitals
- Provide appropriate diagnostic support for HIV:

  ACCURATE DIAGNOSIS - EFFECTIVE TREATMENT - QUALITY OF CARE
"Prescribing anti-HIV drugs without the essential monitoring is like driving blindfolded,"

HIV/AIDS Diagnostic Support