Namibia’s experience with an electronic recording and reporting system
Background

- Population ~2.2 million
- Population density 2.2/km²
- 35 public hospitals, 34 health districts
- Government finances 100% of all anti-TB medicines (including 2nd line) and 60% of all HIV-care medicines
- TB & HIV diagnosis and care services provided for free in public health facilities
- Excellent telecommunication infrastructure in all districts
  - Telephone & email present at all major facilities
Epidemiology: HIV/TB in Namibia (1)

- 2010 ANC HIV prevalence: 18.7%
- 204,000 estimated PLWHA
- 76,307 patients active on ART (Dec 2010)
- 18,236 patients active pre-ART (Dec 2010)
- Of the active patients 13,581 received IPT (Dec 2010)
- 164,041 ever enrolled in HIV care since the programme began (includes died, lost to follow up and transferred to private)
- ART coverage for those eligible is currently estimated at about 69%
  - Dropped from 88% due to revision of guidelines
- 141/338 public health facilities providing ART
- 74% of notified TB patients had an HIV result
- 35% of HIV positive TB patients were put on ART in 2009
Epidemiology: HIV/TB in Namibia (2)

- In 2009 TB CNR 634/100,000 down from 665/100,000 (2008)
- 58% of TB patients are co-infected with HIV
- Treatment success in new smear positive cases was 82% (2008 cohort)
- 396 patients placed on 2nd line TB medicines in 2009 (275 MDR TB, 17 XDR TB, 80 PDR, 24 with no DST)
- TBIC guidelines printed in 2009; TB guidelines revised 2011; ART guidelines revised 2010 to include early initiation:
  - All TB/HIV co-infected to get ART in 2-8 weeks of starting TB Rx
  - CD4 < 350 regardless of stage
  - Stage 3 & 4 regardless of CD4 count
Overview of the TB and HIV reporting systems in Namibia

TB Programme

- Paper based tools have been in use since adoption of DOTS and have been reviewed periodically (under review currently).
- Desktop based Electronic TB register (ETR) in place since 2007
- Plans to introduce Web based eTB manager for PMDT (pilot to start May 2011)
- This tools can capture the following HIV-related information
  - Testing for HIV among TB patients
  - ART regimens for TB patients
  - Cotrimoxazole for TB patients

HIV programme

- Paper based tools have been in use since 2003 and has been reviewed periodically (under review currently).
- Electronic Patient Monitoring system (ePMS) in place since 2007
- Other electronic tools include Electronic Dispensing Tool (EDT) pharmacy based tool.
- ePMS can capture the following TB-related information
  - Screening for TB, and dates of treatment
  - IPT
  - Cotrimoxazole
MoHSS - NAMIBIA

ART Electronic Patient Monitoring System (ART ePMS)

<table>
<thead>
<tr>
<th>Main Menu</th>
<th>New Patient</th>
<th>Search</th>
<th>HIVQUAL</th>
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<tbody>
<tr>
<td>Card Data_Entry</td>
<td>Card_F_Up</td>
<td>Quality Control</td>
<td>Reports</td>
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<tr>
<td>Appointments</td>
<td>Import_Export</td>
<td>Chang_ART_#</td>
<td>EWI</td>
</tr>
</tbody>
</table>

This_Facility_code
This_Health_Facility
This_Region
ePMS

• Main electronic reporting system for HIV patient care in Namibia
• Source of data for the system is the patient care booklet
• On the 3Is captures:
  o IPT among HIV positive patients
  o Number of HIV positive patients screened for TB in HIV care setting
  
  ▪ Does not capture any information on TBIC yet
ART patient care booklet
# Data Flow

<table>
<thead>
<tr>
<th>LEVEL</th>
<th>ACTIVITY</th>
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</thead>
<tbody>
<tr>
<td>Health facility level:</td>
<td>Patient based data collected on the patient care booklet and Pre and ART registers</td>
</tr>
</tbody>
</table>
| District level             | Data entered at district level in an electronic patients monitoring system (EPMs)  
Data aggregated in periodic reports for the regional level  
Report for the district is made                                    |
| Regional level             | Hard copy of the district report is forwarded to the region                                                                                |
| National level             | Soft copy to the National office National aggregation of data  
Production of periodic reports                                      |
ePMS - data entry
ePMS - follow up data entry
ePMS - reports
Data collection and management

- Recorded by HCW (community counsellor, nurse and doctor) at point of care in the Patient care booklet; Pre-ART and ART registers
- Entered by data clerks into EPMS at district level
- Periodic reports generated and hard copies send to regional level
- Electronic reports emailed to national level for cleaning aggregation & analysis
- National office produce quarterly bulletins based on ePMS reports
Enablers

• Introduction of the IMAI & HIVQUAL has managed to strengthen the following aspects of the system
  ▪ Identifying gaps and areas for improvement
  ▪ Screening for TB in HIV patients
  ▪ Roll out of IPT
  ▪ Task-sharing and role of teamwork
• Housing of the TB & HIV programmes in the same directorate and division
• Presence of a TB-HIV collaboration technical working group at national level – joint planning and cross consultation
• Regular training of both implementers and data entry staff on the tools
• Mentoring and support visits to the sites
• Good telecommunication infrastructure
Challenges

- Sub-optimal integration of TB and HIV reporting systems (parallel reporting), sometimes leading to conflicting or double-reported data
- Data verification done on ad-hoc basis
- Human resources challenges still remain
- Data clerks often overwhelmed by the reporting requirements
THANK YOU