

# Scaling up Child TB Activities: the Kenyan Experience

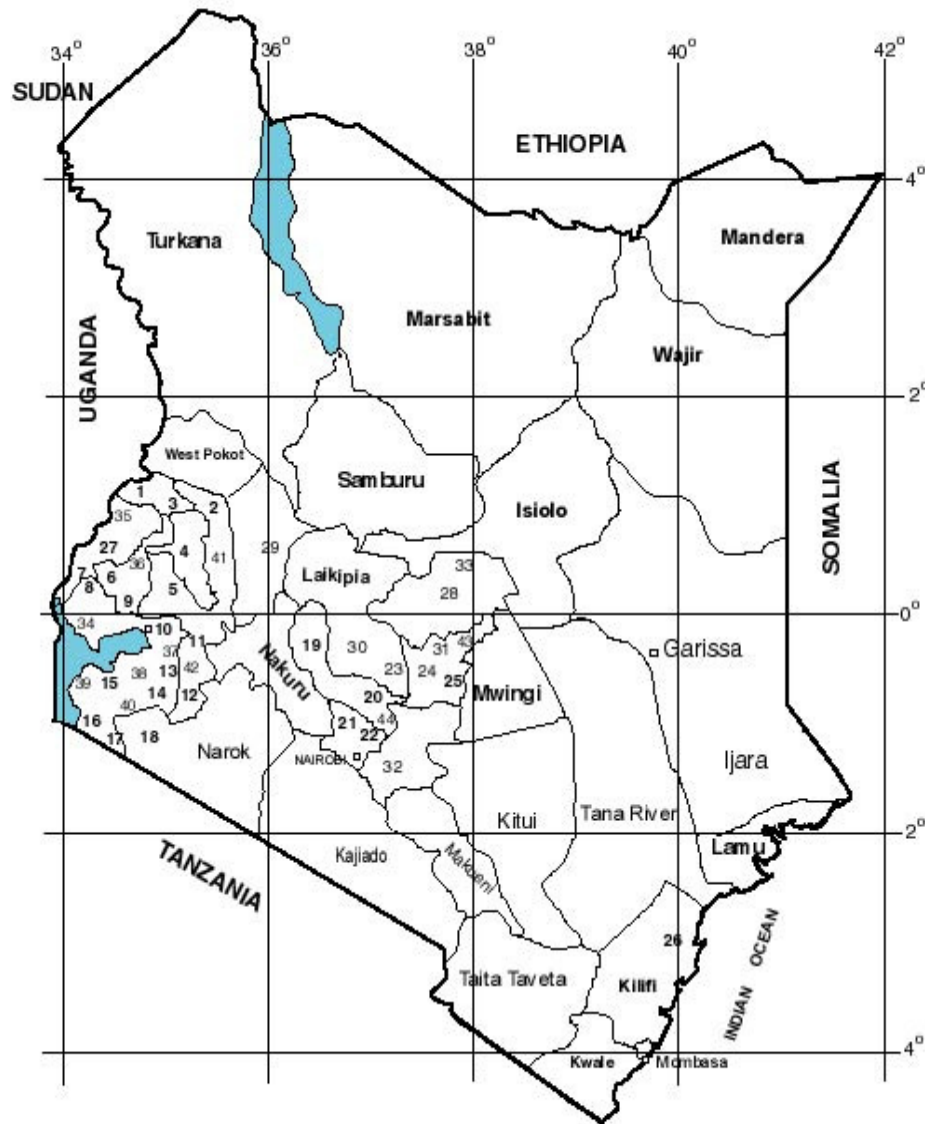
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## DISTRICTS IN KENYA



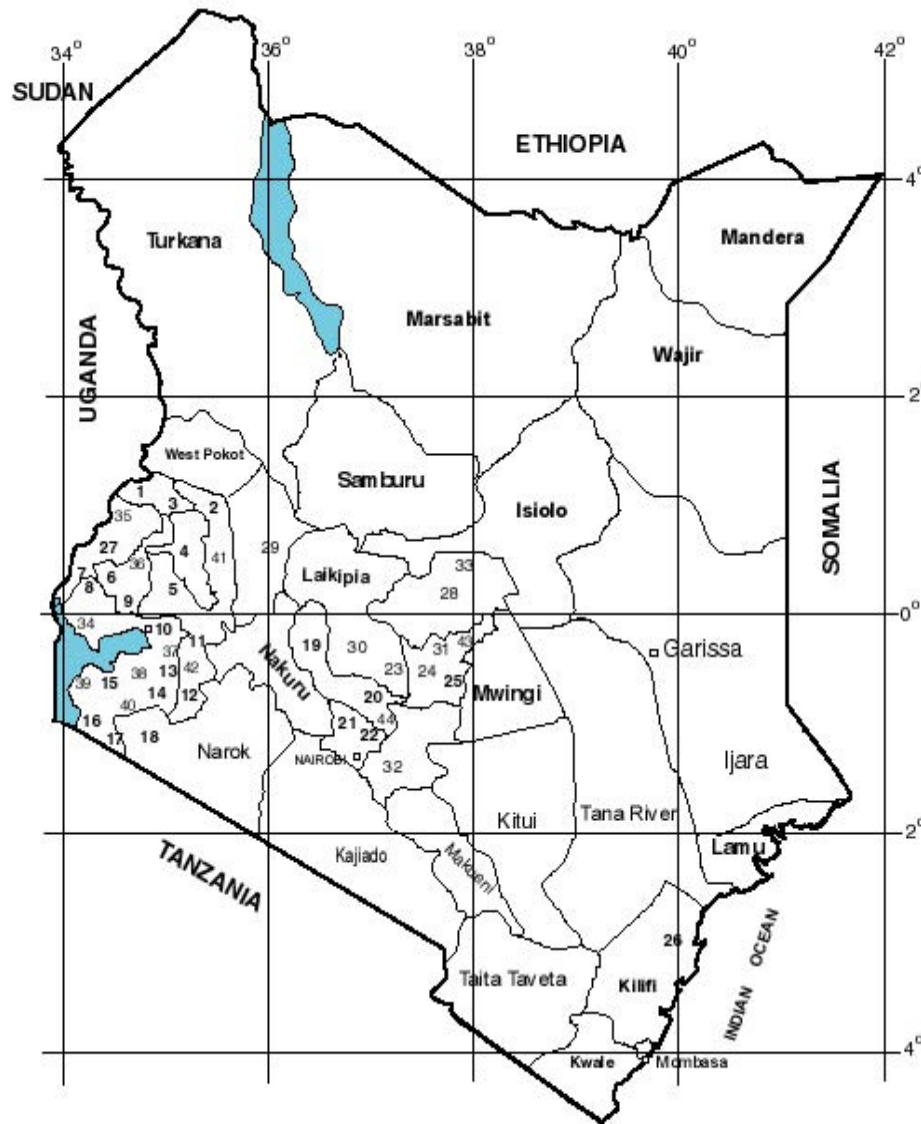
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|-----------------|--------------|-----------------|----------------|--------------|--------------------|----------------|--------------|
| 1 - Mt. Elgon   | 7 - Busia    | 13 - Nyamira    | 19 - Nyandarua | 25 - Mbeere  | 31 - Nithi         | 37 - Nyando    | 44 - Maragua |
| 2 - Marsket     | 8 - Siaya    | 14 - Kisii      | 20 - Murang'a  | 26 - Malindi | 32 - Machakos      | 38 - Rachuonyo | 43 - Tharaka |
| 3 - Trans Nzoia | 9 - Vihiga   | 15 - Homa Bay   | 21 - Kiambu    | 27 - Bungoma | 33 - Nyambene      | 39 - Suba      |              |
| 4 - Uasin Gishu | 10 - Kisumu  | 16 - Migori     | 22 - Thika     | 28 - Meru    | 34 - Bondo         | 40 - Gucha     |              |
| 5 - Nandi       | 11 - Kericho | 17 - Kuria      | 23 - Kirinyaga | 29 - Baringo | 35 - Teso          | 41 - Keiyo     |              |
| 6 - Kakamega    | 12 - Bomet   | 18 - Trans Mara | 24 - Embu      | 30 - Nyeri   | 36 - Bureti Mumisa | 42 - Buret     |              |

Scale 1:4 500 000  
0 50 100 150 200 250 Kms

Kenya experience Child TB, Obimbo

Population	33.4 Million
Children < 14 yr	40% of population
Case Notification Rate (2006)	329/100,000
Incidence of TB (2006)	115,324 (58,854 – 07)
Case Notification Rate (2006)	
HIV prevalence	6.1%
TB patients with HIV (2007)	49%

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Kenya experience Child TB, Obimbo

<b>Kenya</b>	<b>2006</b>
Population	39.4 million
Children < 14yr	~ 43% of population
TB CDR (WHO-2007, Report)	50%
Incidence of TB (2006)	115,324 (58,854 – 07)
Case Notification Rate (2006)	329/100,000
HIV prevalence	6.1%
TB patients with HIV (2007)	49%

# Historical Picture in Kenya (before 2008)

Child TB under-recognized and under-represented on several fronts.....

- Policy level
  - Minimal mention child TB in policy documents & meetings
- Health services delivery level
  - Children managed as “small adults”
  - Health workers inadequate understanding & skills to diagnose and manage children
  - Use of scoring system a barrier (complex, lab and xray limited availability)
  - Much up-referral to paediatrician for diagnosis
  - Use of adult drug formulations

# Historical Picture in Kenya

- Monitoring & Outcomes
  - Tailored to adults (registers, Rx cards, outcome indicators)
- Training material & TB Guidelines
  - Child TB module - 2 hrs in 5 day national TB training Course
  - National guidelines 2006 version – child TB absent
  - Target trainees usually NTP personelle, rarely from MCH or pediatric fraternity
- Prevention
  - Child contact tracing low
  - Health workers not confident at ruling out active TB in children
  - No INH prophylaxis available

# The Pathway to Scaling Up Child TB Activities in Kenya

# Advocacy

- Two paediatricians realized lack of child issues in TB program activities (researcher, lecturer)
- Began inviting ourselves to Ministry of Health forums on TB
- Created awareness of child TB, the gaps and poor outcomes we see in hospitals
- At National TB Program Policy makers slowly began to listen (Head of National TB Program, and some NTP officers.....)

# Advocacy bears fruit....

- National TB Program – began to regularly seek technical guidance from paediatricians on child TB and lung diseases (from 2008....)
  - Paediatrician involvement in developing child Tb content for National Guidelines book when reviewed in 2008-9 (first time substantively included)
- Kenya Paediatric Association – organized one day symposium on Child TB
  - Invited NTP to participate (present and hear CME)
  - Updated paediatric fraternity on child TB
- *This was the beginning of true scale up of child TB activities...*



# The Pathway to Scale Up

- Afro WHO office organised Workshop on Child TB involving Sub-Saharan African country teams (Malawi 2009)
- Kenya Ministry of Health sent combined team including a Provincial TB Officer & two paediatricians
- Supported by Kenya WHO TB point person
- Developed a matrix outlining SWOT – with action and implementation plan to address child TB issues in-country

# The Pathway to Scale Up

- One Provincial TB officer – requested to handle child TB agenda – coordinated activities and various technical experts & partners to move agenda forward
  - (WHO, Universities, Research Institutes, NGOs)
- Developed stand alone guidelines “Management of Child TB” (2010)
  - WHO Desk Guide (2010) provided template for Kenyan adaptation

**Desk-guide for diagnosis and management of TB in children**



1



**Tuberculosis Management  
in Children**

**Ministry of Public Health and Sanitation  
Division of Leprosy, Tuberculosis and Lung Disease**

**November, 2011**

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# NLTP Strengthens Leadership in Child TB

- Child TB Technical Working Group in NLTP set up in Nov 2011. Multi-organisational representation:
  - MoH – NLTP + HIV, MCH and Nutrition programs
  - Medical Schools & Research Institute
  - Partners – CDC, other NGOs (ICAP, AMREF)
  - TWG meets at least twice each year
- NLTP Officer in National Office given dedicated portfolio of Child Tb as full-time responsibility
- Inclusion of Child TB in National Strategic Plan 2013 – 2018 (with Budget line)

# The Pathway to Improvement

Widespread creating of awareness on Child TB including:

- Official launch of Child TB Guidelines at World TB day 2012
- Sensitisation and distribution of child TB guidelines at Kenya Paediatric Association Conference 2012
- Child TB included in World AIDS day ceremony program

# Equipping Health Workers to Manage Child TB

- Child TB TWG organised workshop to write training material for equipping & updating health workers to manage Child TB
  - Two hour CME “A to Z of Child TB”
  - 5 day course on “Management of Child TB”
- Job-aids specific for children also developed:
  - Screening for TB                      - IPT dosage charts
  - Diagnostic algorithm                - Drug dosage charts
- Monitoring card adapted to include child-specific aspects

All Aligned to revised National Guidelines

Resource material - WHO child TB generic course material

# Equipping Health Workers to Manage Child TB

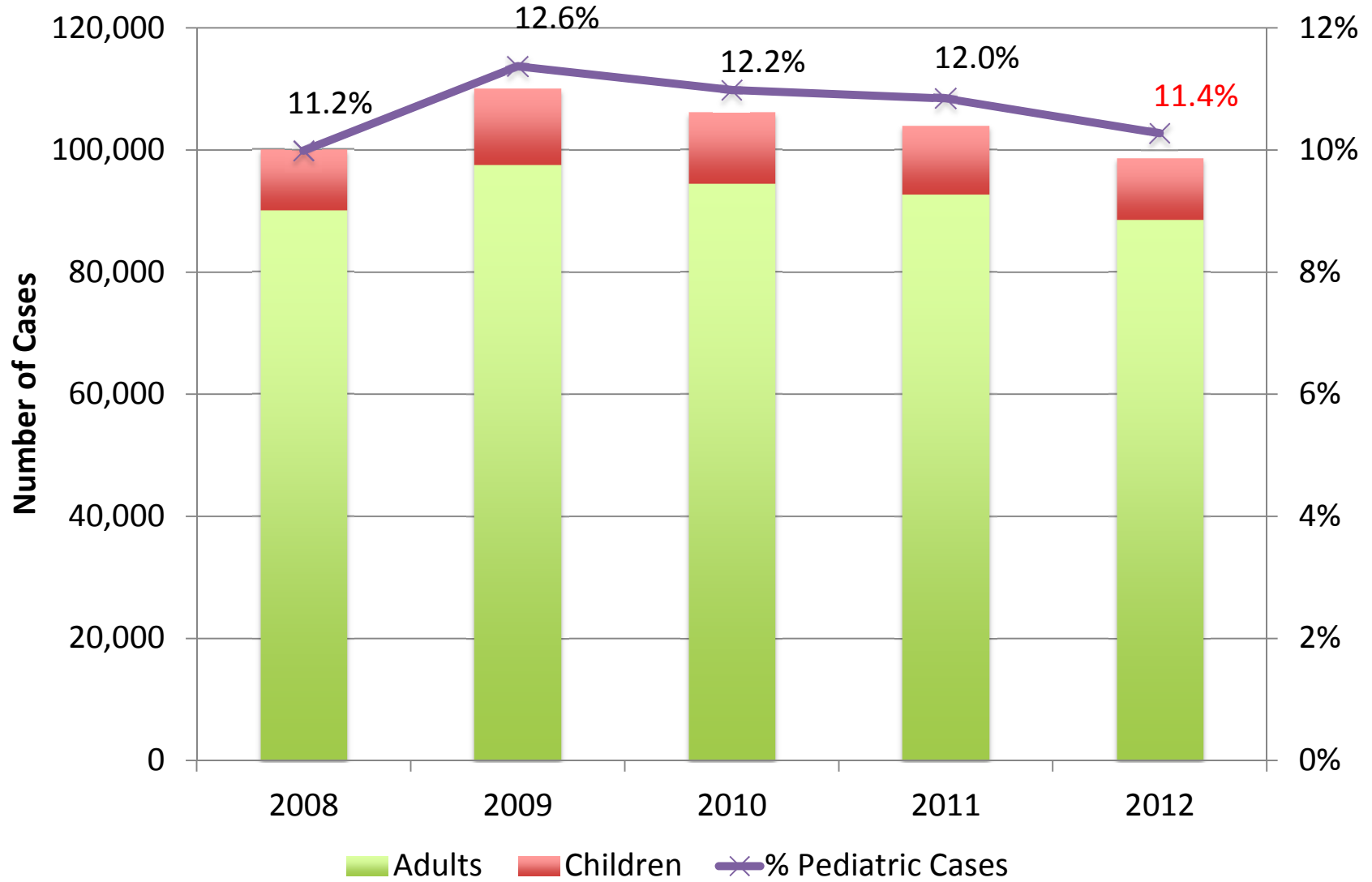
- Roll out of training health workers from August 2013 county by county
- Strategy:
  - Train potential trainers including paediatrician, medical officers alongside TB program personelle
  - Train staff from MCH and paediatric wards, hospital pharmacists, lab personnele
  - Introduce job-aids and updated child TB guidelines

# Mid-term Review of National TB Program Feb 2014

- Child TB – included as separate focus area
- Key recommendations made:
  1. Access to diagnostics - CXR and xpert testing should be scaled up and free for children.
  2. Child TB capacity building (knowledge and skill development) on diagnosis, management and prevention.
  3. Scale-up child contact tracing to improve case finding and IPT uptake.
- Child TB activities scaled up accordingly in the current TB program strategic plan (2014-2018)



### TB Cases - Child versus Adult

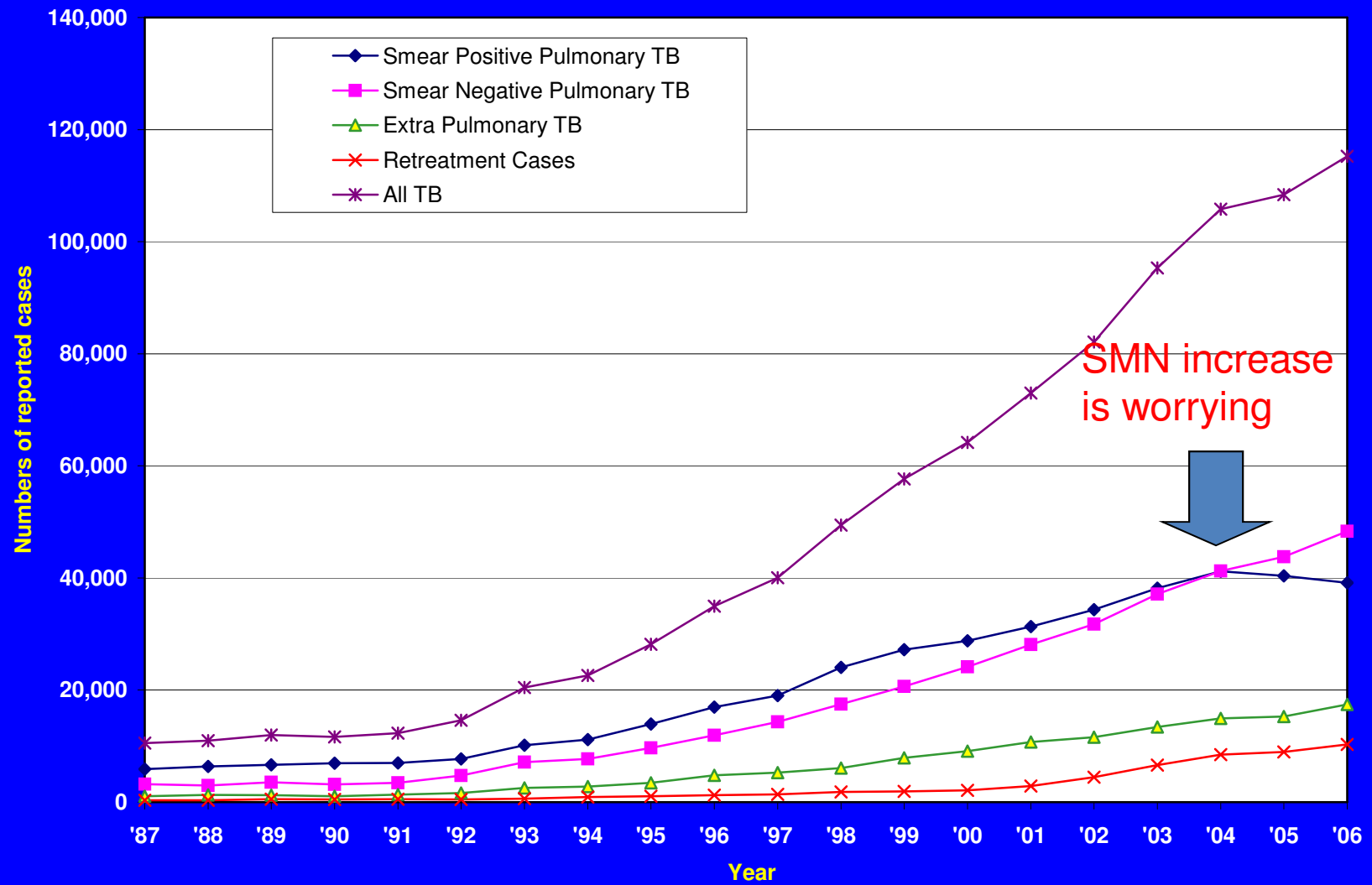




**Asante! Thank you! Orio! Erokamano!  
Bien venue! Grazios! Danke!**

# SUPPLEMENTAL SLIDES

## NLTP Kenya - TB Case Finding: 1987 - 2006



# Child TB Diagnostics - Situation 2006

- Diagnostic approach
  - Clinical scoring system approach by most
  - Many health workers found this too complex – not confident
  - Required CXR, ESR, TST – frequently not available
- Diagnostic tests
  - CXR mainstay – poor access due cost, no Xray facilities most clinics where children seen
  - Gastric lavage – recommended but largely un-available
  - Sputum – rarely collected even in older children
  - MTb tests on child specimens – microscopy only which has low sensitivity in child pauci-bacillary disease
  - Mantoux (tuberculin) test not available
  - HIV testing – low testing rates in children with TB, HIV PCR for infants required referral to HIV services

# Child TB Treatment - Situation 2006

- General tendency towards up-referral of children with suspected TB – led delay in Rx initiation
- Pediatric drug dosage tables available
- Pediatric drug formulation availability inconsistent
- Predominant use of adult TB drugs even for young children – HW choice
- Low awareness on need to weigh child and adjust dosage during 6 months of Rx as child gains weight
- Adjunct Rx – pyridoxine adult formulation

# Follow-up Monitoring – Situation 2006

## Patient follow-up TB treatment card

- Tailored for adults
- Weight captured only at start of Rx
- No place to adjust drug dose with change of weight
- Outcome recording tailored to sputum positive individuals
  - no sputum done in most children
  - therefore poor capture of child TB Rx outcomes