From DOTS Expansion to implementation of the Stop TB Strategy: challenges for NTPs

Chakaya J.M
Chair, DEWG

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Outline

• DOTS to Stop TB Strategy – evolutionary steps

• Implementation of the Stop TB strategy – the challenges at the country level

• Proposes responses to the Stop TB Strategy implementation challenges

• Conclusions
TB : A Global Emergency

Friday 23, April 1993

WHO

- Declares TB a global emergency
- Warns that 30 million lives could be lost from TB in the next decade
Deaths from Infectious and Parasitic Diseases in 1990, Over Age 5

Source: WHO TB Report 1994
TB in 1993-1994

• At 3 millions lives a year TB was the leading infectious killer of adults
• TB was resurging in wealthy countries
• Drug resistant TB was becoming more common and was killing people
• The TB-HIV co–epidemic was rapidly unfolding
• Short course chemotherapy was available and able to cure more than 95% of cases
• The World Bank Development Report (1993) had declared TB control among the most cost effective health interventions
TB was a low priority disease (only one person was coordinating TB control activities at WHO in 1988)

Poor public policy

TB control programmes were considered too "vertical"
The proposed TB control strategy

• Demonstrate to governments the economic and social consequences of ignoring TB
• Help nations establish effective TB programs
• Focus on worst affected countries
• Develop both the “vertical” and “horizontal” aspects of TB control
• Promote short course chemotherapy instead of long course
• Emphasize supervised treatment
• Treat existing cases before searching for new cases
• Funding should first emphasize treatment then research
DOTS – the Strategy

• Political commitment
• Passive case detection of smear positive PTB using sputum smear microscopy
• Standardized short course (6-8 months) treatment with direct observation of treatment
• Regular and uninterrupted supply of anti-TB drugs
• Standardized recording and reporting system
DOTS Expansion

- Key elements of the first Global DOTS Expansion Plan of 2000
  - Development of five year plans at country level
  - Increased political commitment
  - Enhanced national and international partnerships
  - Social mobilization
  - Human resource development
  - Improved TB drug procurement
  - Quality assurance of smear microscopy
  - Operations research
Ten years of DOTS Implementation (2004 -2005)
Escalating TB Disease Burden Despite in Africa

Source: WHO Global TB Report 2004
The problems with DOTS

• Targets:
  • 70% CDR in the face of an uncertain denominator
  • 85% Cure Rate without ART considered not feasible

• Focus on smear positive PTB while PLHIV had proportionately higher smear negative PTB and EPTB

• Inferior drug regimen – Adverse effects with TH and poorer outcomes with EH
Escalating MDRTB Problem

Global Burden of MDRTB estimated at about 500,000

Increasing demand for more comprehensive approaches to prevention, identification and treatment of MDRTB
Doubts about efficacy of DOT for improving adherence

Directly observed therapy and treatment adherence

Jimmy Volmink, Patrice Matchaba, Paul Garner

Direct observation of patients taking their medication is a strategy to improve completion rates for tuberculosis treatment, but the programmes to implement this approach consist of a complex array of inputs aimed at influencing adherence. Policy makers need a clear understanding of these inputs to succeed. We systematically identified and reviewed published reports of direct observation therapy (DOT) programmes and compared inputs with WHO’s short-course DOT programme. DOT programmes frequently consist of more than the five elements of WHO’s strategy, including incentives, tracing of defaulters, legal sanctions, patient-centred approaches, staff motivation, supervision, and additional external funds. Focusing on direct observation as a key factor in the promotion of adherence seems inappropriate. Multiple components might account for the success of DOT programmes, and WHO should make these explicit.

*Lancet* 2000; 355: 1345 - 1350
Summary of the “weaknesses” of the DOTS strategy

• **DOTS was a largely public Health approach**
  • Focus on infectious smear positive PTB (Cat 1)
  • Less emphasis on other forms of TB (Cat 2, 3 and 4)
  • Not patient centered
  • Inadequate to control TB where the driver was HIV
  • Ignored MDRTB
  • DOT was offensive to “communities”
However---

• Between 1995 -2010

  • **55 million TB patients were treated in TB programmes adopting DOTS/Stop TB Strategy, 46 million of them successfully with 6.8 million lives saved**

*Source: WHO Global TB Report 2011*
The DOTS Strategy

**Political commitment**

Passive case detection of smear positive PTB using sputum smear microscopy

Standardized short course (6-8 months) treatment with direct observation of treatment

Regular and uninterrupted supply of anti-TB drugs

Standardized recording and reporting system

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**THE 6 COMPONENTS**

1. **PURSUE HIGH-QUALITY DOTS EXTENSION AND ENHANCEMENT**
   a. Secure political commitment, with adequate and sustained financing
   b. Improve case detection, and diagnosis through quality-assured bacteriology
   c. Foster sustainability of treatment with supervision and patient support
   d. Ensure effective drug supply and management
   e. Monitor and evaluate performance and impact

2. **ADDRESS TB-HIV, MDR-TB, AND THE NEEDS OF POOR AND VULNERABLE POPULATIONS**
   a. Scale-up collaborative TB-HIV activities
   b. Scale-up prevention and management of multi-drug-resistant TB (MDR-TB)
   c. Address the needs of TB-affected and poor and vulnerable populations

3. **CONTRIBUTE TO HEALTH SYSTEM STRENGTHENING BASED ON PRIMARY HEALTH CARE**
   a. Help improve health policies, human resource development, financing, supplies, service delivery and information
   b. Strengthen linkages between health centers, other competing settings and hospital networks
   c. Increase laboratory testing, and implement the radical approach to new health (RH)
   d. Adopt successful approaches from other fields and sectors, and focus action on the social determinants of health

4. **ENGAGE ALL CARE PROVIDERS**
   a. Involve all public, voluntary, corporate and private providers through "Stop TB Platform" (PTP) approach
   b. Promote use of the International Standards for Tuberculosis Care (ISTC)

5. **EMPLOY PEOPLE WITH TB, AND COMMUNITIES THROUGH PARTNERSHIP**
   a. Promote education, communication and social mobilisation
   b. Foster community participation in TB care, prevention and health promotion
   c. Promote use of the "Ending TB" Charter for Tuberculosis Care

6. **ENABLE AND PROMOTE RESEARCH**
   a. Conduct programme-related operational research
   b. Advocate for and participate in research to develop new diagnostics, drugs and vaccines
Focus on Early and Full Case Detection
Conceptual framework for improved and early case notification/detection

TB and Poverty

ACSM
Community engagement

Health education

Minimize access barriers

DOTS / MDR/HIV Expansion

PPM

Paediat. TB
PAL

Improve diagnostic quality, new tools

Lab Strenght

HSS/HR

TB and Poverty

Active TB

Symptoms recognised

Health care utilisation

Patient delay

Effective TB screening in health services, on broader indication

Improve referral and notification systems

TB and Poverty

Infected

Active case finding

Contact investig
-Children
-Other risk groups
-All household
-Workplace
-Wider

Clinical risk groups
-HIV
-Previous TB
-Malnourished
-Smokers
-Diabetics
-Drug abusers

Risk populations
-Prisons
-Urban slums
-Poor areas
-Migrants
-Workplace
-Elderly

New diagnostic tools
Infection control

Source: Leopold Blanc
A patient centered approach

- Onset of symptoms (or desire to check my health) to first contact with a health provider (who, where, when – my choice)

- Clinical evaluation of symptoms (telling my story, submitting to a physical examination, accepting tests, receiving test results, accepting treatment, adhering to treatment)

- Listening to story, doing a physical examination, to refer or not, to request tests or not, to discuss test results, to prescribe treatment, to support patient with treatment issues (including side effects monitoring), the NTP work of recording and reporting

- The outcome – cure or no cure, acquired resistance, death, default, chronic disease etc
The Challenges

The critical challenge in tuberculosis programmes: are we thinking critically?

• Blind adoption of the Stop TB strategy by NTPs

• Risk of complacency when a CDR of 70% and TS of 85% is achieved

• Insufficient analysis of routine surveillance data by NTPs
Are NTPs overwhelmed by the Rapid evolution of global policies?

• Programmes not being given time to soak in new approaches and tools?
  • 2007 Liquid Culture
  • 2007 New case definition of S+PTB
  • 2007 Reduction in # smears
  • 2008 Molecular LPA
  • 2009 LED microscopy
  • 2009 Non commercial culture and DST
  • 2010 Automated NAAT
Dealing with Health System Issues

• Human Resource Development

• Commodity Management

• Health Management Information Systems

• Focus on broader health issues
  • Disease Prevention
Health Systems Issues including Human Resource Constraints

• Can the Stop TB Strategy be delivered effectively in the face of the current HRH Crisis?

• What Health System/Services Research needs to be done to address HR shortfalls?

• How should TB take advantage of the NCD wave?
Sustaining TB as a national health priority

• Weak advocacy capacity
  • Inadequate number and skills of advocates
  • Inadequate ability to turn routine surveillance data into advocacy “punch lines”
Is the Stop TB Partnership WG Structure a Problem?

- WG Structure of the Stop TB Partnership closely mimics the Stop TB Strategy

- Sub optimal coordination at the global level

- Is this a problem at the Country level?

- Could this structure be interfering with patient care?
Conclusion

• Although the Stop TB Strategy is comprehensive and saves lives, its application at country (sub national level) level should be based on local epidemiology of the disease.

• Know your epidemic and act appropriately.