Initiation and scale-up of MDR-TB care in Ethiopia

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FAILURE IS NOT AN OPTION

FMOH

UNIVERSITY OF GONDAR

Global Health Committee

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TB in Ethiopia

#7 among the 22 highest TB-burdened countries.

#15 among the 27 highest MDR-TB-burdened countries
The Status of MDR TB in Ethiopia in 2008

Population ~80 million

129,000 new TB cases/year


Proportion of MDR-TB 1.6% and 11.8% among new and re-treatment cases respectively.

~6,000 new MDR cases/year

221 MDR cases documented by DST as of 12/08; FIND assistance to establish lab capacity

Green Light Committee (GLC) application initiated 2007 and submitted June 2008

GLC approval for 45 patients obtained in August, drugs were to be received in October 2008

First MDR training in Ethiopia by GHC/CHC in Oct 2008 followed by training in Cambodia in Dec 2008 funded by WHO & TBCap

Cambodian Health Committee team visit to St Peter’s Hospital, In August 2008 to assist initiation of Ethiopian MDR program
South-South Partnership: Didactic Training in Addis (Oct 2008), And then Ethiopian MDR Team Trains in Cambodia

Battambang, Cambodia, December 2008
Limitations Faced in Ethiopia in Feb 2009

- No second line TB drugs: in the end delayed by \textasciitilde 1 year
- Isolation beds not available: MDR ward not completed at St Peters in Addis Ababa and would be delayed for another year
- Human resource limitations
- No 2nd line pharmacy
- Only partial lab testing available
- Outpatient system not established
Limitations Faced in Ethiopia in Feb 2009:

-Cambodian/Global Health Committee (CHC/GHC) with funding from Angelina Jolie and Brad Pitt and an initial donation for 18 courses of capreomycin from Eli Lilly

-using models established in Cambodia, in the partnership with the Ethiopian MOH, initiated MDR care for 9 patients at St. Peter’s Hospital in converted space in Feb. 2009

St. Peter’s Hospital, February 2009
Ethiopia MDR-TB Timeline June 2007 – December 2011

6/2007 Green Light Committee (GLC) application process started

6/2008 GLC application submitted

8/2008 GLC application approved for cohort of 45 patients—planned program start date Oct. 2008

9/2008 Global Health Committee/Cambodia provides drugs for the first patient

10/2008 First GHC MDR training of doctors, nurses and health workers in Addis Ababa at request of MOH: 45 participants: MDs, nurse, pharmacists, lab personnel; focusing on prevention of infection, patient management, drug side effects, program design and management

12/2008 GHC training of Ethiopian MDR team in Cambodia sponsored by WHO TB Care & WHO

2/2009 What happened while the Green Light Committee drugs were stalled by inefficiencies of the Global Drug Facility

2/2009 GHC/FMOH program with GHC/Lilly drugs initiated with first group of 9 patients;
• GHC providing SLD, ancillary drugs, assistance with labs, social support, established SLD pharmacy management protocol, prevention of infection with masks and training, inpatient and outpatient systems established based on Cambodian experience in collaboration with the FMOH and in communication with the Technical Working Group
• Begin of scale-up with second group of 13 patients started

6/2009 Third group of 16 patients started

8/2009 GLC drugs for 45 arrive—37 patients had already started in the previous 6 months (36 surviving)—allowing rapid use of the 45 courses of GLC drugs with all aspects of the program supported by GHC

9/2009 Fourth group of 14 patients started

Fifth group of 30 patients started

1/2010 Sixth group admitted (13 patients)

4/10-6/10 Seventh and Eighth groups admitted (44 patients)
• initiation of pilot program for outpatient start of MDR care with 5 outpatient starts.

Request by MOH to expand and initiate care in Gondar for 5 patients. MD and nurse from Gondar trained at GHC/St Peters program in Addis

8/10 Program initiation in northern Ethiopia, Gondar (3 patients)

7/10-9/10 Ninth group of patients admitted in Addis (12 patients) including 4 outpatient starts

9/10-12/10 Nine patients are admitted in Gondar; New MDR opened in October 2010

10/10-12/10 Ten patients are admitted in Addis Ababa

By the end of 2010: 159 patients initiated on MDR therapy (147 Addis & 12 Gondar)
Scale-up of MDR care in Ethiopia

July 2012

500 patients have been initiated on therapy
- 444 in Addis with 59 outpatient starts (0 defaults/100% adherence)
- 56 in Gondar
- 128 SLD courses provided (Jolie-Pitt, Lilly, Chao, Jacobus, CHC)

98 patients have been cured (6) or completed treatment (92)

254 patients are on active treatment
- 243 outpts and 55 inpts in Addis; 38 outpts and 12 inpts in Gondar
- 9 patients (presumed) XDR

49 patients died (9.8%)
- 6 treatment interruptions/default (1.2%)

Program Expansion to Bahir Dar

Ethiopia and GHC/St Peters Program selected as the clinical site for the STREAM trial, soon to begin
What happened to the DST-confirmed MDR backlog patients that were waiting for GDF drugs?

Of the historic **221 DST-confirmed MDRTB backlog patients** in Addis Ababa awaiting 2nd line therapy in **August 2008**:

- **30% (66)** initiated on therapy

The other **70%** remaining:
- **20% (42)** of list confirmed **dead** while awaiting therapy
- **50% (110)** of list were unable to be located with the contact info in hand despite door to door search by GHC staff, many presumed dead
GHC-FMOH MDR-TB Treatment Program

- **Median age:** 27 years (8-75)
  - 46% males & 54% females
- **Comorbidities:**
  - 21.2% with HIV
  - 4.9% with Diabetes
  - 4.9% with Cor pulmonale
  - 9.7% with ETOH or tobacco dependence
- **Low BMI:** median 18.5 (11-27.4)
- **Advanced disease:**
  - 68.6% with bilateral cavitary disease
- **Median # of prior TB treatments:** 3
- **Median # of resistance to drugs:** 4

![Treatment Outcomes of the Initial Cohort completing therapy by Oct 2011, n=41.](chart.png)

Source: PC-765-29: A Successful Model for MDR-TB treatment and Scale-up in Ethiopia with a community-based program, presented 41st IUATLD Conference, Lille, France, October 2011
Fetene

- 19 years old
- Multiple prior TB rx
- Severe malnutrition, and chronic diarrhea
- Extreme poverty: homeless & living with the Missionaries of Charity
- Pulmonary TB and TB peritonitis
- Died at 56 days – severe intercurrent pneumonia, respiratory failure with limited reserve given advanced underlying lung disease
Advanced, chronic patients with extensive bilateral disease
5% have irreversible right heart failure/cor pulmonale
GHC community based care model in partnership with FMOH

• **Hospitalization**
  – Initial cohort: patients hospitalized for initiation of treatment

• **Outpatient & Community-based care (80% patients)**
  – At health center level and at home
  – Completion of intensive and continuation phases
  – Outpatient follow-up
    • Intensive monitoring [home level family DOT supporter, Health center staff, mobile out-patient monitoring team, patient visit of treatment center, telephone communication]
    – Home visits

• **Multidisciplinary care:**
  • Nutritional support: In-patient as well as out-patient phases of treatment
  • Social support: Transportation allowance, house rent support
Expansion to Gondar (Northern Ethiopia)

Gondar Medical staff trained in GHC/St. Peters program

August 2010: first patients begin treatment
August 2010

Gizachew, 33 y.o. man, very ill living with 11 family members including his 2 children

3 prior courses of CAT 1/2 DST+ for MDR March 2010 unable to access care
Gizachew

Aug 2010, Gondar

September 2011, Gondar
A viable approach

• Rapid scale-up of MDR care
  – Effective partnership FMOH, GHC (NGO) in collaboration with and supporting the MDR Technical Working Group

• Expansion of program ongoing

• Training & Capacity-building—creating MDR centers of excellence in Addis and Gondar and core national trainers

• Expanding access to care to life-saving treatment

• Provides a model for expansion for Africa and other RLS
Current Challenges

• Laboratory capacity—only 50% of cultures are reported back in general

• Funding: traditional mechanisms not accessible
“TB is not about an aerobic, acid fast, lymph node invading and occasionally antibiotic resistant bacteria. It is about a debilitating, lethal, contagious and curable illness.”
Steve Miles 1981
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