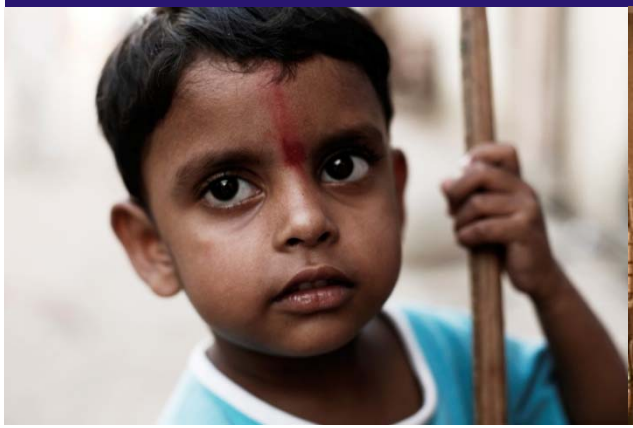
Operation **ASHA**

Fighting Tuberculosis Worldwide

# Dramatic results in TB treatment:

## Building an effective, scalable & replicable model

November 2011

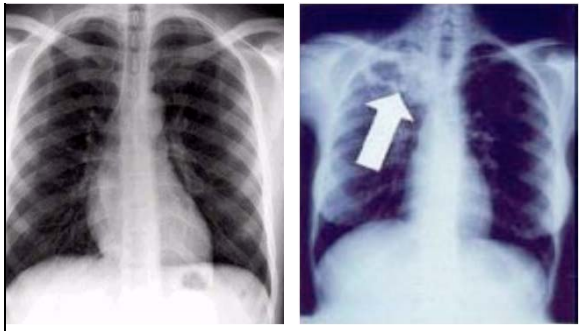



# TB: A brief introduction

TB (Pulmonary Tuberculosis) is a bacterial infection that "punctures" the lungs

Healthy Infected

Chest X-Ray

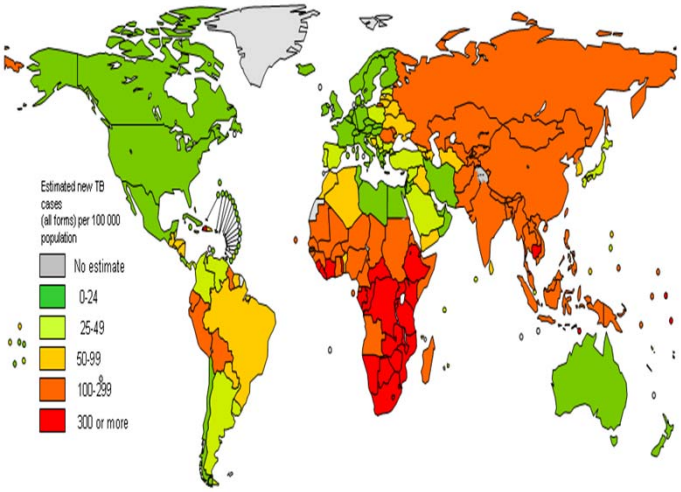


Lung Cross-Section

Source: WHO, CDC

It is an airborne disease, and is usually transmitted through sneezing, coughing, spitting etc.

There are almost 13 million people around the world with active TB, concentrated in Asia and Sub-Saharan Africa



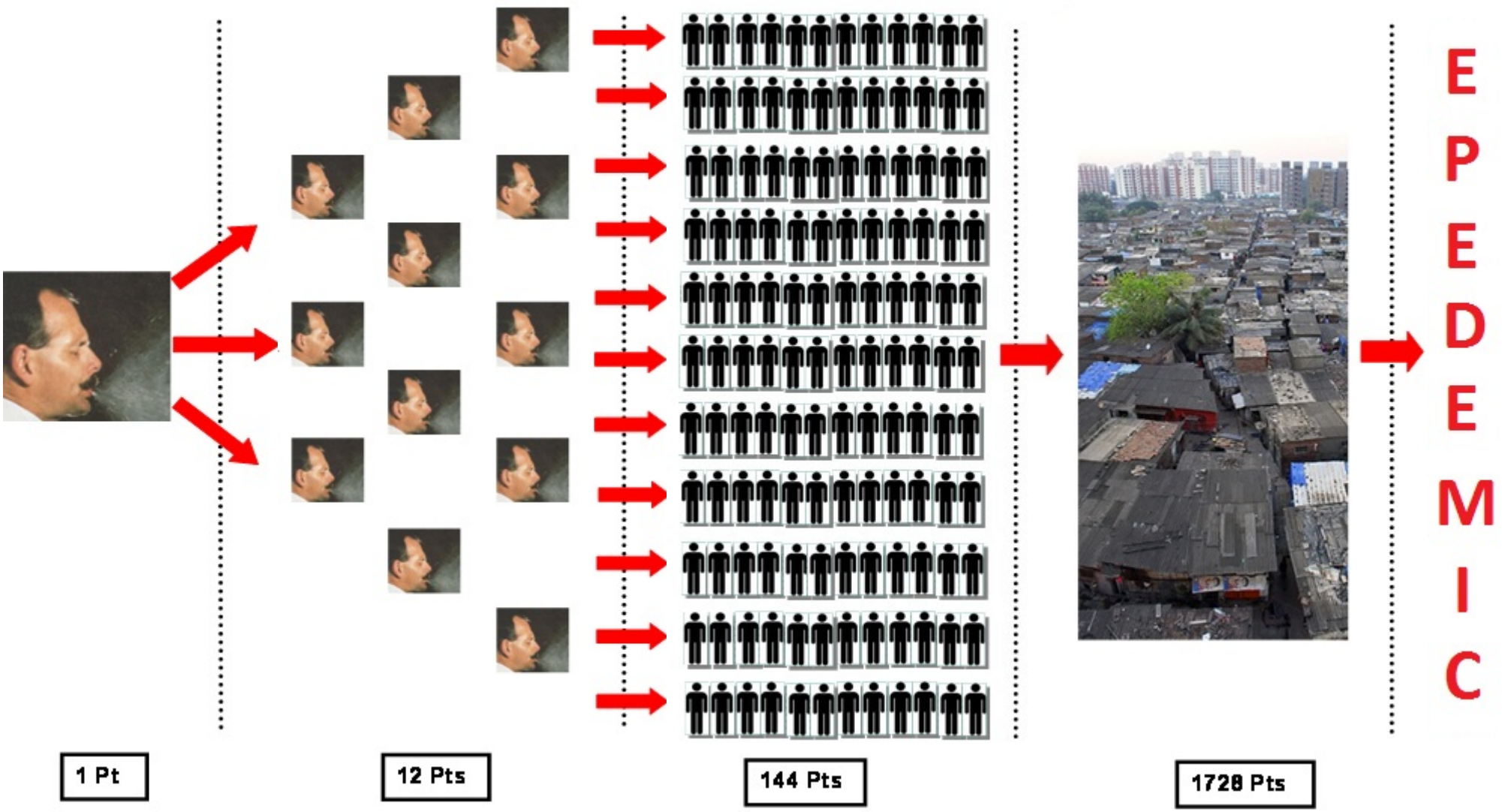
# TB: A brief introduction (Ctd)

## Types of TB


| | "Basic" TB disease | Multi-drug resistant TB (MDR) | Extensive drug resistant TB (XDR) |
|---|---|---|---|
| **Description** | • Occurs to LTBI carriers with immune deficiency<br>• Patient under treatment infectious for 3-4 weeks<br>• Untreated patient infects 10-15 others | • Occurs to patients not complying with protocol<br>• Resistant to the two first-line antibiotics<br>• MDR can be just as infectious as the basic TB | • Highly virulent strain, resistant to three or more of the six second-line drugs<br>• Virtually untreatable |
| **Primary cause** | • Exposure to patient | • Failure to treat "basic" TB | • Failure to treat MDR-TB |
| **Num. patients worldwide (vs. India)** | • 13 MM total (3-3.5 MM)<br>• 8 MM new cases annually (2 MM) | • 5-10% of basic TB cases (150-300,000) | • 20-25% of MDR cases |
| **Mortality rate** | • 5-10% | • 80% | • Virtually 100% |
| **Treatment/ cost per patient** | • 6-9 month program of two main antibiotics<br>• $130 (often subsidized) | • Cocktail of up to 6 second-line drugs<br>• $5000 (most patients in poor countries die) | • N/A (virtually untreatable) |

Primary source: WHO

# Geometric Progression of MDR Patients

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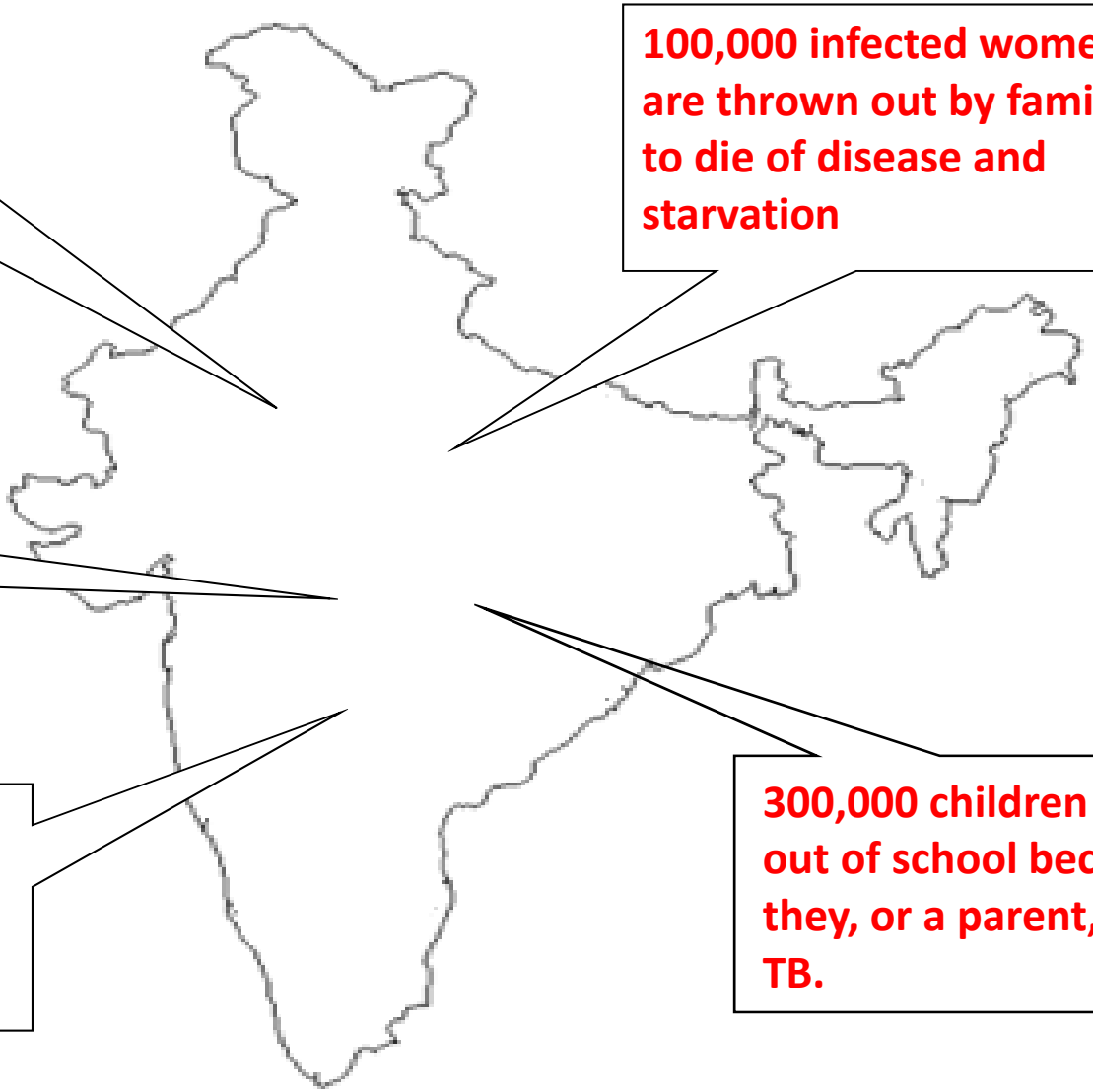
# TB : The biggest health crisis confronting India

India has 3.5 million TB patients, 25% of the world's total burden.

100,000 infected women are thrown out by families to die of disease and starvation



2 persons die of disease every 3 minutes in India

Lost wages: $300 million/year; Total loss to Indian economy: $ 3 billion/year. *

300,000 children drop out of school because they, or a parent, have TB.

* TB India 2007, Government Of India, Mar2007

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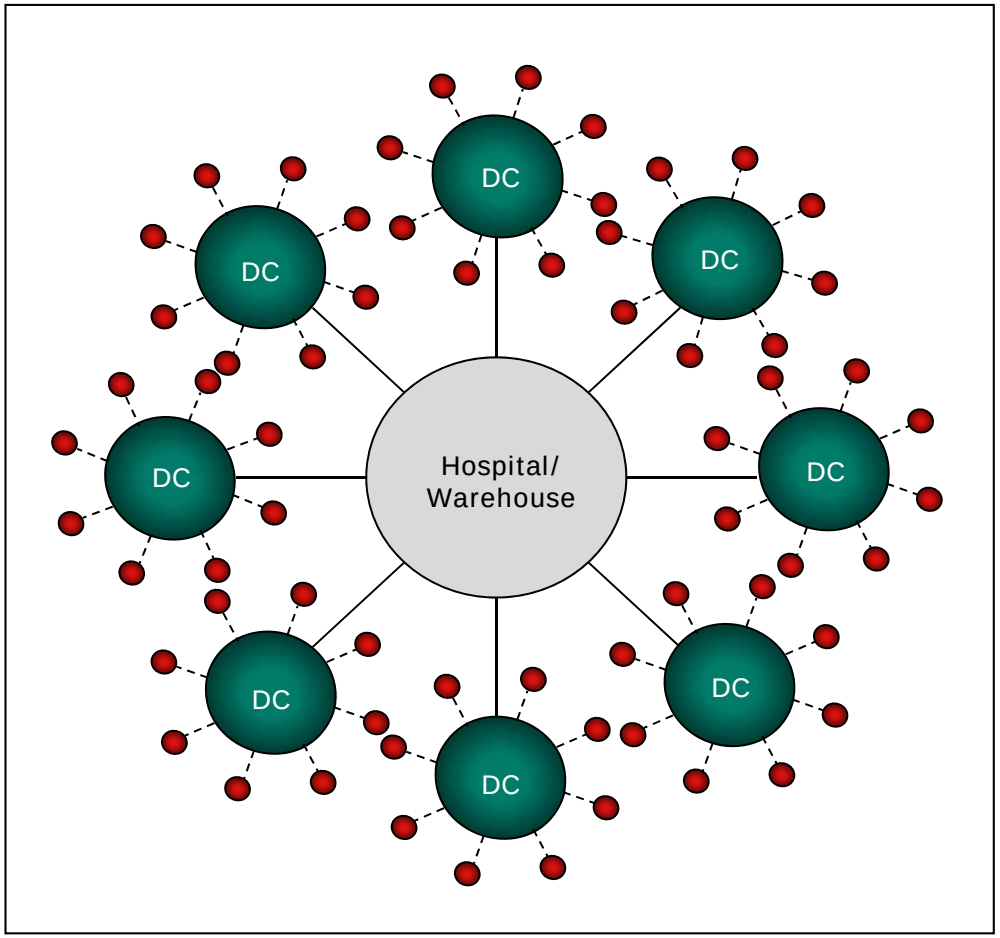
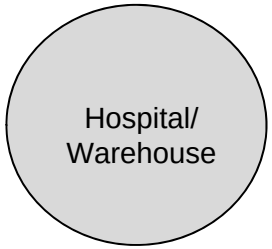
# Government model breaks down in “last mile” to slums

**The DOTS* model: network of three types of facilities**





**TB Hospitals: Adequate**

- Government facilities providing comprehensive diagnostics and treatment recommendation
- Warehouse for medicine supplies, provided free by government & donors

**Diagnostic Centers: Adequate**

- Sputum tests for initial/rapid diagnosis
- 5 DCs required for every hospital ; typically present

**Treatment Centers: Inadequate in slums**

- Local “last mile” centers, distributing medication and ensuring compliance
- 5 TCs required for every DC; currently, only 1-4, with limited hours of operation
- Scarcity of TCs results in high default rates, causing relapse & drug-resistance

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* “Directly Observed Therapy - Short Course”

# OpASHA's 14-point model for the "last mile"

**14 elements of OpASHA's distinctive approach**

1. Internationally accepted standard DOTS therapy prescribed by World Health Organization and followed by India all over the country.

2. Close coordination with Revised National TB Control Program.
   - Hospitals & Diagnostic centers
   - TB medicines
   - Over-the-counter drugs like pain-killers and antacids to take care of the side effects
   - NTP also provides the following
     - Consumables and stationery like file covers and stock registers
     - Disposable plastic cups
     - Protein supplements
     - Tea and snacks for participants at awareness campaigns
   - A grant two years after the patient is enrolled for treatment.

# OpASHA's 14-point model for the "last mile"

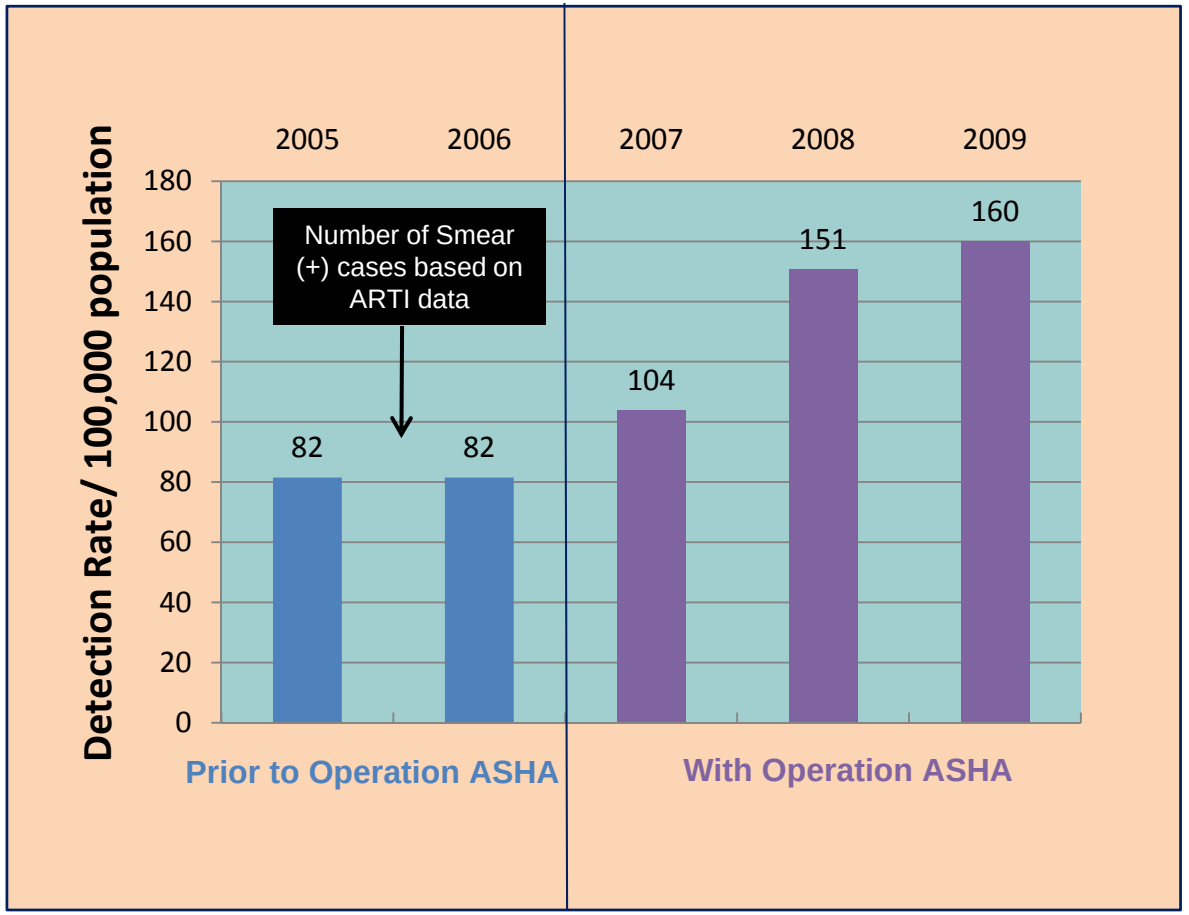
3. Dense network of treatment centers consisting of strategically selected, high-traffic community centers (e.g., places of worship and popular locally owned stores), so that patients are no farther than a 10 minute walk from the nearest center; extended operating hours based on specific community needs.

4. Leverage trusted community leaders (e.g. priests, traditional healers) to work as DOTS providers and spread key messages to their community

5. Rapid response testing and education of immediate circle (e.g., family members and neighbors) of identified patients

# Results: Higher detection rates

**Annual Detection Rate of New Sputum + Cases**
**South Delhi**

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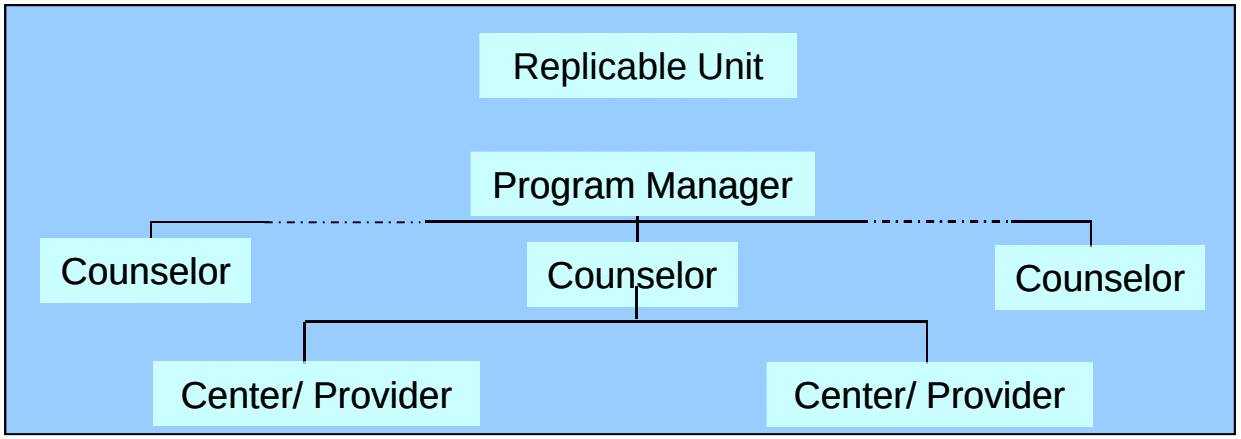
# OpASHA's 14-point model for the "last mile"

6. Corps of highly-trained, well-compensated, full-time counselors (equipped with motorcycles, as required), to ensure compliance and "turn off the tap" for drug resistance (i.e., treat normal TB fully to prevent MDR/XDR)




7. Provision of Over-the-Counter drugs to treat side effects of TB drugs and provide camouflage.
8. Highly effective Performance-based remuneration.
9. Robust feedback loop involving government officers from field level to state level to ensure proper adherence to duty by our staff. Stringent quality control by external auditors.

| **Results:** | **OpASHA** | **Other Organizations** |
|---|---|---|
| **Default Rate** | **3%** | **Up to 60%** |

# OpASHA's 14-point model for the "last mile"

10. Stringent quality control with internal and external audit.

11. Low-cost, highly leveraged operating model so that cost of full treatment (7-month course) only $60 per patient (one-fourth of this is the initial one-time cost)

**Results: Significantly lower cost per patient and higher "SROI"**

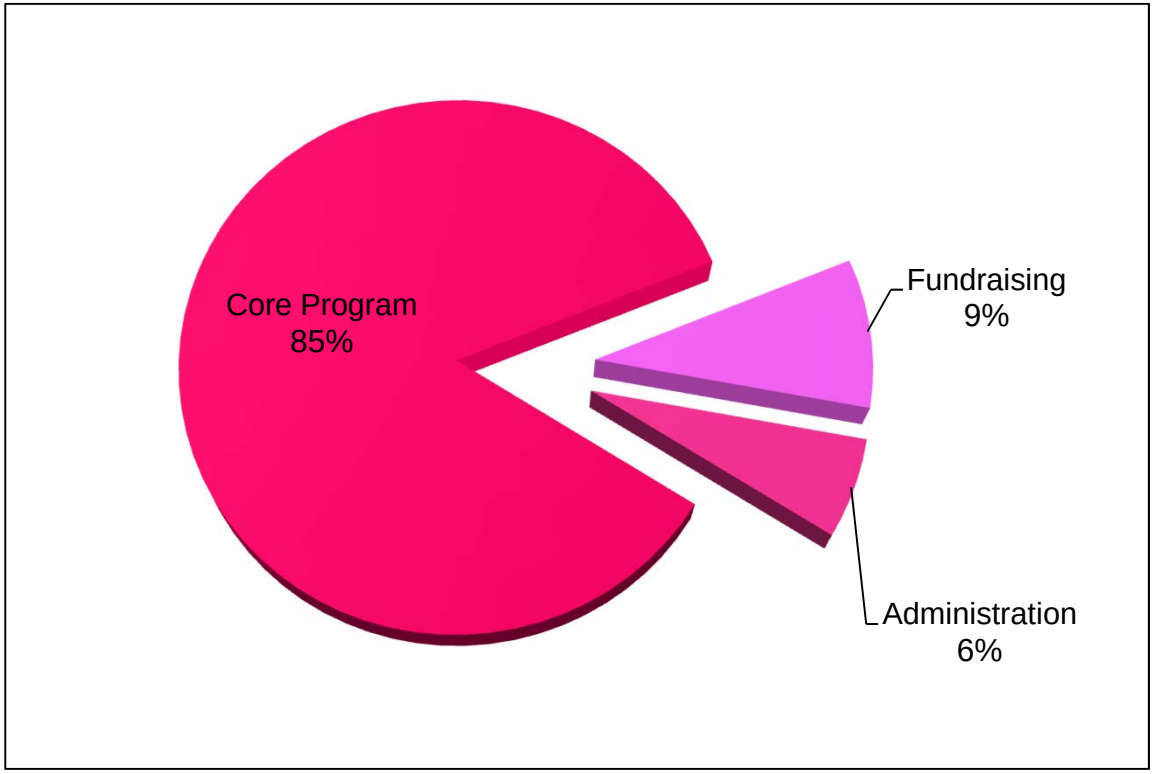
| | OpASHA | Other NGOs |
|---|---|---|
| **Cost per patient** | USD 60 | USD 300 |
| **Leverage** | 2 | 0.08 |
| **SROI: On NGO's investment** | 3,500% | 1,000% |
| **SROI: on total investment by all partners** | 850% | 719% |

Assumptions: TB treatment leads to increase in productivity, which in turn raises annual income by USD $150*; it also saves USD $1500 in indirect expenses to the economy*; Discount rate = 8%

* Annual TB Report, Government of India, 2007

# Our model is efficient, scalable & replicable

## 12. 85% of expenses go toward core programs



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# OpASHA's 14-point model for the "last mile"

13. Process-based franchise-like operation with detailed manuals.

**Result: Rapid replication**

**Replication done in India (No. of Centers: 181)**

- South Delhi (17)
- Moradabad (7)
- East Delhi (3)
- West Delhi (4)
- Ludhiana (4)
- Amritsar (3)
- Jalandhar (2)
- Bhopal (19)
- Jabalpur (22)
- Gwalior (19)
- Indore (18)
- Sagar (10)
- Jaipur (7)
- Raipur (20)
- Korba (9)
- Durg-Phillai (9)
- Bilaspur (8)

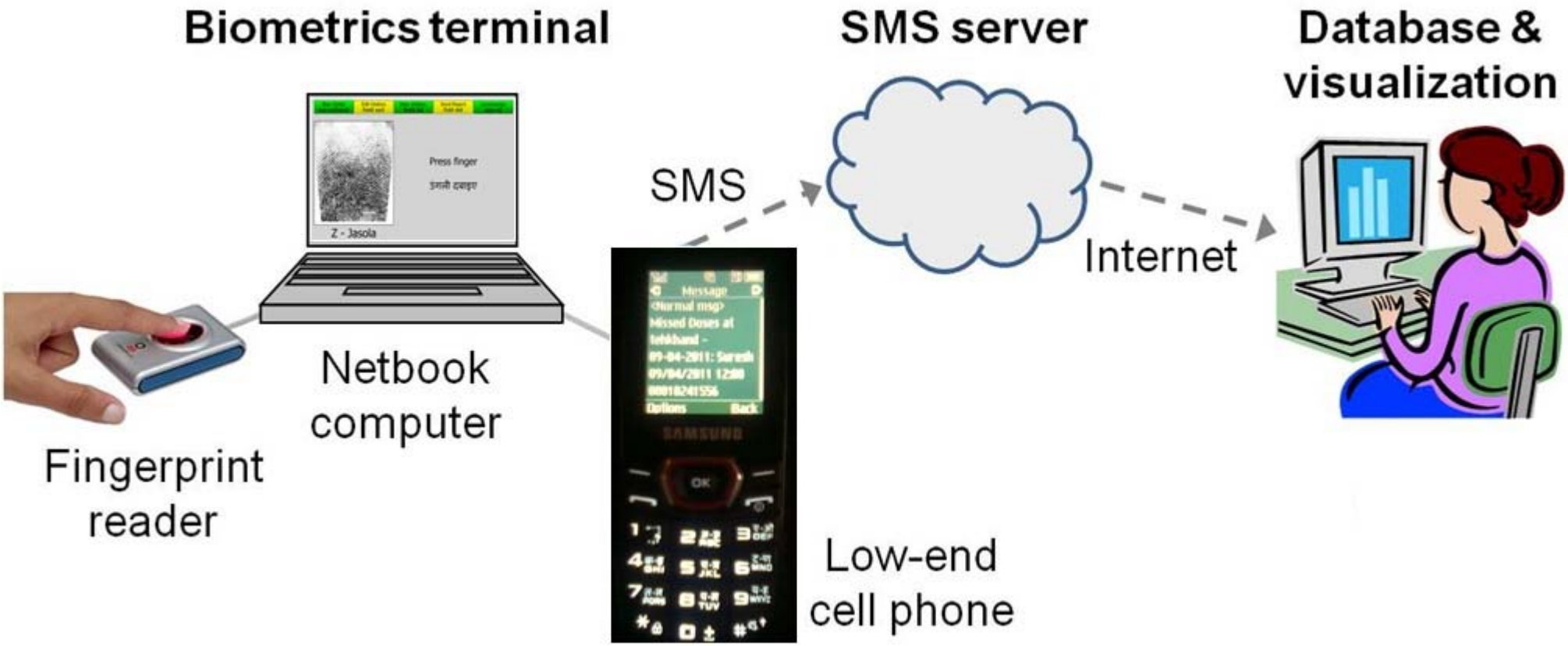
**Replication done in Phnom Penh, Cambodia (No. of Centers: 8)**

**Ground-level talks in progress for replication in Morocco and Ghana**

# OpASHA's 14-point model for the "last mile"

14. Biometric devices for automated compliance tracking deployed at all the South Delhi centers

**Result: With state-of-the-art compliance-tracking, we expect a 0% default rate, thus eliminating Drug-Resistant TB, which is almost fatal**



# Patient Interaction with the Biometric Terminal

# Victory unto Victory

"I have seen Operation ASHA' s centers in Delhi. Their work is truly remarkable. May this serve as an inspiration to reach an even larger number of persons in need."

*Dr. Ken Castro, MD*
*US Assistant Surgeon General, Division of Tuberculosis Elimination*

“Operation ASHA is one of the best three public health care models in the world.”

*Dr. Barry Bloom*
*Dean, Harvard School of Public Health*

"It’s commendable and inspirational that you’ve chosen to work in such a challenging and needy environment."

*Robin Mardeusz*
*Health Development Officer, USAID*
*New Delhi, India*

“I have never seen an NGO so impressively conscientiously leverage every $ to such impact.”

*Paul Breloff*
*Vice President*
*SKS Microfinance, India*

## Services provided by OpASHA (apart from TB)

1. Economic benefits

2. OpASHA provides jobs to slum dwellers who work as counselors and providers: 80% of OpASHA's expenses generate livelihood in the slums simultaneously with fighting TB

3. Over-the-counter drugs for ailments like acidity, dizziness and headache

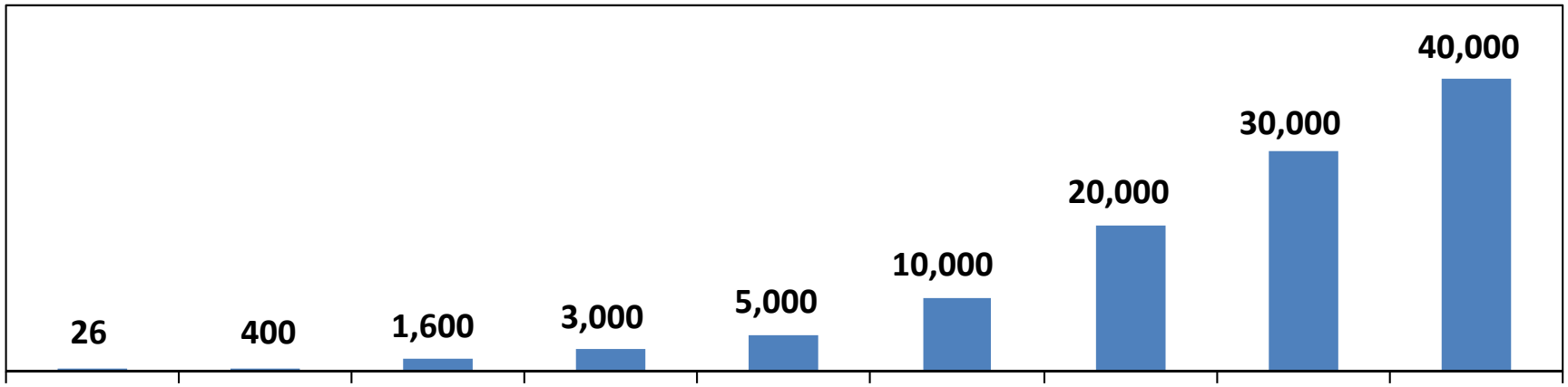
4. Oral Rehydration Salt (ORS) to ameliorate the effects of diarrhea and dehydration and prevent consequent deaths

5. Contraceptives

6. Distribution of food and nutrition supplements given by TB Association, Indian Government and religious groups etc for poor children/youths/elderly living in slums

# Aggressive expansion to provide services to 80 million people by 2014

## Total number of Enrolled Patients




| Year | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 |
|---|---|---|---|---|---|---|---|---|---|
| Population base served exclusively by Operation ASHA (in million) | 0.01 | 0.2 | 1 | 2 | 3.5 | 7 | 14 | 21 | 28 |
| Total Population of areas served by Operation ASHA (in million) | 0.05 | 1 | 2.3 | 6 | 10 | 20 | 40 | 60 | 80 |

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# First and Foremost: funding for NGOs under RNTCP

1. The grant is tiny compared to expenses, making NGOs unsustainable. So no NGOs want to work in TB control, whereas 4 lakh patients die annually
2. What is to be done?
3. RAISE THE GRANT TO A REASONABLE LEVEL: one-fourth of the amount that the Stop TB Partnership grants ($1325 per patient)
4. Suggested grant is nearly Rs. 11,000 per patient. In terms of the existing schemes of RNTCP: it would come to Rs. 5.5 lakh for a population of 20,000.
5. The provider/ volunteer, who has been paid Rs. 250 per patient for the entire treatment period of 6 months should be paid at least Rs. 2500.
6. Villages are scattered. So it costs higher to treat a patient. In comparison, RNTCP's adherence scheme (which is meant for villages) provides for much less funding than the slum scheme. This anomaly should be changed. For smooth administration of the schemes, grant should be the same in both the schemes.
7. Category A NGOs should also be given one-time expenses so they do not have to depend on donations, specially from abroad. TB is our problem. We should solve it. And should put enough funding into it rather than have our NGOs beg from abroad.

## Procedures: Problems and Suggestions

| PROBLEM | REASON(S) | SUGGESTION |
|---|---|---|
| There are too many NGOs, with little credibility | 1. There is little administrative framework to differentiate one NGO from another. | 1. A classification system for NGOs should be put in place . This can be done through an administrative order by each Ministry depending on its requirements.<br>2. Classes can be made on the following basis<br>3. Social return on investment. This could be difficult.<br>4. So a simpler yardstick like operating budget could be used.<br>5. Say an NGO that has experience of 3 years old AND has an operating budget of 1 crore per year should be placed in category A. Others that are 1 year old and have an operating budget between 10 lakh and 1crore pa could be in category B. Rest could be in category C. |

# Procedures: Problems and Suggestions (contd)

| PROBLEM | REASON(S) | SUGGESTION |
|---|---|---|
| Lack of coordination between NGOs and relevant Ministry/ Department | Officers are extremely busy | 1. Preferrably monthly but at least quarterly meetings should be institutionalized between category A NGOs and the relevant Ministry.<br><br>2. An ombudsman should be appointed in the Ministry of Health both at the central and state levels, whom NGOs can approach for resolution of problems. |

## Procedures: Problems and Suggestions (contd)

| PROBLEM | REASON(S) | SUGGESTION |
|---|---|---|
| It takes a long time (months and years) to sign an agreement with the District Health Society. Example is Mewat, where our application has been pending for a year. | 1. Chair of the District Health Society is DC/ DM, who is extremely busy and many times unapproachable.<br>2. Many times, District TB Officers are “afraid” to even send a proposal to the DC/DM because the many reasons. It could be awe that is attached to the position of the DC, or DC’s inaccessibility or latter’s personality/ arrogance<br>3. Many DTOs are not keen on enrolling new NGOs, though there is tremendous need because more the number of DOTS (TB treatment) centers, more the administrative work and supervision that the DTO and his team need to devote. | 1. The power of permitting an agreement under TB control (RNTCP) should rest with the CMO/ (Civil Surgeon).<br>2. A time limit should be prescribed to deny application by an NGO of category A to work under the schemes notified by the M/ Health, GoI. For example, if an application is not rejected within 1 month, it should be considered to have been accepted.<br>3. Agreements with category A NGOs should be signed at the central or state level, rather than signing agreement for each district. This will save huge amount of paperwork and expedite the process tremendously. |

## Another serious problem: fudging of data

| PROBLEM | REASON(S) | SUGGESTION |
|---|---|---|
| States are fudging data of vaccinations, reported Times of India recently. The source was an interview with the Health Minister. | 1. There is nothing new about it. Manipulation of data to meet the targets has been in practice for long.<br>2. SHOULD WE CONTINUE TO LIVE WITH IT<br>3. CERTAINLY NO<br>4. What can be done: automate the data in such a way that manipulation is not possible: similar schemes have already been installed in many government departments like finger-pritn based attendance system in MCD. This has saved MCD hundreds of crores in salaries that were earlier paid to non-existent employees. In a nutshell, the system has more than paid for itself in the first year. | 1. An automatic data collection and analysis system must be put into operation at the earliest. The system should have following minimum capabilities<br>2. Identification of staff and patients through finger-prints of themselves or of surrogates (like finger-print of a parent for vaccination of an infant).<br>3. It should not be possible to manipulate the data<br>4. Maintenance of data should be outsourced to a private party so vested interests within the government may not stymie it |

## The way forward

1. Bangladesh would not be able to provide good public health but for BRAC.

2. For TB control, field work has been entrusted to BRAC, which works as an "arm" of the National TB Control Program.

3. Experts agree that BRAC has delivered excellent results at low cost

4. Lesson to be learnt

GOVERNMENTs (STATE and CENER) SHOULD PLAY THE ROLE OF A FACILITATOR, AUDITOR AND A WATCHDOG BODY. IT SHOULD LEAVE IMPLEMENTATION OF PUBLIC HEALTH PROGRAMS, SPECIALLY TB CONTROL TO NGOs.

## Our request to the Planning Commission

We are looking for the following.

1. Direction of policies regarding TB Control Program of the Government of India. We can give a detailed paper if required.

2. Contacts in Ministry of Health

3. Support for taking forward the biometrics system.
    - Run a pilot for a few districts in India
    - To make the biometrics totally text free so it can be used in tribal areas in India and Africa.
    - To expand the EMR to take care of additional levels of reporting like national level and multi-country.

4. Regular interface with the Member of the Planning Commission, Ms Sayeda Hameed.