

## WorldMEDSchool GLOBAL EDUCATION

## **Operational Research in Tuberculosis Care and Control**

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International Union Against Tuberculosis and Lung Disease



## **Outline**

- Need for Operational Research (OR)
- What is Operational Research? Objectives? **Examples of OR**
- Operational Research Landscape Where are we? What needs to be done?



### **Need for Operational Research** 51 million patients cured, **BUT, TB incidence declining too** 1995-2011 slowly 20 million lives saved ⇒ 1.4 million people still dying since 1995 → 8.7 million cases every year; 2015 MDG target on Only 2/3 reported track: global TB incidence ⇒ TB/HIV epidemic still rampant rate peaked in early 2000s and declining → MDR-TB response slow Un-engaged private sector Gaps in financing Are they enough?

# "What" is operational research (OR)?

Research into

interventions, strategies, tools or knowledge, that can enhance the **performance** (quality, coverage, effectiveness, efficiency) **of the program** (and improve health outcomes)

Lancet ID 2009, 9:711-717

Jargon: 'Implementation Research'; 'Action Research'; 'Operations Research'; 'Health Systems Research', 'Health Services Research', 'Translational Research'

## **Objectives of Operational Research**

- ✓ Assess feasibility of new strategies or interventions in specific settings or populations
- ✓ Advocate for policy change
- ✓ Improve programme outcomes in relation to medical care or prevention



# mortality in TB patients in Thyolo, Malaw AIDS 2003, 17:1053-1061

Improving program outcomes:

Voluntary counselling, HIV testing and adjunctive cotrimoxazole reduces mortality in TB patients in Thyolo, Malawi

AIDS 2003, 17:1053-1061

In both districts, the package was associated with a reduction in case fatality from 36% to 28%

Country-wide, expansion of HIV testing and cotrimoxazole for TB patients

## HIV Testing and CPT in TB patients in Malawi

MALAWI	2003	2004	2005	2006	2007	2008
TB patients	26,836	26,136	26,019	26,659	25,767	25,688
HIV tested <	15%	26%	47%	66%	83%	84%
HIV positive	69%	72%	69%	66%	69%	63%
Started CPT<	87%	97%	92%	98%	97%	96%

Harries et al. BMC Public health 2011, 11:593

# National TB treatment outcomes in new smear-positive PTB

Year	Treatment Succ	Death		Other	
2002	71%		19%		10%
2003	70%		19%		11%
2004	71%		16%		13%
2005	74%		15%		11%
2006	79%		13%		8%
2007	83%		9%		8%
2008	86%		7.5%	1	6.5%

Harries et al. BMC Public health 2011, 11:593



# Assessing Feasibility

Collaborative Framework for Care and Control of Tuberculosis and Diabetes

Is it feasible to implement TB-DM bidirectional screening in routine programme settings?

#### ESTABLISH MECHANISMS FOR COLLABORATION

Set up a means of coordinating diabetes and TB activities

Conduct surveillance of TB disease prevalence among people with diabetes in medium and high-TB burden settings

Conduct surveillance of diabetes prevalence in TB patients in all countries

Conduct monitoring and evaluation of collaborate diabetes and TB activities

#### DETECT AND MANAGE TB IN PATIENTS WITH DIABETES

Intensify detection of TB among people with diabetes

Ensure TB infection control in health-care settings where diabetes is managed

Ensure high-quality TB treatment and management in people with diabetes

#### DETECT AND MANAGE DIABETES IN PATIENTS WITH TB

Screen TB patients for diabetes

Ensure high-quality diabetes management among TB patients





# Operational research landscape: Where are we today?

- 1. Pursue high-quality DOTS expansion
- 2. Address TB-HIV, MDR-TB, and needs of the poor and vulnerable
- 3. Contribute to health system strengthening
- 4. Engage all care providers
- 5. Empower people with TB and communities
- 6. Enable and promote research

Ample political recognition

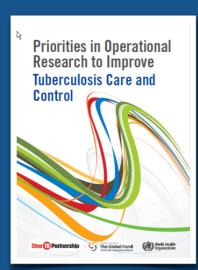
- ✓ Component of WHO's Global STOP TB strategy
- √ GFATM allows 10% of each grant to OR; though rarely used!
- √ Emphasized by many technical/ implementing/donor agencies

Still, very little OR from LICs and MICs where the disease burden in greatest



## **Barriers to Operational Research**

- · Lack of a enabling environment
  - Lack of priority: NTP manager too busy in service delivery and thinks OR is not his/her job
  - Lack of strategic prioritized OR agenda
  - No collaboration with academia, NGOs
  - Donor driven research with lack of ownership by NTP
  - Lack of priority for publishing OR by journals
- Lack of Resources (Infrastructure, Trained Manpower, Dedicated Time, Funds)
- Lack of capacity and structured mentorship
- · Lack of monitoring of impact of OR



# Creating a supportive environment

- Every NTP should have its own list of OR priorities
- · WHO Guidance available
- Partnership Model
- Ownership of Research
- · Dedicated OR focal point
- Integrating OR into routine programme activities and budgets
- Advocating with scientific journals the value of OR and need to publish it





# Monitoring the impact of OR

Is operational research delivering the goods? The journey to @ 🦒 success in low-income countries



Operational research in low-income countries has a key role in filling the gap between what we know from research and what we do with that knowledge—the so-called know-do gap, or implementation gap. Planned research that does not tangibly affect policies and practices is ineffective and wasteful, especially in settings where resources are scarced and disease burden is high. Clear parameters are urgently needed to measure and judge the success of operational research. We define operational research and its relation with policy and practice, identify why operational research engine fail to affect policy and practice, and offer possible solutions to address these shortcomings. We also propose measures of success for operational research. Adoption and use of these measures could help to ensure that operational research better changes policy and practice and improves health-care delivery and disease programmes.

- Effective Dissemination Policy and Practice change
- Publication
- Health Outcomes

## **CONCLUSION**

- · Operational research has a key role to play in:
  - Meeting health needs by filling the "know-do" or "implementation gaps"
  - Improving health outcomes
- · Measuring and reporting its success is essential

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