



GUIDE TO OPERATIONAL RESEARCH IN PROGRAMS SUPPORTED BY THE GLOBAL FUND

What is operational research?

Operational research provides decision-makers with information to enable them to improve the performance of their programs. Operational research helps to identify solutions to problems that limit program quality, efficiency and effectiveness, or to determine which alternative service delivery strategy would yield the best outcomes. In simple terms, it is described as “the science of better”.

Operational research focuses on factors which are under the control of programs. It seeks to improve the number and quality of services and program outputs and outcomes by optimizing program inputs (e.g., personnel, supplies) and processes (e.g., training, supervision, promotion of services). Operational research can also determine cost-effective and sustainable ways to build service delivery capacity, test financing alternatives and make advocacy and communication strategies and tools more effective. For example, a study to increase condom use among patients on antiretroviral (ARV) treatment might experiment with changes in provider training or client counseling and measure the impact on the number of condoms distributed or frequency of consistent condom use.

Why is operational research important?

The Global Fund believes that operational research has an important role to play in the success of the programs it funds, and strongly encourages proposals with an operational research component. Everyone writing a Global Fund application, and anyone concerned with improving their program’s performance, should think about whether operational research should be built into the application. “Learning by doing” is an essential element of improving program performance. Global Fund-supported programs are recommended to spend five to ten percent of their grant budget on monitoring and evaluation (M&E), which can include spending on relevant operational research.

Operational research complements M&E and provides both the host program and the Global Fund with solid information about which interventions and service delivery models work (or do not work) in HIV, TB, and malaria programs. Global Fund support can also help build a program’s overall

Examples of research topics in Global Fund-supported HIV, tuberculosis and malaria programs

- Systems for delivering antiretroviral treatment (ART); identifying needs and demand for ART and barriers to treatment seeking among different population groups. Tanzania Round 4 HIV grant: www.theglobalfund.org/search/docs/4TNZH_824_0_full.pdf
- Integrating HIV and tuberculosis control. Ethiopia Round 6 tuberculosis grant: www.theglobalfund.org/search/docs/6ETHHT_1317_0_full.pdf
- Rapid diagnostic tests vs. microscopy for malaria in peripheral health facilities. Afghanistan Round 5 malaria grant: www.theglobalfund.org/search/docs/5AFGM_942_0_full.pdf

How to include operational research in a proposal to the Global Fund?

Operational research should be described as an activity (with the associated budget) in the proposal form, with a focus on explaining the link to program outcomes. Look for further guidance in the Round 8 guidelines, available as of 1 March 2008 on the Global Fund website.

Further information is available in the *Monitoring and Evaluation Toolkit* available at: www.theglobalfund.org/en/apply/call7/documents/me/ and under **Item 7** of www.theglobalfund.org/en/apply/call7/documents/technical/

research capacity and ability to learn from data and implementation, effectively serving as an investment in future program efficiency and performance. In Global Fund grants, operational research components must be aligned with national research priorities, matching the country’s evolving disease-control policies.



Who does operational research?

Operational research is commonly carried out by any health-care provider, including the public sector, nongovernmental organizations (NGOs), and the for-profit sector as a means of identifying and solving problems in hospitals, health centers, and community programs. Most studies need not be elaborate, and they can be conducted within almost any program.

Operational research is most successful when it is carried out by a team of program implementers and researchers who work closely together during every stage of the research, from the identification of the problem to the dissemination and utilization of results. The role of the program implementers who know the program and its clients, includes: (1) taking the lead in defining the program problem, (2) specifying when the study result is needed for decision-making, (3) ensuring that providers and facilities cooperate with the researchers, (4) utilizing the findings in program decision-making and (5) disseminating research findings. Researchers are responsible for translating the program problem into a researchable problem and for the quality of the research. It could also be useful to involve stakeholders as advisors throughout the operational research process, for example representatives from civil society groups, NGOs, affected communities, the government and technical assistance agencies.

How to do operational research

Either qualitative or quantitative methods can be used. Qualitative methods include focus group discussions or individual interviews with service providers or clients or observational studies, e.g., observing health care workers. Quantitative methods include structured questionnaires or the analysis of service statistics. Formal epidemiological studies using qualitative or quantitative methods are commonly performed.

The research often follows a well-defined process:

1. Identification of the program problem

Identifying the problem is the most critical step in the operational research process. Unless a problem is clearly defined it is impossible to develop good solutions.

2. Identification of possible reasons and solutions and the testing of potential solutions

Research is required when either the reason for the problem or the solution to the problem is not self-evident. Once the problem has been identified, it is the job of the program implementer and researcher to determine the reasons for the problem and to generate possible solutions. Sources for thinking of possible reasons and solutions include program staff and clients, community members and literature on the topic. Good solutions must be measurable, easy to implement and sustainable.

In some cases, operational research is used to determine the effectiveness of a proposed solution through comparison methods in an intervention study.

Designs used for this are:

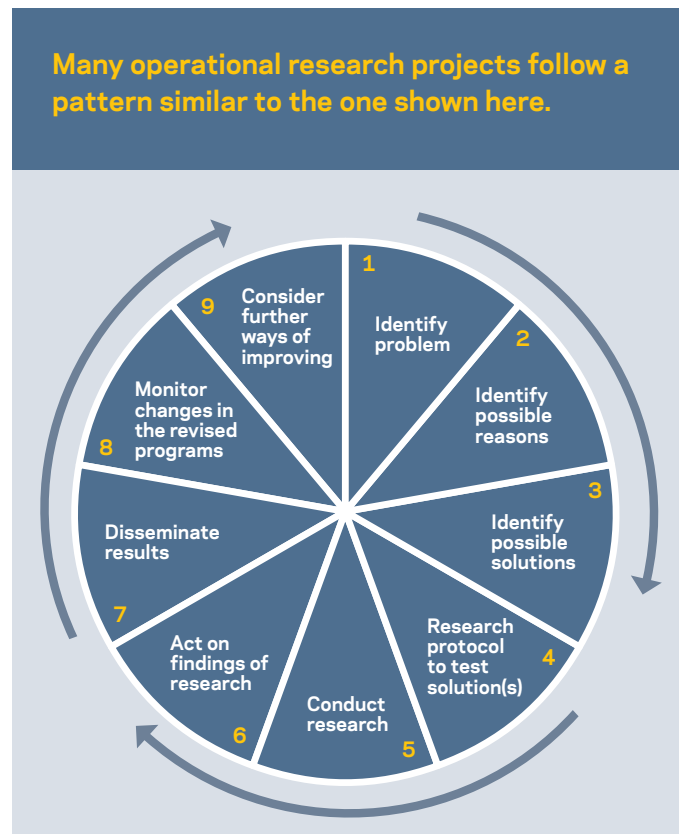
- quasi-experimental design: one where the situation is analyzed before and after introducing the possible solution to the service delivery unit, or between service delivery units with and without the proposed solution; and
- true experiment: one where service delivery, or health outcomes, are compared between randomly assigned “experimental” and “control” groups.

3. Results utilization

Prior to beginning the study, it is necessary to decide how its results are meant to be used. This determines, to some extent, the information that will be collected. For instance, a study might find that one way of delivering insecticide-treated bed nets is superior to another way in getting households to buy and use the nets, but the decision-maker will (and should) want to know, for example, if the new strategy is more expensive; if information about cost was not collected, a good decision cannot be made.

4. Results dissemination

Early in the operational research process, a strategy must be developed for disseminating results to stakeholders. This dissemination could take the form of a seminar if there are multiple decision-makers or stakeholders, or in a meeting in the decision-maker’s office. Researchers should also assist the decision-makers and stakeholders in devising ways to widely implement the decisions made. Informing the CCM will facilitate the process of including any lessons learned in any country request for continued funding (or grant reprogramming, if relevant).



Operational research is successful if its findings are used in making a program decision

- Let the program identify the problem to be solved or the decision to be made
- Know who will make the decision and when
- Include a results utilization and dissemination plan in the research proposal and budget
- Identify program stakeholders, their information needs, and the best way of providing information to each.

PRACTICAL EXAMPLES OF OPERATIONAL RESEARCH

EXAMPLE 1

Determining target locations and populations for delivering HIV prevention services

In Kawempe district of Uganda, the AIDS Control Project conducted a study to identify areas of potentially high HIV transmission in order to efficiently target prevention efforts. The study used the “PLACE methodology¹”, which identifies locations where individuals go to meet new sexual partners. Information is collected on the locations and their users and on factors that could facilitate or hinder program activities in the venues.

Trained interviewers talked to taxi drivers, youth and police who identified 255 meeting places, mostly bars and nightclubs. They visited the locations, talked to owners and employees and recorded the number of persons visiting the sites at peak business hours. Interviews with customers confirmed that patrons visited the locations to meet new partners. Most patrons were young and had not used a condom with their last partner. Only 11 percent of sites had an AIDS prevention poster, and only 20 percent had condoms available. Information used by the program included the specific locations where people gathered, the number of people who gathered at those locations, and times when the sites were most crowded. Additionally, managers who were willing to have AIDS prevention activities in their establishment and those willing to sell condoms were identified.

EXAMPLE 2

A before-and-after study to determine the effectiveness of community health workers

Tuberculosis treatment at the Malteser hospital in Sudan was disrupted by ethnic conflict. To increase treatment access, the hospital tested the effectiveness of community health workers (CHWs) who were given training in providing tuberculosis care. Before the intervention, tuberculosis patients spent six months in the hospital until they completed a full course of directly-observed treatment (DOTS). After intervention, patients were discharged at two months and referred to CHWs for continued treatment. Patients treated in-hospital in 2004 were compared with patients who received CHW care in 2005. The respective cure rates were 76 percent and 82 percent. Researchers recommended rapid expansion of the CHW program.²

EXAMPLE 3

Comparing alternative approaches to malaria treatment regimen adherence

In Uganda, a new first-line malaria treatment option was needed, and the program considered switching to artemether-lumefantrine (A-L). Since the new therapy requires a relatively complicated three-day course of treatment, there was concern that treatment effectiveness could be compromised by poor adherence. One option to maximize adherence was to do in-hospital supervised therapy, but this would be expensive for the program and complicated for patients, which could limit utilization of the drug. A randomized trial comparing treatment outcomes of patients receiving supervised and unsupervised treatment was conducted in the Mbarara University Hospital. A total of 957 malaria patients were randomly assigned to either supervised or unsupervised treatment. Supervised treatment consisted of hospitalizing patients for three days and closely supervising treatment. The unsupervised group was counseled on how to use the drug at home. Twenty-eight day cure rates were 97.7 percent for the supervised group, and 98.0 percent for the unsupervised group, indicating that an A-L regimen could be based on unsupervised treatment.³

1. MEASURE Evaluation. 2003. “PLACE in Uganda: Monitoring AIDS-Prevention Programs in Kampala Uganda Using the PLACE Method,” Carolina Population Center, University of North Carolina at Chapel Hill, Chapel Hill NC.

2. Hughes S. 2006. “Community based tuberculosis-control program in Yei county: experience in a war situation in southern Sudan.” Operational Research in Tropical and Other Communicable Diseases Final Report of Summaries 2003-2004 implemented during 2004-2006. Results portfolio 3. World Health Organization, Regional Office for the Eastern Mediterranean.

3. Piola P Fogg C, Bajunirwe F et al. “Supervised vs. unsupervised intake of six-dose artemether-lumefantrine for treatment of acute, uncomplicated *Plasmodium falciparum* malaria in Mbarara, Uganda: a randomized trial. *Lancet* 2005;365:1467-73.

FURTHER INFORMATION

Scano F et al.. *TB/HIV research priorities in resource-limited settings. Report of an expert consultation.* 2005, World Health Organization, Stop TB Department: Geneva. WHO/HTM/TB/2005.355, WH/HIV/2005.03, whqlibdoc.who.int/hq/2005/WHO_HTM_TB_2005.355.pdf

WHO, Dept of HIV/AIDS and Special Programme for Research and Training in Tropical Diseases (WHO/TDR). Operational research to support HIV treatment and prevention in resource-limited settings – Summary of activities, July 2004 to January 2006. www.who.int/hiv/topics/or/en/index.html

Special Programme for Research and Training in Tropical Diseases (TDR), *Report of the Scientific Working Group on Malaria.* 2003, World Health Organization: Geneva. TDR/SWG/03. www.who.int/tdr/publications/publications/pdf/malaria_swg.pdf

Special Programme for Research and Training in Tropical Diseases (TDR). *Report of the Scientific Working Group meeting on Tuberculosis.* 2005, Geneva, Switzerland. TDR/SWG/06. www.who.int/tdr/publications/publications/pdf/swg_tub.pdf

Fisher AA, Foreit JR. *Designing HIV/AIDS Intervention Studies: An Operational Research Handbook.* Population Council 2002. www.popcouncil.org/horizons/orhivaidshndbk.html

WHO, Stop TB Dept. "Preparing TB proposals for the Global Fund to fight AIDS, Tuberculosis and Malaria" (2007 edition) at index no. 6.1. www.who.int/tb/dots/planningframeworks/en/

LINKS TO PARTNERS FOR TECHNICAL ASSISTANCE AND ADVICE

WHO Special Programme for Research and Training in Tropical Diseases (TDR) www.who.int/tdr/topics/ir/default.htm

WHO Stop TB Department www.who.int/tb/en

WHO HIV/AIDS Department www.who.int/hiv/en

WHO Global Malaria Programme www.who.int/malaria/en

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