



Ministry of Health and Sports



Introduction to IR

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Introduction to IR



TDR IMPLEMENTATION RESEARCH TOOLKIT

This toolkit is designed to help you conduct an implementation research (IR) project through a standard process so that you have high quality results that are reliable. Before you get started, we recommend you read the [“How to use this Toolkit”](#) section. It is also advisable to take the [TDR Massive Open Online Course on IR](#) for a foundation knowledge of IR.



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adphealth.org/irtoolkit/

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TDR For research on diseases of poverty
UNICEF • UNDP • World Bank • WHO

Introduction

Understanding IR

Proposal development

Research methods and data management

IR-Planning and Conducting IR

Communications and advocacy

Integrating IR into health systems

Windows taskbar: 9:29 AM 12/4/2017



This message is provided as a service by TDR, the Special Programme for Research and Training in Tropical Diseases.
This email service provides news and information on infectious diseases of poverty.

IR-MOOC- Massive open online course on implementation research

Deadline to register: 25 September 2020

A new session of the TDR Massive Open Online Course on Implementation Research is now organized by TDR and the School of Public Health, University of Ghana, the Regional Training Center supported by TDR in the WHO African Region.

This free course is a step-by-step online training for public health researchers and decision-makers, disease control programme managers, academics and others, that focuses on how to design and demonstrate robust IR projects to improve control of infectious diseases of poverty and generate better health outcomes.

This course is open to all applicants. No technical or scientific background is required, though a health background will be an advantage.

Language: English with subtitles in Spanish, English and French.

Course starts on 5 October 2020.

To register, please send a request to: artc@ug.edu.gh

Consult the [course flyer](#) for more information.

[More information](#) about TDR MOOC

Course starts on 5 October 2020



What is implementation research?





Published in final edited form as:

J Public Health Manag Pract. 2017 ; 23(3): e1–e9. doi:10.1097/PHH.0000000000000367.

Using an implementation research framework to identify potential facilitators and barriers of an intervention to increase HPV vaccine uptake

Rebecca Selove, Ph.D., M.P.H.¹, Maya Foster, M.P.H.², Raquel Mack, M.S.³, Maureen Sanderson, Ph.D.⁴, and Pamela C. Hull, Ph.D.⁵

Abstract

Background—Although incidence of cervical cancer has been decreasing in the United States over the last decade, Hispanic and African American women have substantially higher rates compared to Caucasian women. The human papillomavirus (HPV) is a necessary, although insufficient, cause of cervical cancer. In the U.S. in 2013, only 37.6% of girls 13–17 years old received the recommended three doses of a vaccine that is almost 100% efficacious for preventing infection with viruses that are responsible for 70% of cervical cancers.

Implementation research has been underutilized in interventions for increasing vaccine uptake. The Consolidated Framework for Implementation Research (CFIR), an approach for designing effective implementation strategies, integrates five domains that may include barriers and facilitators of HPV vaccination. These include the innovative practice (Intervention), communities where youth and parents live (Outer Setting), agencies offering vaccination (Inner Setting), healthcare staff (Providers), and planned execution and evaluation of intervention delivery (Implementation Process).

Methods—Secondary qualitative analysis of transcripts of interviews with 30 community healthcare providers was conducted using the CFIR to code potential barriers and facilitators of HPV vaccination implementation.



REVIEW

Open Access



Health system barriers and levers in implementation of the Expanded Program on Immunization (EPI) in Pakistan: an evidence informed situation analysis

Babar Tasneem Shaikh^{1*}, Zaeem ul Haq², Nhan Tran³ and Assad Hafeez¹

Abstract

Background: In Pakistan, immunization coverage has been quite low since the program's inception, and the 2012–2013 population-based survey recorded it at 54%. Much has been written about the issues, challenges, and constraints in the implementation of Pakistan's immunization program. However, there is a need to better understand the health system barriers as well as levers that influence progress. This review aims to bridge the information gaps on system-level barriers that currently impede the optimal delivery and uptake of immunization services to the children of Pakistan through the Expanded Program on Immunization (EPI).

Methods: We conducted a comprehensive literature review, using PubMed and Google Scholar to find peer-reviewed literature, and also reviewed EPI-related international and national reports. Additionally, we consulted government reports, surveys, and publications on the health system. Employing the basic tenets of WHO's health systems framework for health system strengthening, and a socio-ecological model, this study cataloged the service delivery and the demand side perspective on various pillars of Pakistan's immunization program.

Results: Themes generated from the literature review included financing, governance, service delivery, human resources, information systems, and supplies and vaccines. Findings suggest that certain areas in the larger health system need to be improved for a more coordinated implementation of EPI in Pakistan. Moreover, it is imperative to understand community behaviors and perceptions as well as demand side issues in order to achieve the desired results.

Conclusion: For better immunization coverage and ultimately a reduction in child mortality due to preventable diseases, EPI operations and performance must be improved. Further systematic implementation research could help to develop an even finer understanding of the system-wide bottlenecks encumbering the coverage and efficiency of the program.

Keywords: Immunization, Child health, Health system, Pakistan



RESEARCH ARTICLE

Low implementation of Xpert MTB/RIF among HIV/TB co-infected adults in the International epidemiologic Databases to Evaluate AIDS (IeDEA) program

Kate Clouse^{1,2,3}, Meridith Blevins^{1,4}, Mary Lou Lindegren^{1,2}, Marcel Yotebieng⁵, Dung Thi Nguyen⁶, Alfred Omondi⁷, Denna Michael⁸, Djimon Marcel Zannou⁹, Gabriela Carriquiry¹⁰, April Pettit^{2,3,*}, International Epidemiologic Databases to Evaluate AIDS (IeDEA) collaboration[†]





Abstract

Objective

Xpert MTB/RIF is recommended by the World Health Organization (WHO) as the initial tuberculosis (TB) diagnostic test in individuals suspected of HIV-associated TB. We sought to evaluate field implementation of Xpert among a cohort of HIV/TB co-infected individuals, including availability, utilization and outcomes.

Design

Observational cohort study (patient-level data) and cross-sectional study (site-level Xpert availability data).

Methods

Data were collected at 30 participating International epidemiologic Databases to Evaluate AIDS (IeDEA) sites in 18 countries from January 2012-January 2016. All patients were HIV-infected and diagnosed with TB, either bacteriologically or clinically, and followed until a determination of TB treatment outcome. We used multivariable modified Poisson regression to estimate adjusted relative risk (RR) and 95% confidence intervals for unfavorable TB treatment outcomes.





Results

Most sites (63%) had access to Xpert, either in the clinic (13%), in the same facility (20%) or offsite (30%). Among 2722 HIV/TB patients included, median age was 35.4 years and 41% were female; BMI and CD4 count were low. Overall, most patients (76%) received at least one TB test; 45% were positive. **Only 4% of all patients were tested using Xpert: 64% were Xpert-positive, 13% showed rifampicin (RIF) resistance and 30% were extrapulmonary (EPTB) or both pulmonary-EPTB. Treatment outcomes were mostly favorable (77%) and we found little association between Xpert use and an unfavorable TB treatment outcome (RR 1.25, 95%CI: 0.83, 1.90).**

Conclusions

In this cohort, **Xpert utilization was low even though the majority of sites had access to the test.** Our findings show the need for expanded implementation and further research exploring barriers to use in low-resource settings.





Retention and Risk Factors for Attrition in a Large Public Health ART Program in Myanmar: A Retrospective Cohort Analysis

Aye Thida^{1*}, Sai Thein Than Tun¹, Sai Ko Ko Zaw¹, Andrew A. Lover², Philippe Cavailler³, Jennifer Chunn⁴, Mar Mar Aye⁵, Par Par⁵, Kyaw Win Naing⁵, Kaung Nyunt Zan⁵, Myint Shwe⁶, Thar Tun Kyaw⁷, Zaw Htoon Waing¹, Philippe Clevenbergh¹

1 The Union Office in Myanmar, International Union Against Tuberculosis and Lung Disease, Mandalay, Myanmar, **2** Infectious Diseases Programme, Saw Swee Hock School of Public Health, National University of Singapore, Singapore, **3** Innovation Unit, Médecins Sans Frontières, Geneva, Switzerland, **4** Maths and Statistics Help Centre, James Cook University, Singapore, **5** Medical Care Division, Department of Health, Mandalay, Myanmar, **6** National AIDS Program, Department of Health, Nay Pyi Taw, Myanmar, **7** Disease Control Division, Department of Health, Nay Pyi Taw, Myanmar

Abstract

Background: The outcomes from an antiretroviral treatment (ART) program within the public sector in Myanmar have not been reported. This study documents retention and the risk factors for attrition in a large ART public health program in Myanmar.

Methods: A retrospective analysis of a cohort of adult patients enrolled in the Integrated HIV Care (IHC) Program between June 2005 and October 2011 and followed up until April 2012 is presented. The primary outcome was attrition (death or loss-follow up); a total of 10,223 patients were included in the 5-year cumulative survival analysis. Overall 5,718 patients were analyzed for the risk factors for attrition using both logistic regression and flexible parametric survival models.





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Result: The mean age was 36 years, 61% of patients were male, and the median follow up was 13.7 months. Overall 8,564 (84%) patients were retained in ART program: 750 (7%) were lost to follow-up and 909 (9%) died. During the 3 years follow-up, 1,542 attritions occurred over 17,524 person years at risk, giving an incidence density of 8.8% per year. The retention rates of participants at 12, 24, 36, 48 and 60 months were 86, 82, 80, 77 and 74% respectively. In multivariate analysis, being male, having high WHO staging, a low CD4 count, being anaemic or having low BMI at baseline were independent risk factors for attrition; tuberculosis (TB) treatment at ART initiation, a prior ART course before program enrollment and literacy were predictors for retention in the program.

Conclusion: High retention rate of IHC program was documented within the public sector in Myanmar. Early diagnosis of HIV, nutritional support, proper investigation and treatment for patients with low CD4 counts and for those presenting with anaemia are crucial issues towards improvement of HIV program outcomes in resource-limited settings.





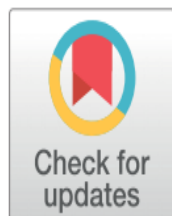
RESEARCH ARTICLE

Intensified tuberculosis and HIV surveillance in a prison in Northeast India: Implementation research

Tarun Bhatnagar^{1*}, Malsawmtluangi Ralte², Lalhriatzuali Ralte³, Chawnglungmuana⁴, L. Sundaramoorthy¹, Lily Chhakchhuak³

1 ICMR School of Public Health, ICMR-National Institute of Epidemiology, Chennai, India, **2** Mizoram State AIDS Control Society, Ministry of Health and Family Welfare, Aizawl, India, **3** Department of Health and Family Welfare, Mizoram, Aizawl, India, **4** SHALOM NGO, Aizawl, India

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Abstract



Structural and individual level factors in prisons create challenges towards detection and management of HIV/tuberculosis. WHO and India's HIV/tuberculosis control programs recommend intensified case finding in prisons. Low HIV and tuberculosis detection rates suggest poor implementation of existing surveillance strategies within the prison healthcare system in Mizoram's capital city of Aizawl. We explored the operational feasibility of implementing the intensified case finding strategy in Aizawl central prison. We implemented the intensified screening through entry screening of new inmates, mass screening of resident inmates and exit screening at release. We set up digital chest radiography, sputum smear microscopy and HIV testing facilities within the prison and referral to external facility for Cartridge Based Nucleic Acid Amplification Test (CBNAAT). We screened 738 inmates (Male: 626; Female: 112). Of 53% inmates having presumptive tuberculosis symptoms, 37% underwent sputum microscopy. We detected 14 new tuberculosis cases; overall tuberculosis positivity 1.9%. We tested 65% of 657 inmates for HIV, of which 41 new cases were detected; overall HIV positivity 16.5%. Three male inmates had HIV-tuberculosis co-infection. It is feasible to implement intensified case detection for tuberculosis/HIV in the prison with inter-departmental coordination, albeit with certain challenges.





Kumar et al. *BMC Health Services Research* (2019) 19:543
<https://doi.org/10.1186/s12913-019-4343-3>


BMC Health Services Research

RESEARCH ARTICLE

Open Access

Implementation fidelity of provider-initiated HIV testing and counseling of tuberculosis patients under the National Tuberculosis Control Program in Kathmandu District of Nepal: an implementation research



Randeep Kumar^{1*} , Ari Probandari², Biwesh Ojha³, Ashmin Hari Bhattarai¹ and Yanri Wijayanti Subronto⁴





Abstract

Background: There exists low uptake of Human Immunodeficiency Virus (HIV) testing among Tuberculosis (TB) patients through Provider-Initiated HIV Testing and Counseling (PITC) under the national TB control program in Nepal. The degree and quality of program delivery were explored through determining whether the PITC program is currently implemented as intended. This study aimed to assess three major components of the program's implementation fidelity: adherence to PITC service, exposure, and quality of program delivery in order to optimize and standardize PITC implementation by exploring its barriers and enablers.

Methods: This research used a sequential explanatory mixed method design. Retrospective cross-sectional study of TB patients enrolled in five TB treatment centers of the Kathmandu district from July 1, 2016, to June 30, 2017 was done to assess PITC adherence to Direct Observed Treatment-Short Course (DOTS) protocols. The centers' TB-DOTS readiness was assessed using the WHO Service Availability and Readiness Assessment checklist. A qualitative study was conducted to explore the barriers and enablers of PITC service implementation.

Results: From a total of 643 TB patients registered, 591 (92.1%) patients were offered HIV test counseling. Amongst those, 571 (96.6%) accepted and 523 (91.5%) were tested. Service providers' HIV knowledge was found to be good although only 2/5 (40%) had participated in PITC training. The key barriers experienced by service providers were: patients feeling offended, stigmatization and lack of human resources in DOTS centers. The main enablers for PITC were national TB program commitment, health workers' motivation, collaboration between stakeholders and external development partners' promotion of program implementation.


Conclusion: In the selected study sites, PITC services are well integrated into the routine TB control program with a high uptake of HIV testing among registered TB patients. This achievement should be sustained by addressing the identified barriers mainly in the quality of the PITC program delivery.

Keywords: Implementation Fidelity, TB, HIV, PITC, DOTS, Nepal



The need for targeted implementation research to improve coverage of basic vaccines and introduction of new vaccines

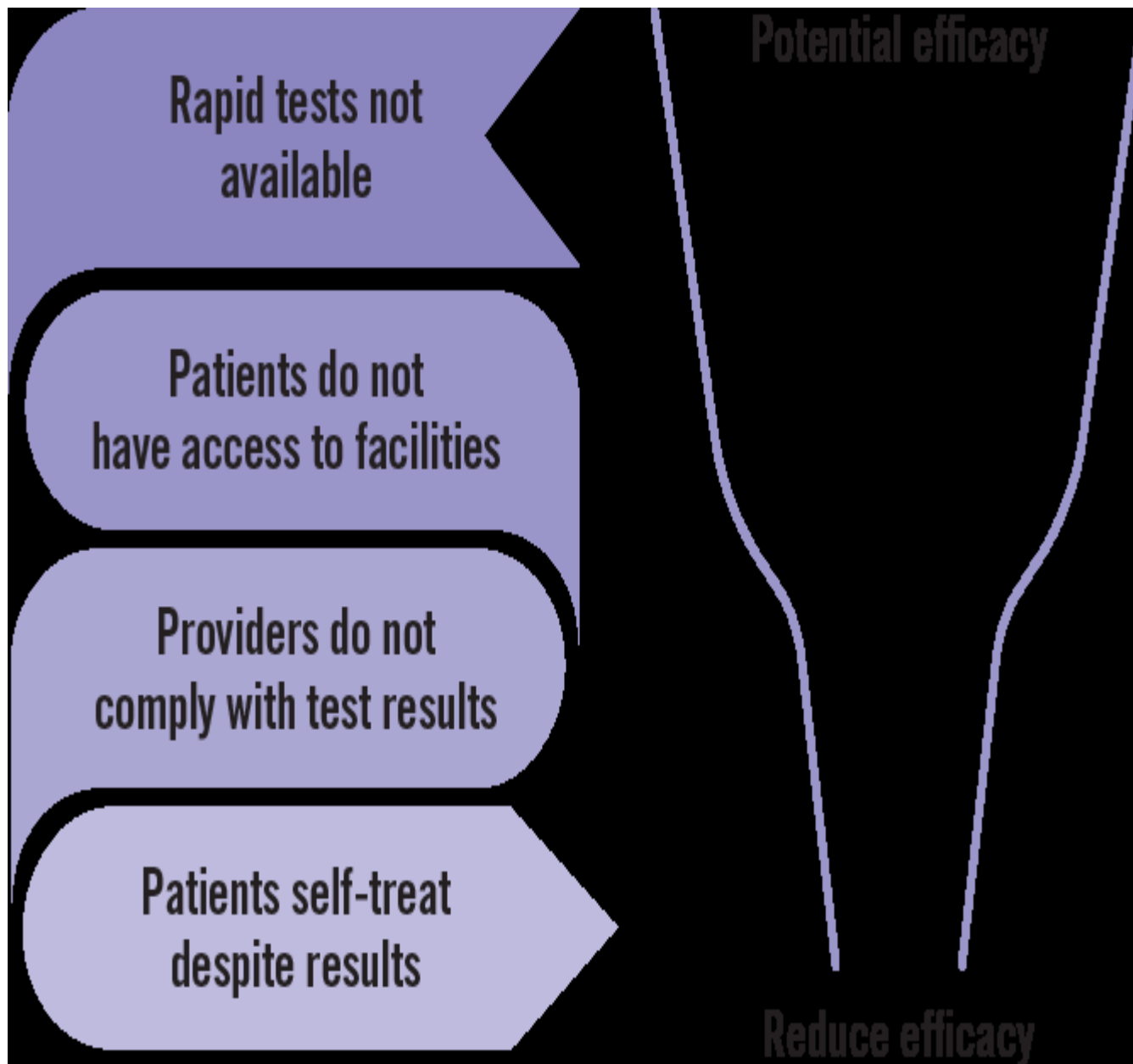


Narendra K. Arora ^a ¹ , Altaf A. Lal ^{b, 1}, Joachim M. Hombach ^c, Jose I. Santos ^d, Zulfiqar A. Bhutta ^e, Samba O. Sow ^{f, g}, Brian Greenwood ^h

Abstract

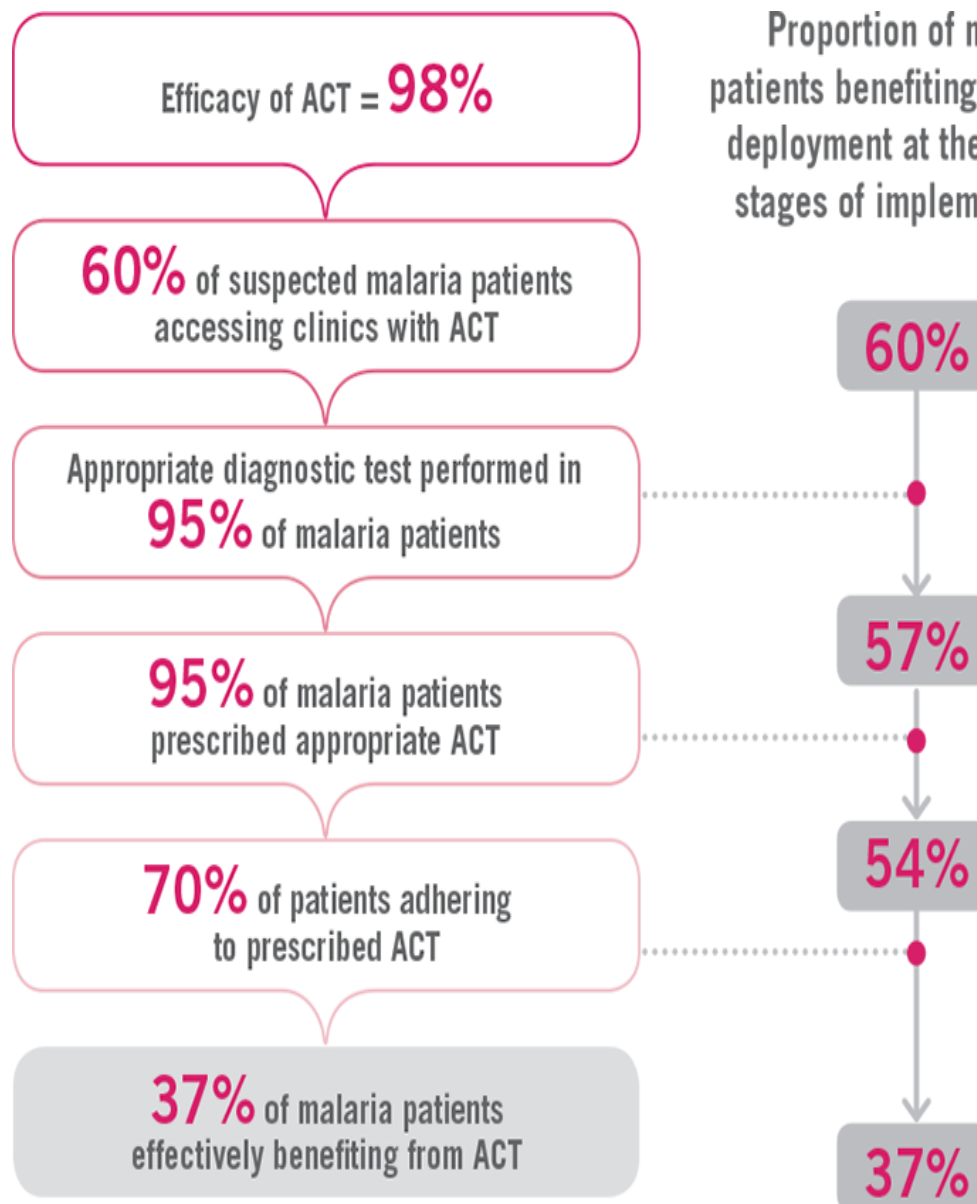
The Decade of Vaccines Collaboration (DoVC) Research and Development (R&D) Working Group identified implementation research as an important step toward achieving high vaccine coverage and the uptake of desirable new vaccines. The R&D Working Group noted that implementation research is highly complex and requires participation of stakeholders from diverse backgrounds to ensure effective planning, execution, interpretation, and adoption of research outcomes. Unlike other scientific disciplines, implementation research is highly contextual and depends on social, cultural, geographic, and economic factors to make the findings useful for local, national, and regional applications. This paper presents the broad framework for implementation research in support of immunization and sets out a series of research questions developed through a Delphi process (during a DoVC-supported workshop in Sitges, Spain) and a literature review.







Proportion of malaria patients benefiting from ACTs deployment at the different stages of implementation.





IR is a
systematic
approach that...



Identifies implementation
bottlenecks

Identifies optimal
approaches

Promotes Uptake of research
findings







Implementation
research...

Demand driven

Research question
developed with stakeholders

Implementers are part of the
research process



Defining research to improve health systems

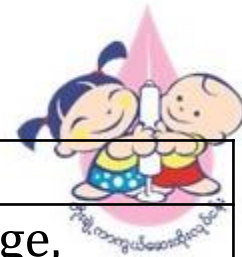


Research domain	Primary characteristics		
	Focus of the research	Focus of the research outputs	Utility of the research output
Operational research	Operational issues of specific health programs	Health-care providers, program managers	local
Implementation Research	Implementation strategies for specific products/services	Program managers, Research & Development Managers	Local/broad
Health Systems Research	Issues affecting some or all of the health system building blocks	Health system managers, policy makers	Broad

Source: Remme et al. (2010). Defining Research To Improve Health Systems. PLoS Med. 7 (1)

Brainstorming Workshop for Further Development of Action Plan for Implementation Research (EPI), DMR (POLB), First RCS, HA, DMR (POLB)

Implementation research outcomes



IRO	Related terms
Acceptability	Related factors: (eg. comfort, relative advantage, credibility)
Adoption	Uptake, utilization, intention to try
Appropriateness	Relevance, perceived fit, compatibility, perceived usefulness or suitability
Feasibility	Practicality, actual fit, utility, trialability
Fidelity	Adherence, delivery as intended, integrity, quality of delivery, intensity or dosage of delivery
Implementation cost	Marginal cost, Total cost
Penetration/ coverage	Reach, access, service spread or effective coverage, penetration
Sustainability	Maintenance, continuation, routinization, institutionalization





Multidisciplinary team work: a core
element of IR



The slide is jointly developed



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Questions, comments and suggestion





Questions, comments and suggestion

