10th Implementation Science Workshop, Brazil, November, 2018
Task for you

- Why are you here for this WORKSHOP?
Task for you

- Why are you here for this week?

- Write down 2-3 things you most want to get from attending this school (your objectives for this week)
Task for you

- Write down 2-3 things you most want to get from attending this school (your objectives)
- Then, introduce yourself to the person next to you
- Say your name + where you are from + your work interests + one major interest outside work + your objectives for this School (*Each do this*)
- We’ll then ask some of you to introduce your ‘new’ colleague to all of us
Task for you

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- Discuss at your table and identify a couple of common objectives
Overview of Implementation Science

Brian Oldenburg, PhD
Professor of Public Health
The University of Melbourne
&
Director, WHO Global Collaborating Centre on Implementation Research for NCDs
1st GACD Implementation Science Workshop was held in Xi’an, CHINA, 2014
Mexico, 2015 (2\textsuperscript{nd} GACD Implementation Science Workshop)
<table>
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<tr>
<th>Year</th>
<th>City</th>
<th>Male (n)</th>
<th>Female (n)</th>
<th>LMIC (n)</th>
<th>HIC (n)</th>
<th>First time (n)</th>
<th>Attended previously (n)</th>
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<td><strong>286</strong></td>
<td><strong>24</strong></td>
<td><strong>310</strong></td>
</tr>
</tbody>
</table>

NB Does not include stats from recent IS workshops in Liverpool (Global Health Systems Conference) and South Africa a fortnight ago
Inaugural (1st) Global Alliance for Chronic Diseases 5-day Implementation Science Training School
Faculty for this workshop
School Objectives

- Introduction to the field of D&I science, particularly in relation to NCDs, LMICs & resource constrained settings.
- How to study and implement research findings into policy & practice?
- Learn about theories, models, study designs and measurement
- Illustrate ways of collaborating and networking more globally
- Showcase exemplars of D&I science
● Program for the week
● Lectures/presentations
● Small group discussion and interaction
● Interactive Q&A and discussion
● Networking and interacting with faculty & one another – learn from one another
● You will receive PDF of all of the talks
http://www.who.int/ncds/governance/policies/NCD_MSA_plans/en/

AN INTRODUCTION TO
POPULATION-LEVEL
PREVENTION OF
NON-COMMUNICABLE
DISEASES

EDITED BY
Mike Rayner • Kremlin Wickramasinghe
Julianne Williams • Karen McColl • Shanthi Mendis
Standing ovations and physical activity for the next 2 days!
NCDs and Implementation Science

Brian Oldenburg, PhD
Professor of Public Health
The University of Melbourne
&
Director, WHO Global Collaborating Centre on Implementation Research for NCDs

Email: boldenburg@unimelb.edu.au
“Neglecting implementation (science), costs lives and money”
It takes an average of 17 years before 14% of research findings are translated into practice.


Why does it take so long and why is the uptake so poor?
Some of the reasons????????
Some of the reasons

• Researchers not asking policy salient questions and/or research is not very important to policymakers/program implementers/professionals
• Findings conflict with vested interests and involve “disruption” with current approaches
• The way we conduct science is very slow and non-responsive to the demands of policymakers/program implementers/professionals
• Researchers not good at knowledge translation into policy and practice
• ETC
• ETC
What is the most common kind of research dissemination/“translation”?
Most Common Type of Research Translation?

Bench to Bookshelf

+ Conferences + Guidelines
This workshop is all about doing better than this, particularly in LMIC and resource constrained settings
Implementation Research

**KNOW**
Interventions are effective in clinical & controlled-research settings

**DO**
Proven interventions are not well adapted to and/or implemented in the “real world”
Translational Research

T0: Define mechanisms underlying health or disease
- Basic research & studies in animals

T1: Test basic research findings for clinical effect
- Translation to humans: Case studies (Phase 1 & 2 CTs)

T2: Test new interventions under controlled environments
- Translation to patients: Efficacy studies

T3: Explore ways of applying guidelines in general practice
- Translation to practice: Effectiveness studies

T4: Study influences on the health of populations
- Translation to population health and communities: Implementation research
Implementation research: new imperatives and opportunities in global health

Sally Theobald, Neal Brandes, Margaret Gyapong, Sameh El-Saharty, Enola Proctor, Theresa Diaz, Samuel Wanji, Soraya Elloker, Joanna Raven, Helen Elsey, Sushil Bharal, David Pelletier, David H Peters

Implementation research is important in global health because it addresses the challenges of the know–do gap in real-world settings and the practicalities of achieving national and global health goals. Implementation research is an integrated concept that links research and practice to accelerate the development and delivery of public health approaches. Implementation research involves the creation and application of knowledge to improve the implementation of health policies, programmes, and practices. This type of research uses multiple disciplines and methods and emphasises partnerships between community members, implementers, researchers, and policy makers. Implementation research focuses on practical approaches to improve implementation and to enhance equity, efficiency, scale-up, and sustainability, and ultimately to improve people's health. There is growing interest in the

Published Online
October 9, 2018
http://dx.doi.org/10.1016/S0140-6736(18)32205-0

Department of International Public Health, Liverpool School of Tropical Medicine, Liverpool, UK (Prof S Theobald PhD, J Raven PhD); US Agency for International Development.
The defining characteristics of implementation research are:

- Context specific
- Relevant and agenda setting
- Method fit for purpose
- Demand driven
- Multi-stakeholder and multidisciplinary
- Real world
- Real Time
- Focuses on process and outcomes
Very big challenge for the world
The 3rd UN High-Level Meeting on Non-Communicable Diseases (NCDs) met on Sept 27, 2018 to review national and global progress towards the SDG target…..
UN Sustainable Development Goals – NCDs

Unlike the previous Millennium Development Goals (MDGs), the recent Sustainable Development Goals (SDGs) now formally recognize NCDs (SDG Target 3.4) by 2030:

- Reduce by one third premature mortality from NCDs
- Strengthen responses to reduce the harmful use of alcohol
- Achieve universal health coverage (UHC)
- Strengthen the implementation of the WHO Framework Convention on Tobacco Control (FCTC)
- Support the research and development of vaccines and medicines for NCDs that primarily affect developing countries
- Provide access to affordable essential medicines and vaccines for NCDs
Are most countries on track to achieve this goal of a 30% reduction in premature mortality by 2030?
Are most countries on track to achieve this goal of a 30% reduction in premature mortality by 2030?

What do you think?
• Sustainable Development Goal (SDG) target 3.4— that is, a one-third reduction, relative to 2015 levels, in the probability of dying between 30 years and 70 years of age from diabetes, cancers, cardiovascular diseases and chronic respiratory by 2030—will only be achieved in 35 countries (19%) for women, and 30 (16%) for men, if these countries maintain or surpass their 2010–2016 rate of decline in NCD mortality.

• Most of these achieving countries are already high income countries with already-low NCD mortality.
NCD Countdown 2030: worldwide trends in non-communicable disease mortality and progress towards Sustainable Development Goal target 3.4

www.thelancet.com Vol 392 September 22, 2018
Heads of State and Government made a bold commitment in SDG target 3.4—to reduce, by 2030, premature mortality from non-communicable diseases by one third, through prevention and treatment and the promotion of mental health and well-being.

So, how can countries do better—both in HICs and LMICs?
Addressing NCDs at a societal level requires policies and system level interventions and integration.
WHO evidence-based ‘Best Buys’ for NCD prevention & control

Little consideration of:

- Costs of implementation
- Adapting to country context
- Capacity to implement and evaluate
- Need to build capacity is long term
WHO ‘Best Buys’ for NCDs….

- Good evidence for group interventions in reducing tobacco use.
- Weaker evidence for tobacco interventions targeting individuals.
- Fewer studies on smoking bans, warning labels and mass media campaigns, and no studies on taxes or marketing restrictions.
- Supportive evidence that cervical screening and hepatitis B immunisation prevent cancer in LMICs.
- Fourteen of the ‘best buy’ interventions did not have ANY good evidence for effectiveness in LMICs, including those related to changing diet, physical activity etc.
- Very little evidence about HOW to adapt and implement

Urgent need for more evidence about HOW to implement what we already know (including Best Buys), particularly for LMICs
Urgent need for more evidence about HOW to implement what we already know (including Best Buys), particularly for LMICs

Field of Implementation Science
**Implementation**

A specified set of activities designed to put into practice a policy or intervention of known dimensions (15)

**Implementation processes are:**
- purposeful
- described in sufficient detail to allow independent observers to detect the presence and quality of the specific set of implementation-related activities (16)

| Implementation research | The scientific study of the processes used to implement policies and interventions and the contextual factors that affect these processes (17) | Investigates all aspects of implementation, including:
- the uptake of evidence-based policies and interventions
- activities used to put these into practice
- factors that influence these activities
- impact of factors on health outcomes |

Implementation Research is the scientific study of methods to promote the systematic uptake of clinical research findings and other evidence-based practices and into public health practice and hence to improve the quality (effectiveness, reliability, safety, appropriateness, equity, efficiency) of public health interventions.

- Eccles et al., An Implementation research agenda, Implementation Science, 2006

......The scientific inquiry into questions concerning implementation – the act of carrying an intention into effect, which in health research can be policies, programmes, or individual practices.....

- Peters et al., 2013
• CONTEXT is important
  – “Implementation research studies should not assume that empirically-supported interventions can be transferred into any service setting without attention to local context, nor that a unidirectional flow of information (e.g., publishing a recommendation, trial, or guideline) is sufficient to achieve practice change.”
Lots of different terms and intersecting disciplines/fields
Implementation Research Traditions

- Quality Improvement Science
- Operational Research
- Policy Implementation and evaluation
- Programme Evaluation
- Dissemination and Implementation of Evidence based medicine
- Participatory Action research
Implementation Research Traditions

- Quality Improvement Science
- Operational Research
- Policy Implementation and evaluation
- Programme Evaluation
- Dissemination and Implementation of Evidence based medicine
- Participatory Action research
- Intersection of public health sciences + social/behavioral sciences + policy sciences
- Think more explicitly about population impact and benefit
Public health benefit is not just determined by evidence of efficacy/effectiveness, but also by:

- **Reaching** large numbers of people for most benefit by adapting, refining and translation…
- Being widely **adopted** in many different settings/contexts
- Being consistently **implemented** with moderate levels of training and expertise
- Producing **replicable** and **long-lasting** effects (and minimal negative impacts) at reasonable cost

**Glasgow’s REAIM framework**
Glasgow RE-AIM framework

**Reach**
- Policy/Planning Questions: How do I reach those who need the program?
- Measures/Indicators: N, proportion & representativeness of those willing to participate

**Efficacy/Effectiveness**
- Policy/Planning Questions: How do I know the program is effective?
- Measures/Indicators: Positive & negative effects on health, QoL, and economic outcomes

**Adoption**
- Policy/Planning Questions: How do I develop organisational & other support for this program?
- Measures/Indicators: N, proportion & representativeness of settings and providers willing to initiate a program

**Implementation**
- Policy/Planning Questions: How do I ensure the program is delivered properly?
- Measures/Indicators: How closely has the program’s protocol been followed - consistency, timing, resources

**Maintenance**
- Policy/Planning Questions: How do I incorporate the program so it is delivered over the long term?
- Measures/Indicators: The extent to which a program is institutionalised as part of routine practice & policy
RE-AIM

• A systematic way for researchers, practitioners, and policy makers to evaluate health behavior/service/public health interventions.
• It can be used to estimate the potential impact of interventions on public health.
Scaling up of interventions and programs into policy and widespread practice
http://www.who.int/ncds/governance/policies/NCD_MSA_plans/en/

WHO Guide – Framework Model

Relationship between implementation and the implementation research cycle

STEP 1
IDENTIFICATION OF APPROPRIATE POLICY OR INTERVENTION

- How will appropriate policies and interventions be selected?
- How will relevant evidence be identified and assessed?

STEP 2
ADAPTATION AND PILOTING OF POLICY OR INTERVENTION

- How will a policy or intervention for a new setting be refined and translated?
- How acceptable is the policy or intervention?
- What are the barriers and facilitators of implementation?

STEP 3
FULL IMPLEMENTATION OF POLICY OR INTERVENTION

- What is the reach of the policy or intervention?
- What is the adoption?
- How well is it implemented?
- What are the moderators of implementation?
- How effective is implementation?

STEP 4
SCALE-UP OF POLICY OR INTERVENTION

- Is the policy or intervention appropriate for new contexts?
- What resources need to be mobilized for scale up and how will these be mobilized?
- How will knowledge be translated and exchanged effectively?
Summary

• **WHAT (“Best Buys”)** we already know about for improving the prevention and management of NCDs needs to be better tailored and adapted to countries, settings and context.

• The evidence about **HOW** to implement policies and programs – particularly in LMICs – is a fraction of what we know about ‘what to do’.

• **Prioritizing evidence** for implementation is also very important.
Summary (2)

Implementation research:

- Involves the scientific study of implementation processes and the contextual factors that affect them.
- Helps identify the most efficient and cost-effective methods of implementation.
- Should be embedded in all stages involving the selection, adaptation and evaluation of policies or interventions.

Knowledge generated by implementation research should be shared widely.
The defining characteristics of implementation research are:

- Context specific
- Relevant and agenda setting
- Method fit for purpose
- Demand driven
- Multi-stakeholder and multidisciplinary
- Real world
- Real Time
- Focuses on process and outcomes
Thank you
Implementation Research: From Problems to Solutions to Outcomes

Rajesh Vedanthan, MD MPH
Director, Section for Global Health
Associate Professor, Departments of Population Health and Medicine
New York University School of Medicine
Disclosures

I receive financial support from the following company or companies related to the products listed below. These relationships may lead to bias in my presentation.

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Implementation research

• Implementation research is the scientific study of **methods to promote the systematic uptake of research findings and other evidence-based practices into routine practice**, and, hence, to improve the quality and effectiveness of health services and public health.

• It includes the study of influences on healthcare professional and organizational behaviour.

• (Eccles/Mittman, 2006)
Knowledge-Practice (Know-Do) Gap

STROKE 8%

MYOCARDIAL INFARCTION 14%
Hybrid – Type 1
Test intervention, gather information on implementation

Hybrid – Type 2
Test intervention, Test implementation strategy

Hybrid – Type 3
Test implementation strategy, gather effectiveness data

Implementation pipeline- Mittman & Curran 2012
Problem Analysis—Flow Chart

**Flow Chart Diagram**

**Detailed Flow Chart of Information Gathering and EMS Dispatch Process**

- **CALL COMES TO PUBLIC SAFETY ANSWERING POINT**
  - **AMBULANCE REQUEST**
    - **CAD ADDRESS CORRECT?**
      - **YES**
        - FORWARD ADDRESS TO DISPATCHER
      - **NO**
        - **DISPATCHER ATTEMPTS RADIO CONTACT WITH ASSIGNED UNIT**
          - **CONTACT SUCCESSFUL?**
            - **YES**
              - PATIENT BREATHING?
            - **NO**
              - SIH CONTACT ATTEMPT?
                - **YES**
                  - GO TO BRIEFING PROTOCOL
                - **NO**
                  - GO TO ALTERNATE UNIT DISPATCH PROTOCOL
        - GO TO POLICE DISPATCH PROTOCOL
    - **NO**
      - FIRE REQUEST?
        - **YES**
          - GO TO POLICE DISPATCH PROTOCOL
        - **NO**
          - QUERY CALLER FOR LOCATION AND UPDATE CAD
            - **BEGIN HEALTH STATUS INQUIRY**
            - **CONTINUE HEALTH STATUS SURVEY**

- **Patient arrives at front desk.**
  - Nurse asks for patient’s name and searches the database for his/her file.
  - **Patient in system?**
    - **YES**
      - Ask patient to be seated in the waiting room.
    - **NO**
      - Nurse asks patient to complete paperwork for new clients and return it to the front desk.
  - Etc.
  - Medical nurse takes patient into the exam room.

**Flowchart Symbols**
- Oval shape shows beginning to ending step in a process.
- Rectangle depicts particular step or task.
- Arrow shows direction of process flow.
- Diamond indicates a decision point.

NHTSA; AETC
Problem Analysis—Pareto Chart

Pareto Chart - Types of Medication Errors (n=430)

Vital Few

80% Cut off (80:20 Rule)

Trivial Many

Clinical Excellence Commission (Aus)
Problem Analysis—Fishbone/Ishikawa Diagram
Problem Analysis—Fishbone/Ishikawa Diagram
Implementation Research

- Community-based Participatory Research
- Qualitative Methods
- Biostatistics
- Outcomes and Impact Evaluation
- Cost Effectiveness Research
- Modeling Techniques
- Management Sciences
- Operations Research
- Supply Chain Logistics
- Information & Communication Technology
- Human Performance Engineering

**ANALYZE determinants**

**IDENTIFY problem**

**DEVELOP solutions**

**IMPLEMENT interventions**

**EVALUATE outcomes**

Vedanthan (2011) MSJM
Analyze Determinants

- Context, Agency, Structure

1. **INDIVIDUAL or FAMILY**
   - Ability to pay
   - Degree of social protection
   - Sources of knowledge
   - Embedded social conditions

2. **COMMUNITY LEVEL**
   - Community engagement
   - Social norms
   - Social support

3. **HEALTHCARE SETTING**
   - Facilities, staffing & cost of care
   - Organizational culture

4. **LOCAL or DISTRICT LEVEL**
   - Leadership & administrative practices
   - Physical environment (including food)

5. **NATIONAL or STATE LEVEL**
   - Socio-political climate
   - Health & social welfare policies

Daivadanam et al. Forthcoming
Determinants

• Behavior

Michie (2011) Imp Sci
Behavior Change Wheel

Michie (2011) Imp Sci
Other examples…

(there are MANY)

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<tr>
<th>SOCIO-ECOLOGICAL LEVEL</th>
<th>THEORY</th>
<th>FOCUS</th>
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<tr>
<td>Individual</td>
<td>Health Belief Model</td>
<td>Individuals’ perception of the threat of a health problem and the appraisal of recommended behavior(s) for preventing or managing the problem.</td>
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<tr>
<td></td>
<td>Theory of Planned Behavior</td>
<td>Individuals’ behavioral intention is the most important determinant of behavior.</td>
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<tr>
<td></td>
<td>Stages of Change (Transtheoretical Model)</td>
<td>Individuals’ readiness to change or attempt to change toward healthy behaviors.</td>
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<tr>
<td>Interpersonal</td>
<td>Social Learning Theory</td>
<td>Behavior is explained via a three-way, dynamic reciprocal theory in which personal factors, environmental influences and behavior continually interact.</td>
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<tr>
<td></td>
<td>Diffusion of Innovation Theory</td>
<td>Addresses how new ideas, products and social practices spread within a society or from one society to another.</td>
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Modified HBM: LARK

Intervention Selection

• Patient-focused
• Provider-focused
• Education
• Feedback/Reminders
• Patient safety
• Organizational change
• Economic strategies
• Policy/Regulation
• Multifaceted
DESIGN THINKING

Designer's **sensibility** and **methods** to match:

• **Desirability** (people’s needs)

• **Feasibility** (social, political, technological, cultural)

• **Viability** (economic, sustainable, scalable)
Designer’s Triad

Desirability
Viability
Feasibility
Designer’s Sensibility: Integrative Thinking

ANALYTICAL THINKING

Deductive reasoning

Inductive reasoning

INTUITIVE + IMAGINATIVE THINKING

Abductive reasoning

INTEGRATIVE THINKING
Please do not pee everywhere. Keep the bathroom clean for next use.

Thanks,
Bayanihan Management
Reduces spillage by over 80%!
How can we get more people to use stairs?
Designer’s Method: Three Spaces

1. Inspiration
2. Ideation
3. Implementation

NYU Langone Health
Bridging Income Generation with Group Integrated Care

PI (USA): Rajesh Vedanthan, MD MPH
PI (Kenya): Jemima H. Kamano, MMed
Design Team

Leung, et al, forthcoming
Aim 1.1: Prototype
The PRagmatic-Explanatory Continuum Indicator Summary 2 (PRECIS-2) wheel

Kirsty Loudon et al. BMJ 2015;350:bmj.h2147
Pragmatic vs. Explanatory

Eligibility - Who is selected to participate in the trial?

Primary analysis - To what extent are all data included?

Primary outcome - How relevant is it to participants?

Follow-up - How closely are participants followed-up?

Flexibility - What measures are in place to make sure participants adhere to the intervention?

Recruitment - How are participants recruited into the trial?

Setting - Where is the being done?

Organisation - What expertise and resources are needed to deliver the intervention?

Flexibility - How should the intervention be delivered?
# Pragmatic vs. Traditional

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<th></th>
<th>Pragmatic</th>
<th>Traditional</th>
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</thead>
<tbody>
<tr>
<td>Stakeholder Engagement</td>
<td>Engaged in all phases</td>
<td>Limited engagement</td>
</tr>
<tr>
<td>Research Design</td>
<td>Internal and external validity; design fidelity; local adaptation; real-life settings; context</td>
<td>Limiting threats to internal validity; usually RCT; homogenous participants</td>
</tr>
<tr>
<td>Outcomes</td>
<td>Reach, effectiveness, adoption, implementation, comparative effectiveness, sustainability</td>
<td>Efficacy, mechanism, component analysis</td>
</tr>
<tr>
<td>Measures</td>
<td>Brief, valid, actionable, rapid utility, feasible</td>
<td>Validated measures that minimize bias; internal consistency/theory vs. clinical relevance</td>
</tr>
<tr>
<td>Data Source</td>
<td>Existing data, health records, admin data, patient reports</td>
<td>Data generation and collection part of clinical trial</td>
</tr>
<tr>
<td>Availability of Findings</td>
<td>Rapid learning and implementation</td>
<td>Delay between trial completion and analytic availability</td>
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# Pragmatic vs. Traditional

<table>
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<tr>
<th>Pragmatic</th>
<th>Traditional</th>
</tr>
</thead>
<tbody>
<tr>
<td>Few exclusion criteria; higher external validity</td>
<td>More exclusion criteria; lower external validity</td>
</tr>
<tr>
<td>Wide range of patients, providers, and settings</td>
<td>Limited range of patients, providers, and settings</td>
</tr>
<tr>
<td>Active comparators</td>
<td>Mostly placebo-controlled</td>
</tr>
<tr>
<td>Patient-centered outcome measures</td>
<td>Clinical or physiological outcome measures</td>
</tr>
<tr>
<td>Longer follow-up with less intensity</td>
<td>Shorter follow-up with more intensity</td>
</tr>
<tr>
<td>Often not blinded</td>
<td>Often double-blinded</td>
</tr>
<tr>
<td>Often cluster-randomized</td>
<td>Often individual-randomized</td>
</tr>
</tbody>
</table>

39
BIGPIC: Cluster RCT

- ELIGIBLE PARTICIPANTS
- RANDOMIZED AT HEALTH FACILITY LEVEL
- UC
- MF
- GMV
- GMV-MF
- 12 MONTHS
- Δ SBP
- Δ CVD RISK SCORE
- 12 MONTHS
- Δ SBP
- Δ CVD RISK SCORE
- 12 MONTHS
- Δ SBP
- Δ CVD RISK SCORE
- 12 MONTHS
- Δ SBP
- Δ CVD RISK SCORE

Stepped-Wedge Design

Implementation Research

Vedanthan (2011) MSJM
Differences between hybrid designs 1, 2 and 3

- Clinical Effectiveness Research
  - Hybrid Type 1: Test clinical intervention. Gather implementation data.
  - Hybrid Type 2: Test clinical intervention & test implementation strategy.
  - Hybrid Type 3: Test implementation strategy. Gather data on clinical intervention effectiveness.

Implementation Research
Hybrid Type 1

• Research Aim:
  – Primary: Effectiveness of intervention
  – Secondary: Better understand context for implementation

• Sample Research Question
  – Primary: Will treatment work in this setting/with these patients
  – Secondary: What are potential barriers/facilitators to widespread implementation
Differences between hybrid designs 1, 2 and 3

Clinical Effectiveness Research

- Hybrid Type 1: Test clinical intervention. Gather implementation data.
- Hybrid Type 2: Test clinical intervention & test implementation strategy.
- Hybrid Type 3: Test implementation strategy. Gather data on clinical intervention effectiveness.

Implementation Research
Hybrid Type 2

• Research Aim:
  – Co-Primary (“clinical”): Effectiveness of intervention
  – Co-Primary (“implementation”): Feasibility and potential utility of an implementation strategy

• Sample Research Question
  – Co-Primary: Will treatment work in this setting/with these patients
  – Co-Primary: Does the implementation method show promise in facilitating implementation of the clinical treatment
Differences between hybrid designs 1, 2 and 3

Clinical Effectiveness Research

Hybrid Type 1
TEST CLINICAL INTERVENTION
Gather implementation data

Hybrid Type 2
TEST CLINICAL INTERVENTION & TEST IMPLEMENTATION STRATEGY

Hybrid Type 3
TEST IMPLEMENTATION STRATEGY
Gather data on clinical intervention effectiveness

Implementation Research
Hybrid Type 3

• Research Aim:
  – Primary: Determine utility of an implementation strategy
  – Secondary: Assess clinical outcomes associated with implementation trial

• Sample Research Question
  – Primary: Which method works better in facilitating implementation of a clinical treatment
  – Secondary: Are clinical outcomes acceptable?
BIGPIC—Type 2

**MICROFINANCE GROUPS**
- Health savings
- Increased income
- Financial literacy
- Self-confidence
- Decision-making agency
- Social Support

**GROUP MEDICAL VISITS**
- Efficiency of care delivery
- Improved quality of care
- Clinician-patient trust
- Increased self-efficacy
- Shared experiences
- Peer support

**INTERMEDIATE FACTORS**
- Healthy Diet
- Physical Activity
- Medication Adherence
- Retention in Care

**CVD Risk Reduction**

Process evaluation

Research Methods & Reporting

Process evaluation of complex interventions: Medical Research Council guidance

*BMJ* 2015; 350 doi:https://doi.org/10.1136/bmj.h1258 (Published 19 March 2015)

Cite this as: *BMJ* 2015;350:h1258
Process Evaluation: Saunders

Components of Process Evaluation

1. Fidelity (quality)
2. Dose delivered (completeness)
3. Dose received (exposure)
4. Dose received (satisfaction)
5. Recruitment
6. Reach (participation rate)
7. Context

Saunders (2005) Health Prom Prac
THANK YOU
Small Group Session to Discuss Research Projects

- 60 minutes for group discussion
- 15 minutes feedback & discussion to plenary group
Tasks in the group

• Choose 1 person to ‘chair’/facilitate the group and 1 person to identify and briefly report back on up to 3 learnings from each group.
• At least one faculty will visit and spend time with your group.
• Many of you have submitted an abstract for an implementation project, so each of you will have approximately 10 minutes to present and discuss your project.
• After each presentation (3 min.), discuss the key questions on the following slide (7 min.)
Discuss for each project

• What is the implementation problem or gap that is being addressed? How do you know this?

• What are the planned implementation strategies? How do you know this?

• How are/will you evaluate whether your strategies are effective? Measures + Study Design?
WHO Guide – Framework Model

Relationship between implementation and the implementation research cycle

- **STEP 1**: Identification of appropriate policy or intervention
  - How will appropriate policies and interventions be selected?
  - How will relevant evidence be identified and assessed?

- **STEP 2**: Adaptation and piloting of policy or intervention
  - How will a policy or intervention for a new setting be refined and translated?
  - How acceptable is the policy or intervention?
  - What are the barriers and facilitators of implementation?

- **STEP 3**: Full implementation of policy or intervention
  - What is the reach of the policy or intervention?
  - What is the adoption?
  - How well is it implemented?
  - What are the moderators of implementation?
  - How effective is implementation?

- **STEP 4**: Scale-up of policy or intervention
  - Is the policy or intervention appropriate for new contexts?
  - What resources need to be mobilized for scale up and how will these be mobilized?
  - How will knowledge be translated and exchanged effectively?