## Dissemination and Implementation Research: An Introductory Workshop for Investigators
Clinical Research Training Center, October 22-23, 2020
Washington University School of Medicine in St. Louis

### DAY 1

<table>
<thead>
<tr>
<th>Time and Session</th>
<th>Topic</th>
<th>Comments/Notes</th>
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<tr>
<td>Session 1: (9:00-09:30)</td>
<td>Introduce dual goals of workshop to provide entrance to D&amp;I as well as build cohort of scholars; expectations for participants; “mavens” and disseminating D&amp;I; follow-up and engagement over time; make sure other resources in D&amp;I are introduced;</td>
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<td>Session 2: The Ailment - Why a Science of D&amp;I is needed (9:30-10:30)</td>
<td>Describe motivation for implementation science; understand need for rigor as well as relevance for generalizable but impactful implementation research; the central scientific challenge of context and generalizability; external validity a critical challenge in implementation science.</td>
<td>Lecture and discussion</td>
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<td>Session 3: The Diagnosis I - How to Analyze a Gap in Implementation: Foundational Perspectives, Frameworks and Theories (10:40-11:10)</td>
<td>Understand approaches to addressing the gap between evidence and practice; the role of theory; common frameworks and theories; specific frameworks (e.g., CFIR); applications of theory to inform the understanding of a particular implementation problem; link to related theories in health behavior and public health (e.g., Bandura, socio-ecological frameworks)</td>
<td>Lecture and discussion</td>
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<td>Session 4: Diagnosis II - How to Analyze a Gap in Implementation using Perspectives from Social Sciences (11:10 to 11:40)</td>
<td>Draw from major theoretical perspectives that emerged from traditions outside of health; sociology and social networks; economics and random utility theory, cognitive biases; marketing; social proof; place implementation theories and frameworks within larger context of perspectives to improve implementation of evidence based interventions</td>
<td>Lecture and discussion</td>
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<td>Discussion: 11:50 to 12:30</td>
<td>Students to describe their work in D&amp;I, including development of a proposal, and solicit feedback from the group; depending on size, in multiple smaller groups.</td>
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**Day 2**

| Session 5: The Treatment - Designing and Implementing Implementation Strategies (9:00-9:40) – Christopher | Understand how implementation strategies are best conceptualized, specified and reported; cover differences between implementation strategies and clinical interventions; illustrate shortcomings in the reporting of implementation strategies in current literature; illustrate unifying approaches that cut across major families of implementation strategies; | Lecture and discussion |
Session 6: Study Designs and Approaches in Implementation Research
(9:40-10:30) – Aaloke Mody
Understand research designs that can advance D&I research; pragmatic trials, stepped wedge; cover use of “impact evaluation” or econometric approaches such as regression discontinuity and difference-in-difference; the concept of natural experiments; hybrid designs – implementation and effectiveness trials; choice experiments; human centered design
Lecture and discussion

Session 7: Mechanisms and External Validity in Implementation Research
(10:40-11:10)
Theory of change literature, causal model and mechanisms, transportability & external validity; mechanism as key for external validity; concrete examples; implications for study design mechanism
Lecture and discussion

Session 8: Context, Adaptation and Fidelity
(11:10-11:40) – Ana Baumann
Introduce the concept of adaptation of interventions and implementation strategies; understand the value-added of adaptation particularly as it is related to equity delivery of care, introduce process and tracking framework of adaptation; tracking methods
Lecture and discussion

Discussion 11:50-12:30
Students to describe their work in D&I, including development of a proposal, and solicit feedback from the group; survey

Readings for Session 2

Readings for Session 3

Readings for Session 4

Readings for Session 5


Readings for Session 6


Readings for Session 7


Readings for Session 8
INSTRUCTOR BIOS

Elvin H. Geng, MD, MPH
Professor of Medicine
Director of the Center for Dissemination and Implementation at the Institute of Public Health
Using the lens of implementation science, Dr. Geng conducts research to optimize the use of evidence-based interventions in the public health response to HIV. His work is carried out through collaborations in Kenya, Zambia, Uganda, as well as in safety-net setting in the US. Current projects make use of a range of observational, mixed methods, quasi-experimental and experimental methods.

Ana A Baumann, Ph.D.
Research Assistant Professor
Ana Baumann's research agenda focuses on identifying strategies to facilitate the implementation and dissemination of evidence-based interventions in low-resource settings. Baumann is the co-director of the Dissemination and Implementation Research Core (DIRC). Through DIRC, she has supported several investigators as an implementation scientist in receiving federally funded funds to conduct studies aiming to accelerate the use of evidence-based interventions or guidelines in different settings of care.

Christopher Carpenter, MD, MSC, FACEP, FAAEM, AGSF
Professor, Emergency Medicine, Emergency Care Research Core
Director, Evidence Based Medicine, Washington University Division of Emergency Medicine
Dr. Carpenter’s primary emergency medicine research interests are geriatrics, cognitive dysfunction, evidence based medicine, diagnostic testing, and implementation science. He co-led an NIH Work Group to create a framework for Dissemination and Implementation Science and then co-authored the EQUATOR Network reporting standards for Implementation Science. He has lectured locally and regionally on various issues related to emergency care of aging adults, evidence based medicine, and implementation science.

Aaloke Mody, MD
Instructor in Medicine
Dr. Mody’s overall interest is in utilizing interdisciplinary implementation science research to understand how public health systems can be optimized to deliver high-quality and patient-centered HIV care in resource-limited settings. He has particular interest in utilizing advanced epidemiologic methods, including natural experiments and other causal methods for real-world data, for implementation science research that helps to answer the most pressing and relevant questions to improving patient outcomes during real-world implementation of HIV care in resource-limited settings.

Stephanie Mazzucca, Ph.D.
Research Assistant Professor
Stephanie Mazzucca's research works to develop and evaluate evidence-based approaches for promoting healthy eating and physical activity to prevent chronic diseases such as obesity, diabetes and cancer. A member of the Prevention Research Center, Mazzucca's work focuses on improving home environments and organizations - such as public health departments and community-based groups - to support healthy behaviors for populations at risk of chronic disease. She also works to improve the dissemination and implementation of research evidence into public health and clinical practice.