IMPLEMENTATION RESEARCH:
EXPLORING IMPLICATIONS FOR CSD PROGRAMS

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Disclosure Statement

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☐ No financial relationships to disclose

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Problem

Providing the best services to individuals with communication disorders.

- Efficacy studies
  - How translate into clinical practice?

- How do we address:
  - Research-Practice Gap – the divide between what we know can optimize care and what actually gets implemented in everyday practice?

- Goal: spread of evidence-based practices
  - What are the barriers?
Efforts to close the gap

- NIH
  - Establishment of the Office of Behavioral and Social Sciences Research (OBSSR), 1993
  - NIH Roadmap, 2004
  - NIH National Center for Advancing Translational Sciences (NCATS), 2011

- ASHA
  - Evidence Maps https://www.asha.org/Evidence-Maps/
  - Practice Portals, Access Academics & Research Newsletter

- CAPCSD
  - Academic/clinical resources

- ASHFoundation
  - Summit on Implementation Sciences, 2014
  - Researcher-Practitioner Collaboration Grant mechanism, 2018
Embracing active knowledge transfer

- Promoting research designed to improve services
- “Knowledge-to-action cycle” involves
  - synthesizing knowledge,
  - interacting with target users to assess needs and identify barriers,
  - tailoring knowledge products and identifying implementation strategies,
  - Monitoring impact
## Framework for Knowledge Translation
(Morshed et al., 2016)

<table>
<thead>
<tr>
<th>Stage</th>
<th>Activity</th>
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<tbody>
<tr>
<td>T1 to Humans</td>
<td>Translating laboratory finding into potential clinical solutions in humans</td>
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<tr>
<td>T2 to Patients</td>
<td>Testing initial hypotheses in early-stage and multi-center human trials</td>
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<tr>
<td>T3 to Practice</td>
<td>Translating clinical findings into everyday clinical practice</td>
</tr>
<tr>
<td>T4 to Population</td>
<td>Implementing and testing new clinical solutions at the population level</td>
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Knowledge spread into practice

(Nielson, 2015)

Diffusion
  Passive
  Untargeted
  Unplanned

Dissemination
  Active
  Targeted
  Planned

Implementation
  Active +
  Integrated

How the intervention fits into the real world systems – exploring barriers and facilitators

How the intervention is packaged, transmitted and interpreted
Implementation Science

- Seeks to understand the processes and factors that are associated with successful integration of evidence-based interventions within a particular setting.
  - Worksite
  - School

- Examines methods (strategies) to promote the systematic uptake of research findings and evidence-based practices for improving the quality of service delivery in routine care. (Powell et al., 2012)
Pillars of implementation research

- Integrates research and clinical practice
- Recognizes the complexities of interventions, the needs of stakeholders, and variables associated with service settings
- Involves relevant stakeholders in an iterative process of investigating how to adopt evidence in practice and
- Utilizes mixed methodologies
Mandate

- For health and educational disciplines to be accountable and flourish, they must invest in instruction and training to facilitate the establishment of a cadre of new investigators and practitioners dedicated to optimizing services to individuals.

- Training CSD students in implementation science could:
  - build synergy within department and university
  - Grow clinical research
  - Demonstrate value of collaboration to address issues around communication disorders
Education and training

- **New investigators need to learn the tools to**
  - Design scientifically rigorous research specifically targeting improvement of care and increasing evidence in practice
  - Capably serve as peer reviewers for the growing number of grant applications and journal submissions in implementation science, and
  - Be prepared to fill the growing number of faculty positions embracing this aspect of clinical research
Education and training

- **New practitioners need to learn the tools to**
  - Find and utilize evidence in their practice
  - Recognize their role and responsibility in generating new evidence
    - Participate in collaborative research
Question Today

Should CSD academic programs be a part of this movement, and if so how?
Challenges
(Stamatakis et al 2013; Brownson, Proctor, et al., 2017)

□ Some beliefs about Implementation Science:
  ▪ Not part of our discipline, rather a separate science, perhaps for advanced research training.
  ▪ A new, undeveloped discipline of research, and as such,
    ■ Small, though growing, evidence with evolving models, measures and methods (different than the widely-accepted randomized controlled trial);
    ■ Few established ‘experts’ and thus few senior mentors;
    ■ Little institutional support, primarily due to its newness,
  □ Lack of TIME in the curriculum
Role of CSD University programs – some ideas

- Goal: Enhance researchers interested in implementation and practitioners passionate about building evidence-based practices

- Approaches to building capacity
  - Coursework through university programs
  - Mentoring and scientific collaboration
  - Independent learning

RESOURCES PROVIDED
Coursework

- Offer a separate course (e.g., seminar, consider as a topic for a master’s or doctoral Training Grant)

- Infuse in existing course (e.g., clinical decision making, research methods, etc.)

- Consider other group training opportunities (e.g., immersive training institutes, 1-day workshops, webinar series)
Coursework

- Recognize the array of tools and toolkits available to address Implementation Research content for coursework, including identification of:
  - theories, models, and frameworks;
  - reliable and valid measures;
  - implementation strategies;
  - designs and analysis approaches; and
  - grant writing
Mentoring and Scientific Collaboration

- Encourage new investigators (faculty and doctoral students) to pursue implementation research - Start small.
  - If mentors are not available in your own departments, look within your institution, or network outside the institution (ASHA-MARC).
  - Look to universities that have an active National Center for Advancing Translational Sciences (NCATS) Clinical and Translational Science Awards (CTSA) Program Hub
  - Explore grants (e.g., ASHFoundation grants, Training Grants)
Mentoring and Scientific Collaboration

- Engage your university clinic: Bring together professorial faculty, clinical faculty/supervisors, and interested students (masters’ and doctoral) to begin addressing implementation questions and feasibility.
Independent Learning

- Participate in **ongoing webinars** and explore **online resources**
  - NIH National Cancer Institute Implementation Science Webinar Series
  - NIH National Center for Advancing Translational Sciences (NCATS),
    - UW ITHS Research Toolkit
- Join **peer networks**
  - Society for Implementation Research Collaboration (SIRC) “Networks of Expertise”
  - AHSA’s Clinicians and Researchers Collaborating (CLARC) Community
Independent Learning

- Join or create journal groups
  - Journal of Implementation Science
- Attend trainings and conferences
  - Training Institute on Dissemination and Implementation Research (TIDIRH) NIH Office of Behavioral and Social Sciences Research (OBSSR)
  - Washington University, Implementation Research Institute (IRI)
  - Conference on the Science of Dissemination and Implementation in Health (sponsored by NIH, AHRQ, PCORI, US VA, etc.)
  - Global Implementation Society and Conference
Discussion

- Should we be considering including information about IR in our programs? How does it “compete” with other needs?

- What barriers/challenges interfere with ramping up this area within our programs?

- What creative approaches might be used to integrate attention to this topic and training within our programs?
Discussion

☐ How can training in implementation science help bridge the academic/clinical divide?

☐ What support is needed from the department or college to facilitate implementation research and training?

☐ Do any of you address this in your programs?
  □ If so how, and where?
Session Resources

Resources for building curriculum in Implementation Science

Dissemination and implementation models in health research and practice [http://dissemination-implementation.org/index.aspx].

Consolidated Framework for Implementation Research (CFIR) Technical Assistance Website [http://www.cfirguide.org/].


Dissemination & Implementation (D&I) Toolkits [https://sites.wustl.edu/wudandi/di-toolkits/].


Resources for designing a training grant (The following references are about the Implementation Research Institute – 2 year training program at Washington University St. Louis in area of Mental Health)

Enola K Proctor, John Landsverk, Ana A Baumann, Brian S Mittman, Gregory A Aarons, Ross C Brownson, Charles Glisson and David Chambers
The implementation research institute: training mental health implementation researchers in the United States
Implementation Science (2013) 8:105
http://www.implementationscience.com/content/8/1/105

Douglas A. Luke, Ana A. Baumann, Bobbi J. Carothers, John Landsverk and Enola K. Proctor,
Forging a link between mentoring and collaboration: a new training model for implementation science
Implementation Science (2016) 11:137
Resources for designing a workshop

Elaine H. Morrato, Borsika Rabin, Jeff Proctor, Lisa C. Cicutto, Catherine T. Battaglia, Anne Lambert-Kerzner, Bonnie Leeman-Castillo, Michelle Prahl-Wretling, Bridget Nuechterlein, Russell E. Glasgow, and Allison Kempe
Bringing it home: expanding the local reach of dissemination and implementation training via a university-based workshop
DOI 10.1186/s13012-015-0281-6

Resources for writing implementation research grants:
Implementation Science Exchange [https://impsci.tracs.unc.edu/].


Resources for mentoring (approach and guidelines)

Anna R Gagliardi, Laure Perrier, Fiona Webster, Karen Leslie, Mary Bell, Wendy Levinson, Ori Rotstein, Ann Tourangeau, Laurie Morrison, Ivan L Silver and Sharon E Strauss
Exploring mentorship as a strategy to build capacity for knowledge translation research and practice: protocol for a qualitative study
DOI:10.1186/1748-5908-4-55

Outside your university, look at universities that have a National Center for Advancing Translational Sciences (NCATS) Clinical and Translational Science Awards (CTSA) Program Hub
Currently, more than 50 medical research institutions across the nation receive Clinical and Translational Science Awards (CTSA) Program funding. These institutions work together to speed the translation of research discovery into improved patient care. Look at the website for a list of funded activities
https://ncats.nih.gov/ctsa/about/hubs
Resources for independent learning

NIH-NCI Implementation Science Webinar Series, Division of Cancer Control and Populations Sciences, https://cyberseminar.cancercontrolplanet.org/implementationscience/

NIH National Center for Advancing Translational Sciences (NCATS), https://ncats.nih.gov
NCATS conducts and supports research on the science and operation of translation to allow more treatments to get to more patients more quickly. The Center focuses on what is common across diseases and the translational process.

Funded by NCATS:
University of Washington, Institute of Translational Health Sciences (UW ITHS), Toolkit (www.researchtoolkit.org)

The NIH Office of Behavioral and Social Sciences Research (OBSSR) supports a variety of training experiences to enhance the research capabilities of social and behavioral scientists, including in-person training institutes and web-based learning opportunities, including lecture series, webinars, supported training institutes (most notably Training Institute on Dissemination and Implementation Research (TIDIRh)
https://obssr.od.nih.gov/training/

Washington University, St. Louis, Implementation Research, http://iristl.org
The IRI is a unique interdisciplinary training program that will help new investigators launch a research career in implementation science.

Society for Implementation Research Collaboration (SIRC) – Training Opportunities
Conference on the Science of Dissemination and Implementation in Health
SIRC is a society dedicated to facilitating communication and collaboration between implementation research teams, researchers, and community providers. SIRC aims to bring together researchers and stakeholders committed to the rigorous evaluation of implementation of evidence based psychosocial interventions.
https://societyforimplementationresearchcollaboration.org/dissemination-and-implementation-training-opportunities/

Global Implementation Society https://globalimplementation.org/society/
Global Implementation Science Conference, https://gic.globalimplementation.org