



University of Colorado
Anschutz Medical Campus

DISSEMINATION & IMPLEMENTATION SCIENCE GRADUATE CERTIFICATE

<https://medschool.cuanschutz.edu/accords/DICert>



CERTIFICATE DIRECTORS & SPONSORS



ACCORDS

ADULT AND CHILD CENTER FOR OUTCOMES
RESEARCH AND DELIVERY SCIENCE

UNIVERSITY OF COLORADO
CHILDREN'S HOSPITAL COLORADO



Colorado Clinical and Translational
Sciences Institute (CCTSI)

UNIVERSITY OF COLORADO DENVER | ANSCHUTZ MEDICAL CAMPUS

Clinical Sciences Graduate Program



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Director



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MPH, PharmD**
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Program Coordinator



**Lisa Cicutto, PhD,
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Administrative Lead, CLSC

D&I CERTIFICATE FACULTY



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Mónica Pérez Jolles, PhD



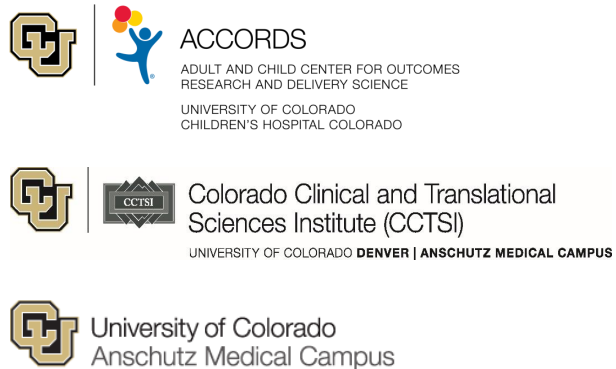
Bethany Kwan, PhD



Ross Brownson, PhD



Alison Hamilton, PhD, MPH



Katy Trinkley, PharmD, PhD



Meredith Fort, PhD



Amy Huebschmann, MD,
MS, FACP (Past Certificate Director)



PRESENTATION OVERVIEW

What, Who, Why, Where, When, How?

- ▶ What is dissemination & implementation (D&I) science?
- ▶ Who should pursue the D&I science certificate?
- ▶ Why pursue the D&I science graduate certificate?
- ▶ Where are certificate courses held?
- ▶ When should I apply?
- ▶ How do I apply?

WHAT

WHAT IS DISSEMINATION & IMPLEMENTATION (D&I) SCIENCE?

Definitions

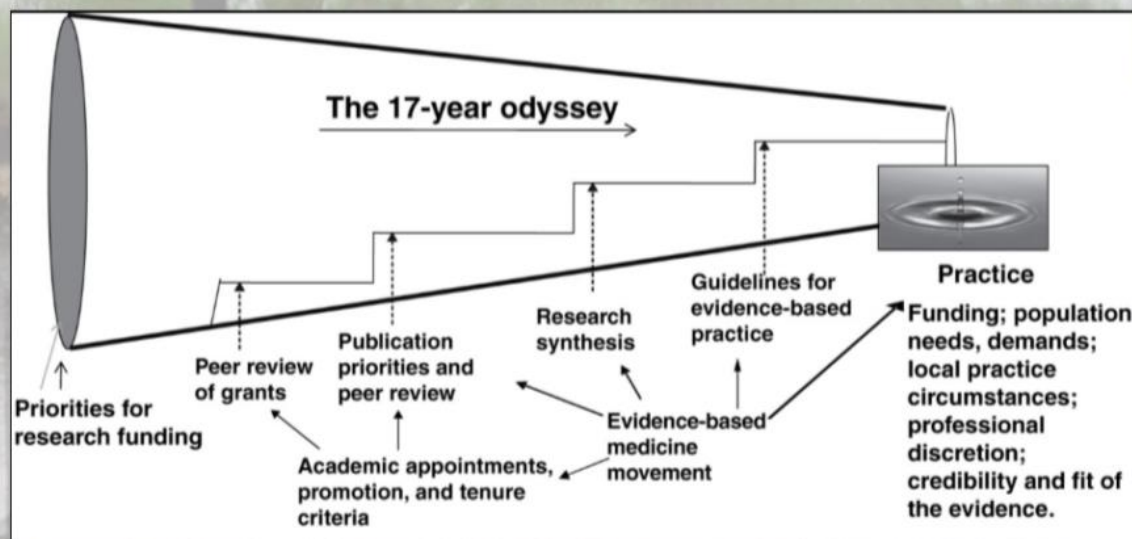
- ▶ Dissemination research: Scientific study of targeted distribution of information and intervention materials to a specific public health or clinical practice audience. (*How best to package, communicate about, and deliver evidence-based interventions?*)
- ▶ Implementation Research: Scientific study of the use of strategies to adopt and integrate evidence-based health interventions into clinical and community settings to improve individual outcomes and benefit population health. (*How best to support the uptake, integration, and sustained use of evidence-based interventions?*)

See: PAR-22-105 – Dissemination and Implementation Research in Health

WHAT

WHAT IS DISSEMINATION & IMPLEMENTATION (D&I) SCIENCE?

Research to Practice Pipeline



With Traditional D&I Approach

14%, 17 years

But there is hope. . .

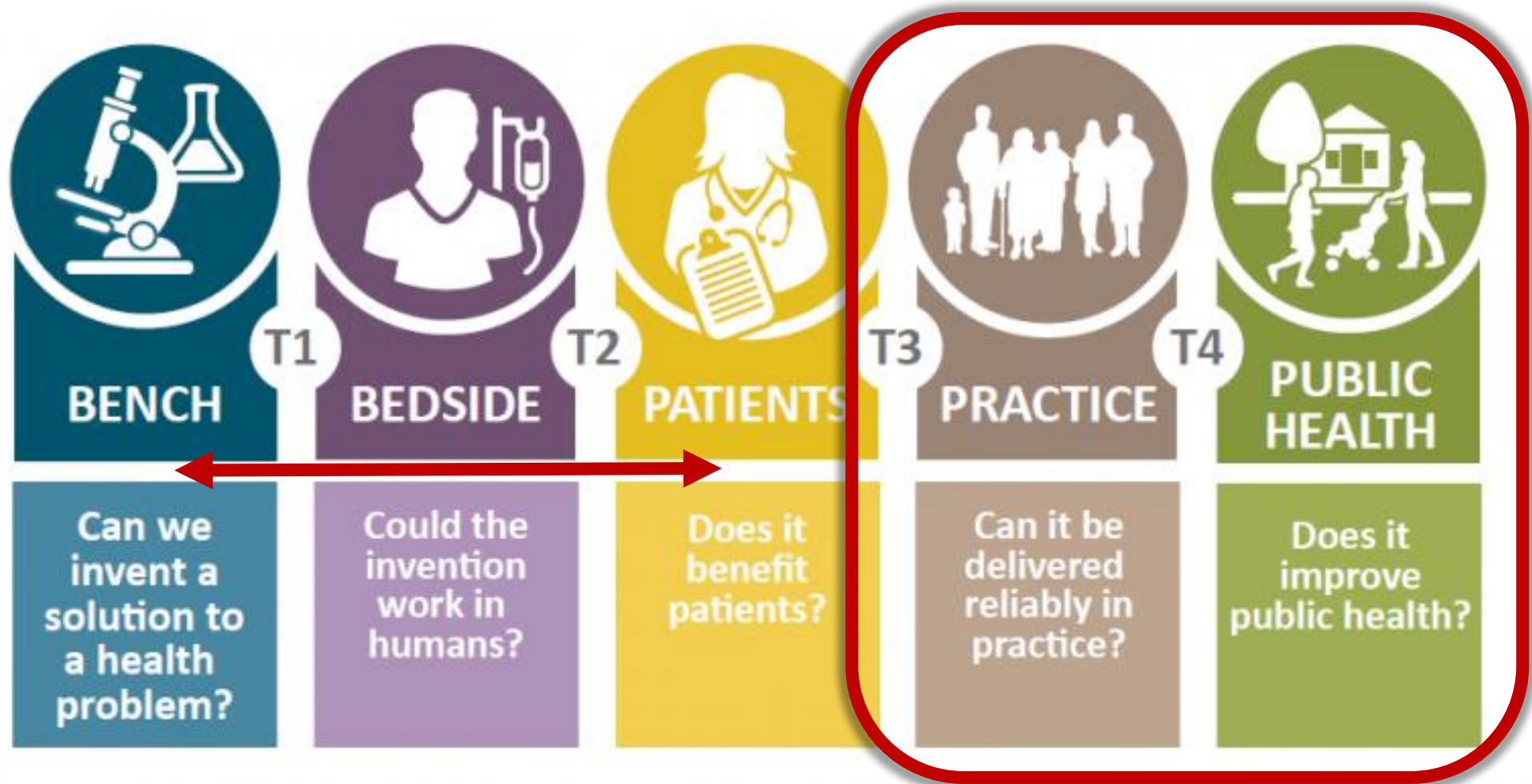
With Active D&I Approach

May be able to achieve up to 80%, 3 years

Balas & Boren, 2000; Green, 2008, Fixsen, Blasé, Timbers & Wolf, 2001, Saldana & Chamberlain, 2012

WHAT

WHAT IS DISSEMINATION & IMPLEMENTATION (D&I) SCIENCE?



WHAT

WHAT IS THE RATIONALE FOR OUR D&I GRADUATE CERTIFICATE?

Rationale

- ▶ Addresses a local and national need for rigorous training in D&I Science in health services and public health research
- ▶ Leverages the outstanding D&I faculty and resources on our campus, and our connections with other national D&I leaders as guest lecturers

WHAT

WHAT IS THE EDUCATIONAL PHILOSOPHY?

Educational Philosophy

- ▶ Tailor materials and assignments to each student's current D&I experience level, professional background, and future goals
- ▶ Personal attention is important to ensure individual attainment of D&I competencies
 - Small class sizes: typically 10-15 people
- ▶ Balance theoretical and applied learning
 - Provide opportunities for students to apply the course theoretical/didactic content to advance a specific research goal in a clinical or public health setting

WHAT

WHAT WILL I LEARN?

Selected D&I Competencies* are addressed, including:

- ▶ Develop a rationale for why/how to select a D&I framework
- ▶ Design pragmatic interventions and evaluations
- ▶ Select appropriate process/outcome measures
- ▶ Balance the need for adaptations with fidelity
- ▶ Use of mixed methods for evaluation in D&I studies
- ▶ Engage key stakeholders throughout the process

*Padek et al., *Implementation Science*, 2015; Tabak et al., *American Journal of Preventive Medicine*, 2017

WHAT

WHAT ARE THE COURSES?

Total of 12 credit hours completed within a 3-year period

► Required Courses (8 credit hours)

Required Courses	Instructor	Credits	Offered
CLSC 7653 Introduction to Dissemination and Implementation Research in Health	Rabin/Studts	3	Fall (annually)
CLSC 6560 Designs and Mixed Methods in Implementation Research	Hamilton/Fort	3	Spring (annually)
CLSC 6750 Designing for Dissemination, Sustainability, and Equity	Kwan/Jolles	2	Fall (annually)

WHAT

WHAT ARE THE COURSES?

► Elective Courses (4 credit hours)

Elective Courses	Instructor	Credits	Offered
CLSC 7663 Context and Adaptation in Implementation Research	Studts/Rabin	2	Spring (annually)
CLSC 6770 Grant-writing for Dissemination and Implementation Research	Glasgow/Brownson	2	Summer (annually)
CLSC 6850 Advanced Topics in Dissemination and Implementation Science	Huebschmann/Trinkley	1-2	Fall (annually)
Electives approved by Certificate Director		Up to 3	Varies

WHAT

WHAT ARE THE COURSES?

- ▶ ***Introduction to Dissemination and Implementation Research in Health (CLSC 7653 – Drs. Rabin and Studts)***
 - Overview of key D&I models, methods, and measures
 - Supports students to develop D&I grant or Quality Improvement (QI) project proposal over the semester
 - Ideas that students develop in this initial course may be further developed in additional later courses (see next slide)

WHAT

WHAT ARE THE COURSES?

- ▶ ***Designs and Mixed Methods in Implementation Research***
(CLSC 6560 – Drs. Hamilton and Fort)
 - In-depth examination of study designs
 - Qualitative, quantitative, and mixed-methods approaches
 - Complete a D&I methods section for a research proposal

- ▶ ***Designing for Dissemination and Sustainability***
(CLSC 6750 – Drs. Kwan and Jolles)
 - Learn about design-thinking processes and diagnosing situational context
 - Engagement with partners for co-design
 - Planning for equitable implementation and sustainment from the start

- ▶ ***Context and Adaptation in Dissemination & Implementation Research***
(CLSC 7663 – Drs. Studts and Rabin)
 - Learn to assess, guide, and balance adaptations with fidelity
 - Develop understanding and skills for assessing multi-level and dynamic contextual issues in D&I research
 - Recognize the role of D&I science in advancing health equity

- ▶ ***Grant-writing for Dissemination & Implementation Science (CLSC 6770 – Drs. Glasgow and Brownson)***
 - Led by Drs. Glasgow/Brownson with numerous other national D&I researchers participating
 - Intensive focus on sections of D&I grant applications
 - Emphasis on grant-writing strategies for D&I in particular
 - Students draft/revise grant sections and receive feedback
 - Leads up to a mock study section final exam

- ▶ ***Advanced Research Topics in D&I Science***
(CLSC 6850 – Drs. Huebschmann and Trinkley)
 - Journal club discussions – presenting critiques of recent D&I publications followed by group discussion with our ACCORDS D&I team (includes Certificate faculty and many others)
 - Research presentations – deliver an oral research presentation to a small group of D&I Certificate faculty
 - Provide peer critiques

WHAT

WHAT DO STUDENTS THINK OF THE COURSES?

- ▶ *"I spent the last 13 years evaluating effectiveness in pragmatic intervention trials. Through that process I learned a great deal about the challenges of implementation, particularly when grant funding ends. The dissemination and implementation certificate program is developing my skillset in incorporating implementation and dissemination science into all phases of intervention development and evaluation."*
 - **Nikki Wagner**, PhD - Assistant Professor, Medicine-Internal Medicine, University of Colorado School of Medicine
- ▶ *"I am taking this class because I have discovered that creating predictive models is the easy part. Implementing them and understanding where they can provide value is the real challenge."*
 - **Douglas Barnaby**, MD, MSc – Assistant Professor of Emergency Medicine, Northwell Health, Hofstra University School of Medicine, Feinstein Institute for Medical Research

WHAT

WHAT DO STUDENTS THINK OF THE PROGRAM?

- ▶ *“I chose this specific program for the incredible faculty and the ability to take courses remotely (since I’m based in NYC). After just 6 months, I’ve acquired foundational skills in D&I Science, which I have already applied to my ongoing K76-supported research studies.”*
 - **Parag Goyal**, MD, MSc, FACC, FHFA – Assistant Professor of Medicine; Etingen Family Clinical Scholar of Medicine; Director, Heart Failure with Preserved Ejection Fraction Program; Director, Cardiac Amyloidosis Program, Weill Cornell Medicine
- ▶ *“Through the D&I Certificate program, I have received training in selecting and using implementation science frameworks to guide and design measurement for... studies, using adaptation frameworks to study modifications and adaptations in a rigorous manner, and mixed methods approaches to design and data collection. The...program and my connections with faculty have also been instrumental in helping me take the next step in my research – applying for NIMH funding.”*
 - **Sarah Kennedy**, PhD – Assistant Professor, Department of Psychiatry; Licensed Clinical Psychologist, Pediatric Mental Health Institute; University of Colorado School of Medicine

WHO

WHO SHOULD PURSUE THE D&I SCIENCE CERTIFICATE?

Target Audience

- ▶ Researchers interested in conducting T3-T4 translational research with a focus on the dissemination and implementation of evidence-based programs
- ▶ Professionals in health services, community health, and public health research

WHY

WHY PURSUE THE D&I SCIENCE GRADUATE CERTIFICATE?

Rationale for individuals in different career stages

- ▶ K-awardees: Robust coursework for a D&I training goal on a career development award
- ▶ Mid-career faculty: Become a “home-grown” local faculty expert for D&I research methods in your institution
- ▶ PhD/DrPH students: potential area of minor concentration research methods
- ▶ Exploring areas for a PhD: test out the field of D&I science before committing to research in this area

WHERE

WHERE ARE CERTIFICATE COURSES HELD?

Format

- ▶ All courses are fully available online (Zoom© videoconference platform) and meet “live” – our current students participate remotely from locations across the USA and Canada

Academic Home

- ▶ Collaboration with Clinical Science Graduate Program, part of the Colorado Clinical and Sciences Institute (CCTSI)
- ▶ Courses can be applied to graduate degrees at CU (MSCS, PhD)

HOW

HOW DO I APPLY?

<https://medschool.cuanschutz.edu/accords/cores-and-programs/dissemination-implementation-science-program/d-i-certificate-program#Cert-Admissions>

Admissions



Admission Requirements

Degree: BA/BS

GPA: A minimum of 3.00 is recommended

Prerequisite courses: N/A



Required Application Documents



International Applicant Criteria

↑ Top

There is one application cycle per year with a start date in the **Fall** (August) semester. **The application cycle for 2024 will be open from January 15 - February 15, 2024.**

HOW

HOW DO I APPLY?



Admission Requirements



Required Application Documents



International Applicant Criteria

- ▶ Degree: BA/BS minimum
- ▶ GPA: A minimum of 3.00 recommended
- ▶ There are no prerequisite courses for admission into the program

HOW

HOW DO I APPLY?



Admission Requirements



Required Application Documents



International Applicant Criteria

- ▶ Online Graduate School application (CU Anschutz)
- ▶ Statements of interest (250 word limit each):
 - What makes you interested in specialized training in D&I Science?
 - What do you hope to gain professionally from the Certificate program?
- ▶ Curriculum Vitae or Resume
- ▶ Transcripts from highest completed degree (MD applicants must include undergraduate degree transcript)
- ▶ Statement of how program will fit into current responsibilities (with optional letter of support)
- ▶ Application fee (\$50 for domestic applicants)

HOW

HOW DO I APPLY?



Admission Requirements



Required Application Documents



International Applicant Criteria

- ▶ In addition to the general admission requirements, international applicants must meet additional requirements dictated by the University: [International Student Requirements for Graduate School admissions](#).
- ▶ **Transcripts from foreign (non-US) institutions:** Applicants must order Course by Course transcript evaluation from either Educational Credential Evaluators, Inc. ([ECE](#)) or World Education Services ([WES](#)). ECE evaluation reports can be uploaded to the University portal automatically by ECE. WES evaluations should be forwarded directly to the University.
- ▶ Application fee \$75 for international applications

HOW

HOW DO I APPLY?

- ▶ See [our website](#) for more information on the application and admissions process
- ▶ Link to application: <https://graduateschool.cuanschutz.edu/admissions/apply>
- ▶ To begin a new application:
 - 1) Select “CU Anschutz Non-Degree Information” under “Non-Degree Graduate Studies (Courses and Certificates)”
 - 2) When prompted for your academic interests, select “Certificate”
 - 3) Select the Dissemination and Implementation (D&I) Science graduate certificate program (this option will not be listed or available outside of the January 15 – February 15 application window)
- ▶ Between January 15 and February 15, if you have questions about accessing the correct application form, please contact Galit.Mankin@cuanschutz.edu for assistance.

HOW

HOW MUCH DOES IT COST?

- ▶ Information on tuition costs (<https://www.cuanschutz.edu/student-finances/tuition-fees/graduate-school-2022-2023>)
 - Same tuition as the MS Clinical Sciences Program
 - ▶ 2023-2024 Colorado Resident = \$560/credit hour
 - ▶ 2023-2024 Non-resident = \$1,361/credit hour
- ▶ Reminder: 12 credit hours total to complete the Certificate, may be completed over 2-3 years.
- ▶ University of Colorado faculty members may use Tuition Assistance for courses if they are an eligible employee.

WHEN

WHEN TO APPLY?

Fall 2023 Certificate Cohort:

- ▶ Application available January 15, 2024 on our website
- ▶ Due date is February 15, 2024
- ▶ Application reviews should be complete in late March/early April 2024 and all applicants will be notified via email of their status
- ▶ Courses begin in late August 2024

ACKNOWLEDGEMENTS

It takes a village! Thank you!

Primary sponsor: ACCORDS

- ▶ ACCORDS Director/Administration
 - Jerica Berge, PhD, MPH
 - Jana Smilanich-Rose, MPA
- ▶ ACCORDS D&I Certificate Faculty
- ▶ D&I Certificate program administrator
 - Jordan Crawford, MPH



ACCORDS

ADULT AND CHILD CENTER FOR OUTCOMES
RESEARCH AND DELIVERY SCIENCE

UNIVERSITY OF COLORADO
CHILDREN'S HOSPITAL COLORADO

Secondary sponsor: CCTSI

- ▶ CCTSI Clinical Sciences Graduate Program
 - Lisa Cicutto, PhD, APN, RN
 - Galit Mankin, MSW
 - Amanda Whiting
- ▶ University of Colorado Graduate School



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With support from CU's NIH-funded Implementation Science
Center for Cancer Prevention and Control (Glasgow, PI)



CONTACT US

General Program questions: Christina.Studts@cuanschutz.edu

Application-specific questions: Galit.Mankin@cuanschutz.edu





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Anschutz Medical Campus

For more information:

<https://medschool.cuanschutz.edu/accords/DICert>





→ YOUR QUESTIONS HERE ←

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