Designing for Dissemination and Sustainability: Methods, Frameworks, Tools, and a Diabetes Case Example

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I have no conflicts of interest to report



Learning Objectives

- 1. Upon completion of this session, participants will be able to:
- 2. Describe the principles of Designing for Dissemination, Sustainability, and Equity (D4DSE): beginning with the end in mind, ensuring innovation-context fit, and planning for active dissemination
- 3. Identify frameworks and methods useful for designing and disseminating a range of research products from a D4DSE perspective
- 4. Describe the phases of the Fit to Context Framework for D4DSE and its application to a case example



Barriers to Dissemination and Sustainability







Poor fit between health innovations and intended context for use Research paradigms used to develop and test programs

Cultures and systems that fail to incentivize and support active dissemination and translation of evidence into practice



Designing for Dissemination and Sustainability (D4DS)

Designing for dissemination

products of research are developed to

match the contextual characteristics of

The process of ensuring that the

the target audience and setting for



Principles and methods for:

Enhancing the fit between a health program, policy, or practice and the context in which it is intended to be adopted

Early and active dissemination and sustainability planning.



intended use

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Designing for sustainability

Early planning and design processes designed to increase the likelihood of sustainment of an evidence-based program or practice after initial implementation

Designing for Dissemination and Sustainability to Promote Equitable Impacts on Health

Bethany M. Kwan, Ross C. Brownson, Russell E. Glasgow, Elaine H. Morrato, Douglas A. Luke, Annual Review of Public Health 2022 43:1, 331-353



Designing for Equity



Yousefi Nooraie, R., Kwan, B., Cohn, E., AuYoung, M., Clarke Roberts, M., Adsul, P., & Shelton, R. (2020). Advancing health equity through CTSA programs: Opportunities for interaction between health equity, dissemination and implementation, and translational science. *Journal of Clinical and Translational Science*, *4*(3), 168-175. doi:10.1017/cts.2020.10





Beginning with the end in mind

Principles of D4DS



Ensuring innovation-context fit



Planning for active dissemination and sustainment



Beginning with the end in mind





Intended Audience and Level of Impact

Adopters

Influencers

Saboteurs

 Image: Control of the second second

Policy/Enabling Environment (national, state, local laws)

> Organizational (organizations and social institutions

Community (relationships between organizations)

> Interpersonal (families, friends, social networks)

> > Individual (knowledge, attitudes, behaviors)

The products of research: What is being designed for dissemination and sustainability?

Evidence

• The generalizable knowledge resulting from the conduct of research and evaluation

Programs, Treatments, Interventions, and Services

 Health promotion and/or disease prevention or educational programs, interventions, initiatives, treatments, or services

Technology and Infrastructure

• Devices, software, hardware, web-based and other tools and equipment for disease prevention or management, research, evaluation, or educational purposes

Dissemination and Implementation Strategies

 Methods, approaches, guides, or materials, for dissemination, implementation, and sustainment of effective, equitable, and efficient public health and health care practices in real world settings

Policy and Guidelines

• Local and/or national public health and health care guidelines, standards, and policies emerging from the evidence base

Methods

 Research and evaluation techniques, instruments, tools, models, measures and/or equipment

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<u>Designing for Dissemination and Sustainability to Promote Equitable Impacts on Health</u> Bethany M. Kwan, Ross C. Brownson, Russell E. Glasgow, Elaine H. Morrato, Douglas A.

Luke, Annual Review of Public Health 2022 43:1, 331-353

Ensuring Innovation-Context Fit







* Briefly mentioned in text, but not focus of the theory

Implementation Science

Debate

A theory of organizational readiness for change Bryan J Weiner

Address: Department of Health Policy and Management, Gillings School of Global Public Health, University of North Carolina Chapel Hill, Chapel Hill, North Carolina, USA

Received: 20 March 2009

Email: Bryan J Weiner - bryan_weiner@unc.edu

Published: 19 October 2009

Implementation Science 2009, 4:67 doi:10.1186/1748-5908-4-67 Accepted: 19 October 2009

This article is available from: http://www.implementationscience.com/content/4/1/67



Innovation-Context Fit: System Capacity and Organizational Readiness

BioMed Central

Open Access



Dissemination

• An active approach of spreading evidence-based interventions to the target audience via determined channels using planned strategies

Diffusion curve



Brownson RC, Eyler AA, Harris JK, Moore JB, Tabak RG. Research full report: getting the word out: new approaches for disseminating public health science. Journal of public health management and practice. 2018 Mar;24(2):102.

Planning for Active Dissemination: Six-Step Dissemination Framework





Bauman AE, Nelson DE, Pratt M, Matsudo V, Schoeppe S. Dissemination of physical activity evidence, programs, policies, and surveillance in the international public health arena. American journal of preventive medicine. 2006 Oct 1;31(4):57-65.

Fit to Context Framework for D4DS



Four-phase process framework



Considers design of a research product and dissemination and sustainability plans from the perspective of ensuring fit to context



Products being designed are:

Culturally appropriate Feasible for use in resource-limited settings Align with the strengths and assets of the intended audience and setting Impact outcomes that matter to communities and partners

Kwan BM, Luke DA, Adsul P, Koorts H, Morrato EH, Glasgow RE. Designing for Dissemination and Sustainability: Principles, Methods, and Frameworks for Ensuring Fit to Context. In: Brownson RC, Colditz GA, Proctor EK, eds. Dissemination and Implementation Research in Health: Translating Science to Practice, 3rd ed. New York, NY: Oxford University Press; 2023: 587-606.



Fit to Context (F2C) Framework for Designing for Dissemination



Kwan BM, Luke DA, Adsul P, Koorts H, Morrato EH, Glasgow RE. Designing for Dissemination and Sustainability: Principles, Methods, and Frameworks for Ensuring Fit to Context. In: Brownson RC, Colditz GA, Proctor EK, eds. Dissemination and Implementation Research in Health: Translating Science to

Practice, 3rd ed. New York, NY: Oxford University Press; 2023: 587-606.



Design Processes



Participatory co-design and community partner engagement



Application of D&I theories and frameworks



Context and situation analysis



Systems, engineering and complexity science approaches

Communication and the arts

The methods, frameworks or approaches used to develop and test the research product; product messages, packaging, and distribution plans; and sustainability plans

Kwan BM, Brownson RC, Glasgow RE, Morrato EH, Luke DA. Designing for Dissemination and Sustainability to Promote Equitable Impacts on Health. Annual Review of Public Health. 2022 Jan 4;43.



Who to engage? 7Ps Framework for Engagement

Patients and the public

Providers

Policymakers

Purchasers

Payers

Product makers

Principal investigators



Concannon TW, Meissner P, Grunbaum JA, McElwee N, Guise JM, Santa J, Conway PH, Daudelin D, Morrato EH, Leslie LK. A new taxonomy for stakeholder engagement in patient-centered outcomes research. J Gen Intern Med. 2012 Aug;27(8):985-91. doi: 10.1007/s11606-012-2037-1. Epub 2012 Apr 13. PMID: 22528615; PMCID: PMC3403141.





The ENGAGEMENT NAVIGATOR Webtool DICEmethods.org | Dissemination, Implementation, Communication, and Engagement A guide for health researchers





Using Design Thinking Methods to Create a Stakeholder Engagement Method Navigator Webtool for Clinical and Translational Science



Purpose: The Stakeholder Engagement Navigator is an interactive webtool designed for use by researchers. It was created to help researchers choose engagement strategies while considering budget, timeline, stakeholder availability, and team expertise.



Kwan, B. M., Ytell, K., Coors, M., DeCamp, M., Morse, B., Ressalam, J., Reno, J. E., Himber, M., Maertens, J., Wearner, R., Gordon, K., & Wynia, M. K. A stakeholder engagement method navigator webtool for clinical and translational science. J Clin Transl Sci. 2021;5(1):e180. Published 2021 Sep 13. doi:10.1017/cts.2021.850

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8596067/









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EDUCATION HUB FIND ENGAGEMENT STRATEGIES Strategy Fact Sheets INTRODUCTION TO STAKEHOLDER ENGAGEMENT Approaches \sim D Stakeholder Engagement Navigator Webtool: Introductory Video Methods \sim Tools \sim STAKEHOLDER ENGAGEMENT NAVIGATOR DICEmethods.org | Dissementation, Implementation, Communication, and Engagement A guide for health researchers MORE VIDEOS



EDUCATION HUB

FIND ENGAGEMENT STRATEGIES

Stakeholder Engagement Education Hub

Welcome to our Stakeholder Engagement Education Hub! This is your home page for accessing our educational content related to stakeholder engagement.

THE BASICS

Getting started with stakeholder engagement

What is stakeholder engagement?

Why engage stakeholders?

Need for more research on stakeholder engagement

What are the core principles of stakeholder engagement?

How to identify stakeholders and establish their roles

A DEEPER DIVE

After reviewing the basics, develop a more comprehensive understanding of stakeholder engagement

What is the difference between a stakeholder engagement approach, method and tool?

Explore engagement approaches for your project

Use the Stakeholder Engagement Selection Tool

ABOUT THE WEBSITE

Learn about the purposes and goals behind the website and how the Stakeholder Engagement Selection tool was developed

Background and development of the Stakeholder Engagement Selection Tool



Web organizing framework



Home > Stakeholder Engagement Selection Tool



Stakeholder Engagement Selection Tool

Data Science to Patient Value (D2V)

UNIVERSITY OF COLORADO ANSCHUTZ MEDICAL CAMPUS

Welcome! The purpose of this tool is to help your team select the most appropriate engagement method or tool for your particular project.

Before using the tool, consider the following:

- O Purpose: What do you hope to achieve through stakeholder engagement?
- \$ Budget: What budget do you expect to have for your engagement activities?
- **Number of interactions:** Over what period of time do you expect to engage your stakeholders?
- Time per interaction: How much time do you expect from your stakeholders in any given interaction?
- Staffing/expertise: What types of staffing and expertise are available to you?







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STAKEHOLDER ENGAGEMENT NAVIGATOR

E-LAUNCH TOOL

DICEmethods.org | Dissemination, Implementation, Communication, and Engagement A guide for health researchers

Home > Stakeholder Engagement Selection Tool > Research Stage Selection > Engagement Purpose Selection > Refinements and Results Page

Your chosen research stage(s): Planning

Your chosen purpose(s) of engagement: Develop research questions relevant to stakeholders





ACCOR Developer of Contractor Developer at C The Stakeholder Engagement Navigator is a service of the Data Science to Patient Value Initiative at the University of Colorado Anschutz Medical Campus



Deverka's Conceptual Model for Stakeholder Engagement in Fact Sheet Comparative Effectiveness Research

Deverka's Conceptual Model for Stakeholder Engagement in Comparative Effectiveness Research was adapted from the analytic-deliberative process framework, used originally in making decisions regarding environmental risk. Deverka et al. adapted the model for stakeholder engagement in the context of comparative effectiveness research (CER). The model equally balances evidence collection with deliberation by stakeholders in arriving at decisions and recommendations. The model also demonstrates that the relationship between analysis and deliberation is bidirectional and is an iterative process in which analysis can be used to provide information for deliberation and deliberation can be used to determine the focus of analysis.



Human-Centered Design

Human-Centered Design is a strategy that puts stakeholders first and can be used for any aspect of health research from determining a study question to effective recruitment, retention, dissemination. It can also be used to help design study interventions or product/solution design. While Human-Centered Design is a highly adaptable approach, most include stakeholders in the following three phases 1) Listening/ Brainstorming around issue or question 2) Coming to consensus on a method/question/ solution to test. 3) Testing method/question/solution 4) Seek feedback and repeat steps one and two until researchers and stakeholders are satisfied that original purpose of engagement has been achieved.

Fact Sheet

Fact Sheet



Stakeholder Panel / Advisory Group

Fact Sheet

Stakeholder panels or advisory groups provide a forum for patients, community members, and other stakeholders to inform the development and alternatives for a research project.

Advisory group members will advise and ensure the exchange of information by:

· Providing feedback to researchers regarding the importance and feasibility of research protocols.

- Providing a "sounding board" for research ideas and research/community partnerships.
- Facilitating connections between community and academic researchers.

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• Making recommendations to researchers at key milestones, including identifying a preferred alternative.



Community Engagement Studios

Community Engagement Studios (CE Studios) are a model of engagement where community members or patients are consulted as stakeholder experts, rather than research participants. Modeled after the Clinical and Translational Research Studio, CE studios consist of a brief presentation from the researcher who presents 2-3 questions to the stakeholder group to elicit input on their project. These sessions are consultative in nature and are designed to ensure that the stakeholders are comfortable sharing their experiences and opinions.



Application of Dissemination and Implementation Science Process Frameworks

Moullin et al. Implementation Science (2019) 14:1 https://doi.org/10.1186/s13012-018-0842-6

Implementation Scie

SYSTEMATIC REVIEW

Open Acc

Systematic review of the Exploration, Preparation, Implementation, Sustainment (EPIS) framework

Joanna C. Moullin^{1,2}, Kelsey S. Dickson^{2,3}, Nicole A. Stadnick^{2,4}, Borsika Rabin⁵ and Gregory A. Aarons^{2,4}*





Context and Situation Analysis

• A formal assessment of the audience, needs, setting, workflows, processes, policies, resources, and systems in which a health innovation is intended to be used.





Hamer MK, Alasmar A, Kwan BM, Wynia MK, Ginde AA, DeCamp MW. Referrals, access, and equity of monoclonal antibodies for outpatient COVID-19: a qualitative study of clinician perspectives. Medicine. 2022 Dec 16;101(50):e32191.

Marketing and Business Approaches









Multi-stage development process: (1) problem-solution fit; (2) productmarket fit; and (3) business model fit

Systems Science



- Systems thinking: The process of understanding how things influence one another within a whole (Rabin & Brownson, 2017)
- Complex adaptive systems with system dynamic mapping



Best A, Berland A, Herbert C, Bitz J, van Dijk MW, Krause \overline{C} , Cochrane D, Noel K, Marsden J, McKeown S, Millar J. Using systems thinking to support clinical system transformation. Journal of health organization and management. 2016 May 16.

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Communication and the Arts

- Social marketing
 - "a social influence technology involving the design, implementation and control of programs aimed at increasing the acceptability of a social idea or practice in one or more groups of target adopters" (Kotler and Roberto, 1989).
- Audience Segmentation



Arts-Based Knowledge Translation and Graphic Design

mAb Superhero

Fighting COVID-19 with monoclonal antibodies (mAbs) one patient at a time

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PATIENT DATA AND PRIVACY REGULATIONS

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PERMISSION

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WOULD NOT HARM PEOPLE

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This article was downloaded by: [University College London] On: 20 January 2015, At: 03:45 Publisher: Routledge Informa Ltd Registered in England and Wales Registered Number: 1072954 Registered office: Mortimer House, 37-41 Mortimer Street, London W1T 3JH, UK



Research in Drama Education: The Journal of Applied Theatre and Performance Publication details, including instructions for authors and

subscription information: http://www.tandfonline.com/loi/crde20

Genetic testing in a drama and discussion workshop: exploring knowledge construction

Emily Dawson $^{\rm a}$, Anne Hill $^{\rm b}$, John Barlow $^{\rm b}$ & Emma Weitkamp $^{\rm a}$ $^{\rm a}$ Science Communication Unit , The University of the West of England , Bristol, UK

^b Faculty of Media, Arts and Society, Southampton Solent University, Southampton, UK



D4DS Planner Tool

About us

FAQs







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Introduction to D4DS

A Designing for Dissemination & Sustainability Action Planner

The D4DS Planner will help you engage partners through a planning process to maximize the impact of your project.

ACTION PLANNER >

EDUCATION HUB >

How to use the planner?

What is D4DS?

D4DS refers to a way of ensuring that "the product" (interventions, policy, evidence) of our work solves a problem and fits the context in which it is intended to be adopted.

D4DS focuses on engaging partners in design to ultimately increase adoption, sustainability, and impact on health and health equity.





https://app.d4dsplanner.com/





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Main menu

Home Page ß 6 **Action Planner Resources menu Education Hub** Guidance Ø **Project menu** My projects 8 [→ LOGOUT



Version 2.1.0

←

Understand The Context

About this Action Item

This activity will provide key questions to help your team think broadly about characteristics of people, relationships, your product, and the environment that may influence your ability to reach your target audience and sustain impact. The goal is to help you and your partners consider the multilevel nature of the context that can impact how you share, adopt, use and benefit from the product over time. You should consider both factors that support and those that may interfere or create challenges.



Structural racism and discrimination may be large forces affecting the context and the potential success of the work that you do with the community. Be explicit in examining these, as well as other social determinants of health. If possible, address these in your work.

Additional Resource:

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9978828/

Brainstorm



You must select or add a project before you can complete this Action Item.

Dive deeper R





To learn about this Action Item

Designing for dissemination and sustainability case example





- Cluster randomized pragmatic trial (Hybrid implementationeffectiveness type 2)
- Comparative effectiveness of patient-driven vs standardized diabetes shared medical appointments (SMAs)
 - Are there added benefits of a multidisciplinary care team including behavioral health and peer mentors, and tailoring curriculum to patient preference and priorities?
- Funded by PCORI Improving Healthcare Systems Award (MPIs: Kwan & Waxmonsky)
- Patient and practice representatives engaged in research prioritization, design, conduct, and dissemination
- RE-AIM framework guided mixed methods evaluation



Kwan BM, Dickinson LM..., Waxmonsky JA. The Invested in Diabetes Study Protocol: a cluster randomized pragmatic trial comparing standardized and patient-driven diabetes shared medical appointments. Trials. 2020 Jan 10;21(1):65



Beginning with the end in mind

Principles of D4DS



Ensuring innovation-context fit



Planning for active dissemination and sustainment





Beginning with the End in Mind: Patient & Clinical Partner Engagement

Fact Sheet **Boot Camp Translation** Boot Camp Translation is a series of in-person and phone meetings with community members about a health topic. The first meeting includes a detailed presentation with evidence-based guidelines and recommendations from an expert on the topic in guestion, and after this presentation participants and skilled moderators begin working to decide what about the health issue their community needs to know and how to best to address the issue. S Budget $\mathcal{P}_{\mathbf{0}}$ Time per interaction Number of interactions I expect to engage stakeholders for. (e.g. personnel, space, equipment) I expect to interact with stakeholders. Family Practice, 2017, Vol. 34, No. 3, 358-363 doi:10.1093/fampra/cmw127 Low Medium High An hour or less Half a dav A full day 1-2 times Appx. 5 times 10+ times Advance Access publication 2 January 2017



Stakeholder engagement in diabetes self-management: patient preference for peer support and other insights

OXFORD

Bethany M Kwan^{a,*}, Bonnie Jortberg^a, Meredith K Warman^a, Ilima Kane^b, Robyn Wearner^a, Romona Koren^c, Thomas Carrigan^c, Vincent Martinez^c and Donald E Nease Jr^a





Shared Medical Appointment (SMA) Features of Interest to Patient and Clinical Partners

Features	Examples
Multidisciplinary care team	SMAs have "guest speakers" representing clinical and behavioral health specialties
Peer support	Peer mentors co-facilitate SMAs and work with patients one- on-one
Whole-person orientation	SMA curriculum includes health behavior change and mental health content
Patient-driven content and structure	Modular curriculum with topics selected by SMA participants and patient-driven care team and family involvement
Focus on patient-centered outcomes	Diabetes distress, quality of life, self-management behaviors, SMA participation







COORDS

Pragmatic Trial of Comparator SMA Models

Glasgow RE, Gurfinkel D, Waxmonsky J, Rementer J, Ritchie ND, Dailey-Vail J, Hosokawa P, Dickinson LM, Kwan BM. Protocol refinement for a diabetes pragmatic trial using the PRECIS-2 framework. BMC Health Services Research. 2021 Dec;21:1-1.



Enhanced Replicating Effective Programs Framework

Pre-ConditionsIdentify DiabetesIntervention Needsand Preferences:• Patient and otherstakeholderengagementthrough Boot CampTranslationIdentify EffectiveIntervention:• Targeted Training inIllness Management(TTIM)Draft Package of	Pre-Implementation Identify and Engage Settings: • Recruitment of PBRN practices interested in implementing diabetes SMAs Project Orientation: • Explain core elements of Invested in Diabetes SMA conditions • Determine logistics for local delivery Test and Finalize	Implementation Disseminate Package: • Practice kick-off meeting • Instructor's manual • Patient handbook • Website with example TTIM session videos Training and Ongoing Support: • 1-Day TTIM training for care team members	Facilitation External Facilitation: • 3-5 practice coaching sessions • Process mapping • Planning for scheduling, workflow, data collection • Billing and reimbursement Internal	 Maintenance and Evolution Adaptations As Needed: Changes to timing and intensity of SMAs SMAs delivered by different clinical team members based on clinical needs and financial sustainability Delivery of training via live webinars for remote clinics Practice coaching sessions guide as well as document adaptations
Intervention: • Patient-Driven and Standardized Diabetes Shared Medical Appointments (SMAs) using TTIM	 Package: Customize content and delivery to fit context of participating practices and adhere to core elements 	 Half-day training for peer mentors 1-Hour Training for Prescribing Providers Practice and peer mentor learning communities 	 Relationship building Pilot test Refine workflows 	 Planning for Sustainability Stakeholder collaborative calls discussing organizational and financial changes needed



Kwan BM, Rementer J, Ritchie ND, Nederveld AL, Phimphasone-Brady P, Sajatovic M, Nease DE, Waxmonsky JA. Adapting diabetes shared medical appointments to fit context for practice-based research (PBR). The Journal of the American Board of Family Medicine. 2020 Sep 1;33(5):716-27.

Enhancing Innovation-Context Fit



Implementation and Adaptation to Enhance Fit to Context



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Kwan BM, Rementer J, Ritchie ND, Nederveld AL, Phimphasone-Brady P, Sajatovic M, Nease DE, Waxmonsky JA. Adapting diabetes shared medical appointments to fit context for practice-based research (PBR). The Journal of the American Board of Family Medicine. 2020 Sep 1;33(5):716-27.



Iterative Adaptation to Fit Context

Table 3 Challenges and resulting adaptations around intervention content and delivery

(health educator, Federally Qualified Health Center

#05)

Nederveld <i>et al. BMC Primary Care (2023) 24:52</i> https://doi.org/10.1186/s12875-023-02006-8	BMC Primary Care	Challenge Identified	Strategies and Adaptations done to assist implementation	Illustrative quote, role of team member, type and study number of practice
RESEARCH Delivering diabetes shared medical	Open Access	Content perceived to be not suited for patient population	Added or adjusted program content	"I know with the Spanish one she does a lot more visuals because the patients don't always read all the stuff. For the IDEA approach she printed out a light bulb, and doing more visuals to help with the words that they don't always read. I think that's been a little bit helpful." (health educator, Federally Qualified Health Center #06)
appointments in primary care: early and mid-program adaptations and i for successful implementation	mplications	Content difficult to deliver according to program plan/timing	Remove or change timing of content delivery	"I did do the medication one in the first cohort, and it just felt so pressured. One of the patients actually told me she felt overwhelmed. It just seemed like the most practical piece to remove and still have the meat of that whole section in that curriculum." (BHP, Federally Qualified Health Center #04)
Andrea Nederveld ^{1*} , Phoutdavone Phimphasone-Brady ² , Dennis Gurfinkel ³ , Jeane Bethany M. Kwan ^{3,4} and Jodi Summers Holtrop ^{1,3} Holtrop <i>et al. Implementation Science</i> (2022) 17:51 https://doi.org/10.1186/s13012-022-01218-3	tte A. Waxmonsky ^{1,3} , Dementation Science	Disagreement with nutrition information/content	Alter or add to program content	"It did seem the carb counting piece is something that we're just not emphasizing that anymore. They immediately think carbohydrates are the bad guy and remove that from their diet and eat summer sausage and cheese cause that's the message when you're carb counting, so therefore carbs must be badl also think that class was the longest one and you had one patient comment that they just had so many more questions. They wanted sample meal and snack ideas, some real examples." (health educator, Private practice #06)
Methods for capturing and analyzing adaptations: implications for implem	Open Access	Content difficult for patients with low literacy levels	Added visuals	"Like I mentioned, there's some patients that didn't understand the wordy part of some of our things, and so it was just really improvising and trying to show them a way of visually being able to see 'em" (health educator, Federally Qualified Health Center # 08)
research Jodi Summers Holtrop ^{1,2*} , Dennis Gurfinkel ² , Andrea Nederveld ¹ , Phoutdavone Ph Patrick Hosokawa ² , Claude Rubinson ⁴ , Jeanette A. Waxmonsky ¹ and Bethany M. Kwa	imphasone-Brady ³ , n ^{1,2,5}	Mental health content not seen as appropriate for patient population	Removed specific content	"I get a little frustrated with the curriculum some- times. With the curriculum we're using now, there are components of it where I don't feel very profi- cient because they're so behavior change, mental health focused" (health educator, Federally Qualified Health Center #05) "The only one that we don't present too much anymore is the one with the severe mental health problems. It's going down too deep for a six visit group. Goin' into schizophrenia meds and stuff like that with these folksThat's a little too much."

ACCADS Weither the State Calculate Weither the State Calculate Weither the State Calculate Colorado Clinical and Translational Sciences Institute (CCTS) UNITED V6 COLORADO EXCEPTION



RE-AIM: Maintenance/Sustainment



Qualitative Interviews with Practice Staff and Leadership

Post-Implementation interviews

79 interviews completed

37 Standardized practices

42 Patient-driven practices



Strong desire to continue SMAs

High need for diabetes education Satisfaction with the TTIM curriculum Successful facilitation



Varying levels of adaptation planned once no "research protocol"

Likely will not continue peer mentors Cultural adaptations to content Tailoring to facilitator comfort and expertise Class size



Key sustainability issues

Payment for SMAs

Finding enough patients both interested and able to attend

Practice staff turn-over and competing demands, exacerbated by the COVID-19 pandemic

Prescribing provider visits require patient co-pays and additional coordination

Nederveld et al. Investing in diabetes over the long-term: perspectives on sustaining shared medical appointments after a pragmatic trial. *In preparation*



Outcomes

Reach IMPACT OF THE STUDY





Ritchie ND, Gurfinkel D, Sajatovic M, Carter M, Glasgow RE, Holtrop JS, Waxmonsky JA, Kwan BM. A multi-method study of patient reach and attendance in a pragmatic trial of diabetes shared medical appointments. Clinical Diabetes. 2023 Oct 1;41(4):526-38.

Outcomes





Across all practices, patients with HbAlc <7% rose from 232 to 319, and patients with HbAlc >9% fell from 238 to 179.

*HbAic reduction of 0.5% was statistically significant (p<.05). Changes in BMI and BP were not statistically significant. Differences between conditions were not statistically significant.

Overall Diabetes Distress



All reductions in distress after SMAs were statistically significant (p<.05)

*Patients in the standardized condition had improvements that were statistically significant for Total distress, Emotional burden, and Regimen-related distress (p<.05)



Kwan et al. Comparative Effectiveness of Patient-Driven versus Standardized Diabetes Shared Medical Appointments: A Pragmatic Cluster Randomized Trial. *Under review.*



Dissemination Planning

Dissemination Message	Dissemination Strategy
Audience: People liv	ing with type 2 diabetes and their care partners
Messages: 1) Reasons to participate in SMAs, 2) Anticipated patient costs, and 3) Effect on patient centered outcomes (study results)	 Peer-reviewed Publication: Value proposition Statements for practices, providers, patients, and family members (Dailey-Vail J, Begum A, Kwan BM, Koren R, Trujillo S, Phimphasone-Brady P, Waxmonsky J, Ritchie N. "A Value Proposition Design Approach to Creating Recruitment Messages for Diabetes Shared Medical Appointments." <i>ADCES in Practice</i>. 2022;10(2):14-20.) Patient Partnership Guide: Koren R, Carrigan, Trujillo SA, Clay B, Downey D, and the Invested in Diabetes Research Team. "A Guide to Engage Patient Partners in Health Research Lessons Learned from the Invested In Diabetes Project."





Dissemination Planning

Dissemination Message	Dissemination Strategy			
Audience: Practices/Provi	udience: Practices/Providers			
Messages: 1) This a way to engage patients and achieve patient centeredness, 2) Informs infrastructure/ resources needs to deliver SMAs and to optimize quality of care, and 3) how to bill	 Infographics handouts of study outcomes for each study practice Sustainability planning within each participating study practice with practice coach Presentations and slide decks to each practice reviewing study outcomes (general and practice specific) Type 2 Diabetes Shared Medical Appointments: A Primary Care Implementation Guide (Dailey-Vail J, Wearner R, Lanigan A, Gurfinkel D, DeRoeck J, Staton EW, Kwan, BM, Waxmonsky JA. "Type 2 diabetes shared medical appointments : a primary care implementation guide." Available at: https://digitalcollections.cuanschutz.edu/work/ns/8f482a04-299c-4c57-8dff-1963d2779458 Targeted Treatment in Illness Management Instructor Manuals. Kwan, BM, Waxmonsky JA, Phimphasone-Brady P, Richie N, Sajatovic M. "Targeted Treatment for Illness Management (TTIM) for Diabetes Group Visits Instructor Manual for the Invested in Diabetes Project" (Standardized and Patient Driven Manual Versions), 2018. 			
COCORDS Constant of constants Constants	 Presentations: "Co-design of a diabetes shared medical appointment implementation guide and a patient partnership guide for engaged research: Dissemination products from the Invested in Diabetes study." Convening Across Sectors for Colorado's Health Equity and Wellness (CASHEW) Conference, Vail, CO (oral) October 21-23, 2022. "Engaging Patient and Practice Partners in Dissemination." Convening Across Sectors for Colorado's Health Equity." Convening Across Sectors for Colorado's Health Equity. 			



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Dissemination Planning

Dissemination Message	Dissemination Strategy
Audience: Local and Region	al Networks and Organizations
Messages: 1) Use of SMAs to increase patient engagement and clinical outcomes, 2) Use of patient driven SMAs with a multidisciplinary team to enhance patient engagement and clinical outcomes (if our findings support this), and 3) Implications for policy, workforce development, integrated care and alternative payment	 Conference Presentations (Regional and Local) "Training diabetes peer mentors as members of health care teams for diabetes groups visits: the Invested in Diabetes study." the SNOCAP Annual Convocation, Lakewood, Colorado. (oral) September 20, 2019 Adaptation and Implementation of the Invested in Diabetes Study: A Pragmatic Trial of the Targeted Training in Illness Management Curriculum. Colorado Pragmatic Research in Health Conference, Virtual Conference, (poster) Jun 9 - 11, 2020 "Evolving Patient Stakeholder Engagement in Invested in Diabetes." Colorado Pragmatic Research in Health Conference, Virtual Conference (poster) May 24-26, 2021 COVID-19 Induced Pivot to Virtual Shared Medical Appointments: Implementation Adaptations and Lessons Learned. Poster presented at: Colorado Pragmatic Research in Health Conference (poster) May 24-26, 2021 Media outlets. UC Anschutz Medical Campus' Office of Media Relations provided a press release about study results and impact. Study Examines Power of Group Sessions in Managing Diabetes (cuanschutz.edu) https:// news.cuanschutz.edu/news-stories/study-examines-power-of-group-sessions-in-managing-diabetes?utm_source=today_newsletter&utm_medium=email&utm_campaign=feb_22_23
	 Website. <u>CU Anschutz Department of Family Medicine Invested In Diabetes</u> <u>https://medschool.cuanschutz.edu/family-medicine/research-and-innovation/current-studies/invested-in-</u> diabetes

Dissemination and Sustainability Planning





Diabetes SMA Implementation Guide

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Type 2 Diabetes Shared Medical Appointments A Primary Care Implementation Guide



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General Diabetes Language	Newly Diagnosed	High A1C
If you are struggling with managing diabetes group classes can help. Here you will find: • Education about Diabetes • Answers to questions and concerns • Easy and doable strategies to help make healthy choices • Tips to cope with stress • Support from others who have similar issues You are your best health advocate, you don't have to go it alone. If you have a family member or friend who has diabetes who doesn't know what to do, refer them to our group classes. For more information contact your provider.	If you are newly diagnosed with diabetes group classes can help. Here you will find: • Education about Diabetes • Support from other patients who have similar issues • Problem-solving strategies to help learn to manage your diabetes If you have a family member or friend who doesn't know what to do, refer them to our group classes	 Take control of your diabetes! If you are struggling with managing diabetes group classes can help. Here you will find: Problem-solving strategies to lower your A1c Support from other patients who have had similar issues. Answers to questions and concerns You are not alone! If you have a family member or friend who doesn't know what to do, refer them to our group classes
Diabetes Distress	Patients with Multiple Chronic Conditions	Support from Family/Friends
If you are feeling physically and emotionally overwhelmed, group classes can help. Here you will find: • Lifelong strategies to help cope with the many challenges of diabetes • Self-care tools • Support from other patients with similar issues • Answers to questions and concerns You are not alone! If you have a family member or friend who doesn't know what to do, refer them to our group classes.	If you are struggling with multiple medical conditions and diabetes, group classes can help. Here you will find: • Tips to cope with anxiety and stress • Easy and doable strategies to help make healthy choices • Answers to questions and concerns • Support from other patients with similar conditions If you have a family member or friend who doesn't know what to do, refer them to our group classes.	f someone in your life who has diabetes and doesn't know what to do, show your support by telling them about our group classes.

Invested in Diabetes marketing recruitment messages to invite participants to join diabetes shared medical appointments. Article Copyright © 2022 Authors, Source DOI: 10.1177/2633559X211070268.





A Guide to Engage Patient Partners in Health Research

Invested Diabetes

Lessons Learned From the Invested In Diabetes Project

Contents

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What is Partner Engagement?
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Appendix

You're invited to join the Invested in Diabetes project Patient Advisory Panel



Be the voice - let us know what matters to you!

Our clinic is working with a research team from the University of Colorado Denver to start new diabetes group visits to better support our patients. We are asking patients with diabetes from our clinic to come and share what you think would work best in our clinic.

As a patient representative, your role will include:

- ✓ Attending patient advisory panel introduction
- meeting (2.5 hour) ✓ Attending 1 hour meeting every 1-2 months
- ✓ Responding to emails from the research team
- condition or disease · Increasing self-management skills for lifestyle and behavioral change

· Access to medical care visits

Diabetes group visits are groups of patients meeting over time improve:

· Education for patients on their medical

- curriculum, handout, resources ✓ Time commitment: up to 3 years
- ✓ Providing feedback on the materials, ✓ Compensation for your time

If you are interested, please call us (XXX-XXX-XXXX or fill out the attached survey and mail it to the address below. You can also email it to XXXXX@ucdenver.edu. Mailing address: [Project PI], 123 Fake St, Anytown, CO 99999

For more information email invested indiabetes@ucdenver.edu or call XXX-XXX-XXXX



tamona Koren, Thomas Carrigan, Sharon A Trujillo, Barbara Clay, David Downey and the Invested in Diabetes Research Team UNIVERSITY OF COLORADO ANSCHUTZ MEDICAL CAMPUS



TRUST	COMMUNICATION	ACKNOWLEDGEMENT
 Establishing trust is important – allow enough time to listen and ask questions. Get to know patient partners as individuals. Understand what made them interested in your project in the first place. Be cognizant of including patient partners into discussions. Understand that they may be quiet for the first couple meetings because they are still absorbing, listening, and learning. Make them feel welcome. Encourage them to ask questions if/when they do not understand something (e.g., terminology, concepts, etc.) 	 Communicate frequently to make sure everyone understands what is happening in the project. This is especially important if the team does not meet frequently or does not hold in-person meetings. Set up phone conferences/ Zoom meeting with the partner group. Include them in group emails to keep them in the loop. Ask for feedback outside of meetings via emails or phone. 	 Provide continuous encouragement to share their unique stories and experience throughout the project as you see relevant. Applaud contributions and than them for sharing. Let them know that you are glad to have them aboard. Celebrate project accomplishments and milestones, no matter how small Meeting in-person or bringing lunch can increase your bond. If In-person meetings are not possible, host virtual lunches (consider providing gift cards or order delivery from local establishments).



The Team

The Invested in Diabetes team included experts, partners, and professionals from across the country.

Principal Investigators:

- · Bethany M. Kwan (PI), CU Anschutz Medical Campus
- · Jeanette A. Waxmonsky (Co-PI), CU Anschutz Medical Campus

Co-Investigators:

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- R. Mark Gritz, PhD (Co-I), CU Anschutz Medical Campus
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- · Jodi S Holtrop, PhD (Co-I), CU Anschutz Medical Campus
- Andrea Nederveld, PhD, MPH (Co-I), CU Anschutz Medical Campus
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Patient Partners:

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- · Sharon A Trujillo
- David Downey
- Thomas Carrigan
- · Barbara Clay

Professional Support:

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- Robyn Wearner, MA, RD (practice facilitator), CU Anschutz Medical Campus
- Anowara Begum, MPH (research assistant), CU Anschutz Medical Campus
- · Jack Cronin, MS (research assistant), CU Anschutz Medical Campus
- · Julia Reedy, MA (research assistant), CU Anschutz Medical Campus
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- Peter Ferrarone, MA (research assistant), CU Anschutz Medical Campus
- Jenny Rementer, MA (former practice facilitator), CU Anschutz Medical Campus

Funding Acknowledgment: Research reported in this presentation was funded through a Patient-Centered Outcomes Research Institute (PCORI) award (IHS-1609–36322). The views, statements, and opinions presented in this work are solely the responsibility of the authors and do not necessarily represent the views of the Patient-Centered Outcomes Research Institute (PCORI), its Board of Governors, or Methodology Committee.



Questions?

Thank you!

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