Pragmatic Models, Methods and Measures for Dissemination and Implementation Research (and Population Impact)

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Acknowledgements and Conflicts of Interest

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Cathy Battaglia, PhD, RN, Nurse Scientist
Denver-Seattle VA Center of Innovation
University of Colorado SOM- ACCORDS Dissemination and Implementation Science Program, DFM Evaluation Hub
RE-AIM colleagues

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UNLABELED/UNAPPROVED USES DISCLOSURE:
None
Overview

• Why do we need pragmatic science?
• How are pragmatic research and designs different from ‘research as usual’?
• Examples:
  ✓ Pragmatic models
  ✓ Pragmatic methods
  ✓ Pragmatic measures
• Tools and Resources
• Conclusions, discussion; Q & A
Need for Pragmatic Research?

Usual Research is Slow

- Traditional RCTs are slow and expensive
- Most common reason for non-adoption...research not seen as relevant
- Rarely produce findings that are easily put into practice

It takes an average of 17 years before 14% of research findings lead to widespread changes in care.
Need for Pragmatic Research

- Traditional RCTs study the effectiveness of treatments delivered to carefully selected populations under ideal conditions.

- Even when we do implement a tested intervention into everyday clinical practice, we often see a “voltage drop”... a dramatic decrease in effectiveness.

“If we want more evidence-based practice, we need more practice-based evidence.”

Green LW

*Am J Pub Health* 2006

Rothwell PM. External validity of randomised controlled trials... *Lancet* 2005;365:82-93.
“The significant problems we face cannot be solved by the same level of thinking that created them.”

Albert Einstein
A Different Approach: Pragmatic Research for Population Health

Explanatory (Efficacy) trial: Specialized experiment in a specialized population

Pragmatic trial: Real-world test in a real-world population

Pragmatic designs emphasize:

- Participation or reach
- Adoption by diverse settings
- Ease of Implementation
- Maintenance


### Key Differences Between Traditional RCTs and Pragmatic Controlled Trials (PCTs)

<table>
<thead>
<tr>
<th></th>
<th>A traditional RCT tests a hypothesis under ideal conditions</th>
<th>A PCT compares treatments under everyday clinical conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GOALS</strong></td>
<td>To determine causes and effects of treatment</td>
<td>To improve practice and inform clinical and policy decisions</td>
</tr>
<tr>
<td><strong>DESIGN</strong></td>
<td>Tests the intervention against placebo using rigid study protocols and minimal variation</td>
<td><em>Tests two or more real-world using flexible protocols &amp; local customization</em></td>
</tr>
<tr>
<td><strong>PARTICIPANTS</strong></td>
<td>Highly defined and carefully selected</td>
<td>More representative because eligibility criteria are less strict</td>
</tr>
<tr>
<td><strong>MEASURES</strong></td>
<td>Require data collection outside routine clinical care</td>
<td>Brief and designed so data can be easily collected in clinical settings</td>
</tr>
<tr>
<td><strong>RESULTS</strong></td>
<td>Rarely relevant to everyday practice</td>
<td>Useful in everyday practice, especially clinical decision-making</td>
</tr>
</tbody>
</table>
PCTs: Fewer Exclusions Allow for a Broader Subset of Settings, Staff, and Participants

Traditional RCT
- Eligible population
- Exclusions, non-response, etc.
- Efficacy, among a defined subset

PCT
- Eligible population
- Exclusions, non-response, etc.
- Effectiveness, in a broad subset

Figure provided by Gloria Coronado, PhD, Kaiser Permanente Center for Health Research
Pragmatic Models- RE-AIM
Other Models

91 Frameworks: http://dissemination-implementation.org/index.aspx

Most Common at NIH: RE-AIM and DOI (now also CFIR)

Many commonalities across models and theories
## Pragmatic Use of RE-AIM

<table>
<thead>
<tr>
<th>RE-AIM Dimension</th>
<th>Key Pragmatic Priorities to Consider and Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Reach</strong></td>
<td><strong>WHO</strong> is (was) intended to benefit and who actually participates or is exposed to the intervention?</td>
</tr>
<tr>
<td><strong>Effectiveness</strong></td>
<td><strong>WHAT</strong> is (was) the most important benefits you are trying to achieve and what is (was) the likelihood of negative outcomes?</td>
</tr>
<tr>
<td><strong>Adoption</strong></td>
<td><strong>WHERE</strong> is (was) the program or policy applied and <strong>WHO</strong> applied it?</td>
</tr>
<tr>
<td><strong>Implementation</strong></td>
<td><strong>HOW</strong> consistently is (was) the program or policy delivered, <strong>HOW</strong> will (was) it be adapted, <strong>HOW</strong> much will (did) it cost, and <strong>WHY</strong> will (did) the results come about?</td>
</tr>
<tr>
<td><strong>Maintenance</strong></td>
<td><strong>WHEN</strong> will (was) the initiative become operational; how long will (was) it be sustained (Setting level); and how long are the results sustained (Individual level)?</td>
</tr>
</tbody>
</table>

Glasgow R and Estabrooks P, Preventing Chronic Disease, 2017
Why Is This Important? Impact Loss at Each RE-AIM Step

Example of Translation of Interventions into Practice

<table>
<thead>
<tr>
<th>Dissemination Step</th>
<th>RE-AIM Concept</th>
<th>% Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>50% of clinics use intervention</td>
<td>Adoption</td>
<td>50.0%</td>
</tr>
<tr>
<td>50% of clinicians/staff take part</td>
<td>Adoption</td>
<td>25.0%</td>
</tr>
<tr>
<td>50% of patients identified accept</td>
<td>Reach</td>
<td>12.5%</td>
</tr>
<tr>
<td>50% follow regimen correctly</td>
<td>Implementation</td>
<td>6.2%</td>
</tr>
<tr>
<td>50% benefit from the intervention</td>
<td>Effectiveness</td>
<td>3.2%</td>
</tr>
<tr>
<td>50% continue to benefit after 6 months</td>
<td>Maintenance</td>
<td>1.6%</td>
</tr>
</tbody>
</table>
## Ultimate Impact of a Weight Management Program

<table>
<thead>
<tr>
<th>Dissemination Step</th>
<th>Concept</th>
<th>% Impacted</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.8% of weight management sites participated</td>
<td>Adoption</td>
<td>8.80%</td>
</tr>
<tr>
<td>5.9% of members participated</td>
<td>Reach</td>
<td>0.52%</td>
</tr>
<tr>
<td>91.4% program components implemented</td>
<td>Implementation</td>
<td>0.47%</td>
</tr>
<tr>
<td>43.8% of participants showed weight loss</td>
<td>Effectiveness</td>
<td>0.21%</td>
</tr>
<tr>
<td>21.2% individuals maintained benefit (individual)</td>
<td>Maintenance</td>
<td>0.04%</td>
</tr>
</tbody>
</table>

Abildso CG, Zizzi SJ, Reger-Nash B. *Prev Chronic Dis* 2010 May;7(3):A46
Moral of this Story?

• All steps or phases in translation are important and provide opportunities to improve population health

• It is about the DENOMINATOR
Population Health
Population Health
Population Health - It's about the denominator
Population Health - It's about equity
Pragmatic RE-AIM Precision Science and Health Questions

Determine:

- What percentage and what types of patients are Reached;
- For whom is the intervention Effective, in improving what outcomes, with what unanticipated consequences;
- In what percentage and in what types of settings and staff is this approach Adopted;
- How consistently are different parts of it Implemented at what cost to different parties;
- And how well are the intervention components and their effects Maintained?

Pragmatic Considerations for RE-AIM Framework

- Intended to facilitate translation of research to practice
- Internal and external validity, and emphasizes representativeness
- Individual and organizational factors - experimental and observational
- Public health impact depends on all elements (reach x effectiveness, etc.)

www.re-aim.org
Evolution of RE-AIM

- Reviews documenting use over time
- Applicability to many different content areas - over 350 articles
- Used for both planning and evaluation
- Underreporting of key components
- Setting level factors reported much less often (e.g., adoption)
- Maintenance (sustainability) reported least often

NEW AREAS

- Costs and resources
- Adaptations
- Patient centered outcomes research
- Qualitative RE-AIM assessments

Practical, Robust Implementation and Sustainability Model

RE-AIM Summary Points

• RE-AIM is an outcomes framework that can be used for planning and evaluation
• Each dimension is an opportunity for intervention
• RE-AIM can be used for observational, efficacy, effectiveness, and implementation science projects
• All dimensions can be addressed within a given study (though likely not all intervened upon)
• Methods exist to combine and summarize RE-AIM outcomes
All Models (and methods) are Wrong...
Some are useful

“To every complex question, there is a simple answer… and it is wrong.”

~H. L. Mencken
RE-AIM and Pragmatic Science and Models Q & A
Pragmatic Design Issues

KEEP CALM AND BE PRAGMATIC
Effectiveness/Implementation Hybrids

Hybrid Type 1: Test clinical intervention, observe/gather information on implementation

Hybrid Type 2: Test clinical intervention, test implementation intervention

Hybrid Type 3: Test implementation intervention, observe/gather information on clinical intervention and outcomes

Pragmatic Experimental Designs

- Individual RCT
- Cluster randomized RCT
- Natural experiment
- Stepped wedge
- Preference design
What Types of Observational Research are Related to Pragmatic Research?

- Natural experiments
- Multiple case studies
- **Contextual** impact on process and outcomes
  - especially at multiple levels
- Assess *multiple stakeholders and perspectives*
- Multiple methods
- Theory guided prospective studies
The Pragmatic-Explanatory Continuum Indicator Summary (PRECIS) Planning Tool

- How pragmatic is your study?
- Not all or none (no completely pragmatic study)
- Tool to help in planning and reporting (see next slide)


https://www.precis-2.org/
Average PRECIS Scores for All Studies by Domain

Average Practical Feasibility Scores for All Studies by Domain

The 5 Rs to Enhance Pragmatism and Likelihood of Translation

Research that is:

• Relevant
• Rapid and Recursive
• Redefines Rigor
• Reports Resources Required
• Replicable


Reporting Resources Required

- Reporting on cost and other resources in a standardized manner is useful in:
  - ✔ Demonstrating *value*
  - ✔ Promoting rigor, transparency and relevance to stakeholders

- Present *from perspective of stakeholders* and decision makers

- Simple is fine – sophisticated economic analyses are not needed
  - ✔ Report costs of conducting or replicating interventions
  - ✔ Beyond money, costs can include clinician and staff time, training, infrastructure, startup costs, opportunity costs

EXAMPLE PRAGMATIC STUDY: My Own Health Report (MOHR) Study

Cluster randomized pragmatic trial of web-based, brief health behavior and mental health assessment and intervention in nine diverse pairs of primary care practices to test whether they could implement My Own Health Report (MOHR).

Outcomes included:

- **Reach** of the MOHR program across patients
- Whether practices would **adopt** MOHR
- How practices would **implement** MOHR
- **Effectiveness** of the MOHR program


### Basic patient and clinician goal advice

**Electronic** and goal-setting **(paper)**

#### Overall Health Rating
- **Reason:** I am working too hard at my job.
- **Score:** Good to Excellent
- **Your Score:** Poor
- **Level of Concern:** A Lot
- **Read to Change?** Yes
- **Want to Discuss?** Yes

#### Body Mass Index
- **Recommended Score:** 20-25
- **Your Score:** 27.7
- **Level of Concern:** Some

#### Health Behaviors

<table>
<thead>
<tr>
<th>Behavior</th>
<th>Recommended Score</th>
<th>Your Score</th>
<th>Level of Concern</th>
<th>Ready to Change?</th>
<th>Want to Discuss?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fruit/Vegetable Intake</td>
<td>5+ / day</td>
<td>Less than 2 / day</td>
<td>A Lot</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Fast Food Intake</td>
<td>Less than 1 time / week</td>
<td>1-3 times / week</td>
<td>Some</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Soda/Sugary Beverage Intake</td>
<td>Less than 1 / day</td>
<td>1 to 2 / day</td>
<td>Some</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Physical Activity Participation</td>
<td>150+ minutes / week</td>
<td>175 minutes / week</td>
<td>None</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sleep</td>
<td>Never/rarely sleepy</td>
<td>Often sleepy</td>
<td>Some</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alcohol Intake</td>
<td>Never</td>
<td>Never</td>
<td>None</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tobacco use</td>
<td>No</td>
<td>Yes</td>
<td>A Lot</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Illegal Drug/Prescription Use</td>
<td>Never misuse</td>
<td>Never misused</td>
<td>None</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Mental Health

<table>
<thead>
<tr>
<th>Behavior</th>
<th>Your Score</th>
<th>Level of Concern</th>
<th>Ready to Change?</th>
<th>Want to Discuss?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stress</td>
<td>Less than 5</td>
<td>8</td>
<td>A Lot</td>
<td>Yes</td>
</tr>
<tr>
<td>Anxiety/Worry</td>
<td>Not at all / rarely</td>
<td>Not at all / rarely</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>Depression</td>
<td>Not at all / rarely</td>
<td>Not at all / rarely</td>
<td>None</td>
<td></td>
</tr>
</tbody>
</table>

> ⭐ = Most important to you
Adoption

18 practices agreed to adopt MOHR

- 30 practices approached (adoption 60%)
- 7 of 9 sites recruited, first practices approached
  - Decliners were doing other studies, worries about workload, or doing HRAs
- Participating practices represented a diverse spectrum of primary care
## Overall Reach
1768 of 3591 patients (49.2%)

<table>
<thead>
<tr>
<th><strong>Mailed (patient complete)</strong></th>
<th><strong>Lobby (patient + MD complete)</strong></th>
<th><strong>Lobby (MA or coordinator)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Site 1</em>: 100 of 344 (29.1%)</td>
<td><em>Site 2</em>: 192 of 437 (43.9%)</td>
<td><em>Site 6</em>: 265 of 287 (92.3%)</td>
</tr>
<tr>
<td><em>Site 3</em>: 11 of 420 (2.6%)</td>
<td></td>
<td><em>Site 7</em>: 211 of 306 (69.0%)</td>
</tr>
<tr>
<td><em>Site 4</em>: 138 of 444 (31.3%)</td>
<td></td>
<td><em>Site 8</em>: 247 of 323 (76.5%)</td>
</tr>
<tr>
<td><em>Site 5</em>: 115 of 248 (46.4%)</td>
<td></td>
<td><em>Site 9</em>: 198 of 329 (60.2%)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Phone (nurse complete)</strong></th>
<th><strong>Lobby (MA or coordinator)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Site 3</em>: 291 of 453 (64.2%)</td>
<td></td>
</tr>
</tbody>
</table>


Implementation

Practices used four main implementation strategies:

- Web at home (n=3), called patients (n=1), completed in office on paper (n=1) or electronically in office (n=4)
- 4 asked patients and 5 asked staff to complete MOHR with patients
- 8 needed research team or health systems help
- 8 asked clinicians to counsel patients, 4 had some follow-up, 1 had no counseling or follow-up

*Delivery of MOHR took 28 minutes (16-31), including assessment and feedback*
Effectiveness:
Did anyone help you set a goal?

<table>
<thead>
<tr>
<th>Topics</th>
<th>% Yes</th>
<th></th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Intervention</td>
<td>Control</td>
<td></td>
</tr>
<tr>
<td>Eating/Diet</td>
<td>51.7</td>
<td>34.1</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>Physical Activity/Exercise</td>
<td>49.5</td>
<td>37.9</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>Tobacco/Smoking</td>
<td>22.6</td>
<td>19.7</td>
<td>0.0769</td>
</tr>
<tr>
<td>Alcohol Use</td>
<td>17.1</td>
<td>13.1</td>
<td>0.0055</td>
</tr>
<tr>
<td>Drug Use</td>
<td>13.5</td>
<td>11.4</td>
<td>0.1012</td>
</tr>
<tr>
<td>Stress Level</td>
<td>31.2</td>
<td>22.2</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>Anxiety/Depression</td>
<td>32.1</td>
<td>23.1</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>Sleep</td>
<td>29.6</td>
<td>24.4</td>
<td>0.003</td>
</tr>
</tbody>
</table>
Effectiveness: Have you made any positive changes?

<table>
<thead>
<tr>
<th>Topics</th>
<th>% Yes</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Intervention</td>
<td>Control</td>
</tr>
<tr>
<td>Eating/Diet</td>
<td>62.9</td>
<td>49.9</td>
</tr>
<tr>
<td>Physical Activity/Exercise</td>
<td>55.1</td>
<td>48.2</td>
</tr>
<tr>
<td>Tobacco/Smoking</td>
<td>17.3</td>
<td>16.6</td>
</tr>
<tr>
<td>Alcohol Use</td>
<td>15.2</td>
<td>14</td>
</tr>
<tr>
<td>Drug Use</td>
<td>11.5</td>
<td>11.2</td>
</tr>
<tr>
<td>Stress Level</td>
<td>31.2</td>
<td>25.1</td>
</tr>
<tr>
<td>Anxiety/Depression</td>
<td>29.2</td>
<td>24.6</td>
</tr>
<tr>
<td>Sleep</td>
<td>30.2</td>
<td>24.4</td>
</tr>
<tr>
<td>Pragmatic Features of MOHR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>----------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Relevant</strong></td>
<td>Diverse, real-world primary care settings, and staff who do all the interventions</td>
<td></td>
</tr>
<tr>
<td><strong>Rigorous</strong></td>
<td>Cluster randomized, delayed intervention design</td>
<td></td>
</tr>
<tr>
<td><strong>Rapid</strong></td>
<td>One year from concept, planning, and execution, low cost, and cost informative</td>
<td></td>
</tr>
<tr>
<td><strong>Resource Informative</strong></td>
<td>Low cost; studying costs and cost-effectiveness under different delivery conditions</td>
<td></td>
</tr>
<tr>
<td><strong>Transparent</strong></td>
<td>Report on adaptations, failures, lessons learned</td>
<td></td>
</tr>
</tbody>
</table>
Moral of this Example?

• Success demands tailoring and customization at the levels of:
  ✓ Patient
  ✓ Clinician
  ✓ Setting

• Opportunity to contribute to big data elements not usually present, currently adding in social determinants of health
IF AN INTERVENTION WORKS

AND NOBODY CAN USE IT.....

DOES IT STILL MAKE AN IMPACT?
Pragmatic Research Designs Q & A
Pragmatic Outcomes and Measures
Evidence-Based... **on what?**

External Validity/Pragmatic Criteria, Often Ignored

- Participant **Representativeness**
- **Setting** Representativeness
- **Context** and Setting
- Community/Setting Engagement
- **Adaptation/Change**
- Sustainability
- **Costs/Feasibility** of Treatment
- Comparison Conditions
Evidence-Based Program and RE-AIM Resources

http://re-aim.org/resources_and_tools/index.html
http://rtips.cancer.gov/rtips/index.do
Expanded CONSORT Diagram

Total number of potential settings (n)

Settings eligible (n, %)

Settings and agents who participate, (n, %)

Settings and agents who decline (n, %)

Excluded by investigator (n, %, reasons)

Other (n, %)

Other (n, %)

Staff who participate, (n, %)

Staff who decline, (n, %)

Total potential participants (n)

Individuals eligible (n, %)

Excluded by investigator (n, %)

Not contacted/Other (n, %)

re-aim.org: https://www.re-aim.hnfe.vt.edu/resources_and_tools/figures_and_tables/consort.pdf
Types of Outcomes in Implementation Research (Proctor, et al., 2010)

<table>
<thead>
<tr>
<th>IMPLEMENTATION OUTCOMES</th>
<th>SERVICE OUTCOMES</th>
<th>CLIENT OUTCOMES</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Acceptability</td>
<td>• Efficiency</td>
<td>• Satisfaction</td>
</tr>
<tr>
<td>• Adoption</td>
<td>• Safety</td>
<td>• Function</td>
</tr>
<tr>
<td>• Appropriateness</td>
<td>• Effectiveness</td>
<td>• Symptoms</td>
</tr>
<tr>
<td>• Costs</td>
<td>• Equity</td>
<td></td>
</tr>
<tr>
<td>• Feasibility</td>
<td>• Patient centeredness</td>
<td></td>
</tr>
<tr>
<td>• Fidelity</td>
<td>• Timeliness</td>
<td></td>
</tr>
<tr>
<td>• Penetration</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Sustainability</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Pragmatic Measures

1. Required Criteria
   - Important to stakeholders
   - Burden is low to moderate
   - Broadly applicable, has norms to interpret
   - Sensitive to change

2. Additional Criteria
   - Actionable
   - Low probability of harm
   - Addresses public health goal(s)
   - Related to theory or model
   - “Maps” to “gold standard” metric or measure

Glasgow, RE & Riley, WT. Pragmatic measures... Am J Prev Med (in press)
<table>
<thead>
<tr>
<th>Domain</th>
<th>Final Measure (Source)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Overall Health Status</td>
<td>1 item: BRFSS Questionnaire</td>
</tr>
<tr>
<td>7. Smoking/Tobacco Use</td>
<td>2 items: Tobacco Use Screener [Adapted from YRBSS Questionnaire]</td>
</tr>
<tr>
<td>10. Demographics</td>
<td>9 items: Sex, date of birth, race, ethnicity, English fluency, occupation, household income, marital status, education, address, insurance status, veteran’s status. Multiple sources including: Census Bureau, IOM, and National Health Interview Survey (NHIS)</td>
</tr>
</tbody>
</table>
Replicability (and generalizability)

Important to report conditions under which program was delivered

• To what extent is the program replicable:
  ✓ In similar settings?
  ✓ In different settings?

Goal: what intervention do you compare it to (real world alternative)?

Bottom Line and **ULTIMATE USE QUESTION**: “*What program/policy components are most effective for producing what outcomes for which populations/recipientes when implemented by what type of persons under what conditions, with how many resources and how/why do these results come about?*”
QUESTIONS, COMMENTS
Resources on Pragmatic Research
“Key New Pragmatic Resource from NIH Collaboratory on Pragmatic Trials”

http://www.rethinkingclinicaltrials.org/
Where do I find pragmatic measures? Sample sites to visit!

PROMIS website http://www.healthmeasures.net/explore-measurement-systems/promis

National Institute of Nursing Research
https://cde.nlm.nih.gov/form/search?selectedOrg=NINR

GEMS- NCI website

My own health report (MOHR) project.
http://myownhealthreport.org/
Implementation Science Funding Opportunities

- PCORI—and “true” patient/family-centered research
- “Team Science” and collaborative approaches to care transformation
- Guidelines implementation, especially across networks
- Patient Health Records—patient portal to EHR
- Collection and meaningful use of patient report measures for care and research
- Efficiency, CEA and CER on care planning, etc.
General Resources


re-aim.org

https://rtips.cancer.gov/rtips/index.do

www.ucdenver.edu/accords/implementation

www.Dissemination-Implementation.org
ACCORDS D&I Program, University Colorado School of Medicine

- Collaborative learning partnerships to translate research into practice more quickly and successfully
- Interactive resources and support for patients, medical and public health students, and faculty researchers
- Frequently updated information on D&I related articles, grant opportunities, events, webinars, talks, and training
- Local consultation on D&I related research to increase funding and publication success
- Cutting edge research on: adaptation of interventions, self-management, pragmatic research and measures, shared decision making, planning for and evaluation of reach, implementation and dissemination

www.ucdenver.edu/accords/implementation
Questions? Comments?

I’m all ears!
Common Questions

- How does ‘adaptation’ fit with fidelity to protocol?
- How can Implementation Science help with observational studies? (natural experiments, multiple case studies, multiple levels, multiple stakeholders, theory guided prospective studies)
- How do I plan or design for ‘dissemination’?