

EXAMPLE - D&I Project USE Worksheet

Project Name: 5A's Smoking Cessation Project

D&I models should be used to inform every aspect of your D&I project. In this worksheet, we use the sections of a grant proposal to provide guidance on how to operationalize D&I models in your D&I project. Before completing this worksheet, you should consider Combining and/or Adapting the Selected D&I model(s). While we acknowledge that you might have Selected multiple D&I models, in this worksheet we will use the singular form to reference your Combined and Adapted D&I model.

Specific Aims & Objectives

Describe how your D&I model helps shape the specific aims, objectives, research questions, and/or hypotheses of your D&I project.

It will guide the activities and goals of both our intervention and our implementation strategies. It will guide which contextual factors we focus on and what key issues we assess for evaluation.

Does your D&I model include constructs relevant to both internal¹ and external validity²? If so, how does it address both internal validity and external validity?

Yes- it focuses on both producing the largest effect and how to deliver the program with consistency (fidelity), but also on the generalizability and representativeness of results

In one sentence, describe why you chose your D&I model?

Because it seemed to best align with the key constructs we wanted to address, while still being pragmatic and possible to operationalize

1. Internal Validity - The degree to which the inference drawn from a study is warranted when account is taken of the study methods, the representativeness of the study sample, and the nature of the population from which it is drawn.
2. External Validity - The degree to which results of a study may apply, be generalized, or be transported to populations or groups that did not participate in the study.

Significance

Is there previous literature showing the use of your D&I model that will help you in developing the rationale for your study and use of your model in the context of your D&I project? If so, where were studies conducted and how was the model used?

Not sure; I will have to do a literature review. I know that some studies have been published focused on the reach and representativeness, but do not know how many or if there are comprehensive applications

Are there parts of your D&I model (particularly contextual constructs) that have been used in one or more previous studies?

See above. I think there are some studies on context of policies and cigarette taxes as factors related to results of 5 As programs

Is there a quality gap or void in the literature that is illustrated and explicitly addressed in your D&I model? Does your model address health equity?

The PRISM model calls out two issues that are not frequently reported in the literature- the selection and inclusion of different types of settings in a research study- and their representativeness. Also in terms of program implementation, the issues of both costs incurred and adaptations made.

Why is your D&I model better for your D&I project than others you could have chosen?

As above, addresses most of the key constructs or issues and does so efficiently

Innovation

Does the way you proposed to Use your D&I model advance D&I science? How? Possible innovations include how you Combine, Adapt or operationalize D&I model(s) in your D&I project. You can learn more about how to Combine and/or Adapt D&I model(s) in the relevant sections of the webtool.

Not sure if it does- or needs to. We are considering if we should combine our PRISM model with one that specifically focuses on different stages of a study and program- such as EPIS or REP.

Describe any innovative methods you are proposing to Use to Combine, Adapt, and/or operationalize your D&I model. Innovative methods could include:

- combining models that have not been previously used together
- engaging stakeholders through model adaptation and use
- using a D&I model from a field different from your own (e.g., taking a model from business or engineering and applying it to population health)
- applying a D&I model to a setting, population, and/or health topic for which it has not been previously used
- applying a model from D&I science to frame/advance a substantive/content area (e.g. using PRISM to frame next steps for the field of shared decision making³)
- and/or documenting additional adaptations to the model through implementation.

It is important to maintain the integrity of your D&I model as changing core components of a model can be seen as a weakness of your proposed D&I project.

We are employing user-centered design from tech and engineering but not explicitly as part of our theory. Same with stakeholder engagement to identify key contextual factors.

Approach

How does your D&I model inform the study methods for your D&I project? (e.g. measurement & analysis)

- Describe how you link the measures of you D&I project to the constructs of the D&I model.
 - A table or figure can be helpful in conveying the linkages between the constructs and measures. An example table is provided below using select dimensions of the RE-AIM framework.
- Mixed-methods⁴ are commonly used in D&I projects. Consider identifying how these mixed-methods map to the constructs in your D&I model.

3. Matlock, D. D., Fukunaga, M. I., Tan, A., Knoepke, C., McNeal, D. M., Mazor, K. M., & Glasgow, R. E. (2020). Enhancing Success of Medicare's Shared Decision Making Mandates Using Implementation Science: Examples Applying the Pragmatic Robust Implementation and Sustainability Model (PRISM). *MDM Policy & Practice*, 5(2), 2381468320963070. [Read the Article](#)

4. Mixed-Methods - An approach for collecting, analyzing, and mixing both quantitative and qualitative data in a single study or series of studies to understand an evaluation problem.

Example:

Construct	Measure(s)	Measure Type (qual, quant, both)	From whom	Source	When
Implementation	Number of Sessions Completed	Quant	Patient	Program Log	Weekly ongoing
Implementation	Provider Satisfaction	Qual	Frontline Staff	Interview	Mid & End of implementation
Effectiveness	Physical Activity Level	Quant	Patient	Pedometer	Daily ongoing

Template:

Construct	Measure(s)	Measure Type (qual, quant, both)	From whom	Source	When
Reach	Percent of smokers in the EHR offered cessation	Staff calculate from # participants over # smokers with visits	Staff	EHR and project records	On weekly basis

- Do your analyses assess the relationships postulated in your D&I model and highlighted on your aims page? For example, how does your model inform the relationships between contextual variables, D&I strategies, and outcomes?
- In what ways does your study balance internal and external validity?

Will analyze relationship of different PRISM factors to the RE-AIM outcomes

Balances internal and external validity by recruiting and reporting on a wide variety of settings and participants, while using reliable and valid measures

Other Notes:

Need to do a literature review, and think about how my framework will guide my intervention delivery, and the measures and analyses we will use.