

# Applying the Knowledge to Action (K2A) Framework:

## Questions to Guide Planning



**Centers for Disease  
Control and Prevention**  
National Center for Chronic  
Disease Prevention and  
Health Promotion

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# History

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*Applying the Knowledge to Action (K2A) Framework: Questions to Guide Planning* (Planning Tool) was developed by the National Center for Chronic Disease Prevention and Health Promotion's Work Group on Translation (WGOT). The WGOT is a cross-division work group created to share translation-related experiences and observations, and advance translation and related work within the center, as well as the Centers for Disease Control and Prevention (CDC). The development of this Planning Tool exemplifies the collaborative work performed by the WGOT to facilitate the processes of moving knowledge into public health action.

The WGOT recognizes members who played significant roles in drafting select elements of this Planning Tool, including Theresa Armstead, Teresa Brady, Shanta Dube, Erika Fulmer, Jo Anne Grunbaum, Stephanie Gruss, Mary Hill, Linda Orgain, Brooke Steele, Sally Thigpen, Natalie Wilkins, and Kathi Wilson. Their willingness to create the initial drafts of specific sections and to incorporate numerous rounds of feedback was exemplary and ensured that the tool represents the collective wisdom across divisions and programs.

Other members of the WGOT were very active in reviewing multiple drafts of each section of the tool. These include J. Nell Brownstein, Linda Ekwenugo, Laura Kettel-Khan, Mary Leinhos, and Geraldina Villalobos-Quezada. The WGOT would also like to thank our reviewers, who provided extensive feedback on the near final draft of the tool: Diane Hall, Jan Jernigan, Mary Leinhos, Gayle Payne, Kathi Wilson, and Michael Schooley. Their comments and questions helped clarify our thinking and improved the current Planning Tool.

# INTRODUCTION

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Translating scientific knowledge into action (K2A) to improve the public's health is a priority for the CDC. Scientists and practitioners from CDC's National Center for Chronic Disease Prevention and Health Promotion formed the WGOT in 2007 to foster translation at CDC. An initial step created a cross-division, cross-discipline organizing framework for the translation process. The work group reviewed the literature about translation of research to practice, including related frameworks and theoretical models, and drew upon their own experiences and observations related to translation to develop the K2A framework. The K2A framework has since been vetted by CDC and peer review.

The K2A framework describes and depicts the high-level processes necessary to move from discovery into action by using translation of evidence-based programs, practices, or policies—broadly defined to include evidence-based communications, campaigns, guidelines, and other interventions and tools. The framework identifies three components (i.e., research, translation, and institutionalization) and the decision points, interactions, and supporting structures within the components that are necessary to move knowledge to sustainable action (Figure 1). Evaluation undergirds the entire K2A process. The framework was designed to be

- Nonlinear (i.e., activities may occur in multiple components at the same time).
- Applicable, regardless of the disease, condition, or risk factor being addressed.
- Applicable, regardless of the type of intervention being considered (i.e., program, policy, practice).
- A tool to support involvement and interface among all actors in the research and practice communities, including scientists, developers, administrators, policy makers, support systems, and practitioners in the translation process.

In addition, the K2A framework reflects the framework developers' experiences in the field, showing that public health practitioners and practitioner-generated innovations are needed for effective translation.

To make the K2A framework actionable for practitioners, evaluators, researchers, and other public health professionals, CDC's WGOT developed the Planning Tool. This tool was developed by a consensus process guided by a multidisciplinary group of subject matter experts within CDC's National Center for Chronic Disease Prevention and Health Promotion, as well as other centers across the agency. We hope that feedback from those using the planning tool in the field can be incorporated into a continuous quality improvement process, which will strengthen and refine the tool over time.

## **Purpose of the K2A Planning Tool**

Development of the K2A framework highlights the importance of planning for translation, attending to supporting structures, and evaluating the effects of public health efforts. The Planning Tool facilitates use of the K2A framework to foster translation of evidence-based interventions (i.e., programs, policies, practices) into public health action by providing a short set of high-priority, reflective questions to be used to guide planning for each element of the K2A process.

## **Primary Audience**

The Planning Tool is meant for public health-related professionals involved in translating evidence-based interventions into widespread public health action. These individuals may work at the national, state, or local levels, in the public or private sectors, and may be involved in just one or multiple primary translation-related functions, such as intervention development and testing, administrative decision making, disseminating, implementing, or evaluation.

## Using the Planning Questions

The planning questions are designed to help organize and strengthen translation planning processes. Not all the questions will apply to every situation, but these questions serve as a reflective planning tool as your group or organization engages in a translation process. There are a number of features of the planning questions that make the K2A Framework as actionable as possible. Here are a few things to keep in mind when using the planning questions:

- ✓ **Roles:** The planning questions are divided by the different roles individuals or groups may take when engaged in the translation process. The question sets for each element of the K2A process are written to reflect these different perspectives. All roles involved in the K2A process are equally important and are often overlapping or collaborative in nature. It is recommended that individuals serving in each of these roles be involved in the translation planning process.
- During particular stages in the K2A process, some roles may have more responsibility than others. Therefore, at certain stages in the time sequence, there will be more questions for certain roles and less for others. Below are definitions of each of the roles referred to in the planning questions:



**Intervention development and testing:** Individuals responsible for developing or testing the intervention (program, policy, or practice). These individuals may work in academic, industrial, government, or private institutions.



**Administrative decision making:** Individuals who decide or influence which intervention his or her organization or staff will use. These individuals could range from a state health officer or school superintendent to an outreach coordinator, health department chronic disease coordinator, clinic manager, community organizer, or others functioning in this decision-making role.



**Disseminating:** Individuals responsible for the process of distributing information and materials to organizations and individuals who can use them to improve health. (Planning questions for this role are located only in the disseminating question set.)



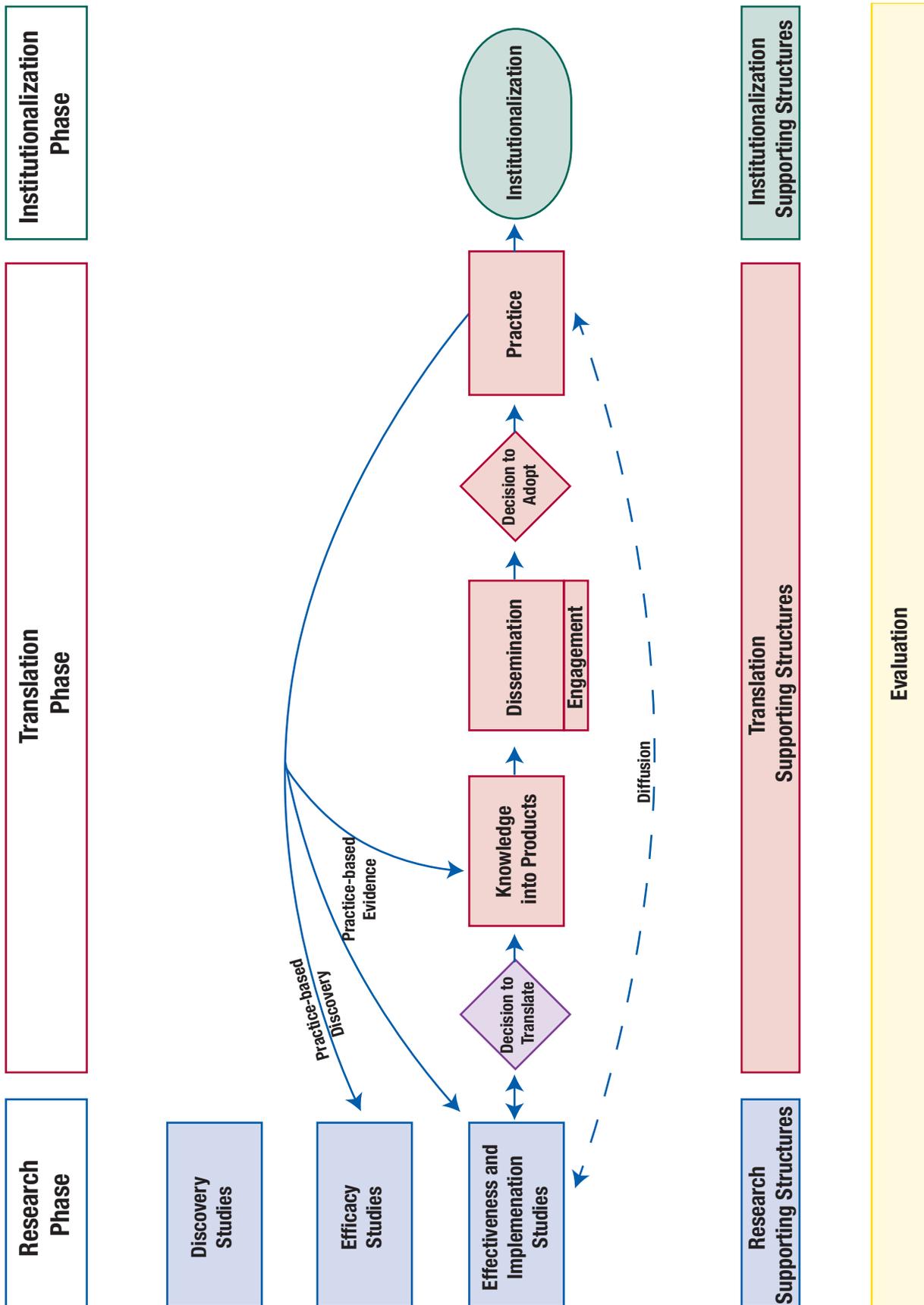
**Implementing:** Individuals who put the intervention (program, policy, or practice) into place. Examples are community health workers, health educators or health promoters, clinic staff, teachers, or others directly involved in implementing the intervention.



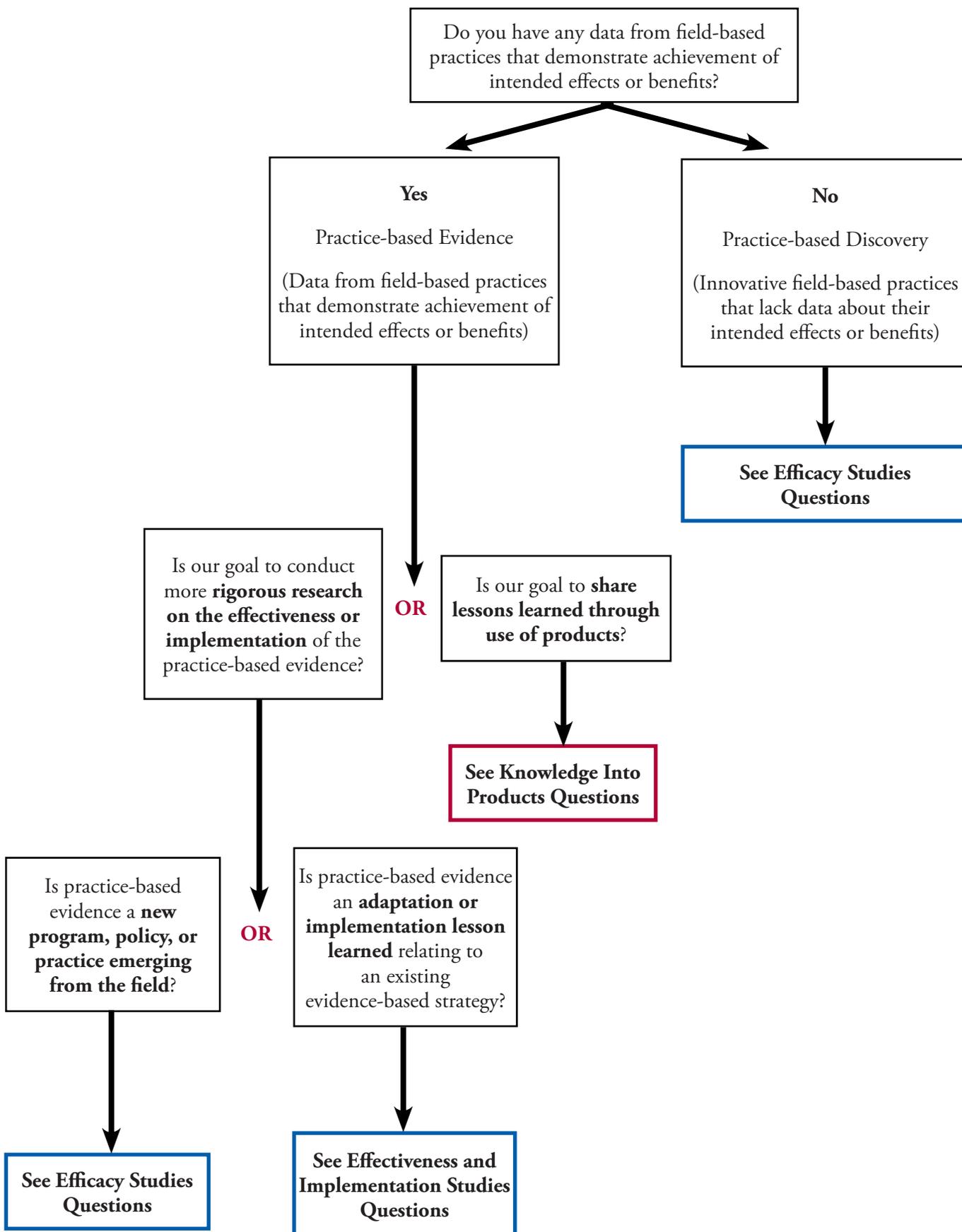
**Evaluating:** Individuals who are responsible for measuring the activities, impacts, and effectiveness of implementation. These individuals may be internal or external to the organization implementing the intervention.

- ✓ **Time sequence:** The translation process is not necessarily linear. As indicated in the K2A framework (Figure 1), translation activities and processes can be cyclical and start at many different places in the translation process.
- ✓ **Terms:** There are a number of terms used in the planning questions and in the K2A framework that may have multiple different meanings (e.g., intervention, which can be used to broadly refer to a program, policy, or practice, not just a prepackaged, evidence-based program). Appendix A provides a glossary with definitions of terms for the purposes of this planning tool.
- ✓ **Where to start:** Before you start using the planning questions, review the K2A framework and glossary and identify where your translation activity, task, or process is on the framework. We recommend that you start with the questions that correspond with the part of the framework that most applies to your situation. *If your translation activities involve practice-based evidence or practice-based discovery, be sure to start with the Decision Tree.*

**Figure 1. National Center for Chronic Disease and Public Health Promotion's Knowledge to Action (K2A) Framework, May 2010<sup>1</sup>**



**Figure 2. Practice-based Discovery or Evidence Decision Tree Questions**



# Discovery Studies

**Discovery:** The original biomedical, behavioral, or epidemiologic factor or finding that stimulated development of an intervention.

## Questions for those persons responsible for

<b>Intervention Developing or Testing</b> 	<b>Administrative Decision Making</b> 	<b>Implementing</b> 	<b>Evaluating</b> 
<ul style="list-style-type: none"> <li>• Do the discovered data connect to relevant theories, risk factors, or protective factors?</li> <li>• Do the data describe potential public health burdens or potential health effects?</li> <li>• Do the data highlight one or more issues with vulnerable or underserved populations?</li> <li>• Does the discovery suggest an intervention that would be appropriate and feasible for eventual widespread dissemination?</li> </ul>	<p><i>Given this role's focus on deciding or influencing which intervention an organization or staff will use, this role will be more involved and active in other elements of the K2A framework.</i></p>	<p><b>For Practice-based Discovery</b></p> <ul style="list-style-type: none"> <li>• Do we have field-developed interventions that show promising benefits and that need more rigorous research to establish an evidence base?               <ul style="list-style-type: none"> <li>» Who might be able to fund or conduct that research?</li> </ul> </li> </ul>	<p><i>Given this role's focus on measuring the activities, effects, and effectiveness of implementation, this role will be more engaged and involved in other elements of the K2A framework.</i></p>

# Efficacy Trials

**Efficacy:** The extent to which the intended effect or benefits were achieved under optimal conditions.

## Questions for those persons responsible for

<b>Intervention Developing or Testing</b> 	<b>Administrative Decision Making</b> 	<b>Implementing</b> 	<b>Evaluating</b> 
<ul style="list-style-type: none"> <li>• Have practitioners or potential implementers been included in the development of this intervention?</li> <li>• Have potential recipients of the intervention been included in the development of this intervention.</li> <li>• Is the intervention theory-based?</li> <li>• What does science tell us about interventions like this? Have similar strategies been found to be effective?</li> <li>• Will it be feasible to establish widespread implementation supports (e.g., manuals, training, coaching, technical assistance) for those who want to implement this intervention if it is found to be effective?</li> <li>• Are developers, researchers, and other key stakeholders committed to the intervention and stable in their roles to help ensure consistent data collection and sustained interest?</li> <li>• Are the resources required to deliver the intervention feasible in real-world settings?</li> <li>• Is the potential public health effect of this intervention enough to warrant an investment in an efficacy trial?</li> <li>• Do we have the resources (e.g., money, staff, expertise) to conduct an efficacy trial?</li> <li>• How will developers or practitioners be involved in the efficacy trial (e.g., designing study, collecting or analyzing data, interpreting results)? Have roles been clearly stated and agreed on?</li> <li>• Have we considered a dissemination plan? Does it include a plan for (1) disseminating study findings, and (2) engaging those who will disseminate the intervention if effective?</li> </ul>	<p><i>Given this role's focus on deciding or influencing which intervention an organization or staff will use, this role will be more involved and active in other elements of the K2A framework.</i></p>	<ul style="list-style-type: none"> <li>• Does the intervention being tested appear feasible for implementation?</li> <li>• Would the intervention being tested resonate with your constituents?</li> </ul> <p><b>For Practice-based Discovery or Evidence</b></p> <ul style="list-style-type: none"> <li>• Do we have data about field-based practices that require additional research?               <ul style="list-style-type: none"> <li>» Who can fund or conduct that research?</li> </ul> </li> </ul>	<p><i>Given this role's focus on measuring the activities, effects, and effectiveness of implementation, this role will be more engaged and involved in other elements of the K2A framework.</i></p>

# Effectiveness and Implementation Studies

**Effectiveness:** The extent to which the intended effect or benefits that were achieved under optimal conditions are also achieved in real-world settings.

**Implementation Research:** The understanding of the processes by which research findings are put into practice.

## Questions for those persons responsible for

<b>Intervention Developing or Testing</b> 	<b>Administrative Decision Making</b> 	<b>Implementing</b> 	<b>Evaluating</b> 
<ul style="list-style-type: none"> <li>• Has efficacy research identified essential intervention elements (core components) and any major implementation barriers and facilitators?</li> <li>• Will the current study be conducted in settings or conditions expected to be used for wide-scale implementation of this intervention?</li> <li>• Have we established implementation benchmarks?</li> <li>• Are strategies in place to monitor and evaluate implementation processes, and implementation barriers and facilitators?</li> <li>• Have we developed a dissemination plan? Does it include a plan for (1) disseminating study findings and (2) engaging those who will disseminate the intervention if it is found to be effective?</li> </ul>	<ul style="list-style-type: none"> <li>• Will the proposed effectiveness or implementation studies provide information needed to make translation-related decisions?</li> <li>• Have any changes in the background or contextual factors (e.g., sociopolitical climate, time horizon) affected the relevance of this intervention?</li> </ul>	<p><b>For an existing intervention,</b></p> <ul style="list-style-type: none"> <li>• What mechanism will we use to submit information (e.g., adaptations, implementation barriers or other practice-based evidence) to those responsible for developing or testing the intervention?               <ul style="list-style-type: none"> <li>» How will we collect that information?</li> </ul> </li> </ul>	<p>How will we assess</p> <ul style="list-style-type: none"> <li>• Whether the effectiveness or implementation study was conducted in settings or conditions desired for wide-scale implementation?</li> <li>• Whether the study findings provided meaningful, actionable information?</li> <li>• Whether any modifications in the intervention or implementation strategy are recommended on the basis of this effectiveness or implementation study?</li> </ul>

# Research Supporting Structures

**Research Supporting Structures:** Interrelated elements that enhance the capacity of an organization to effectively plan, implement, evaluate, and sustain the research phase of the intervention process, including marketing, training, technical assistance, financial resources, and organizational capacity.

## Questions for those persons responsible for

<b>Intervention Developing or Testing</b> 	<b>Administrative Decision Making</b> 	<b>Implementing</b> 	<b>Evaluating</b> 
<ul style="list-style-type: none"> <li>• What resources are needed to develop and implement the intervention under ideal conditions? Resources include people, money, space, administrative (e.g., computers), and more.</li> <li>• Who will develop the training materials and data collection methods?</li> <li>• Does the organization conducting the research have the capacity to recruit participants and implementation sites (if necessary)?</li> <li>• Have appropriate audiences who could use this intervention been identified? Are they accessible and willing to participate?</li> <li>• Is there sufficient broad-based support to translate findings into practice?</li> <li>• Are communication processes in place to convey findings to the field and gather feedback from the field?</li> </ul>	<p><i>Given this role's focus on deciding or influencing which intervention an organization or staff will use, this role will be more involved and active in other elements of the K2A framework.</i></p>	<p><i>Given this role's focus on putting interventions (program, policy or practice) into place, this role will be more engaged and involved in other elements of the K2A framework.</i></p>	<p>How will we assess</p> <ul style="list-style-type: none"> <li>• Whether the study had adequate resources, and if not, what was the effect of insufficient or alternate resources?</li> <li>• Whether the supporting structures were effective in supporting the development and implementation of the research study?</li> <li>• Whether the technical assistance provided was adequate, and what additional technical assistance was needed?</li> </ul>

# Decision to Translate

**Decision to Translate:** The decision to create an actionable product on the basis of existing science-based knowledge or the decision to propel an evidence-based program, policy, or practice into widespread use.

## Questions for those persons responsible for

Intervention Developing or Testing 	Administrative Decision Making 	Implementing 	Evaluating 
<ul style="list-style-type: none"> <li>Do efficacy, effectiveness, or implementation study results suggest that meaningful public health effects will result from its translation into widespread use?</li> <li>Have effectiveness studies identified factors influencing effective implementation in the field?</li> <li>Can we (or a designee) support the dissemination and implementation of this intervention?</li> </ul>	<ul style="list-style-type: none"> <li>Does the intervention have an adequate evidence base and address a high-priority public health issue?</li> <li>Is this intervention needed?</li> <li>Does the intervention meet the needs of our constituents?</li> <li>How does this intervention compare with others already available?</li> <li>Is there broad support or buy-in to translate the intervention into practice?</li> <li>Are the supporting structures in place (or can we put them in place) to support implementation of this intervention (i.e., resources, training, technical assistance)?</li> <li>How promising are the economic evaluations (i.e., return on investment, cost benefit, cost effectiveness) data?</li> <li>Have any changes in the background or contextual factors (e.g., sociopolitical climate, time horizon) affected the relevance of this intervention?</li> </ul>	<p><i>Given this role's focus on putting interventions (program, policy or practice) into place, this role will be more engaged and involved in other elements of the K2A framework.</i></p>	<p>How will we assess</p> <ul style="list-style-type: none"> <li>What factors were used to make the decision?</li> <li>If the decision is made to translate, and does it turn out to be the <i>right</i> decision?</li> <li>The effects and unintended consequences of the decision to translate?</li> </ul>

# Knowledge into Products

**Knowledge into Products:** A systematic process of turning scientific evidence and audience research into programs, policies, interventions, guidelines, tool kits, strategies, and messages that will assist and support audiences or users in putting science into practice.

## Questions for those persons responsible for

<b>Intervention Developing or Testing</b> 	<b>Administrative Decision Making</b> 	<b>Implementing</b> 	<b>Evaluating</b> 
<ul style="list-style-type: none"> <li>• What products (e.g., tool kits, action guides, recommendations, FAQs, guidance documents) are needed to disseminate and implement this intervention?</li> <li>• Are there specific considerations or modifications needed for vulnerable or disparate populations?</li> </ul>	<ul style="list-style-type: none"> <li>• Are additional products needed, and if so, who will create them?</li> <li>• Who will use the products, and what types of products will be most useful to them?</li> </ul>	<ul style="list-style-type: none"> <li>• Are the products needed to implement the intervention (e.g., implementation guidance, leader’s manual, sample policies) available?</li> <li>• Do the available products meet the needs of the target population? If not, what needs to be modified, and who can make that modification?</li> </ul> <p><b>For existing interventions,</b></p> <ul style="list-style-type: none"> <li>• What implementation or adaptation lessons learned are important for others to know, and how can we communicate those lessons learned?</li> </ul>	<ul style="list-style-type: none"> <li>• How will we assess if the products meet the needs of the people using them?</li> </ul>

# Dissemination

**Dissemination:** A purposeful and facilitated process of distributing information and materials to organizations and individuals who can use them to improve health.

## Questions for those persons responsible for

<b>Intervention Developing or Testing</b> 	<b>Administrative Decision Making</b> 	<b>Disseminating (this element only)</b> 	<b>Implementing</b> 	<b>Evaluating</b> 
<ul style="list-style-type: none"> <li>On the basis of the preliminary evidence demonstrating efficacy or effectiveness, what meaningful public health effects will result from disseminating the intervention?</li> <li>Is a dissemination plan available? If not, how can we reach people who can effectively distribute the intervention?</li> <li>Can we (or a designee) support dissemination of this intervention?</li> </ul>	<ul style="list-style-type: none"> <li>Is there an opportunity to partner with organizations to facilitate dissemination?</li> <li>Are the supporting structures in place (or can we put them in place) to adequately support dissemination of this intervention (e.g., resources, training, technical assistance)?</li> </ul>	<ul style="list-style-type: none"> <li>Have we identified the target audience(s)?               <ul style="list-style-type: none"> <li>» Is there a need to produce culturally and linguistically appropriate materials?</li> </ul> </li> <li>Have we established a dissemination plan?</li> <li>Are there any barriers to disseminating the intervention?</li> <li>Which communications and marketing strategies and channels will we use to disseminate the intervention?</li> <li>Do partner organizations have vehicles useful for promotion?</li> </ul>	<p><i>Given this role's focus on putting interventions (program, policy or practice) into place, this role will be more engaged and involved in other elements of the K2A framework.</i></p>	<ul style="list-style-type: none"> <li>How will we determine               <ul style="list-style-type: none"> <li>» The dissemination measures of success, (e.g., uptake of the intervention)?</li> <li>» Whether dissemination of the intervention is effective?</li> </ul> </li> </ul>

# Engagement

**Engagement:** The active participation and collaboration of stakeholders who can mobilize resources and influence systems to change policies, programs, and practices.

## Questions for those persons responsible for

<b>Intervention Developing or Testing</b> 	<b>Administrative Decision Making</b> 	<b>Implementing</b> 	<b>Evaluating</b> 
<ul style="list-style-type: none"> <li>• Which stakeholders should be engaged (or what are the characteristics of stakeholders who should be engaged) to help translate this intervention?</li> <li>• What resources need to be mobilized for successful translation?</li> </ul>	<ul style="list-style-type: none"> <li>• Who are the appropriate stakeholders and partners who can mobilize resources and influence systems to facilitate successful translation of this intervention?</li> <li>• What are the stakeholders' and partners' motivations for engaging in the translation process, and how does this motivation affect translation decisions?</li> <li>• Is the intervention to be translated and aligned with stakeholders' and partners' goals and values, and match the needs of the organization or community?</li> <li>• Are there leaders within the organizations who are engaged in the translation process?</li> <li>• Is there broad-based support for translation of the intervention?</li> <li>• Do we have the resources for successful translation?</li> </ul>	<ul style="list-style-type: none"> <li>• How can we leverage stakeholder and partner resources to assist in our translation effort?</li> </ul>	<p>How will we assess</p> <ul style="list-style-type: none"> <li>• What resources were used in the engagement process?</li> <li>• If stakeholders and partners were actively involved in mobilizing resources and changing systems to facilitate translation of this intervention?               <ul style="list-style-type: none"> <li>» What was the level of involvement of each stakeholder and partner group?</li> <li>» What resources did the stakeholders and partners provide, leverage, or mobilize?</li> <li>» Were the right people engaged in this effort? Who else would have been helpful to engage?</li> </ul> </li> </ul>

# Decision to Adopt

**Decision to Adopt:** The decision at the organizational or community level to implement a program, policy, or practice.

## Questions for those persons responsible for

<b>Intervention Developing or Testing</b> 	<b>Administrative Decision Making</b> 	<b>Implementing</b> 	<b>Evaluating</b> 
<ul style="list-style-type: none"> <li>• Have we developed and made accessible tools or products for decision makers to make accurate decisions about the intervention?</li> <li>• Have we developed implementation guidance and shared it with potential adopters of the intervention?</li> <li>• Have we shared any specific considerations or modifications for vulnerable or disparate populations?</li> </ul>	<ul style="list-style-type: none"> <li>• Does the intervention have an adequate evidence base and address a high-priority public health issue for our organization?</li> <li>• Is the intervention appropriate for our constituents?</li> <li>• Does the intervention being considered for adoption represent the best available research evidence?</li> <li>• How might the organization or community context affect the intervention's feasibility, acceptability, and relevance?</li> <li>• Is this intervention sustainable on a long-term basis?</li> <li>• Does this intervention duplicate other activities in the community? Can the new intervention integrate with or complement existing activities?</li> <li>• Will this intervention need to be adapted?               <ul style="list-style-type: none"> <li>» Do we know the core components of this intervention? (Core components are aspects of the intervention that should NOT change and are critical to the strategy's effectiveness.)</li> <li>» Are supports or resources available for appropriate adaptation?</li> </ul> </li> <li>• Can the intervention be evaluated in a way that meets the goals of stakeholders? Do we have the resources?</li> </ul>	<ul style="list-style-type: none"> <li>• How will the intervention affect our existing services?</li> <li>• Are there barriers to implementing the intervention?</li> </ul>	<p>How will we assess</p> <ul style="list-style-type: none"> <li>• If stakeholders were effectively engaged in the decision-making process?</li> <li>• What forms of evidence (best available research evidence, contextual evidence, experiential evidence) were considered during the decision-making process?</li> </ul>

# Practice

**Practice:** Performing the tangible tasks and action steps to achieve public health objectives.

## Questions for those persons responsible for

<b>Intervention Developing or Testing</b> 	<b>Administrative Decision Making</b> 	<b>Implementing</b> 	<b>Evaluating</b> 
<ul style="list-style-type: none"> <li>Have the essential intervention elements (core components) been clearly identified and communicated effectively to the practice community?</li> </ul>	<ul style="list-style-type: none"> <li>Are the resources and supporting structures available to allow our organization to deliver the intervention with fidelity? (See examples in Translation Supporting Structures.)</li> <li>Is this intervention scalable for widespread impact?</li> <li>Does the intervention need to be tailored to our community or population? If so, who will do that and how will we assure fidelity?</li> </ul>	<ul style="list-style-type: none"> <li>Are the tools and resources necessary to implement the intervention available?</li> <li>Do we need to tailor the intervention to meet the needs of our target audience? If so, how will we accomplish this?</li> <li>How will we assure fidelity to the intervention?</li> </ul> <p>For Practice-based evidence,</p> <ul style="list-style-type: none"> <li>Do we have implementation lessons learned or adaptations that should be further tested with effectiveness and implementation studies or used to inform knowledge into practice?</li> </ul>	<ul style="list-style-type: none"> <li>How will we assess               <ul style="list-style-type: none"> <li>» If the intervention was implemented with fidelity?</li> <li>» If the intervention had the desired or expected effect?</li> <li>» If the intervention was delivered in the most efficient and cost-effective way possible?</li> <li>» How satisfied intervention participants or recipients are with the intervention?</li> </ul> </li> </ul>

# Translation Supporting Structures

**Translation Supporting Structures:** Interrelated elements that enhance the capacity of each organization to effectively plan, implement, evaluate, or sustain the translation phase of the intervention process, including marketing, training, technical assistance, financial resources, and organizational capacity.

## Questions for those persons responsible for

<b>Intervention Developing or Testing</b> 	<b>Administrative Decision Making</b> 	<b>Implementing</b> 	<b>Evaluating</b> 
<ul style="list-style-type: none"> <li>• What resources are needed to implement the intervention in the real world? Resources include people, money, space, administrative, etc.</li> <li>• Are the intervention materials in a format that could be easily used by others and appropriate for their audience?</li> <li>• Do we know and have access to the persons or groups that might be interested in implementing the intervention?</li> <li>• Is there sufficient broad-based support to translate findings into practice?</li> <li>• Are processes in place to convey findings back to participating organizations and gather feedback from the field?</li> </ul>	<ul style="list-style-type: none"> <li>• Do we have the necessary resources (e.g., organizational capacity) to implement the intervention? (This includes, but is not limited to, sufficient money, time, space, personnel, and administrative supports.)</li> <li>• Do we have an adequate number of appropriate people needed to implement the intervention, including people to do training, delivery, and oversight?</li> <li>• Are the intervention-specific materials (e.g., implementation guide, trainer’s manual, licensing, marketing materials) readily available and in appropriate formats?</li> <li>• What technical assistance is available, and who will provide it?</li> <li>• Is there broad-based support for intervention implementation?</li> </ul>	<ul style="list-style-type: none"> <li>• Do we have sufficient resources to implement the intervention with fidelity? (This includes, but is not limited to, sufficient money, time, space, personnel, and administrative support.)</li> <li>• Do we have access to the intervention materials?</li> </ul>	<p>How will you assess</p> <ul style="list-style-type: none"> <li>• If there were enough resources, and if not, why not? What was the effect of insufficient or alternate resources?</li> <li>• If the supporting structures were adequate to support the translation process?</li> <li>• If the training was adequate to ensure that people could implement the intervention correctly?</li> <li>• If there was sufficient broad-based support for the implementation process and intervention?</li> <li>• If implementers were satisfied with the support they received?</li> </ul>

# Institutionalization

**Institutionalization:** The maintenance of an intervention (program, policy, or practice) as an established activity or norm within an organization, community, or other social system.

## Questions for those persons responsible for

<b>Intervention Developing or Testing</b> 	<b>Administrative Decision Making</b> 	<b>Implementing</b> 	<b>Evaluating</b> 
<ul style="list-style-type: none"> <li>• What resources (e.g., personnel, money, space, administrative support) are needed to maintain the intervention over time? Can we provide this? If not, who else can?</li> <li>• What were the facilitators and barriers for maintenance of the intervention?</li> <li>• What additional feedback is needed to continue to refine or improve the intervention? How can we obtain that feedback?</li> <li>• What plans do we have for updating the intervention to maintain relevance?</li> </ul>	<ul style="list-style-type: none"> <li>• Are resources and stakeholders needed to maintain the intervention secure and in place?</li> <li>• How can evaluation findings be used to sustain the intervention within the organizations, communities, or social systems?</li> <li>• Have barriers been discussed and addressed with key stakeholders so that they have a better understanding of challenges likely to be present when maintaining the intervention?</li> <li>• Is the sustainability plan for maintenance of the intervention adequate and feasible?</li> </ul>	<ul style="list-style-type: none"> <li>• Have we developed a sustainability plan and sought or identified resources necessary to support the intervention?               <ul style="list-style-type: none"> <li>» Does the plan address changing resources, future policy efforts, and continued stakeholder involvement?</li> </ul> </li> <li>• Have we identified appropriate organizations, communities, or social systems where intervention sustainability would have the greatest effect?</li> <li>• How can previous implementation challenges be avoided in the maintenance or institutionalization phase of the intervention?</li> <li>• How can we expand the reach of this intervention in our organization, community, or social system?</li> </ul>	<p>How will we assess</p> <ul style="list-style-type: none"> <li>• If there were enough resources, as well as the necessary expertise, and if not, then why not?</li> <li>• If resources were inadequate, or what was the effect of insufficient or alternate resources?</li> <li>• If current outcomes of the intervention were similar to those of previous interventions?</li> <li>• If the intervention influenced or changed an organizational or social norm or social expectation?</li> <li>• If the evaluation findings are similar to those found during the initial research or efficacy studies or evaluation of the intervention?</li> <li>• If we should conduct an economic evaluation?</li> <li>• If there is a sustainability plan in place to address               <ul style="list-style-type: none"> <li>» Changing resources?</li> <li>» Future policy efforts?</li> <li>» Continued stakeholder involvement?</li> </ul> </li> <li>• What factors facilitated or supported sustainability?</li> </ul>

# Institutionalization Supporting Structures

**Institutionalization Supporting Structures:** Interrelated elements that enhance the capacity of each organization to effectively sustain the intervention program, policy, or practice, including marketing, training, technical assistance, financial resources, and organizational capacity.

## Questions for those persons responsible for

<b>Intervention Developing or Testing</b> 	<b>Administrative Decision Making</b> 	<b>Implementing</b> 	<b>Evaluating</b> 
<ul style="list-style-type: none"> <li>• What resources are needed to sustain the intervention in the real world? Resources include people, money, space, etc.</li> <li>• Are the intervention materials in a format that could be easily used by others and appropriate for their audience?</li> <li>• Are structures in place to support ongoing implementation?</li> <li>• Are processes in place to communicate refinements of the intervention to implementers?</li> <li>• Are processes in place to gather feedback on the intervention from implementers?</li> </ul>	<ul style="list-style-type: none"> <li>• Do we have the necessary resources (e.g., organizational capacity) to sustain the intervention? (This includes, but is not limited to, sufficient money, time, space, personnel, and administrative supports.)</li> <li>• Do we have an adequate number of appropriate people needed to implement the intervention ongoing, including people to do training, delivery, and oversight?</li> <li>• Are the intervention-specific materials (e.g., implementation guide, trainer’s manual, licensing, marketing materials) readily available and familiar to target audiences?</li> <li>• What technical assistance is available, and who will provide it?</li> <li>• Is there sufficient broad-based support to maintain intervention implementation?</li> </ul>	<ul style="list-style-type: none"> <li>• Do we have the appropriate resources to sustain the intervention delivery? (This includes, but is not limited to, sufficient money, time, space, and administrative support.)</li> <li>• Do we have access to the intervention materials?</li> <li>• Is intervention delivery part of routine practice and supported by organizational policy?</li> </ul>	<p>How will we assess</p> <ul style="list-style-type: none"> <li>• If the supporting structures are effective in sustaining the intervention?</li> <li>• If the training was adequate to ensure that the people implemented the intervention in the manner intended?</li> <li>• If there was sufficient broad-based support to sustain the implementation process and intervention?</li> </ul>

# Appendix A

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## K2A Framework Expanded Glossary

### **Adaptation**

Additions, deletions, modifications, substitutions, reordering, or other changes to the intervention,<sup>2</sup> (definition modified from Adaptation Project in progress in the National Center for Injury Prevention and Control).

### **Best available research evidence**

Information derived from scientific inquiry that assists in determining whether or not a prevention program, practice, or policy is actually achieving its intended outcomes.<sup>3</sup>

### **Contextual evidence**

A collection of measurable factors in the community that may affect the success of a prevention strategy (e.g., community history, organizational capacity, social norms).<sup>3</sup>

### **Core components**

Elements of the intervention that must be kept intact when the intervention is being replicated or adapted for it to produce program outcomes similar to those demonstrated in the original evaluation research. Elements (e.g., content, delivery method, and intervention setting) in combination are the underlying logic of the intervention.<sup>4</sup>

### **Decision to adopt**

The decision at the organizational or community level to implement a program, policy, or practice.<sup>1</sup>

### **Decision to translate**

The decision to create an actionable product on the basis of existing science-based knowledge, or the decision to propel an evidence-based program, practice, and policy into widespread use.<sup>1</sup>

### **Diffusion**

The process through which an innovation spreads via communication channels over time among the members of a social system.<sup>1</sup>

### **Discovery**

The original biomedical, behavioral, or epidemiologic factor or finding that stimulated development of an intervention.<sup>1</sup>

### **Dissemination**

A purposeful and facilitated process of distributing information and materials to organizations and individuals who can use them to improve health.<sup>1</sup>

### **Economic evaluation**

Processes to identify, measure, value, and compare the costs and outcomes of interventions.<sup>5</sup>

### **Effectiveness**

The extent to which the intended effect or benefits that were achieved under optimal conditions are also achieved in real-world settings, and the understanding of the processes by which research findings are put into practice (implementation research).<sup>1</sup>

### **Efficacy**

The extent to which the intended effect or benefits were achieved under optimal conditions.<sup>1</sup>

**Engagement**

The active participation and collaboration of stakeholders who can mobilize resources and influence systems to change policies, programs, and practices.<sup>1</sup>

**Evaluation**

A systematic process for an organization to (1) improve and account for public health actions, and (2) obtain information on its activities, its effects, and the effectiveness of its work to improve activities and describe accomplishments.<sup>1</sup>

**Experiential evidence**

The collective experience and expertise of those who have practiced or lived in a particular setting, including the knowledge of subject matter experts.<sup>3</sup>

**Facilitators**

Factors that increase the likelihood of translation success.<sup>6</sup> Examples of facilitators include appropriately skilled or committed people, sufficient funds or resources, high priority issue or interest, committed leadership or champion, and strong partnerships.<sup>7</sup>

**Institutionalization**

The maintenance of an intervention (program, policy, or practice) as an established activity or norm within an organization, community, or other social system.<sup>1</sup>

**Knowledge into products**

A systematic process of turning scientific evidence and audience research into programs, policies, interventions, guidelines, tool kits, strategies, and messages that will assist and support audiences or users in putting science into practice.<sup>1</sup>

**Partners**

Partners include equitable collaborators of different stakeholders in the translation and widespread use of science-based programs, practices and policies.<sup>8</sup>

**Practice**

Performing the tangible tasks and action steps to achieve public health objectives.<sup>1</sup>

**Practice-based discovery**

Innovative field-based practices that lack data about their intended effects or benefits.<sup>1</sup>

**Practice-based evidence**

Data from field-based practices that demonstrate achievement of intended effects or benefits.<sup>1</sup>

**Supporting structures**

Interrelated elements that enhance the capacity of each organization to effectively plan, implement, evaluate, or sustain the translation phase of the intervention process, including marketing, training, technical assistance, financial resources, and organizational capacity.<sup>1</sup>

**Translation**

The process and steps needed or taken to ensure effective and widespread use of science-based programs, practices, and policies; a term for the entire process of putting research to practice. The term has also been used more narrowly to describe the process of making materials in an intervention linguistically appropriate.<sup>1</sup>

**Unintended consequences**

Outcomes that are not the ones intended. Unintended consequences may occur before, during, or after translation of an intervention.<sup>9</sup>

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