# Adaptation Framework for Global Exchange of Innovation

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### Context

CHMI, in partnership with RWJF, proposes a multi-stage framework for identifying promising global models potentially adaptable to other contexts.

#### **Considerations**

- Framework offers set of guiding principles for identifying program activities that have potential for knowledge transfer and impact, both within the U.S. health system context and globally in other contexts.
- Recognizing that few programs are replicable in their entirety, the framework focuses on identifying the "active ingredients", or isolated program attributes core to achieving the program's outcomes.
- Framework designed to provide flexible and adaptable principles that can be applied to multinodal innovations more generally, while at the same time providing specific tools that can be used to guide one's process.
- Framework designed to be open-source, allowing any individual or organization to access and
  use adaptation framework towards their goals. Potential users include healthcare implementers,
  researchers, networks and advisors, funders, policymakers, and thought leaders.





### Guidance for Using Framework

# Framework designed to provide flexible and adaptable principles; guidance provided below

#### **Considerations**

- **Forming a user team:** Organizations should consider who on their team would be good user(s) for this process. Identification of active ingredient will likely vary based on user, so having a small core team with diverse, representative perspectives may be useful. Representatives may come from business, law, economics, clinical, policy, and/or business backgrounds. Involving community and patient representatives would also be beneficial.
- Researching active ingredient: While resources like the CHMI database contain basic information through program profiles, identifying and assessing the active ingredient will necessitate a deeper dive, potentially through interviews and discussions with organizations themselves or industry experts. It may also be useful to identify literature on how the identified active ingredients are applied by other programs and in other sectors, including meta-analyses and systematic reviews.
- **Guidance on framework:** Categories are presented as guidance to walk users through entire framework. If an organization feels that a particular category is less relevant based on their needs, they can move on to the next stage.
- Revisiting relevant checkpoints: The process may be iterative; it can be useful to revisit certain checkpoints and steps during the process based on your output.





### Proposed Framework

The activities below represent key checkpoints in the process of identifying promising global models potentially adaptable to other contexts. The order of the stages may vary by user, desired output, and information/resources available. As an iterative process, users may revisit certain steps to further refine analysis.

# Search for program models



Based on the problem you are trying to solve for and specified parameters, what models currently exist?

#### **OUTPUTS**

Short list of program models

# Identify the active ingredient(s)



What are the core components or attributes of the program that make it successful? What are the contextual factors for the active ingredient?

List of isolated active ingredients

# Determine effectiveness



What evidence exists on the effectiveness of identified active ingredient(s)?

Narrowed list of active ingredients

# Assess adaptability



What are the barriers and levers to adaptation of the active ingredient(s) to the U.S. health market?

List of barriers and levers to adaptation





# Search for program models

- Organizations can use this stage to clarify their objectives and define the scope of their search for adaptable models – What is the problem(s) you are trying to solve for and what are the parameters for the model you are seeking to identify?
  - In some cases organizations will already have a program in mind it will still be useful to review the problem and root cause challenges the program is working to solve for. It is recommended that organizations revisit this stage throughout the assessment process.
- The goal of this step is to be inclusive and search for as many programs that fit your objectives. (For a list of recommended resources, see "User guidance and considerations").
  - However, some organizations may already have a program model in mind for consideration, and may not need this step.
  - Others may find that it's helpful to **revisit this stage** once you've identified one or more program models and can identify other useful filters for the search process. The process is not meant to be rigid and linear, but rather to provide a set of potential filters to select from in your search.
- The table "Search for Program Models" provides a list of potential filters for the search process; organizations should select the ones relevant to their objective.
  - We recommend starting with the health system priority challenge and root cause as these elements are
    critical to identifying the active ingredients within program models. Please see Appendix A for a sample list of
    U.S. health system challenges and their associated root causes. Organizations that have already identified
    the root cause(s) of focus may skip this step.
  - Organizations may then apply additional filters to further narrow the list of program models and better target the programs identified based on your objectives.







# Search for program models

Based on your objectives and the problem you are trying to solve for, identify program models using various resources, described in greater detail in "Guidance".

Category	Key Questions	Guidance and Examples	
Primary Filter	Primary Filter		
Challenge	What is the challenge or problem you are trying to solve for?	Narrow down the specific challenge you are targeting; for instance, the challenge of cost as an underlying issue, coupled with:	
		<ul> <li>Insufficient access to care for vulnerable populations</li> <li>Inadequate use of cost-effective care (especially primary care and prevention)</li> <li>Inadequate quality and safety of care</li> <li>Failure to act on social determinants of health</li> </ul>	
Root Cause	What is the root cause of this challenge?	Analyze the root cause of the specific challenge. For instance, insufficient access to care for vulnerable populations can include the following root causes:	
		<ul> <li>Knowledge barriers to access: lack of knowledge about available health insurance coverage; under-enrollment among those eligible for and aware of coverage</li> <li>Physical/geographic barriers: provider shortages; inadequate transportation</li> <li>Cultural/language barriers: lack of translator services; lack of trust</li> <li>Financial barriers: lack of affordable coverage options</li> </ul>	
Optional Additional	Filters		
Health Focus Area	What is the health focus area of interest?	If applicable, apply additional filters to narrow your search and/or refine your results based on key characteristics of interest. This should be done in addition to the primary filter.	
Other Program Characteristics	What other program characteristics are of interest?		
Active Ingredients	What active ingredients are of interest?		





# Search for program models

#### **User guidance and considerations**

- Organizations may want to conduct a stakeholder assessment prior to starting Stage 1 to determine who are the
  appropriate users to involve in the process, which can also include community and patients/families. The
  stakeholder analysis described in Stage 4 may be a useful starting point for identifying potentially relevant
  individuals.
- The framework recommends using the key health system challenge and associated root cause(s) of focus as your first screen; a sample list for U.S. health system challenges can be found in Appendix B. However, additional screens may apply if your program list is still too large and/or you have a specific set of program characteristics you are searching for.
- Organizations may want to revisit this stage later on in the process to surface more programs for consideration, particularly once promising active ingredients or additional program characteristics of relevance are identified.
- Based on your objectives and the problem you're trying to solve for, identify program models using resources like the ones described in the table below:

#### Resources to identify relevant program models

Models can include both programs in global health and <u>outside</u> healthcare (e.g. education, technology, automotive industry, etc.)

The framework allows for flexibility in resources, which can include:

- The Center for Health Market Innovations (CHMI) Database
- · Interviews and networking
- Tacit knowledge

- UCLA Health Global Lab Innovation Inventory
- Networks of global health innovators, e.g. IPIHD
- Journals and publications on relevant topics
- Call for abstracts and/or competitions centered on relevant topics (e.g. Saving Lives at Birth)







### Identify the active ingredient(s)

- The active ingredient is the isolated program attribute(s) alone or in combination core to achieving the program's outcomes. It hones in on the causal pathway which activities or processes lead to your desired outcome? The active ingredient is not the entire program model, nor is it about cut-and-paste replication.
- The goal of this step is to define and isolate the active ingredient, with the understanding that few program models are replicable in their entirety; by isolating the active ingredient(s), you can more easily adapt the practice to other environments and against similar root cause challenges.
- In identifying the active ingredient, it is important to identify the cultural factors and underlying assumptions that enable it
  to work well in the local context.
- Illustrative examples of active ingredients can be found below. (Additional examples in Appendix B).

Programs that provide inspiration	Active ingredient common to programs
<ul> <li>Aarogyasri state-financed social protection scheme in Andhra Pradesh</li> <li>RSBY national social protection insurance in India</li> </ul>	Health camps to combine insurance enrollment with awareness, diagnosis, and treatment
<ul> <li>The Family Health Book project in the Philippines uses community health volunteers to serve as patient navigators</li> <li>Volunteer community outreach workers in Ethiopia target maternal and child health.</li> </ul>	Community volunteers to support patient navigation
<ul> <li>World Health Partners is a social franchise that links remote providers to higher levels of care in India and Kenya</li> <li>LifeNet is a social franchise that provides remote clinics with access to specialists through training</li> </ul>	Social franchise model to link remote providers to higher levels of care







### Q Identify the active ingredient(s)

Identify the active ingredient that addresses the selected root cause challenge(s).

Category	Criteria	Guidance		
The following questions help to identify and document the active ingredient(s) within a program model				
Active ingredient	<ol> <li>What are the core components/ attributes of the program that contribute to desired outcomes?<sup>1</sup>*Core components should relate directly to root cause challenge identified</li> <li>What are the sub-components or underlying activities that support the active ingredient and are inherent to its success?</li> <li>What are the key assumptions around this active ingredient? *This includes the cultural considerations for how the active ingredient works</li> <li>Who makes the active ingredient "happen"?</li> </ol>	<ul> <li>Document core program components identified in each program model as related to the root cause challenge; programs may have more than one active ingredient that contributes to overall success, so this process may need to be repeated</li> <li>The sub-components or underlying activities are the elements of the active ingredient that support how it operates in practice; this can include training, resource needs, etc.</li> <li>Isolate key assumptions to how the active ingredient works, including the prevailing conditions (e.g. cultural norms, infrastructure in place) necessary for the active ingredient to work. The assumptions should remain valid in the receptor site.</li> <li>The "who" should identify the critical individuals for implementation, e.g. community health workers or family members</li> </ul>		
The impact poter	ntial serves as a final check on the relevance of the active ingred	dient to the receptor site		
Contextual factors	<ol> <li>What are the elements of the active ingredient that are context-dependent and cannot be adapted? *It will be important to identify what these elements accomplish, and to find corollaries for this in the adaptation process</li> <li>What are the system-level factors required for the programs success?</li> </ol>	<ul> <li>Context-dependent factors that cannot be adapted to other settings should be analyzed to understand what they accomplish; identifying corollaries for these factors is an important step in the adaptation process – see "Assessing Adaptation" for further guidance</li> <li>System-level factors may include payer systems, regulatory considerations, etc.</li> </ul>		
Impact potential	<ol> <li>Does the active ingredient directly address/ work towards resolving the root cause problem?</li> <li>Does the active ingredient offer a relative advantage to existing approaches in the US? Does it significantly improve status quo?</li> <li>Has active ingredient been applied before in the US? If yes, what was outcome?</li> </ol>	<ul> <li>This stage is an important threshold and "gut check": if impact potential is a confident "no", you may not want to proceed to later stages. However, if inconclusive or strong affirmative evidence, you likely will want to proceed.</li> <li>Relative advantage may be measured in terms of cost, quality, efficiency, and/ or health outcomes</li> </ul>		





### Identify the active ingredient(s): Illustrative example

#### Category

#### **Example**

In this scenario, the user is a U.S.-based practitioner searching for active ingredients to support rising costs and poor quality outcomes related to readmissions. She begins the search process by screening for programs that address the challenge "Inadequate use of cost-effective care" and "lack of patient self-management" as the root cause. She searches the CHMI database and other resources for "patient self-management" and related terms (e.g. care management, patient support), and identifies two potential programs for exploration: Narayana Health and Dementia Home Care Project. The below outlines how she identifies the active ingredient "training family members in care management" from both programs for potential adaptation to her practice.

### Active ingredient

#### Narayana Health:

- 1. Narayana Health is a chain of multi-specialty hospitals in India. Its **core component** related to "lack of patient-self management" involves training family members in care management at home once patients are discharged
- 2. Sub-components to support training family members include: leadership around this as a priority, nurse-developed courses based on previous care management challenges, family member exam on care management practices
- 3. A key assumption is that the patient has a support network/ family members who can undergo training
- 4. Family members' engagement and nurse staff as trainers are key to who makes the active ingredient

#### **Dementia Home Care Project:**

- 1. Dementia Home Care Project supports people with dementia and their caregivers in India. Its **core component** related to "lack of patient self-management" involves training caregivers on assisting the person with dementia, including nutrition, physical health, psycho-education, and managing problem behaviors
- 2. **Sub-components** to support training caregivers include: home visits by a formal employee at least every two weeks; a dedicated psychiatrist and counselor who supervise the home-based care as necessary; support groups for caregivers; and dedicated helplines for carers
- 3. A key assumption is that the patient has a support network and family members who can undergo training
- 4. Caregiver engagement and lay workers are key to who makes the active ingredient

### Contextual factors

#### Narayana Health:

- 1. Context dependent factors include training certificates and rewards for participation. Both work to incentivize and reward family members to participate in the program, and create a sense of pride
- 2. System-level factors include the ability of nursing staff to train family members on care practices

#### **Dementia Home Care Project:**

- 1. Context dependent factors include family acceptance of home visits, family acceptance of lay health workers, patient/ family preference of home visits vs. facility-based care
- 2. System-level factors include the ability of formal medical staff to train caregivers on care practices, ability of formal medical staff to conduct home visits

### Impact potential

#### Narayana Health:

- 1. This active ingredient addresses the root cause: "lack of patient self-management"
- 2. The active ingredient offers a **relative advantage** to this challenge in the U.S.
- 3. There are some examples of family training for palliative care in the U.S., but we're not aware that the active ingredient has not been applied in the U.S. for readmissions

#### **Dementia Home Care Project:**

- 1. This active ingredient addresses the root cause: "lack of patient self-management"
- 2. The active ingredient offers a **relative advantage** to this challenge in the U.S.
- 3. The active ingredient has not been applied in the U.S. that we're aware of for readmissions; however, the Project is under consideration for adaptation to Scotland





# Identify the active ingredient(s)

#### **User guidance and considerations**

- Others may refer to the active ingredient(s) as the element of the program that "works", the core components, the essential ingredients, or the efficiency core of the model.
- While the range and type of attributes that can make up the active ingredient may vary, they should always:
  - Directly address/ work towards resolving the root cause problem identified
  - Offer a relative advantage over current practice in the U.S.
- The active ingredient should move beyond broad categories of practice and/ or the very specific individual components of a program – to identify the **combined elements** that holistically contribute to the program's success.
- Active ingredients can span the range of program models, including (but not limited to) approaches focused on organizing healthcare delivery, financing care, regulating performance, changing provider and/or patient behaviors, or enhancing processes through processes, technologies, or products.
- Programs may have more than one active ingredient; or no active ingredient (in this case, it
  would not be considered for adaptation.)
- Active ingredients identified may vary by user; as such, it may be useful to create a small core
  team with diverse, representative perspectives for this process, to ensure that there is consensus
  in identifying relevant, useful active ingredients.





# Determine effectiveness

- Understanding the effectiveness of a promising program or practice within it is an important question, but often
  challenging to answer. The goal of this section is to get the **best possible information available**, recognizing that
  it may be imperfect.
- There are few program models with formal evaluations to demonstrate program impact and effectiveness, and even fewer for active ingredients. While this stage is focused on understanding what evidence exists on the effectiveness and/or impact of the active ingredient, if this information is not available, users may also consider looking at the program model.
- Furthermore, the level of effectiveness required and how effectiveness is defined can **vary by stakeholder**. As such, this stage has been designed to be flexible in how effectiveness is defined and the information sources used in assessing this according to user needs.
- While this step focuses on determining effectiveness within the original program context, user may also want to evaluate the innovation's **potential impact on effectiveness at the receptor site**.
- Users may want to consider filtering active ingredients by those demonstrated effective (causal relationship is validated by certain outcomes); potential for impact, but too little/ early evidence exists (promising model; early evidence shows directional impact potential); demonstrated ineffective, surmountable (failed active ingredients have surmountable explanations); and demonstrated ineffective, insurmountable (failed active ingredients have insurmountable explanations).
- While the questions are focused on assessing the active ingredient in its current country context, the same set of questions could be applied during small-scale testing of the active ingredient in the receptor site to develop an M&E framework. We recommend in cases where there is limited evidence to explore opportunities for small-scale testing to generate evidence.







### Determine effectiveness

#### Drill further into evidence of how well active ingredient works, using any available data and interviews with program staff.

- Determine degree of evidence required based on level of change you are trying to make and level of evidence required for change. For example, changing a small-scale practice in organization may require anecdotal reports, changing an entire program model may require a mix of positive evidence from multiple cases, and change at the policy level may require positive results from multiple impact evaluations.
- Assess unit level of analysis based on your objectives and the degree of evidence needed:

   Active ingredient data sources can include formal evaluation of active ingredient approach/components and desk research/interviews with program staff.
  - Program model data sources can include formal evaluation of program model and desk research/interviews with program staff.
  - **Comparators** data sources can include evidence in literature on active ingredient approach/components (individual studies and/or meta-analyses and systematic review).
- Using appropriate level of analysis, determine effectiveness across following key categories, filling in any gaps with more general unit levels of analysis as necessary (e.g. begin with assessing active ingredient, but fill in any gaps with program model data).

Category	Criteria	Guidance
Impact and results	<ul> <li>Is there evidence that the active ingredient has improved user experience, clinical quality, and/or health outcomes in local context?</li> <li>If not, is there evidence that its <i>design</i> should improve these outputs/outcomes?</li> <li>Is there evidence that innovation would <u>diminish</u> impact (including quality) at receptor site?</li> </ul>	Prioritize elements based on dimensions that matter most to US setting – both current and potential future (e.g. Triple Aim, health outcomes/outputs, user experience, etc.)
Affordability and cost effectiveness	<ul> <li>Is there evidence to indicate that the active ingredient is cost-effective compared to other alternatives and/or has improved affordability?</li> <li>If not, is there evidence that its design should improve affordability?</li> </ul>	Analyze cost-effectiveness relative to "status quo" or incumbents in local context
Scalability and replicability  • Is there evidence that the active ingredient is easy to test, transfer, and adopt?  • Has the active ingredient experienced large-scale growth or application elsewhere?  • If not, is there evidence that it is easy to adopt and/or apply elsewhere?		Assess growth potential for scale and replication outside local context





# Determine effectiveness

#### **User guidance and considerations**

- Organizations should assess available evidence across the identified categories for the active ingredient; if information at this level is not available, you may then want to consider evidence on the entire program model. In both cases, you may need to rely on qualitative interviews with program staff to better understand its impact and effectiveness. Finally, you can look at evidence of effectiveness outside of the program identified; this may include external literature and programs in other sectors. It is up to the user to determine what level or type of evidence is sufficient.
- Organizations may need to prioritize among the categories to determine which is most relevant and useful to
  assess the active ingredient. In some cases, not all of the categories will be applicable to the identified active
  ingredient.
- Once an active ingredient has been short-listed, users may want to revisit this stage later on in the process to run rapid tests to gather more evidence
- Additionally, the identified categories can also prove useful in developing a monitoring and evaluation framework for active ingredient pilots in a receptor site







- There are three goals in assessing the adaptability of an active ingredient to a receptor site: 1) to identify the potential barriers and levers to adaptation, 2) to determine whether the barriers are surmountable, and 3) to develop an initial plan for introducing the active ingredient to the receptor site/ market.
- Adaptation is complex; through this process there may be some active ingredients that can be introduced immediately, some that can be introduced after testing but only on a small scale, and others that require significant regulatory and structural changes first. However, identifying the requirements for successful adaptation is necessary and invaluable to the process.
- In addition, the Framework was designed to support a **range of potential users**, but the user's perspective and scale up goals will also dictate how the information on adaptability is interpreted and utilized. For example:
  - An individual practitioner may seek to identify potential practices to share with the rest of the clinical team within a hospital
  - A manager of a chain of retail clinics may seek to use ideas from other business models to implement across the chain network
  - A policymaker may seek to build the evidence-base in making the case for addressing a regulatory constraint to a promising practice
  - A foundation may seek to cull a list of the most high-impact potential practices to push for wholesale change across the country
- Information gathered should be used to identify which characteristics act as levers for change, and which are potential barriers to implementation and may need to be addressed.







Assess adaptability of active ingredient into its new context and set the foundations to test and pilot model.

Category	Criteria	Guidance		
Utilize checklist below to assess feasibility of adaptation				
Regulatory and legal requirements	<ul> <li>Can the active ingredient legally operate in current legal and regulatory environment? (Is there a federal or state regulation that prevents it?)</li> <li>Can the structural/ system-level requirements for the active ingredient (e.g. strong level of integration between providers) be met?</li> </ul>	Determine whether approach is possible in the US without changing current regulatory context		
Resource considerations	<ul> <li>Can the resources required for the essential components of the active ingredient be met in the receptor site<sup>1</sup>?</li> <li>Does needed funding and implementation capacity exist for adapting the model to the receptor site?</li> <li>Is the active ingredient cost-effective in the receptor site? Will it help to drive down costs?</li> </ul>	Document resources required to implement active ingredient and whether approach is possible to sustain		
Contextual factors that increase likelihood of success	<ul> <li>Is there "fertile ground" for the active ingredient to be piloted, e.g. in hospital, community setting, etc.?</li> <li>Is the active ingredient culturally appropriate?</li> <li>Has the active ingredient been tried in the receptor site? Was it successful?</li> <li>Is there direct competition to the active ingredient?</li> </ul>	Determine whether there is a particularly welcoming environment to test approach and whether active ingredient would be culturally welcomed		
Begin to develop plan for adaptation using criteria below				
Stakeholder analysis	<ul> <li>What stakeholder groups would benefit from the active ingredient? Oppose it?</li> <li>Is there a will to change? Are there structural barriers that prevent change?</li> <li>What evidence do stakeholder groups require?</li> <li>What are the competing priorities?</li> </ul>	<ul> <li>Conduct stakeholder analysis to help with assessment and inform adaptation strategy</li> <li>Focus on stakeholders needed for the successful implementation of the active ingredient</li> </ul>		
Adapting essential elements	<ul> <li>How would you introduce the active ingredient into the new environment?</li> <li>Has this been tried in the receptor site and if so, how effective has it been?</li> <li>Is the way it was originally introduced in the originating context viable for the receptor site? If not, what are the alternatives?</li> <li>Is there a corollary for the context-dependent elements of the active ingredient in the receptor site?</li> <li>Who is needed in program execution and what attributes do these players have? (what motivates them?)</li> </ul>	Determine how to bring the active ingredient to market; answers to the subquestions provide more detail on potential pathways to adaptation     For the list of context-dependent elements identified in "Identify the active ingredient(s") (p. 10) determine whether there are substitutes that can be offered in the receptor site; the aim should be to identify ways to accomplish the same goals through different, feasible means		





<sup>\*</sup> The active ingredient is defined as the isolated program attribute(s) – alone or in combination – core to achieving the program's outcomes. See "Identify the active ingredient(s) – Guidance" for additional information.

<sup>\*</sup> Receptor site refers both to the individual organization/ program and the broader health system context to which the active ingredient may be adapted.



#### **User guidance and considerations**

- The yes/no questions within regulatory and legal requirements, resource considerations, and contextual factors
  can be considered a "checklist" for the user to assess the degree of adaptability
- Organizations should identify what is their scale up goal for the active ingredient, and revisit the Framework
  during later expansion stages. In some cases, this will involve testing the active ingredient at a small-scale to
  increase learning around effectiveness and adaptability. When the goal is to move beyond a small-scale
  application of the active ingredient, categories and their associated criteria should be considered beyond the pilot
  receptor site.
- Organizations may have conducted a pilot stakeholder assessment upfront to identify key users for this
  process; in this stage, you will want to conduct a more in-depth version of the assessment.
- In assessing adaptability and moving towards testing and pilot, building will across key stakeholders is crucial
  to ensure that there are champions to support the implementation process.





### **Example: LifeSpring Hospitals**

Search for program models



Identify the active ingredient(s) Determine effectiveness

Assess adaptability





Problem: Increasing access for low-income pregnant women (parameter: maternal health innovations)

Active ingredients: Service specialization, no frills set-up, paraskilling, and high asset utilization

Without formal evaluations, data sources for active ingredients are desk research and interviews with program staff and investors.

Assessment of barriers and levers to adaptation of the active ingredient(s) to the U.S. health market

**STEPS** 

CHMI database search yields 257 programs for MNCH. Focus on "increasing access" includes LifeSpring Hospitals.

Essential elements include skilled clinical staff and complementary services nearby (e.g. blood bank and NICU for referrals).

Context dependent factors include partnerships with government for vaccines and community outreach workers.

Effectiveness of active ingredients difficult to measure, but evidence that design should improve user experience and clinical quality. Evidence that active ingredient is cost-effective. Evidence that scale has not met expectations.

Need at systems level: Prices for delivery in the US have tripled since 1996; 62% of women covered by nonemployer private plans lacked maternity coverage.

Approach can be possible within regulatory environment; but challenging contextual factors (no frills; high asset utilization); many stakeholders against

All program models

Narrowed list of program models (10-20 programs)

All identified active ingredients

Narrowed list of active ingredients List of barriers and levers to adaptation

The Adaptation Framework oscillates between narrowing and expanding the scope of your search. It can be helpful to think of the mode that corresponds to the phase you are working through.