

Healthy Brain Initiative Logic Model Narrative

The Healthy Brain Initiative (HBI) envisions a nation in which the public embraces cognitive health as a vital component of health and is committed to its inclusion in public health efforts. To achieve this vision, the HBI works towards its overarching goal—to maintain or improve the cognitive performance of all adults.¹

Logic Model Overview:

The HBI logic model was developed to outline the activities and expected outcomes of the initiative. This logic model depicts the activities, outputs, and outcomes of the HBI—along with the interconnectedness of these components. It should help to illustrate how the initiative strives to achieve its overarching goal.

The logic model begins on the left with a listing of the primary activities of the HBI. Implementation of these activities is expected to lead to a series of outputs which, in turn, are presumed to result in certain outcomes. Outcomes are further delineated into early, late, and distal categories to indicate the temporal sequence in which outcomes may be achieved.

Continuous assessment of efforts and their impact is conducted through ongoing evaluation, which spans all components of the logic model and is noted at the top of the model. The importance of engaging partners and collaborators in all efforts is depicted by the box and arrows running along the bottom of the logic model. Finally, the logic model recognizes that contextual conditions (e.g., resources, policy environments), influence the overall direction and impact of the HBI, as noted by the box that

extends across the bottom of the entire diagram. Each component of the logic model and related items are described in more detail.

Diagram Notes:

- The logic model is organized into columns. Boxes in each column read from top to bottom and columns read from left to right.
- The size of the boxes depends on the amount of text in the box and does not denote the importance of a specific item.
- Arrows designate the interconnectedness of concepts from one column's boxes to the next. A one-way arrow indicates that this activity directly affects another. Two-way arrows denote a reciprocal interaction between the boxes.
- Although the boxes in the diagram are shown in a linear fashion, the relationships among them are expected to be complex and interactive.
- The logic model is a living document. As such, an evaluation box runs along the top of the logic model. Information gained from outcomes would provide feedback to future evaluation efforts, as depicted by two-way arrows.

Activities:

The first column of the logic model depicts the overarching activities of the HBI. These are the key actions that the HBI undertakes to build the knowledge and capacity of public health organizations and partners to support and address cognitive functioning aligned with the socio-ecological model (individual to system changes). We recognize that there are a wide range of important audiences for dissemination, translational, and educational activities. These audiences include researchers, practitioners, policy makers, consumers (e.g., patients, family members, care partners), and businesses.

There are 6 activities depicted by 6 separate boxes in column 1.

The first activity (box 1) “Develop, implement, and update Public Health Road Map series” relates to the development and subsequent updating of a common guidance document developed by the Alzheimer’s Association and the Centers for Disease Control and Prevention’s (CDC) Healthy Aging Program, entitled *The Healthy Brain Initiative: The Public Health Road Map for State and National Partnerships, 2013–2018*. The timing is particularly important given the National Plan to Address Alzheimer’s Disease,² and the HBI’s new focus on state and national partnerships. This new road map provides a common direction and outlines specific actions state and local public health agencies and their partners can take to promote cognitive health, address cognitive impairment, and help meet the needs of care partners over the next 5 years.

The second activity (box 2) “Increase surveillance” refers to monitoring and data activities. These activities are essential to better understand public health perspectives with respect to the public’s perceptions about cognition and persons living with impairment; self-reported increased confusion, memory loss, and functional decline; and care partner perceptions. These data can provide important baseline information, document changes over time, and be used to identify areas for productive interventions and gaps in research that need further study.

The third activity (box 3) “Disseminate information and evidence and promote innovative approaches” refers to active processes through which information and materials, aimed at the needs of target groups, are distributed with the intent to increase knowledge about findings and evidence-based approaches.³ Approaches may include—but are not limited to—translating scientific findings so they are understandable to various audiences, creating innovative methods and programs, developing case studies of best practices, establishing professional competencies in alignment with professional organizations, and providing technical assistance on specific topic areas.

The fourth activity (box 4) “Inform and educate” refers to activities that help increase awareness of critical issues. Approaches may include—but are not limited to—developing peer-review publications, presentations, and training modules; creating or updating interactive data portfolios; designing and distributing reports; and developing or distributing state and national policy statements or national and state objectives such as Healthy People 2020.

The fifth activity (box 5) “Translate evidence and findings” refers to activities that improve the skills and capacities to actively translate and adapt programs and policies to reach states and communities. Approaches may include—but are not limited to—creating and testing technical packages and tools, and conducting cost-effectiveness studies.⁴

The sixth activity (box 6) “Conduct systematic reviews and applied research” refers to approaches that summarize what is known in the scientific arena or public health practice-based research that includes a systematic inquiry into the methods, systems, policies or programmatic application of public health practices. These can include a wide variety of methods and disciplinary approaches to study an issue. These activities should identify and help solve public health problems through the involvement of public or private partnerships.

Diagram Notes:

- A one-way arrow goes from box 1 “Develop, implement, and update Public Health Road Map series” to the other 5 activity boxes.
- Two-way arrows occur between boxes 2 through 6 to indicate the potential interrelationships among all of these activities.

- The boxes, “Disseminate information and evidence and promote innovative approaches” and “Inform and educate” (boxes 3 and 4), are bracketed together because of the interconnectedness of related activities.

Outputs:

The second column of the logic model lists the outputs resulting from the activities. These outputs are the HBI measurable products. There are 4 outputs, depicted in 4 separate boxes in column 2.

The first output (box 1) “Increased evidence for public health burden” refers to data and an expanded knowledge base that can be used by public health entities and partners.

The second output (box 2) is “Increased understanding, innovations, beliefs and practices among multiple audiences.” Activities can involve professional (e.g., health care practitioners, social service providers, public health professionals, aging service workers, etc.) as well as personal (e.g., family members, friends, care partners, consumers) audiences.

The third output (box 3) “Pool of strong evidence-based messages for communication and policy efforts” relates to the availability and use of content for communication efforts based on research and grounded in science.

The fourth output (box 4) “Pool of strong programmatic interventions for translation into practice” refers to the availability of guidelines, best practices, or strategies aimed at advancing public health efforts related to cognitive health or impairment, or support for care providers.

Diagram Notes:

- A two-way arrow between boxes 1 and 2 indicates that “Increased evidence for public health burden” (box 1) and “Increased understanding, innovations, beliefs and practices among multiple audiences” (box 2) interact.
- A two-way arrow between boxes 3 and 4 indicates that “Pool of strong evidence-based messages for communication and policy efforts” (box 3) and “Pool of strong programmatic interventions for translation into practice” (box 4) interact.

Relationships between Activities and Outputs

“Increase surveillance” (box 2, column 1) is proposed to influence both “Increased evidence for public health burden” and “Increased understanding, innovations, beliefs and practices among multiple audiences.” A one-way arrow goes from box 2 in column 1 to boxes 1 and 2 in column 2.

“Disseminate information and evidence and promote innovative approaches” and “Inform and educate,” which are bracketed together, influence “Increased understanding, innovations, beliefs and practices among multiple audiences.” A one-way arrow extends from the bracket to box 2 in column 2.

“Translate evidence and findings” has a direct influence on “Pool of strong evidence-based messages for communication and policy efforts.” A one-way arrow goes from box 5 in column 1 to box 3 in column 2.

“Pool of strong evidence-based messages for communication and policy efforts” is believed to influence “Increased understanding, innovations, beliefs and practices among multiple audiences,” which is mediated through dissemination and education activities. This is shown by a dotted one-way

arrow that goes from box 3 in column 2 to the bracketed activities (boxes 3 and 4) in column 1, and intersects the arrow from the bracketed group to box 2 in column 2.

“Conduct systematic reviews and applied research” has a direct influence on “Pool of strong programmatic interventions for translation into practice.” A one-way arrow goes between box 6 in column 1 and box 4 in column 2.

Outcomes:

Early

There are 4 early outcomes, depicted in 4 separate boxes in column 3. Early outcomes refer to the short-term, measurable effects of the HBI’s activities and outputs.

The first early outcome (box 1) is “Increased understanding of cognition among public health organizations and partners.” Outcomes in this area would demonstrate increased knowledge and activities regarding the public health importance of cognitive functioning and evidence of igniting action to promote cognitive functioning through a population-based approach. The second early outcome (box 2) is “Increased capacity and ability to take action among public health organizations and partners.” Outcomes would demonstrate an increased ability on the part of organizations and partners to identify and implement effective cognitive health promotion and impairment prevention interventions and services. Capacity includes an organization’s commitment, resources, and skills to identify and respond to cognitive health needs and priorities. The third early outcome (box 3) is “Increase the integration of cognition into organizational missions and planning documents.” Outcomes in this area would demonstrate the recognition of cognition as a vital component of healthy aging and would help to advance cognitive health as part of a public health agenda. The fourth early outcome (box 4) is

“Implementation of action plans.” Actions outlined in plans must be integrated into practice and carried out. Therefore, this constitutes a fourth expected early outcome of the logic model implementation.

Diagram Notes:

- A two-way arrow connects “Increased understanding of cognition among public health organizations and partners” (box 1) and “Increased capacity and ability to take action among public health organizations and partners” (box 2).
- A two-way arrow connects “Increase the integration of cognition into organizational missions and planning documents” (box 3) and “Implementation of action plans” (box 4). This indicates that cognition is expected to be integrated into planning documents as a precursor to being put into practice and that implementation of action plans will stimulate integration into other public health activities.

Relationships between Outputs and Early Outcomes

All 4 boxes in the Outputs column are bracketed together to indicate that they collectively influence the early outcomes listed in column 3.

A large arrow spans across the four boxes in the early outcomes column and points to the items in the next column—late outcomes. This signifies that the early outcomes cumulatively contribute to subsequent, later outcomes.

Late

Late outcomes, listed in the fourth column, represent additional outcomes that are expected to occur in the longer-term. These include the anticipated effect of activities; outputs and early outcomes

on various sectors including public health and partner organizations, policy makers, health care providers, and consumers (e.g., patients, family, care partners).

The first box describes the expected outcome of the HBI's activities and outputs on public health and partner organizations. As reflected in the logic model, it is expected that these organizations will become engaged and motivated to take action, have awareness of and carry out best practices and interventions; and use a consistent framework, terms, and measures in their efforts to promote cognitive health (box 1, column 4).

Policy makers also play an integral role in advancing cognitive health. Through the efforts of the HBI, in part, it is expected that policy makers will provide leadership to develop and carry out policies related to programs, services, and care for those who experience cognitive impairment and issues that affect care partners (box 2, column 4).

Another important anticipated outcome is that health care providers are more knowledgeable about dementia and have increased skills to communicate with patients and their families (box 3, column 4). Complimentary to this are consumers (patients and family) who discuss cognitive health concerns with health care providers (box 4, column 4).

These four late outcomes are bracketed together to signify that they are expected to collectively influence and lead to the distal outcomes, listed in the fifth column of the logic model.

Distal

The last box on the far right of the logic model depicts the distal, or future outcomes the HBI is working to achieve. These include improvements in ways to promote cognitive health or address cognitive impairment; increased awareness of diagnosis and productive actions among consumers and

care partners; improvements in provision of care and management of cognitive impairments that include assessment tools, communications, and care management models; and maintenance of quality of life for care partners and persons with cognitive impairment. These outcomes would accomplish the HBI's overarching goal to maintain or improve the cognitive performance of all adults. The efforts of the HBI contribute to this long-term impact, along with the work of many partners.

Evaluation:

Across the top of the logic model is an evaluation box that extends along the activities, outputs, and early and late outcomes. The arrows indicate that evaluation is part of each of these components of the logic model. As noted previously, the two-way arrows that extend from early and late outcomes to the evaluation box signifies that information gained from outcomes helps to inform future evaluation efforts.

Evaluation provides useful data and feedback to the ongoing efforts of the HBI. Evaluation information can be used to identify which activities are being carried out—the extent and quality of these activities, the outputs that have resulted, and progress toward achieving expected outcomes. Evaluation findings can then be used to refine strategies, modify activities, or enhance collaborations and partnerships. These findings can also help to document the value of the Initiative and justify continuation of efforts.

The evaluation box does not extend across the distal outcomes column given that the achievement of distal outcomes may be outside the direct influence of the HBI.

Engage Partners and Collaborators:

Horizontally, spanning across the bottom of the first four columns of the logic model is an elongated box reflecting the importance and relevance to engage partners and collaborators in every element of the model. Arrows from the box, “Engage Partners and Collaborators,” link to the activities, outputs, and early or late outcomes columns, and indicate the engagement of partners and collaborators in each aspect of the HBI.

Contextual Conditions:

“Contextual Conditions” also span horizontally along the bottom of the logic model. These conditions include factors external to the HBI that may not be within its control, but that may influence the implementation of activities, resulting outputs and achievement of outcomes. Contextual factors may include resources; socioeconomic and political factors (e.g., national, state, local priorities); as well as policy environments. The one-directional arrows rising up from the “Contextual Conditions” box signifies that these factors may influence any or all components of the logic model.

References

1. Alzheimer’s Association and Centers for Disease Control and Prevention. *The Healthy Brain Initiative: The Public Health Road Map for State and National Partnerships, 2013–2018*. Chicago, IL: Alzheimer’s Association, Centers for Disease Control and Prevention; 2013.
2. US Department of Health and Human Services. National plan to address Alzheimer’s disease. 2013 update. <http://aspe.hhs.gov/daltcp/napa/NatlPlan2013.pdf>. Accessed February 27, 2014.
3. Kerner, J. Translating research into policy and practice: who’s influencing whom? Presented at: The Annual National Health Policy Conference. Washington, DC; February 2007.

4. McGartland RD, Schoenbaum EE, Lee LS, et al. Defining translational research: implications for training. *Acad Med*. 2010;85(3):470–475. doi: 10.1097/ACM.0b013e3181ccd618

Other resources:

US Department of Health and Human Services. *Healthy People 2020*. Washington, DC.

<http://healthypeople.gov/2020/default.aspx>. Accessed September 12, 2013.

US Department of Health and Human Services. CDC's Prevention Research Centers Program Funding Opportunity Announcement (FOA). FOA #DP 14-001., 2014.