NORTH CAROLINA INSTITUTE OF MEDICINE
2011 TASK FORCE ON EVIDENCE BASED STRATEGIES
2016 UPDATES TO RECOMMENDATIONS

INTRODUCTION

In 2012, the North Carolina Institute of Medicine (NCIOM) collaborated with the North Carolina Center for Public Health Quality, Center for Health North Carolina (now Population Health Improvement Partners), and the Department of Public Health to form a Task Force. The Task Force on Implementing Evidence-Based Strategies in Public Health was charged with developing recommendations to assist public health professionals in the identification and implementation of evidence-based interventions (EBIs). This report builds on previous efforts by focusing on what can be done at the local level by health departments to improve health outcomes as described in the Health North Carolina 2020 objectives. The Task Force was chaired by Alice Ammerman, DrPH, Director of the Center for Health Promotion and Disease Prevention and Professor in the Department of Nutrition at Gillings School of Global Public Health, University of North Carolina at Chapel Hill; Laura Gerald, MD, then State Health Director at the Division of Public Health, North Carolina Department of Health and Human Services [now serves as president of the Kate B. Reynolds Charitable Trust]; and Gibbie Harris, then Health Director at Buncombe County Health Department [now at Praxis Partners for Health].

The full Task Force had 30 additional members including representatives from state and local agencies, health care leaders, public health experts, foundation leaders, and key stakeholders. A Steering Committee comprised of four individuals guided the agenda of the Task Force. The Task Force began meeting in the March of 2012 and held six day-long sessions through September of 2012. The final report, entitled, *"Improving North Carolina's Health: Applying Evidence for Success,"* was released in September 2012.

The Task Force made a total of 6 recommendations addressing the following guiding principles: (1) identify how widely EBIs are being applied in local health departments, as well as challenges for their utilization; (2) provide recommendations as to how the Division of Public Health can assist health departments in increasing access to and adoption of EBIs for prevention and wellness; (3) provide information about easy-to-access and user-friendly resources to assist local health departments and community partners in the application of evidence-based public health strategies; and (4) identify areas where cross-jurisdictional efforts could increase the development, identification, implementation, and dissemination of EBIs.

The following document details the progress on the recommendations of the NCIOM Task Force on Evidence-Based Strategies. The report includes the original recommendations in bold along with a description of the progress, to date, on the implementation of the recommendations.[1]

ACKNOWLEDGEMENTS

[1] Note: The original Task Force recommendations used the phrase, "Evidence-based strategies." (EBS) Since the 2012 report release, the phrase "Evidence-based interventions" (EBI) has become more widely used. For this update, the authors have kept "evidence-based strategies" (or EBS) in the original recommendations, but use "evidence-based interventions" (or EBI) in the update text.

The NCIOM would like to thank the following people and organizations for providing information to including in the 2016 update to the report:

From Population Health Improvement Partners (Improvement Partners): Joanne Rinker, Senior Director for Community Health Improvement, and Laura Edwards, Senior Vice President for Strategic Initiatives.

We would also like to thank Sharon Rhyne, Chronic Disease and Injury Section, North Carolina Department of Public Health; Anna Thomas, then Dare County Health Director; Andrea Radford, DrPH, UNC Sheps Center; Greg Randolph, MD, MPH, President & CEO of PHIP; Eleanor Howell, State Center for Health Statistics; Kristena Clay-James, HIV Prevention, Department of Public Health; Shelby Weeks, Baby Love Plus Program, Division of Public Health; Elizabeth Freeman-Lambar, Office of Rural Health; Janice Peterson, PhD, Division of Mental Health, Developmental Disabilities, and Substance Abuse Services; and Donna Alberton, PHIP.

TOTAL RECOMMENDATIONS: 6

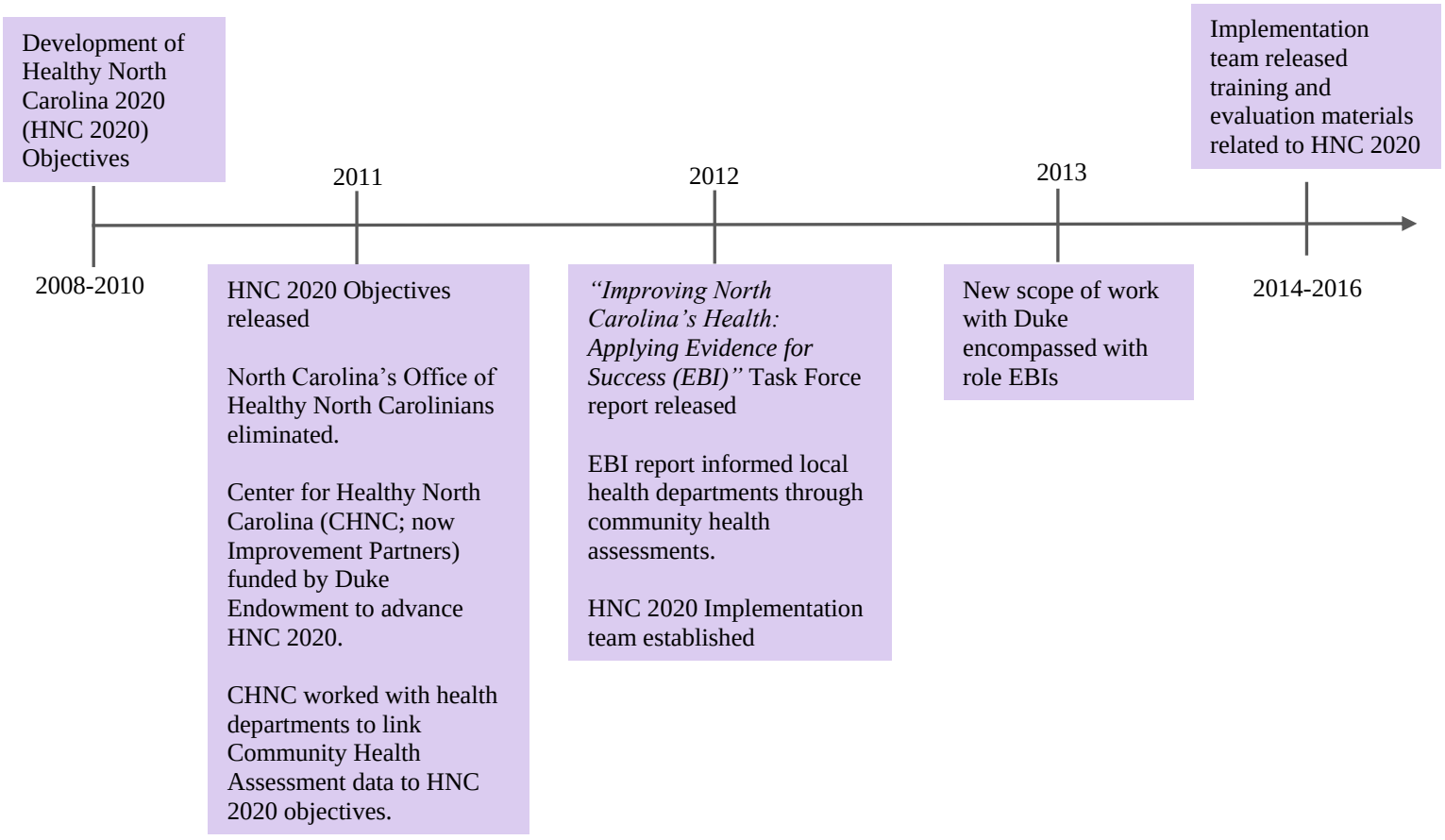
- **FULLY IMPLEMENTED: 5 (83%)**
- **PARTIALLY IMPLEMENTED: 1 (17%)**

Background

Through collaboration with the Department of Public Health, NCIOM and other state partners developed a roadmap to improve public health efforts and improve quality of life for North Carolinians with two publications: the *Prevention Action Plan for North Carolina* and the *Healthy North Carolina 2020: A Better State of Health* (HNC 2020) reports. The release of HNC 2020 spurred the initiation of a Task Force focused on helping local health departments implement evidence-based interventions to address priority areas. The Task Force on Implementing Evidence-Based Strategies in Public Health presented six final recommendations which guided the creation of a HNC2020 Implementation Team. This team was comprised of staff from the Department of Public Health and other agencies. The Center for Healthy North Carolina partnered with the Implementation Team to oversee the Task Force recommendations as well as the greater HNC 2020 objectives. A timeline of events are depicted in Figure 1.

This document provides an update of the implementation of the Task Force recommendations.

Timeline of Events.



Recommendation 5.1 **FULLY IMPLEMENTED**

Educate State and Local Public Health Staff about Evidence-Based Strategies

a) **State public health staff, in partnership with other state agencies, the National Implementation Research Network (NIRN), the North Carolina Institute for Public Health (NCIPH), the Center for Training and Research Translation (Center TRT) at the University of North Carolina at Chapel Hill, the North Carolina Center for Public Health Quality (NC CPHQ), and other appropriate partners should identify or, if necessary, develop generic trainings about evidence-based strategies (EBSs), and offer these trainings in multiple settings, including but not limited to existing state and regional public health meetings, Area Health Education Centers (AHECs) and online. These generic trainings should focus on the reasons for the importance of implementing evidence-based strategies. These trainings should include information on national compendiums of evidence-based strategies; how specific programs, policies, and clinical interventions are evaluated by different organizations to determine whether they are evidence-based; the importance of selecting appropriate strategies to meet the communities' needs; implementing EBSs with fidelity; and the need to include monitoring and feedback loops to ensure that the EBS is achieving its desired goals. The trainings should also highlight examples of successful EBSs that have been implemented in North Carolina.**
b) **The Division of Public Health should ensure that appropriate state (including regional) staff receive EBS training. Specifically, all Division directors, management, and key program staff should attend or participate in the generic EBS training to understand the importance of implementing EBSs and gain a basic understanding of what is needed to ensure that EBSs are implemented with fidelity.**
c) **Local health department directors should ensure that appropriate staff receive EBS training. Specifically, all members of the local health department leadership and senior management, those involved in selecting EBSs, and other relevant staff should attend or participate in the generic EBS training to understand the importance of implementing EBSs and gain a basic understanding of what is needed to ensure that EBSs are implemented with fidelity.**
d) **Partner organizations, including but not limited to the Center for Healthy North Carolina, NCIPH, Center TRT, NIRN, NC CPHQ , the Department of Public Health at East Carolina University, the North Carolina Center for Health and Wellness at the University of North Carolina at Asheville, and the Family and Consumer Sciences Department at North Carolina State University, should disseminate information about the reason to implement evidence-based strategies, as well as examples of successful implementation and impact on health outcomes.**

The University of North Carolina (UNC) Center for Training and Research Translation (Center TRT) collaborated with the following partner agencies to develop an evidence-based intervention (EBI) training: North Carolina Institute for Public Health (NCIPH), Population Health Improvement Partners (Improvement Partners), Eastern Area Education Center (EAHEC), Mountain Areas Health Education Center (MAHEC), and Granville Vance District Health Department.

The EBI training, established in 2013, aimed to build EBI capacity in public health and empower participants to produce positive change in population health. The structure of the training included 5 webinars followed by 2-day face-to-face workshops and a few additional post-training webinars to reinforce and expand upon the information presented at the in-person trainings. The training curriculum covered general topics of EBI such as an overview of EBIs, Healthy North Carolina 2020 (HNC 2020), phases of community health assessments, and program evaluation. The target audience for these trainings were local health departments, community coalitions, non-profits, hospitals, and others whose objective is to improve population health. The trainings were offered four times, in March, April and September 2015 and February 2016 in Raleigh, Winston-Salem, Hickory, and Greenville respectively, reaching many local public health and partner agency staff. After each training, the EBI curriculum was revised based on input from participants. While the initial trainings were broad, the latter two trainings focused on EBI for obesity-related outcomes.

A grant through NCIPH resulted in the development of two obesity-specific trainings. These obesity-specific trainings held a similar structure to the general training but also had additional components. After each obesity-specific training teams received coaching and technical assistance to aid them on implementing EBIs for their respective projects. Coaching and technical assistance were focused on the following dimensions: identification, selection, implementation, evaluation, and sustainability.

No future trainings are currently scheduled. Past trainings are archived and accessible to the general public. Additional information on training can be accessed at http://nciph.sph.unc.edu/training/programs/ebph/

Recommendation 5.2 **FULLY IMPLEMENTED**

Selected Appropriate Evidence-based Strategies

a) **To support the selection of appropriate evidence-based strategies (EBSs) at the local level, the Division of Public Health (DPH) should, to the extent possible:**
    1. **Work with local health directors, academic institutions, and partnering organizations to identify two EBSs for ten HNC 2020 objectives identified as priorities in the action plans submitted to DPH by local health departments (LHDs). DPH should identify these state-selected EBSs no later than July 1, 2013. To the extent possible, DPH should focus on EBSs that would meet the standards for best or leading practices. DPH and collaborating partners should also try to identify a mix of evidence-based policies, programs, and clinical interventions, and should focus on those EBSs that, based on prior evaluation evidence, would have the best chance of having a positive health impact in communities throughout North Carolina.**
    2. **Identify at least one expert within DPH, or another appropriate state agency, academic institution, or partnering organization for each of the selected EBSs. Each EBS expert should be able to provide information about the populations targeted, strength of the evidence and, to the extent possible, the expected impact; costs, staffing requirements, and other necessary implementation resources; implementation barriers; the availability of implementation and evaluation resources including training, technical assistance, coaching, and evaluation tools; any potential funding sources (if known); and information**

about any other communities in North Carolina that have implemented the same EBS.

b) **The Center for Healthy North Carolina should maintain a website with information about EBSs. The information maintained in the Center for Healthy North Carolina's website should be linked to other state websites, including HealthStats for North Carolina and the North Carolina Center for Public Health Quality. Specifically, the website should include:**
    1. **Detailed information about each of the EBSs identified by DPH, along with a DPH or other expert for each of the selected EBSs.**
    2. **Information about other EBSs being supported by DPH.**
    3. **Information about communities in North Carolina that are implementing each of the selected strategies.**
    4. **Links to national compendiums of EBSs to assist communities in selecting other appropriate strategies.**
    5. **A search or sorting mechanism so that LHDs can easily identify sources of EBSs with potentially appropriate program, clinical, and policy strategies by HNC 2020 objectives.**
    6. **Links to organizations that provide information and/or assistance with implementing EBSs including, but not limited to, the National Implementation Research Network.**
    7. **Archived webinars on the importance of implementing EBSs (basic training), as well as more detailed training, if available, about those EBSs being supported by DPH.**
c) **DPH should select EBSs and assist in statewide roll-out when implementation of a specific EBS is required as part of state or federal law, or supported by changes in clinical standards of care.**

The Healthy North Carolina 2020 (HNC 2020) Implementation Team, a joint venture between the Division of Public Health (DPH), other state agencies, and Improvement Partners (formerly the Center for Healthy North Carolina), was established in 2012 and charged with five tasks. First was to identify five focus areas from the 13 listed in the HNC 2020 Action Plan. These focus areas were priority areas for multiple counties/groups that the Implementation Team could best support including local health departments and community organizations. Local health departments were consulted throughout the process of developing these five priorities. The second task was to construct an inventory of technical assistance programs currently offered by DPH and conduct a gaps analysis with recommendations. Third was to identify and combine available EBIs and make them available on the HNC 2020 website. Fourth was to develop recommendations for changes to HNC 2020 objectives, and finally, to serve in an advisory capacity to the Center for Healthy North Carolina.

The Implementation Team began a gaps analysis in September 2012 to evaluate each of the 40 HNC 2020 objectives and it was completed in December 2013. To aid in the development of the gaps analysis, all DPH branches and sections reported: (1) whether or not technical assistance was provided by DPH, (2) whether or not funding was provided by DPH; and (3) identification of partner agency technical assistance and/or funding resources. A product of the gaps analysis was the development of a matrix identifying the breadth, not depth, of technical assistance and funding available from DPH at the time of the assessment. Major findings of the analysis were that DPH does offer technical assistance for issues addressing 30 of the 40 objectives in 12 of the 13 HNC 2020 focus areas; additionally, DPH offers funding that targets 18 objectives in 8 of the focus areas. There was not a singular DPH section or branch

that was responsible for providing technical assistance and funding related to 10 objectives in 4 focus areas. Technical assistance or funding resources that were not provided by DPH were identified for 20 of 40 objectives and in 10 of the 13 focus areas.

No additional gaps analyses are scheduled in the future. Information and resources to implement EBI around the state is available on the DPH website at: http://www.publichealth.nc.gov/hnc2020/docs/GapsAnalysisWithRecommendations-022613.pdf.

In addition to the priority setting process and the gaps analysis, DPH, in partnership with other state agencies and organizations like Improvement Partners, developed IMAPP (https://www.ncimapp.org/), a web-based tool to help local health departments, health care providers, and community organizations select and implement EBIs in their own communities. The tool was informed by the US Department of Health and Human Services' 9 Public Health Aims for quality to: (1) identify, access the evidence, and select interventions that suit community contexts; (2) find appropriate implementation resources; (3) interact with a network of organizations or agencies implementing the same or similar interventions in their communities; and (4) contribute to the knowledge base. Interventions are continuously being added to the tool by the DPH, other experts affiliated with the Improvement Partners, and users of the tool. All EBI additions to IMAPP must fall within the predetermined 5 priority focus areas and 10 priority objectives.

IMAPP provides technical assistance throughout the selection and implementation process. This is also being offered to all IMAPP team participants; additionally, evaluation and sustainability training were offered via webinar to all IMAPP teams.

In 2014, DPH conducted an analysis to identify the greatest priorities that emerged from the Community Health Assessments submitted by all local health departments. The top three priorities were cardiovascular disease/hypertension, obesity, and diabetes. Local health directors decided to have each county that selected at least one priority area implement one evidence-based intervention for each of the three priority areas. The cardiovascular/hypertension strategy selected was "Referral to Living Healthy – Chronic Disease Self-Management Program." The obesity strategy was "Implementing comprehensive early care and education standards and policies for nutrition and physical activity." Finally, the diabetes strategy selected by local health departments. Additional information about the process of selecting these intervention strategies can be found at: http://publichealth.nc.gov/lhd/cha/docs/HistoryofLocalHealthDirectorsAdopting-EBS-June2014.pdf.

Recommendation 5.3 **FULLY IMPLEMENTED**

- **a) The Division of Public Health (DPH) should build state and local staff capacity around implementation science, coaching, and quality improvement methods.**
  - **1) DPH should identify champions for EBSs in each Branch and within regional staff. These champions should be trained in implementation science and quality improvement to understand the necessary steps to ensure that evidence-based programs, policies, and clinical interventions are implemented with fidelity. These champions should be able to assist the state and local health departments to support broad array of EBSs, rather than focus on implementation of a specific EBS.**
  - **2) Provide training to state, regional, and local public health staff— through the North Carolina Center for Public Health Quality and other partners—about**

quality improvement methods, including rapid cycle testing (PDSA cycles), monitoring, and feedback loops to ensure successful implementation.

3) **Disseminate information on grant writing trainings.**

b) For each of the state-selected evidence-based strategies (EBSs), the Division of Public Health (DPH) should:

1) **Disseminate information on funding opportunities when available.**
2) **Promote collaborative learning approaches among local health departments (LHDs) and regional staff who are working on implementing similar EBSs.**
3) **Celebrate implementation successes and distribute information about successes to other health departments across the state.**

c) When leading a statewide or multi-county implementation of an EBS, DPH should:

1) **Pursue funding opportunities when needed to support statewide or multi-county implementation of EBSs. Select a mix of different LHDs to pilot a statewide roll-out of an EBS, or when funding is only available to support implementation in a small number of counties. The LHD partners should be selected with the goal of ensuring successful implementation. Selection criteria should include, but not be limited to: need, leadership support, past history of successful implementation of EBSs, staffing and resource capacity, and commitment to success. To the extent possible, DPH should select a cross-section of LHDs that is broadly representative of the state including rural and urban health departments in different geographic areas of the state, those covering Tier 1 low-resource communities, and single county and district health departments.**
2) **Partner with LHDs and other organizations early in the implementation process in order to include the important knowledge and perspectives these groups bring as well as to improve the likelihood of a successful spread of the EBS across the state.**
3) **Use a quality improvement rather than a quality control approach to collaborative partnerships with LHDs. Provide training, technical assistance, and coaching, or ensure that these resources are available through national program staff, or other partnering organizations. This training, technical assistance, and coaching should be available to all LHDs that are seeking to implement the specific EBS (whether funded through the state or not), unless directly prohibited by national program rules, or the state lacks sufficient resources to assist all LHDs that request help. If resources are limited, DPH staff can phase-in the technical assistance on a rollout basis. Training should be experientially based to give participants the skills needed to implement the EBS in their own communities. To the extent possible, LHD staff should be involved in the trainings so that they can explain how they addressed implementation barriers to those interested in implementing a similar strategy.**

d) To support successful implementation at the local level, LHD leadership should:

1) **Serve as champions within their own LHDs to implement EBSs to address priority community health objectives.**
2) **Create teams of trained staff who can help support implementation of specific evidence-based strategies in the LHD. Ensure that every staff member who is involved in the implementation of an EBS receives appropriate training.**
3) **Engage community partners as necessary to the success of the EBS.**

4) **Serve as a resource to other local health departments who are interested in implementing a similar EBS in their community.**

Within each branch of the Division of Public Health, EBI champions have been identified. EBI champions serve as a resource for their DPH program and the stakeholders they serve, connecting them with resources and guidance related to the stakeholder's EBI needs.

Improvement Partners is continuing to work closely with DPH to provide EBI trainings as well as quality improvement methods to monitor and successfully implement EBIs. In addition, Improvement Partners is adding technological components to IMAPP to provide up-to-date information about funding opportunities for data collection, tracking, and evaluation methods around EBI implementation. Improvement Partners is providing on-going technical assistance to community coalitions that are implementing EBIs, facilitating linking communities and partner agencies, and providing a whole community approach.

Improvement Partners profiled multiple communities who have successfully implemented EBIs. Published mini case studies are available online at: www.improvepartners.org. Improvement Partners is a general resource providing technical assistance to local health departments as they work on implementing EBIs. Improvement Partners provides guidance on IMAPP, technical assistance around EBI, and links health departments together if they are working on the same EBI, as a way to disseminate best practices.

The IMAPP site contains EBI modules focused on each of the following priority areas: cardiovascular disease, diabetes, and obesity. Additionally, DPH developed an online resource section where community coalitions can go to obtain resources on how to build a community coalition, who to invite, how to engage participants, and how to evaluate and sustain a chosen EBI. This information has migrated and can now be found on the resources page of the IMAPP website https://www.ncimapp.org/resources/.

Recommendation 5.4 **PARTIALLY IMPLEMENTED**

Monitor and Evaluate Process and Outcomes

a) **To evaluate the effectiveness of state-selected evidence-based strategies (EBSs) being implemented in North Carolina, the Division of Public Health (DPH) and local health departments (LHDs) should, in collaboration with academic institutions and other partner organizations:**
    1) **Identify or develop an evaluation design and data collection tools for each state-selected EBS appropriate to the level of evidence-base that already exists.**
    2) **Provide training and coaching to local staff to enable them to collect the appropriate data.**
    3) **Gather data from LHDs and analyze process and outcome measures at the state level to determine impact of EBSs for the state and local counties.**
    4) **Assist with dissemination of program results.**
b) **If a LHD chooses to implement an EBS that is not state-selected but that is considered best or leading the LHD should work with the national program office to identify the information needed to ensure that the program has been implemented with fidelity, and collect the appropriate data.**
    1) **Ensure staff receive necessary training on collecting data on EBSs.**

2) **Collect requisite process and outcome data and submit to the state for analysis.**
3) **Review local process and outcome measures and make necessary changes in the program implementation to ensure fidelity to key program components.**

c) **If a LHD chooses to implement an EBS that is promising or emerging, then the LHD should develop a more thorough evaluation plan that captures both process and outcomes measures.**

Local health departments and community coalitions in North Carolina piloted outcome measures and data collection tools developed by Improvement Partners. These outcome and data collection tools were integrated into IMAPP. Improvement Partners are in the process of pairing outcome measures and data collection tools to EBIs in order to expand the IMAPP database.

Improvement Partners facilitated a webinar in April 2014 to address evaluation and return on investment and is working with the creators and facilitators of the EBIs included in IMAPP to find appropriate evaluation tools to add to the site for each intervention. The North Carolina State Center for Health Statistics provided data to PHIP to analyze progress towards reaching the HNC 2020 goals. Improvement Partners reported results on the progress towards reaching the HNC 2020 goals at the State Health Directors Conference in January 2014 and January 2016 in Raleigh. Progress reports are also available online (http://publichealth.nc.gov/hnc2020/docs/AnnualDataUpdate-January2015.pdf).

Currently, Improvement Partners is tracking the progress of multiple community coalitions that have adopted EBIs towards meeting HNC 2020 objectives, including: Harnett, Haywood, Wilson, Scotland, Dare, Robeson, Cumberland, Wayne, Yancey County, and the North Eastern North Carolina Partnership for Public Health. Additionally, Improvement Partners is working with sites that received funding from the Duke Endowment's Healthy People, Healthy Carolina initiative to provide coaches and technical assistance for identifying, implementing, and sustaining EBIs around physical activity and nutrition. The aim is to improve these behaviors to prevent chronic diseases, primarily cardiovascular disease and diabetes. These communities are Catawba, Wilkes, Chatham, Granville Vance and Richmond Montgomery.

Recommendation 5.5 **FULLY IMPLEMENTED**

Revise the consolidated agreement

a) **If the Division of Public Health (DPH) provides the necessary support as reflected in Recommendations 5.1-5.4, DPH should revise the 2013 Consolidated Agreement to reflect a new requirement that local health departments (LHDs) implement two new evidence-based strategies (EBSs) (or expand an existing EBS to a new target population) to address at least two HNC 2020 priority objectives identified through the community health assessment and articulated in the LHD action plans. The priority objectives should be selected from at least two of the HNC 2020 focus areas.**
b) **DPH should change the community action plans to require LHDs to identify the EBSs that they have selected, along with a staffing, training, implementation, and monitoring/evaluation plan.**

The Division of Public Health revised the Consolidated Agreement to include the following language, effective July 1st 2013: "For action plans, the agency shall include a minimum of two new evidence-based strategies (or expand current evidence-based strategies to new target populations) to address at least two Healthy North Carolina 2020 objectives from different focus areas. There are a total of 13 focus areas and 40 objectives within HNC 2020. The EBIs shall be highlighted in the Action Plan." Effective July 1, 2014 local health departments shall include a plan for staffing, training, implementation and monitoring/evaluation for each EBI listed in the Action Plan. Based on the results of the community health assessment, local health departments will be encouraged to participate in the same EBI if they identify cardiovascular disease, diabetes or obesity as a focus area."

More information about this project can be found at
http://publichealth.nc.gov/lhd/cha/docs/HistoryofLocalHealthDirectorsAdopting-EBS-June2014.pdf

Recommendation 5.6 **FULLY IMPLEMENTED**

Collaborate with Partner Organizations

a) **The Center for Training and Research Translation (Center TRT), within the University of North Carolina at Chapel Hill, should convene academic and other appropriate organizations to work with the Division of Public Health and local health departments in implementing evidence-based strategies to address the Healthy North Carolina (HNC 2020) objectives. Some of the other academic or community partners may include, but not be limited to: the North Carolina Institute of Public Health (NCIPH), the North Carolina Center for Public Health Quality, the National Implementation Research Network (NIRN), the Department of Public Health at East Carolina University, North Carolina Center for Health and Wellness, the Family and Consumer Sciences Department at North Carolina State University, and the Center for Healthy North Carolina.**
b) **To the extent possible within existing funding, these academic and nonprofit organizations should:**
    1) **Assist the state in identifying appropriate EBSs to address priority HNC 2020 objectives.**
    2) **Provide implementation support such as training, coaching, or other technical assistance.**
    3) **Assist the state in developing appropriate data collection instruments needed for evaluation, or help communities develop implementation plans (if the EBS is not one of the state-selected EBSs).**
    4) **Assist with the collection and analysis of evaluation data.**

UNC Center for Training and Research Translation (Center TRT) brought together academic and other organizations to work with Department of Public Health (DPH) and local health departments in implementing EBI to work towards the HNC 2020 objectives. Improvement Partners collaborated with some of the following organizations local health departments, UNC, ECU, UNCA, North Carolina Community Health Center Association, and the UNC Center for Health Promotion and Disease Prevention. The results of this partnership resulted in the EBI trainings referenced under Recommendation 5.1.