

## Addressing the Social Determinants of Health through the Community Health Improvement Matrix



### Introduction

In summer 2014, the National Association of County and City Health Officials (NACCHO) reviewed local health department (LHD) community health improvement plans (CHIPs) and non-profit hospital community benefit implementation plans (IPs). The purpose of the initial review was to assess plans for including activities designed to address the Social Determinants of Health (SDOH) and plan for a more in-depth qualitative analysis of CHIPs and IPs. The review showed that determining whether an activity addressed the SDOH was more complex than could be described by either a dichotomous variable or a linear scale. To better assess whether CHIPs and IPs addressed the SDOH, NACCHO developed the “Community Health Improvement Matrix,” a bivariate mapping of prevention and intervention levels.

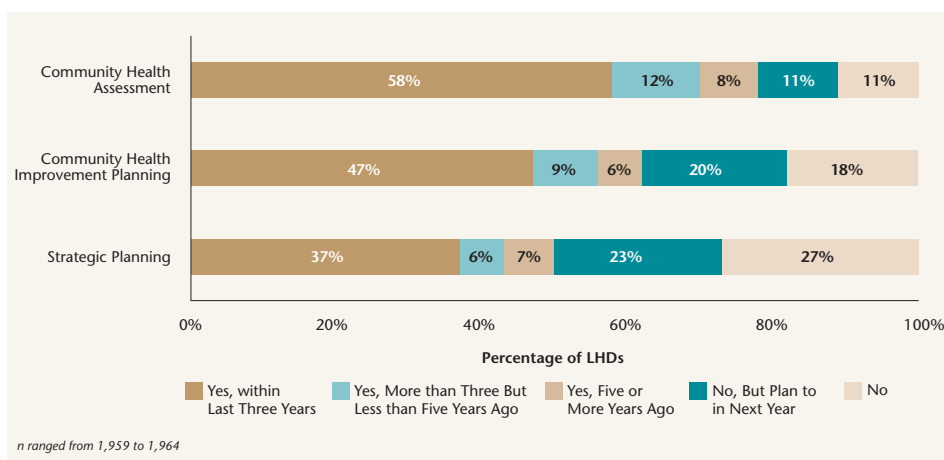
### Background

Recent developments have generated attention to the field of community health assessment and improvement planning. First, the Public Health Accreditation Board requires LHDs interested in applying for voluntary accreditation to submit

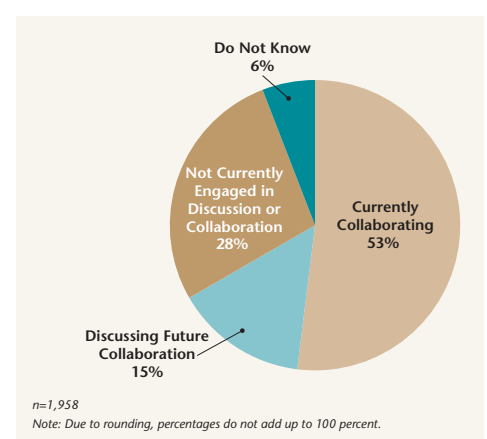
completed community health assessments (CHAs) and CHIPs.<sup>1</sup> Similarly, the Patient Protection and Affordable Care Act (ACA) expanded federal community benefit requirements for non-profit hospitals by requiring them to submit community health needs assessments (CHNAs) and IPs to the Internal Revenue Service.<sup>2</sup> NACCHO’s 2013 National Profile of Local Health Departments (Profile) study showed that many LHDs were conducting CHAs and CHIPs (Figure 1).<sup>3</sup>

The Profile study also showed that a majority of LHDs were collaborating with hospitals on CHA efforts (Figure 2), possibly reflecting the ACA requirement that a CHNA “take into account input from persons who represent the broad interests of the community served by the hospital facility, including those with special knowledge of or expertise in public health.”<sup>2</sup> The requirement is consistent with the second curve in population health,<sup>4</sup> which includes among its six strategies a call for “mature community partnerships to collaborate on community-based solutions.” CHAs and improvement planning efforts, whether led by the hospital, the LHD, or a community coalition including both parties, enable LHDs to collaborate with communities to improve population health.

**FIGURE 1. LHD PARTICIPATION IN COMMUNITY HEALTH ASSESSMENT, COMMUNITY HEALTH IMPROVEMENT PLANNING, & STRATEGIC PLANNING<sup>3</sup>**



**FIGURE 2. COLLABORATION BETWEEN LHDS & NON-PROFIT HOSPITALS ON COMMUNITY HEALTH ASSESSMENTS<sup>3</sup>**



The SDOH began to gain prominence around the turn of the twenty-first century; with the SDOH came increased recognition of the centrality of communities to population health.<sup>5</sup> In 2008, the World Health Organization defined the SDOH as “the circumstances in which people are born, grow up, live, work and age, and the systems put in place to deal with illness. These circumstances are in turn shaped by a wider set of forces: economics, social policies, and politics.”<sup>6,7</sup> Along with the development of the SDOH framework, various community or “place-based” efforts were launched to address public health problems from a population health perspective.<sup>8,9</sup> These approaches are particularly resonant with CHA/CHIP processes, which can become the catalyst for place-based, multi-sector initiatives, reaching beyond the traditional healthcare arena and maximizing the benefits to community health.<sup>10</sup>

Although the SDOH framework seems to offer a central opportunity to improve the health of communities, little is known about the extent to which activities related to the SDOH are included in CHIPs and IPs. An effort to study the results of community benefit activities concluded that “in 2009, tax-exempt hospitals varied markedly in the level of community benefits provided, with most of their benefit-related expenditures allocated to patient care services. Little was spent on community health improvement.”<sup>11</sup> A more recent study of 2011 non-profit hospital Schedule H reporting suggests that the amount spent on community health improvement is increasing; however, the extent to which these dollars represent an investment in the SDOH is unknown.<sup>12</sup> On the public health side, although CHIPs do include many community health activities, little is known about the extent to which LHDs are incorporating activities directed toward the SDOH in CHIPs.

## Methodology

NACCHO drew a convenience sample of 36 CHA/CHIPs and CHNA/IPs from a database of 502 reports developed in the spring and summer of 2013.<sup>13</sup> Most reports in the database were separate CHAs and CHIPs or CHNAs and IPs; to look broadly at the question of the inclusion of the SDOH, NACCHO included in the original sample all 36 reports from the database that included both assessment and implementation/improvement planning efforts. From these 36 reports, NACCHO selected 12 for analysis. The final sample included five LHD CHA/CHIPs and seven hospital CHNA/IPs from 10 states, with LHD jurisdictional or hospital service area population sizes ranging from rural (population of less than 25,000) to urban (population of more than one million).

NACCHO scanned each report (both assessment and improvement/implementation sections) for the phrase “social determinants”; reviewed the CHIP or IP activities section; and analyzed each activity within the section for its application to the SDOH, using as a preliminary criterion that the activity must have addressed the context or conditions in which people live.

Classifying these activities as “SDOH-related” was challenging: inter-rater reliability was lacking, and reaching consensus on whether an activity did or did not address the context for health was difficult. An effort to resolve measurement problems by quantifying the extent to which an activity addressed the social determinants failed, as well. In the end, reviewers decided to err on the side of inclusiveness and counted some items that arguably might not be considered as SDOH-related.

## Findings

Among the 12 reports reviewed, three reports contained the phrase “social determinants.” In the CHIP or IP activities sections, four improvement/implementation plans had no SDOH-related activities; three had less than 10% of their total activities; four had between 10% and 20% of their total activities; and three had more than 20% of their total activities. Among the 298 total improvement/implementation activities contained in the 12 reports, 35 activities (11.7%) addressed an SDOH.

## Discussion

The difficulties of determining whether activities from a hospital IP or an LHD CHIP addressed the SDOH have been instructive. Even when the question was reframed to measure the extent to which an activity addressed the SDOH, reaching a conclusion was challenging. Communities address health problems on many levels of prevention and intervention. Clearly, a different approach is necessary to capture the complexity and nuance of community health improvement/implementation activities.

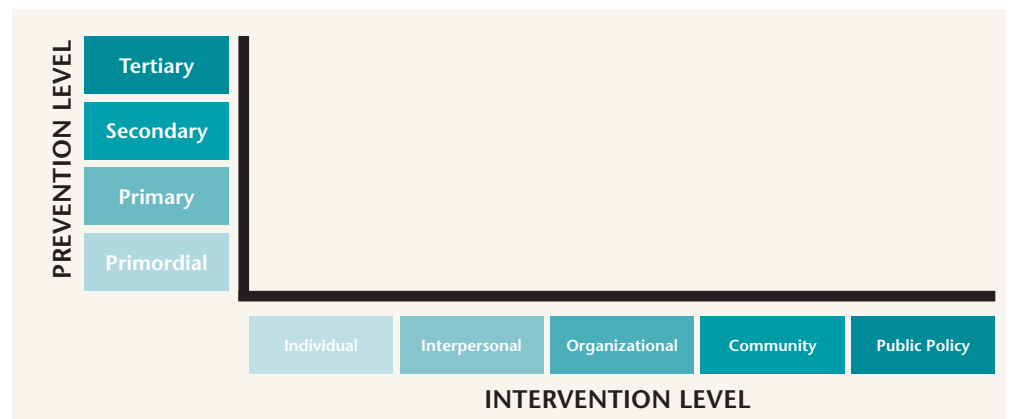
NACCHO developed the Community Health Improvement Matrix, a bivariate map that includes the level of prevention on the vertical axis and the level of intervention on the horizontal axis (Figure 3), to conceptualize all community health improvement/implementation activities. The matrix’s prevention levels include the three traditional public health categories: primary (reduce susceptibility or exposure to health threats), secondary (detect and treat disease in early stages), and tertiary (alleviate the effects of disease and injury).<sup>14,15</sup> Additionally, NACCHO added a relatively new category: primordial (preventing the emergence of predisposing social and environmental conditions that can lead to causation of disease).<sup>16</sup> The matrix’s intervention levels are built on the Social Ecological Model and include individual, interpersonal, organizational, community, and public policy.<sup>17</sup> For example, if an activity is aimed at improving the choices in school vending machines, the level of intervention is organizational; in contrast, if the activity involves a school curriculum on substance abuse, the level of intervention is the individual. Although the bivariate approach does not begin to address the many dimensions and complexities of the SDOH, it may provide a beginning point for community dialogue through community health assessment and planning processes.

Figure 4 provides an example of how the Community Health Improvement Matrix applies in a bivariate mapping of improvement/implementation activities related to heroin use. The naloxone treatment to prevent death in case of a heroin overdose would be mapped to an individual target and a tertiary prevention level. The DARE (Drug Abuse Resistance Education) campaign is targeted to individual students (even though it is located within schools), so it is an individual-level intervention at a primary level of prevention. The drug courts concept is designed to capture drug offenders at an early stage and prevent their further drug use, making it a secondary prevention through an organizational (the establishment and support of the special court) intervention. Unemployment has a negative impact on health overall and on substance abuse in particular;<sup>18</sup> efforts to establish full employment opportunities in communities address the context in which people live.<sup>6</sup>

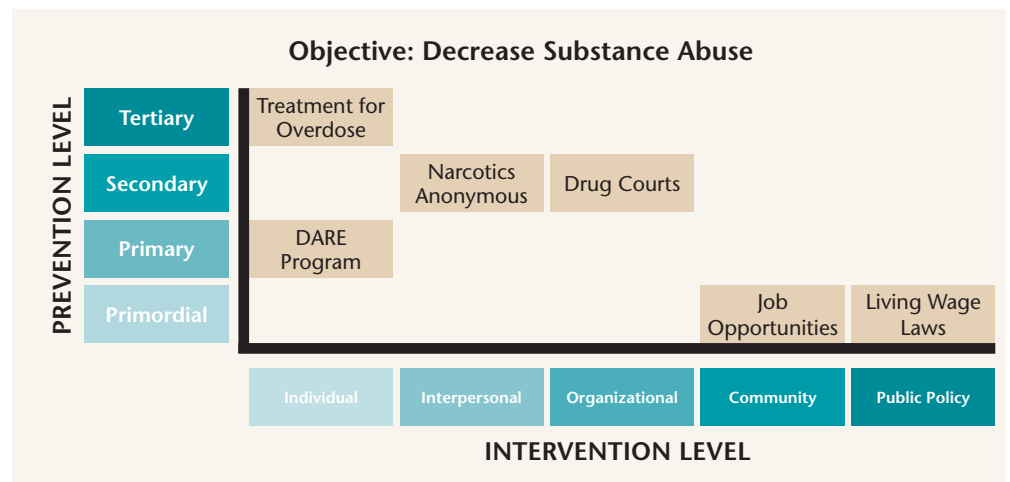
## Conclusion

The Community Health Improvement Matrix can enable LHDs and non-profit hospitals to work together on planning improvement/implementation activities, designating appropriate leads, and addressing the SDOH. The two variables, prevention level and intervention level, provide a beginning point for ensuring that community health improvement/implementation planning efforts include the SDOH. Additional research is needed to develop and refine the Community Health Improvement Matrix to understand the current state of the art of CHIPs and IPs, to find and promote case examples of local efforts, to understand these efforts and their implications for public health practice, and to identify what LHDs and hospitals need to better accomplish the important work of improving population health through community health assessment and planning.

**FIGURE 3. COMMUNITY HEALTH IMPROVEMENT MATRIX**



**FIGURE 4. EXAMPLE OF COMMUNITY HEALTH IMPROVEMENT MATRIX**

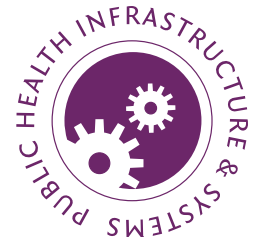


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## [ RESEARCH BRIEF ]

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