Advancing Community-Level Core Measurement

A Progress Report and Workshop Summary
National Committee on Vital and Health Statistics

U.S. Department of Health
and Human Services

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This report was written by NCVHS Consultant Writer Susan Baird Kanaan, in collaboration with NCVHS members and staff.

The National Committee on Vital and Health Statistics (NCVHS) serves as the statutory [42 U.S.C. 242k(k)] public advisory body to the Secretary of Health and Human Services in the area of health data, statistics and national health information policy. In that capacity, the Committee provides advice and assistance to the Department and serves as a forum for interaction with interested private sector groups on a range of key health data issues. The Committee is composed of 18 individuals from the private sector with distinguished expertise in the fields of health statistics, electronic interchange of healthcare information, privacy and security of electronic information, population-based public health, purchasing or financing health care services, integrated computerized health information systems, health services research, consumer interests in health information, health data standards, epidemiology, and the provision of health services. Sixteen of the members are appointed by the Secretary of HHS for terms of four years each, with about four new members being appointed each year. Two additional members are selected by Congress.

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Rebecca Hines, MHS, Executive Secretary
Office of Planning, Budget and Legislation, Office of the Director
National Center for Health Statistics, CDC
Telephone: 301-458-4715 Email: vgh4@cdc.gov

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Executive Summary

As part of its multi-year effort to support the Department of Health and Human Services (HHS) in furthering improvements in health through community-level action, the National Committee on Vital and Health Statistics (NCVHS) has initiated a project to advance community-level core measurement that includes but goes beyond health services delivery.[1] NCVHS believes that a broad-based yet manageable set of community indicators would facilitate multi-sectoral collaboration and increase opportunities to improve health at the local level.[2]

Despite many increasingly favorable conditions, communities have articulated their ongoing struggle with barriers that make it difficult for them to work effectively to enhance local well-being and health equity. They are challenged to access, manage, and organize the broad range of data needed to understand and impact major health determinants, even as the growing drive for health equity heightens the demand for granular, cross-cutting data. Although a host of measures exists, there is a shortage of sub-county data, compounded by other data gaps and by issues with timeliness, standardization, analytic capacity, and data stewardship. More fundamentally, many communities remain uncertain about precisely what they should measure, given the multitude of health determinants.

To address some of these concerns, NCVHS convened a workshop in November 2015 to receive input on development of a common measurement framework and a draft roadmap for advancing this effort. The Committee brought together more than 100 community and state leaders and innovators, public health experts, national thought leaders, and federal agency representatives to participate in this work. The Committee requested input from participants in response to a two-fold charge: 1) Identify a balanced and parsimonious set of domains through which multi-sectoral community partnerships can assess, measure, and improve local health and well-being. These domains must encompass the key determinants of health and be consistent across all geographic levels. 2) Draft a Roadmap for the Department of Health and Human

[1] The National Committee on Vital and Health Statistics (NCVHS) serves as the statutory (42U.S.C.242k[k]) public advisory body to the Secretary of Health and Human Services on health data and statistics. In that capacity, it provides advice and assistance to the Department and serves as a forum for interaction with interested groups on key issues related to population health, standards, privacy and confidentiality, quality, and data access and use. Its 18 members have distinction in such fields as health statistics, electronic interchange of health care information, privacy and security of electronic information, population-based public health, purchasing or financing health care services, integrated computerized health information systems, health services research, consumer interests in health information, health data standards, epidemiology, and the provision of health services. All NCVHS reports and recommendations are online at http://ncvhs.hhs.gov/.

[2] The definition of "community" can vary, depending on the context. In the present context, our focus is on the geographic communities in which people live, learn, work, and play.

Services (HHS) to advance well-informed, community-driven action by promoting such a set of domains, along with suggested measures, to facilitate greater availability and use of data within communities.

As a starting point for the deliberations, the Committee used a straw domain framework developed by the HHS Office of the Assistant Secretary of Health, along with a draft Roadmap for supporting community-level measurement. Three panels set the stage for the discussions by relating the experiences and perspectives of a range of subject matter experts. (See the agenda in Appendix 1.)

Although they offered various suggestions for the structure and content of the domains, the participants were in broad agreement on the potential utility of a common framework that would both broaden and simplify community-level measurement. However, they stressed that such a framework must permit flexible local applications. There was consensus on the urgency of moving forward with this effort. Many participants, including federal agency representatives, expressed enthusiasm for the relevance of the project, and interest in continuing to participate in the Committee's development process.

Input from workshop participants about current work on community-oriented measurement generated strong interest in learning more about current related activities. As a result, a key outcome of the workshop is that NCVHS subsequently commissioned an environmental scan to identify existing measurement frameworks, core domains, indicators, and indicator data sets in non-health sectors. The participants also joined together to call for greater collaboration across the federal government and for greater federal support for sub-county-level measurement.

Broadly speaking, in the early stages of this project the Committee is assessing and attempting to facilitate consensus about what areas are most important to measure. Once that is accomplished, NCVHS will complete its work to develop a measurement framework and roadmap to support community-level action. It anticipates that the measurement framework and roadmap will serve as the basis for framing actionable recommendations to the Secretary of HHS for improving local data availability and use.

NCVHS and the Evolving Community Health Landscape

The November 17, 2015 NCVHS workshop, "Advancing Community-Level Core Measurement: Proposing a Roadmap for HHS," had a dual focus: first, to obtain input on development of a balanced set of domains for measuring community well-being; and second, to envision a more coordinated federal role in advancing measurement to enable successful joint efforts to improve health and well-being at the local level. The collective expertise and wisdom of meeting participants helped lay the groundwork for more effective collaboration among federal, state, and local partners.

In recent years, the Committee has studied the community health improvement movement and identified a need for a more strategic federal role to support community-based improvement efforts. As it has stated in past reports, it believes that communities are natural settings for nurturing broad-based, continuous learning systems for health.[3] The local community is where health happens, or doesn't, and where stakeholders can collaborate for combined impact on the many factors that influence health and well-being. The November workshop is the latest in a series of meetings and reports, beginning in 2011, through which NCVHS is identifying ways for the federal government to directly support local measurement efforts and help communities realize their potential as evolving learning systems for health. The resulting reports and recommendations encourage the Department of Health and Human Services (HHS) through various approaches to increase its investment in local data and capacities.

Community-driven initiatives to improve local health and well-being have grown in scope, energy, and effectiveness in recent years. This trend is strengthened and shaped by the federal data liberation initiative,[4] a growing stratum of intermediary organizations, relevant Affordable Care Act provisions on community health needs assessments (CHNAs), and shifts in health care reimbursement toward paying for value, along with the Public Health Accreditation initiative, recent Institute of Medicine (IOM) reports, and the growing demand for data by local policy-makers, among other influences.

Despite these favorable conditions, however, communities have articulated their ongoing struggle with barriers to accessing data that make it difficult for them to work effectively to enhance local well-being and health equity. They are challenged to manage and organize the broad range of data needed to understand and impact major health determinants, even as the growing drive for health equity heightens the demand for granular, cross-cutting data. Although a host of measures exists, there is a shortage of sub-county data, compounded by other data

[3] Relevant NCVHS letters and reports are listed in Appendix 2.
[4] OMB Memorandum M-13-13, Open Data Policy-Managing Information as an Asset (Open Data Policy).

gaps and issues with timeliness, standardization, analytic capacity, and data stewardship. More fundamentally, many communities remain uncertain about precisely what they should measure, given the multitude of determinants.

Measures of Community Health

Aware of these challenges, NCVHS featured as the starting point of the November 2015 workshop a draft measurement framework consisting of a set of core measurement domains being developed by the Office of the Assistant Secretary for Health (OASH) in HHS. The domain set, preliminarily titled "Measures of Community Health," is intended to provide a common language and framework for a menu of local metrics to help community partners from different sectors work together for collective impact toward improving local health and well-being.

The Acting Assistant Secretary tasked Denise Koo, MD (on assignment from CDC), with reviewing current measurement frameworks and developing a set of proposed domains for describing and assessing holistically what makes a community healthy and vital. The domains are broad categories that reflect important areas in which communities can select metrics relevant to their goals, resources, and planned interventions. Dr. Koo selected the domains for the OASH framework after reviewing major cross-cutting, health-focused metrics efforts. The proposed HHS/OASH measurement framework is weighted according to a leading model of population health determinants.[5,6] Unlike some other frameworks, it is intended for use with sub-county-level metrics. (See Appendix 3 for the OASH draft domains and source documents.)

NCVHS has often called attention to opportunities for HHS to support greater access and availability of data at the community level as a strategy for improving the health of the nation. The confluence of need and opportunity has never been greater than it is now. Reflecting on the meeting on the day after the Workshop, the Acting Assistant Secretary of Health described the present moment in history as "an inflection point that calls us to action." She predicted that the expansion of health insurance coverage and the shift in health care policy to paying for value (i.e., for health) would free the public health sector to take the lead in multi-sectoral, community-driven initiatives to improve health and well-being.[7] She added, however, that the nation will be unable to improve population health unless it "pushes off from seeing health care as the solution" and focuses instead on collective impact, orchestrated by multiple sectors. To

[5] http://www.countyhealthrankings.org/our-approach
[6] Kindig, DA, Stoddart G. (2003). What is population health? American Journal of Public Health, 93, 366-369.
[7] DeSalvo KB, O'Carroll PW, Koo D, Auerbach JM, Monroe JA. Public Health 3.0: Time for an Upgrade. AmJPubHealth, in press.

seize the converging opportunities, communities need "some [measurement] structure on the ground" that enables them to compare themselves to others and make sound decisions.[8]

NCVHS Workshop—Advancing Community-Level Core Measurement: Proposing a Roadmap for HHS

As noted, the NCVHS organizers structured the Workshop around two tasks:

1. Identifying a measurement framework consisting of a balanced and parsimonious set of domains through which multi-sectoral community partnerships can assess, measure and improve local health and well-being. These domains must encompass the key determinants of health and be consistent across all geographic levels.
2. Drafting a Roadmap for HHS to advance well-informed, community-driven action by promoting such a set of domains, along with suggested measures, to facilitate greater availability and use of data within communities.

NCVHS is assessing and aiming to facilitate consensus about what areas are most important to measure. Once that is accomplished, the Committee will identify recommendations for increasing the availability of sub-county data in the identified domains from the relevant federal agencies.

The workshop provided a rare opportunity for experts from diverse sectors around the U.S. to devote a day to sharing ideas and experiences on a subject of mutual importance. The participants in this wide-ranging yet focused discussion included public health leaders at national, state, and local levels; scholars; and decision-makers—all of them working on endeavors related to community health and well-being. More than 100 people accepted the invitation to participate, reflecting wide-spread recognition of the importance and timeliness of the project. The workshop format was designed to create multiple ways for participants to provide input and identify issues and possible solutions from their vantage points in community and state public health departments, national data organizations, health care organizations, foundations, academic institutions, and federal agencies.

Asked for their sense of the opportunities represented by this project, the participants expressed hope that it would help shift attention from data to collective action and from health outcomes to health equity and community well-being. They envisioned the availability of more useful data at the local (sub-county) level, culled from many sources, and support and participation from multiple sectors and governmental agencies. More specifically, they cited the potential for

[8] Acting Assistant Secretary for Health Karen DeSalvo, MD, in remarks to the National Committee on Vital and Health Statistics, 11/18/15.

common CHNA measures, identification of best practices, standardized data sharing and gap-filling, and new ways for society to move toward health equity. (Exhibit 1)

Exhibit 1. Featured Participant Notes on "The Big Opportunity"

- Improving small area assessment capacity and pooling/changing data collection to decrease data burden, with the goal of increasing local stakeholders' capacity to improve health and align resources
- Transitioning from sickness, disease and disparities to health, health equity, wellness and wellbeing of individuals and communities
- Measuring healthier lives and assessing the community's well being
- Ability to mine disparate data stores to populate community-level metrics
- Aligned funding for health and across sectors. How to work together to share data at local level. Sharing data, work collaboratively. Clarity on data needs informing Health IT standards to benefit community efforts.
- Secondary use of existing multi-sector information systems; linked information exchange, with win-win for all
- Multi-sector coordinated action at the local level
- Spend time on improvement, not metric development
- Better health system engagement in community and upstream interventions
- Expanding collaborative approach across federal agencies; addressing constraints within agencies; greater access to agencies with funding
- Bring local-level relevance to national level initiatives and indicators (HP2020)
- Federal government commit resources to provide neighborhood level data

Three Panels

After Dr. Koo presented the draft HHS/OASH Measures of Community Health, three panels further framed and stimulated the Workshop discussions by sharing their perspectives. (See agenda in Appendix 1.)

Community and state change makers

The first panel set a pragmatic tone by highlighting the experiences of four states and communities—Virginia; Ohio; Baton Rouge, LA; and Shelby County, TN. Leaders in these jurisdictions have mobilized partnerships to use comprehensive data for assessment, planning, policy development, interventions, performance monitoring, and evaluation. A common message from these panelists was that gathering and analyzing relevant data has been a major challenge for them, and it should not have to be so difficult and time-consuming. There was consensus among the panelists that a measurement framework is indeed needed, and they welcomed the opportunity to align around core domains and metrics that would move the focus upstream from health outcomes to health determinants. They noted that such a set of core domains plus sub-county metrics would have greatly helped the work in their communities, had they been available.

The panelists shared a common sense of urgency, stemming from the challenges their communities face related to the pressing burdens of chronic disease, health disparities, limited budgets, payment reform efforts, CHNA requirements, and more. They suggested getting started on constructing a measurement framework with core domains and adjusting it as needed during the implementation process. They also voiced caveats heard often during the workshop: that to be useful to communities, a measurement framework of domains and a menu of metrics must be flexible enough to promote local engagement and choice and the data used to generate these metrics must be accessible to community health stakeholders.

Thought leaders and national initiatives

The second panel added the perspectives of thought leaders in the population and community health field from the University of Wisconsin Population Health Institute, the Robert Wood Johnson Foundation (RWJF), Trinity Health, and the independent research arena. These panelists cast the current tasks and conversation in the context of past initiatives, explained the business case for health care organizations' use of a broad set of core domains, and described complementary initiatives.

Dr. Gib Parrish noted that the current work on core domains and indicators builds on earlier projects by NCVHS, the Institute of Medicine, and CDC. This stimulated a thoughtful discussion about what is different about current conditions. Dr. Bechara Choucair of Trinity Health outlined one dimension of the changes now under way: payment reform now rewards health care providers for the health of populations, creating a business case for investing upstream in community transformation. This in turn creates a demand at the board of director level for data with which to monitor the impact of those dollars. Another participant observed that current thinking about domains and metrics expresses a new vision for the kind of society communities want to create. Measurement frameworks are becoming useful tools for priority-setting by

focusing on the most significant factors on which communities can have an impact. Dr. Patrick Remington and Ms. Carolyn Miller talked about the RWJF Culture of Health and County Health Rankings and Roadmaps, both reference points for the HHS/OASH domain set.

The panelists agreed with the previous group of panelists about the need for local flexibility and adaptability in any community health measurement scheme. They sketched a vision for a streamlined process, tailored to local communities, which would enable local leaders to drill down where needed. Their comments on the domains are included below.

Federal perspectives

The third set of observations introduced the important perspectives of representatives from federal agencies, including the Census Bureau, the Environmental Protection Agency, the Department of Justice, and several HHS operating divisions.[9] Collectively, these participants' comments and reports made it clear that many relevant federal projects are already under way; that there is much more to be learned about them; and that additional people should be brought into the conversation. NCVHS was urged to explore the complementary initiatives, frameworks, and indicator sets being developed outside health, with many examples cited. (See Appendix 4.) The strong interest in becoming more knowledgeable about the current landscape later prompted a recommendation that a formal environmental scan be conducted of the domains and indicators being used by non-health federal agencies.

The reporting on federal activity and the active engagement of federal participants were encouraging signs of the potential for convergence around development of a measurement framework designed to improve health at the community level. Further, the creativity and knowledge-sharing manifested in the workshop demonstrated the potential benefits of combining federal perspectives and resources in a more coordinated approach, together with input from other sectors. In that vein, Charles Rothwell, Director of NCHS, challenged the group to make an explicit request of the federal statistical agencies about how they could be helpful—and to make the case for why they should do so. He also urged NCVHS to encourage HHS to simplify and limit the number of Healthy People objectives in the next iteration in ways that align with the current project.

[9] HHS/ASPE/Office of Human Services Policy, CMS Innovation Center, Office of Minority Health, Office of Disease Prevention and Health Promotion, the National Center for Health Statistics, AHRQ, HRSA, OASH, and an HHS regional office. Ironically, the absence of the Housing and Urban Development Agency was further evidence of convergence: HUD representatives expressed strong interest, but had coincidentally scheduled a meeting on a similar subject for the same day.

Finally, the discussion highlighted the absence of an organizational locus in federal government to coordinate federal efforts related to community health.[10] One break-out group discussed whether the National Prevention Council might play this role.

Input on Domains, Metrics, and Data

The participants reached consensus on a number of key points, based on the common understanding that community well-being is best achieved through informed, multi-sectoral action on upstream determinants. First, they affirmed the potential value of a broad-based measurement framework that establishes a core set of domains, while stressing both that communities must have flexibility in the way they use and augment them and that their successful use depends on access to timely sub-county data. Some participants cautioned that an over-emphasis on parsimony could exclude significant population groups, a point that reinforced the need for local flexibility in applying the measurement framework. Most were eager to see this effort move ahead, agreeing that the framework could be modified as needed in response to lessons learned during initial implementation.

The discussion of the HHS/OASH straw domain framework (Exhibit 2 and Appendix 3) ran on two tracks: possible modifications to the conceptual framework, and suggestions for specific measures within the identified domains. To augment the extensive commentary that wove through the day's discussions, the participants were given the opportunity to post written suggestions, which will serve as an ongoing resource for the project. (Appendix 5 contains the suggestions for other domains; comments on the draft HHS/OASH domains are in Appendix 6.)

[10] This idea expands on an NCVHS recommendation from the October 2014 Roundtable: "Create a virtual Federal 'home' for community-facing data work, including the provision of community-level data and the development of tools, technical assistance, and initiatives that support the effective local use of data." (Recommendation 1, NCVHS letter to the Secretary, May 28, 2015)

Exhibit 2. Domains under Consideration for Measures of Community Health

These domains fall into five categories: outcomes, health behaviors, physical environment, social and economic factors, and clinical care.

Outcomes

- Life expectancy
- Well-being

Modifiable factors

- Obesity and relevant behaviors
- Tobacco
- Substance abuse (alcohol/drug)
- Air quality
- Education
- Poverty
- Housing
- Safety
- Access to care
- Preventable hospitalizations

Denise Koo, MD, MPH, CAPT, USPHS, Advisor to the Acting Assistant Secretary for Health, HHS. October 20, 2015 (See complete document in Appendix 3.)

One theme of these discussions concerned the over-all framing of the domain set. There was consensus that any such framework should permit the explicit measurement of health equity. In addition, many participants urged that the life-course perspective be included. It was suggested that the domains be evaluated for their applicability to both health equity and life course approaches.[11]

Another robust discussion thread concerned the need to add one or more domains for community-level variables such as competence, collaboration, and engagement. Several participants noted the importance, too, of including information on community assets: Community members and other stakeholders want to know what makes them and their communities healthy, and this constructive dimension helps to engage and mobilize people. Some participants stressed the need to measure what communities do, either as a domain or across all domains. A related point was that "the process is part of the product"—that is,

[11] See Note 12 for definitions and references for these complementary approaches.

engaging stakeholders in dialog and action is an integral part of the kind of community-driven process that produces results.

The group also discussed the potential merits of including summary/composite measures and indexes in addition to more narrowly-targeted indicators.

Two major themes emerged regarding the data needed to support use of the metrics envisioned as part of a measurement framework. The first theme concerned making more efficient use of available data. Among the many untapped data sources to be mined, participants pointed especially to the American Community Survey, vital records, and other sources of Federal data already available at the sub-county level. The second theme seized on the current expansion of focus—beyond health outcomes and including upstream determinants—as a chance to think outside the box and raise the bar on expectations for data quality. In particular, mismatches among sources related to timeliness, imputed validity, and other variables—especially between surveys and clinical data—were cited.

Finally, participants discussed the importance of focusing not only on access to and provision of data, but also on communities' need for analytic support and technical assistance. For example, communities need analytic methods, guidance, and tools to help them work with the small numbers and sensitive data that are part of community-level data. More broadly, they need pathways for translating data into actionable information for community planning, prioritization, program development, implementation, and evaluation.

Priorities for Action

Toward the end of the day, participants gathered in small groups to discuss the final question posed: *What would you advise NCVHS to do in the next 6-12 months to make sure this conversation materializes into something significant?* In the report-outs, the most common responses concerned gathering more information on current measurement activities and existing frameworks, revising the domains, getting more input, testing, simplifying community data access, and increasing collaboration within government (Exhibit 3).

Exhibit 3. Top Participant Recommendations for Next Steps

1. Identify/inventory what data are available (health and non-health) at what level of granularity.
2. Revise straw domains:
    - Decide if domains will be clinical outcomes vs root causes.
    - Consider methodologic issues – weighting, feasibility, quality (validity, reliability).
    - Include more small area, micro, or community/neighborhood data.
    - Include measures of community policies/actions.
    - Consider indices in addition to individual measures.
3. Convene and seek more input from data users (i.e., communities).
4. Conduct pilots and community testing, and gather case studies.
5. Clarify the purpose and use of domains.
6. Make data available in one place (data portal), with tools (e.g., visualization).
7. Make Census ACS data more accessible/usable.
8. Encourage cross-Agency (Federal and States) collaboration.

There was a widespread sense among participants that the time for action had come and that this conversation, with its focus on jump-starting and guiding the action, should continue. Many participants asked to be included in the conversation and kept abreast of further work on this project.

Roadmap to Community-Level Health Measurement

Although version 1 of the HHS Roadmap being developed by NCVHS served as a backdrop for the workshop rather than an explicit focus, there was considerable discussion of the roles—current and potential—of HHS and other federal agencies in supporting community-level measurement. This theme is informing the Committee's ongoing deliberations regarding the Roadmap, which encompasses the stages outlined below. (The Roadmap graphic is in Appendix 7.)

With the benefit of input provided during the workshop, NCVHS intends to continue to cultivate consensus in tandem with these activities: conducting an environmental scan of measurement activities across non-health sectors; refining the measurement framework and domains; and identifying specific measures that are either accessible, collectable, or estimatable at the sub-

county level. The core domains will be framed to accommodate three equally critical perspectives on health: health determinants, health equity, and life course.[12]

Assuming consensus is reached on the domains, the Committee's goal is to recommend a measurement framework that includes a set of multi-sectoral domains, with menus of representative metrics, for local use. At that point, responsibility for curating a full menu of possible measures, filling data gaps, developing methods and tools, and capturing successes and learnings would reside with the federal government and non-governmental organizations through a public-private partnership yet to be determined. Again, the ultimate purpose of this project is to establish a common framework, language, and cross-cutting menu of metrics as a context within which communities can choose what to measure, based on their priorities. Taken together, these local efforts, carried out in partnership with HHS, can contribute to improving the health of the entire nation.

Emerging Directions

Two major workshop findings concern:

1) The need for a holistic approach to community-level measurement in which health is part of a multi-sectoral set of domains; and

[12] As discussed above (p. 10), the workshop participants agreed that a community-level measurement framework, even if it is structured around the determinants of health, must ensure the assessment of health equity. In addition, they suggested that the framework include measures at different life stages, using a life course perspective. Definitions and references for these approaches:

Health determinants: This approach emphasizes the individual and population-level factors that, if improved, can help communities become healthier places to live, learn, work and play. http://www.countyhealthrankings.org/our-approach

Health equity: Health determinants can have significantly different impacts on the health outcomes of different population groups. Thus the assessment of health and well-being in a community must take into account the distribution of health across specific population groups as defined by such factors as race, ethnicity, sex, sexual identity, age, disability, socioeconomic status, and geographic location, all of which contribute to an individual's ability to achieve good health. http://www.healthypeople.gov/2020/about/foundation-health-measures/Disparities

Life course: "A life course approach emphasises a temporal and social perspective, looking back across an individual's or a cohort's life experiences or across generations for clues to current patterns of health and disease, whilst recognising that both past and present experiences are shaped by the wider social, economic and cultural context." (Source: WHO. A Life Course Approach to Health. WHO PublicationWHO/NMH/HPS/00.2; 2000. http://www.who.int/ageing/publications/lifecourse/alc_lifecourse_training_en.pdf)

2) The need and opportunity for more effective collaboration across federal agencies and programs.

Workshop participants' broad support for development of a common measurement framework and their suggestions for refining the core domains outlined in the straw proposal will contribute to the thinking moving forward, along with their substantive discussions about engaging broader federal participation.

While the Committee has not yet begun to develop recommendations for the Secretary, the workshop themes set the direction for its thinking and for further conversation with other partners. NCVHS envisions developing recommendations for HHS and all federal statistical agencies along the lines of the following themes:

1. **Implications of the workshop findings for HHS**
    - In order to provide replicable approaches for other communities to follow, identify and compile examples of balanced sub-county measurement projects, with a synopsis of the sources and methods used.
    - For the 2030 iteration of Healthy People, simplify and reduce the objectives in ways that align with the current project, encompassing the determinants of health and stressing measurability at a sub-county level.
    - Identify recommendations for increasing the availability of sub-county data in the identified areas from the relevant federal agencies.
2. **Requests of all federal statistical agencies**
    - Begin to collaborate around methods to support both small-area estimation and small-area data collection.

Next Steps for NCVHS

The November 2015 workshop was a critical step in a longer process, and it helped clarify the direction for that process. As noted, the Committee's goal, under the leadership of the Subcommittee on Population Health, is to recommend a common framework, language, and approach to domains, with a menu of possible metrics as described above, that could become a shared endeavor of all related federal sectors. NCVHS envisions as the common goal of coordinated action a set of multi-sectoral domains, with menus of representative metrics, which will enable the measurements to inform local efforts to assess and improve health outcomes and community well-being. The metrics will correspond to data that are available, collectible, or estimatable at the sub-county level.

Immediately following the workshop, NCVHS commissioned an environmental scan of existing measurement frameworks, core domains and indicator data sets in health and other sectors

(e.g., transportation, housing, education, environment). The scan, to be completed in the spring of 2016, will build on the Measures of Community Health drafted by HHS/OASH, other domain sets presented in the November workshop, and domain sets not yet integrated into the Committee's work.

In the coming months, NCVHS will continue to seek input from a wide range of sources as it further refines the evolving measurement framework. As in all its work, it will be attentive to the importance of data stewardship and privacy protection as it develops the measurement framework and explores ways to meet local data needs. The Committee then plans to convene workshop participants and other experts again in September, 2016, to finalize a proposed measurement framework and subsequently will submit a final report and recommendations to the Secretary.

NCVHS looks forward to continuing the substantive and productive dialog that took place at the November workshop, as many participants requested.

Appendix 1. Workshop Agenda

National Committee on Vital and Health Statistics
Population Health Subcommittee

Workshop:
"Advancing Community-Level Core Measurement:
Proposing a Roadmap for HHS"

National Center for Health Statistics, Hyattsville, MD
November 17, 2015

—AGENDA—

9:00 am	Welcome Workshop Purpose & The Opportunity Agenda and Expectations for the Day	Bruce Cohen, PhD & Bill Stead, MD NCVHS Co-Chairs for Population Health Subcommittee Monte Roulier, Facilitator
	Introduction of Straw Domains	Denise Koo, MD, MPH, HHS/OASH
	What's the Big Opportunity – Charge to Meeting Participants	Bruce Cohen, PhD Bill Stead, MD Monte Roulier
9:45 am	Panel A: Perspectives from Community and State Change Makers	• Amy Rohling McGee, MSW, Health Policy Institute of Ohio (by phone) • Ray King, PhD, MPH, Community Health Record Project, Shelby, County TN • Andy Allen, City of Baton Rouge, Baton Rouge, LA • Marissa Levine, MD, Virginia Department of Health
11:15 am	Panel B: Perspectives from Thought Leaders & National Initiatives	• Bechara Choucair, MD, MS, Trinity Health • Carolyn Miller, MS, Robert Wood Johnson Foundation • Pat Remington, MD, MPH, University of Wisconsin-Madison • Gib Parrish, MD, Consultant
12:15 pm	Lunch	

1:15 pm	Advancing Domains of Measurement That Will Make a Difference	Facilitator & Participants
2:15 pm	Break	
2:30 pm	Reflections from the Federal Perspective	Federal Participants
3:15 pm	Working session – “Drilling Down”	Break-Out Groups – All Participants
4:00 pm	Report-outs/Filling in Road Map Ideas	All Participants
4:30 pm	Final Reflection and Next Steps	
5:00 pm	Adjourn	

Appendix 2. NCVHS Documents on Community Health Data

1. *The Community as a Learning System for Health* presents the findings from February and May 2011 workshops http://www.ncvhs.hhs.gov/wp-content/uploads/2014/05/110512sm.pdf.

2. *Joint Roundtable on Health Data Needs for Community-Driven Change* reports on an April 2013 Roundtable. http://www.ncvhs.hhs.gov/wp-content/uploads/2014/10/130430sm.pdf.

3. An October 2014 *Roundtable on Supporting Community Data Engagement* generated a report and a May 2015 letter and recommendations to the Secretary. http://www.ncvhs.hhs.gov/wp-content/uploads/2013/12/2015-Ltr-to-Secy-CommunityHealthDataEngagement-redacted.pdf

4. NCVHS has begun work on a Framework for classifying data and data use methods <http://www.ncvhs.hhs.gov/wp-content/uploads/2014/10/NCVHS-Framework-Project-Overview-Oct-2014.pdf>.

5. All of the aforementioned activity builds on ground-breaking NCVHS recommendations on the National Health Information Infrastructure, 21st century health statistics, data stewardship, standardization, and data on specific population groups. All are posted at http://ncvhs.hhs.gov/.

Appendix 3. OASH Measures of Community Health, with Source Documents

Measures of Community Health October 20, 2015
Denise Koo, MD, MPH, CAPT, USPHS
Advisor to the Acting Assistant Secretary for Health, HHS

The Office of the Assistant Secretary for Health, Department of Health and Human Services, is working to identify roughly a dozen domains for describing and assessing holistically what makes a community healthy and vital. These domains should reflect important, cross-cutting areas in which communities could select metrics appropriate for their own goals, resources, and planned interventions. It is intended that communities consider having at least one metric in each of these domains, to strive for and measure whether their community is a livable, thriving community. The naming of such domains is not intended to exclude other priorities (e.g., specific disease areas or other sector-specific activities) important to a given community; rather, our goal is to highlight the critical role of multi-sectoral collaborations for greatest impact on community health and well-being.

In addition, naming such domains together in one HHS document will underscore the message that healthcare alone is not sufficient to create health and well-being, and thus, healthcare metrics alone are insufficient to measure the health of the public. The metrics domains provide a starting point and a framework for potential alignment and increased impact of national efforts and funding (e.g., in addition to Health and Human Services, federal reserve funding for community development, Internal Revenue Service provisions for hospital community benefit, Housing and Urban Development Healthy Communities Transformation Initiative).

Approach--

- **Target:** no more than 10-12 domains, because a smaller number of "vital signs" for a healthy community are easier to remember and follow
- Staying at a higher level balances guidance for communities with flexibility, since communities need to decide on appropriate metrics at their level, with appropriate engagement of local stakeholders
- Domains chosen from review of 7 major crosscutting health-focused metrics efforts (see source at the end of this document), with secondary review of healthy or livable community metrics defined by U.S. Department of Housing and Urban Development and the AARP.
- In this initial step: example metrics are included (from source metrics documents); a final, longer term effort would include more detailed, validated menus of metrics at the local level, with clear specification regarding what the metric is, where the data can be accessed, and the timeliness of such, to support efforts at the local level

Framework: small number of outcomes, with number of domains for health conditions proportional to contribution to health: clinical 20%, health behaviors 30%, physical 10%, socio-economic 40%, based on work of County Health Rankings and Roadmaps and their model

Domains currently under consideration (n=12) in 5 categories

The 5 categories include outcomes, health behaviors, physical environment, social and economic factors, and clinical care, with examples of metrics drawn from the source documents. The list of domains drawn from these categories includes:

Outcomes:

- Life expectancy
- Well-being

Modifiable factors

- Obesity and relevant behaviors
- Tobacco
- Substance abuse (alcohol/drug)
- Air quality
- Education
- Poverty
- Housing
- Safety
- Access to care
- Preventable hospitalizations

Note: modifiable factors that impact health fall into the following four categories, with proportional contribution to health as estimated by County Health Rankings group at University of Wisconsin: health behaviors (3), physical environment (1), social and economic factors (4), and clinical care (2). The categories and the domains are defined below.

Outcomes: results that may stem from exposure to a causal factor from preventive or therapeutic interventions; changes in health status arising as a consequence of the handling of a health problem (Last 2001).

Life expectancy: statistical measure of how long a person may live based on the year of their birth, their current age and other demographic factors including gender.

- **Examples of metrics** include: life expectancy at birth, years of potential life lost before 75, % who live to age 25, 65, or 85, health-adjusted life-expectancy

Well-being: includes dimensions of physical, mental, social and even spiritual well-being, as reported by the individual.

- **Examples of metrics** include: poor physical days last month; poor mental health days last month; health-related quality of life; % reporting good/better health by age group; self-reported health; well-being rating (health, life satisfaction, work-life balance)

Health Behaviors: behavior (activities, actions, or patterns of actions) (undertaken by individuals either spontaneously or in response to incentives) that have the potential to influence health, such as diet, exercise, and substance abuse (adapted from Kindig, New South Wales)

Obesity and relevant behaviors: domain includes health outcome of obesity as well as behaviors that increase or decrease the likelihood of the outcome, such as physical activity, diet and food intake, as well as access to healthy food and beverages, and policy changes that affect any of the preceding

- **Examples of metrics:** BMI (adult, child), sedentary lifestyle, inactivity, active living (adult, adolescent), diet, food environment index, vegetable intake, access to exercise

Tobacco: domain includes various forms of current or past tobacco use among different age groups, availability and use of tobacco cessation services, exposure to secondhand smoke, as well as policies that affect use of tobacco (excise taxes, restaurant policies)

- **Examples of metrics:** adults who are current smokers (>=100 cigs/lifetime and smoke every day or some days); adults smoking every day or some days, % adolescent smoked in last 30 days

Substance abuse (alcohol/drug): domain includes various forms of alcohol and drug dependence and overuse, with detrimental outcomes, as well as policies that impact abuse of such

- **Examples of metrics:** binge drinking/30d, excessive drinking (men >=5 drinks/males; 4 for females) last 30d; alcohol-impaired driving deaths, % adolescents using alcohol/illicit drugs last 30 days), addiction death rate, drug dependence, alcohol dependence

Physical environment factors: factors in the natural environment that affect health outcomes (e.g., air and water quality, lead exposure). Note that some would categorize built environment, including design of neighborhoods, under **physical environment**; others categorize such under **social and economic** factors. For this exercise we have done the latter.

Air quality: the quality and safety of air which humans breathe (generally ambient air)

- **Examples of metrics**: # days air quality index exceeds 100, average exposure of population to PM2.5. Some would argue indoor air quality should also be included, and smoke-free indoor air laws, % aged 3-11 exposed to secondhand smoke.

Social and economic factors: factors in the social and economic environment that affect health outcomes, often referenced as the conditions in which people are born, grow, live, work and age, such as income, education, occupation, class, or social support. The County Health Rankings model includes the built environment in this category.

Education: domain includes education level or achievement or years of education

- **Examples of metrics:** on-time high school graduation, early childhood education; some college; associate degree or higher

Poverty: domain includes absolute/threshold or relative measures of poverty (*and unemployment*?) The "absolute poverty line" is the threshold below which families or individuals are considered to be *lacking the resources to meet the basic needs for healthy living; having insufficient income to provide the food, shelter and clothing needed to preserve health.*

- **Examples of metrics:** % living below poverty (children, elderly); income inequality

Housing: domain related to having adequate shelter, such as housing affordability, availability, quality, security.

- **Examples of metrics:** severe housing problems (households with more than 1 of these 4: overcrowding, high costs, lack of kitchen or plumbing); high housing costs (30 or 50% of income); housing stress (quality); vacant residential properties; age of housing; housing affordability

Safety: experience and feeling of physical and personal safety (NSW definition)

- **Examples of metrics**: rate of violent crime, injury deaths, safe streets, youth safety

Alternatives for 4th domain in social and economic factor (instead of safety):

- **Transportation—**time and effort spent in transportation, including access to public transportation (commute, driving alone to work, active transport) or
- **Social support—**the assistance available to individuals and groups from within communities which can provide a buffer against adverse life events and living conditions (social associations, children in single parent households, social support/community engagement; sense of community?) (WHO—social support, 1998:20)

Clinical care: factors in healthcare that affect health outcomes (e.g., access, quantity and quality of healthcare services)

Access: domain includes having health insurance as well as ability to access primary providers or needed health care

- **Examples of metrics:** # or % persons with health insurance; primary care physicians, dentists or mental health providers/population; uninsured under 65, no access due to cost, unable/delay in medical or dental care or prescription drugs; unmet care need reported, usual source of care, delay of needed care

Quality of care: domain includes receipt of appropriate, high-quality and evidence-based clinical care

- **Examples of metrics:** preventable hospitalizations (i.e., hospitalizations for ambulatory care-sensitive conditions) especially among Medicare population

Source documents

Note: framework for impact on health derived from County Health Rankings and Roadmaps site at University of Wisconsin, funded by Robert Wood Johnson Foundation. Domains were selected from review of the domains and metrics included in the following crosscutting national health metrics efforts:

- **Healthy People 2020 Leading Health Indicators (Office of Disease Prevention and Health Promotion, Office of the Assistant Secretary for Health, HHS)**
  http://www.healthypeople.gov/2020/Leading-Health-Indicators

- **National Prevention Strategy** http://www.surgeongeneral.gov/priorities/prevention/strategy/index.html
- **America's Health Rankings (United Health Foundation, Partnership for Prevention, American Public Health Association),** http://www.americashealthrankings.org/
- **County Health Rankings and Roadmaps (University of Wisconsin, funded by Robert Wood Johnson Foundation)** http://www.countyhealthrankings.org
- **Community Health Status Indicators (Centers for Disease Control and Prevention),** http://wwwn.cdc.gov/CommunityHealth/
- **Vital Signs: Core metrics for health and healthcare progress (Institute of Medicine),** http://iom.nationalacademies.org/Reports/2015/Vital-Signs-Core-Metrics.aspx
- **From Vision to Action: Measures to Mobilize a Culture of Health (Robert Wood Johnson Foundation),** http://www.rwjf.org/en/email/from-vision-to-action--measures-to-mobilize-a-culture-of-health0.html

Appendix 4. Community-level Indexes and Domain Sets outside Health

Workshop participants mentioned the following resources:

Department of Housing and Urban Development:

- Livable community metrics

American Association of Retired Persons (AARP):

- Livability Index

Department of Transportation:

- Transportation and Health Tool

Environmental Protection Agency (Sustainable and Healthy Communities Research Program):

- Environmental Justice Screening Index (EJSCREEN)
- Environmental quality index
- Human well-being index
- Tribal well-being index
- Climate resilience index

Department of Justice:

- Framework for data on correctional health and health care (Bureau of Justice Statistics)
- National Crime Victimization Survey, subnational estimates (Bureau of Justice Statistics)

Other:

- Census' Poverty Index
- Place-based initiatives, e.g., Harlem Children's Zone (Promise Neighborhoods, Promise Zones)
- Urban Institute National Indicators Project (data inventory of community-level measures)
- United Kingdom deprivation index
- New Zealand deprivation index

Appendix 5. Participant Suggestions for Other Domains

- See United Kingdom's index for multiple deprivations and New Zealand deprivation index. Both are empirically tested against health outcomes
- 1) Non-employed (not just unemployed but those not seeking employment)
  From Bureau of Labor Statistics, American Community Survey?
  2) People <64 receiving means-tested services
  3) People in single parent household
- Cost of care pricing, prescription drug costs, Insurance, Hospital, Physicians, etc.
- Walkability – Cross-cutting domain; physical activity & built environment and population density, etc.
- Social v economic –Add impact of incarceration, example me/me % of population with history of incarceration. Clinical Care Quality of Care, add medical errors
- Community resilience
- Social support or cohesion
- Consider community a context and look for leverage point
- Social & community context
- Reproductive health
- Align efforts around health/well-being issues that matter to people for improvement in equity
- Gender equity-economic measured in each of the over-all domains
- Radical equity measured in each of the over-all domains
- What about family-related factors? Or does that fall under social support? Healthy family relationships effective healthy parenting
- Add indicators of the living. B/f life expectancy more concrete than well-being
- Environmental: (toxic exposures)
  - Indoor air quality
  - Outdoor air
  - Drinking water
  - Siting in relation to emission exposure
  - Waste disposal/sanitation
  - Pesticides
- Equal opportunity, economic mobility
- Cross-cutting domains, e.g. – Parks not enough. Safe parks. Walkability=physical activity + built environment
- Adding dynamic dimensions
- Sustainability
- Cost, Equity, Investment, Allocation of resources
- Employers can influence Community Health by positively influencing Health of their employees
- Planning-capacity: ER, inpatient, trauma, % primary care providers, etc.
- Transportation

- Community & Population
  -implies a special aspect and integration/coordination of organizations/sectors
  *Suggest adding
    (1) Social cohesion/social capital/collective efficacy/community resilience
    (2) Assessment of multi-sector organization collaboration
- Reproductive/Maternal/early Childhood health and well-being
- Cross-cutting domain – Walkability (physical activity & built environment) (safe parks)
- Cross-cutting community, Engagement community/cohesion
- Other-workplace injury
- Macrostructure issues (e.g. how much does county government pay for?) Tobacco bans
- Adverse childhood experiences (ACEs) + Early childhood traumas
- Equity
- Greater focus on development/child + family (change the weighting)
- Mental Health –Biggest concerns of citizens in disparate communities
- Child Development milestones (investing in children)

Appendix 6. Participant Comments on Straw Domains

TOBACCO

- Smoking In Home, Smoke-Free Policies Home and Business
- Combine with Drugs & Alcohol, They're all Substance Abuse
- Merge Tobacco with Substance Abuse

AIR QUALITY

- Physical Environment needs to include built environments!
  (Economic implications are captured elsewhere)
- Physical Environment where is Walkability Green Space (actively living)
- Built Environment makes more sense under Physical Environment
- Asthma, chronic lower respiratory disease, chronic obstructive pulmonary disease

SAFETY

- Transportation and Safety-not an either or both needed
- State (or City) level gun laws (i.e. open-carry, background checks, etc.)
- Domestic/Violence interpersonal
- Crime & Safety are vital to community health and well-being. This domain must be included because the direct and indirect effects of violence/crime are monumental. Even the perception of the community as unsafe can shape health behaviors
  - Percent of people exposed to violence/trauma/crime
  - Crime victimization (Department of Justice→NCHS data)
  - Homicide rates *a must! (preferably by age, race, sex)
  - Suicide rates (age, race, sex) *by mode (gun suicides are 2/3 of gun deaths)
  - Cases of founded child abuse and neglect (Child Protective Services data)
  - Community violence prevention programs in place
  - Law enforcement surveillance or community presence (which can be good or bad…)
  - Violent crime rate
  - Average response time of first responders to the community after a 911 call

QUALITY OF CARE

- Include Mental Health not just physical in access to care
- Cultural and linguistic appropriateness of care
- Workforce diversity
- Access to quality
  - Mental/Behavioral
  - Substance
  - Dental
  - Clinical/Medical
  - Cost of care home
- Rather than focusing only on evidence-based clinical care, what about broadening to include evidence-based population health practice? What about care that isn't strictly clinical, e.g. preventive care? Can we measure quality of preventive care?

OBESITY and RELATED

- Can we please make the following reportable/notifiable conditions?:
  - Cancer
  - Heart Disease
  - Diabetes
- Obesity→ Why?
  Recommend breaking up Health Behaviors→

(1) Physical activity
(2) Nutrition
(3) Substance abuse (would include tobacco, ethanol, illegal)

- Obesity –move to outcome modifiable factor; Want physical activity and nutrition
- BMI is an outcome, not a behavior
- Diabetes prevention; Hypertension; Cancer-related
- Healthy food option, Community garden, School based Physician Act-Health & Nutrition policies

WELL-BEING

- Safe streets, Community Policing; Water quality; Social service network; Geriatric service, Sliding scale, Safety net, Providers per population
- Institute for Healthcare Improvement (IHI) 100-million heal their lives common measure
  Z-item instrument to measure well-being:
  - Over all life evaluation
  - Physical health
  - Mental health
  - Social well-being
  - Spiritual well-being
- Mental Health should be part of well-being domain
- Social support and transportation are very important, Social support for MCH issues and elderly, Transportation for rural areas
- Senior prevention, Communicable disease rates, Pregnancy

POVERTY

- Social and economic →Access to healthy food and to jobs
  *Children in poverty
  *Poverty index
  *income disparity
  *Housing and costs of living
  *Living wages

ACCESS to CARE

- Access to care re-formed as access to health services
- Access to public health services

EDUCATION

- Early childhood education (access?)
- Percent of students who receive free or reduced meals at school (also a poverty measure)
- Percent of children with school disciplinary actions

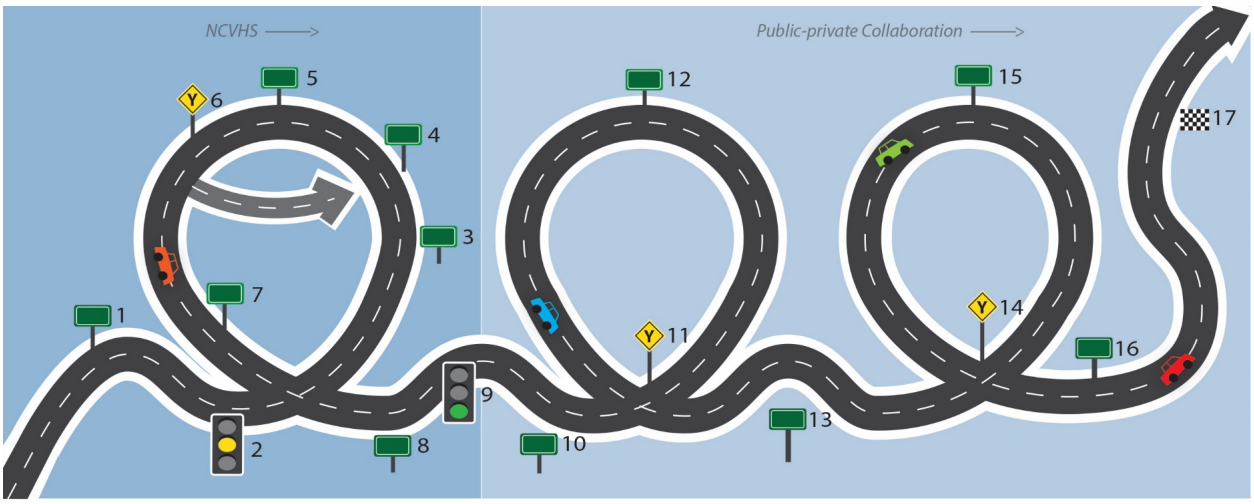
LIFE EXPECTANCY

- Consider well-being, adjusted, life expectancy, (WALY) as primary outcome
- Sub-county level. life expectancy at birth is achievable because data are already collected (mortality + census data)
- Combining mortality and quality of health information; HALE (Health Adjusted Life Expectancy).
- Amenable mortality
- Life Expectancy at birth is easier to understand than Years of Potential Life Lost.

SUBSTANCE ABUSE

- Alcohol, Opioid, intravenous drug use, Marijuana, Mental health days, intended and unintended drug dependency
- Why don't we combine tobacco with substance abuse? Why are they different?
- Locations and volume (capacity) of methadone maintenance programs

Appendix 7. Roadmap to Community Level Health Measurement V2



Milepost	Course of Action
1	Vet straw core domains
	11/2015
2	Consensus?
3	Perform environmental scan of health and non-health sectors
4	Refine core domains
5	Identify measures accessible, collectible, or estimatable at subcounty level
6	Identify gaps
7	Present core domains from determinants, equity, and life course perspectives
8	Vet core domains
	09/2016
9	Consensus?
10	Curate menu of measures
11	Identify gaps
12	Develop methods to access, collect, and estimate at subcounty level
13	Catalog tools to support measrement at the subcounty level
14	Identify gaps
15	Develop tools to support measurement at subcounty level
16	Implement pilots
17	Capture successes and learnings