

Assessing Capacity and Measuring Performance in Maternal and Child Health

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Objectives: To understand the similarities, differences, and relationships between three tools for performance and capacity assessment currently available for Maternal and Child Health (MCH) programs and for state and local health agencies. *Methods:* Three tools for performance and capacity assessment currently available for Maternal and Child Health (MCH) programs and for state and local health agencies, the Title V MCH Block Grant Performance and Outcome Measures (Title V “24”), CAST-5, and the National Public Health Performance Standards Program (NPHPSP) were compared using two metrics, a conceptual model of the public health system, and a set of attributes related to the use of the instruments. *Results:* Both CAST-5 and the NPHPSP are focused on the capacity and key processes (10 Essential Public Health Services) of the public health system, although CAST-5 is intended for capacity assessment and the NPHPSP is intended for performance measurement. The Title V “24” tool is also intended for performance measurement; however, its focus is on the outputs and outcomes of the health system. The Title V “24” tool is the only one of the three that is mandatory, and the only one whose results at the current time can be used to compare across entities. In addition, both the Title V “24” and the NPHPSP include explicit standards, while CAST-5 does not specify explicit standards against which to compare findings. *Conclusions:* While there are various tools available to MCH practitioners for capacity assessment and performance measurement, knowing how the tools relate to each other, and their defining characteristics, should lead to more effective and productive use.

KEY WORDS: performance measurement; capacity assessment; maternal and child health; state and local health agencies.

INTRODUCTION

Over the last decade, there has been a major movement in both the public and private sectors to increase accountability for performance by agencies, institutions, and systems. This demand for increased accountability has been fueled in part by the advances in data systems and information technology that have made databased decision-making in a timely fashion

an achievable reality. This focus on increased accountability for performance at the federal level was codified with the passage of the Government Performance and Results Act of 1993 (GPRA). State and local governments undertook similar initiatives as well.

Simultaneous to this expanded emphasis on increased accountability, there has been growing consensus that the practice of public health is organized around the three core functions of assessment, policy development, and assurance (1) and 10 related Essential Public Health Services (EPHS) (2). In response to these and other forces, such as the increased use of managed care within the medical care system, by the mid-1990s, the public health sector began to develop and implement strategies to assess the ability of public health agencies and programs to perform the

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core functions or to measure actual performance in this regard.

MCH practitioners in state or local health agencies are currently aware of or are using a variety of tools for capacity assessment and performance measurement. However, from the point of view of the MCH practitioner interested in improving the performance of the MCH or the general public health systems, it may not be immediately apparent how these various tools are similar or different from each other and how they can be used together to improve performance of the public MCH enterprise. Three of these tools will be examined—the Title V MCH Block Grant Performance and Outcome Measures developed by the Maternal and Child Health Bureau of HRSA (the Title V “24”), the Capacity Assessment for State Title V (CAST-5) instrument developed jointly by the Johns Hopkins University Women’s and Children’s Health Policy Center and the Association of Maternal and Child Health Programs (AMCHP), and the National Public Health Performance Standards Program (NPHSP) developed by CDC’s Public Health Practice Program Office (PHPPO)—using two metrics described below. These three tools were chosen for examination because all three are part of highly visible initiatives in capacity assessment and performance measurement in public health, and are the tools that MCH/Title V staff are most likely to be using as part of their Title V activities or as part of their participation in larger state or local health agency efforts. An examination and comparison of these tools can assist MCH practitioners to maximize their efforts, avoid unnecessary duplication and redundancy, and more fully realize the benefits of each.

Overview of the Three Tools

Title V MCH Block Grant Performance and Outcome Measures

In response to the Government Performance and Results Act of 1993, the Maternal and Child Health Bureau (MCHB) of the Health Resources and Services Administration (HRSA) in partnership with state Title V programs developed 18 performance measures (see Exhibit 1 in Appendix) for the 1998 and subsequent Title V MCH Block Grant application and annual reports. States were also required to develop seven to ten state-specific performance measures. The 18 performance measures developed by the MCHB for state Title V agencies (there are no comparable measures for local MCH efforts) are

part of an overall Title V MCH Block Grant Performance Measurement system (3) that begins with a needs assessment and identification of priorities, with the aim of improved outcomes for the Title V population. In addition to these 18 performance measures, the MCHB also developed six separately identified outcome measures (Exhibit 1) as part of its effort to track performance of state MCH efforts. Progress for the “24” is measured vis a vis the Healthy People Year 2010 objectives (see Exhibit 2 in Appendix).

Each year, state Title V programs report current data for these “24” measures and submit adjusted targets to their projections for future years. Program progress and plans are discussed in concert with reported data. MCHB compiles these data for all states and U.S. jurisdictions and presents them to the public through the web-based Title V Information System (Title V-IS).

CAST-5

During the same period in which the MCH Block grant performance and outcome measures were developed, state Title V programs began requesting guidance specifically for assessing program capacity and operations. As a result of those requests, Capacity Assessment for State Title V (CAST-5) was designed for use by Title V programs as a voluntary, internal management, and planning tool (4). CAST-5 assists states in assessing their capacity to implement the 10 MCH Essential Public Health Services (EPHS) (5) in the context of their specific statutory and organizational mission and population health and service system outcome objectives.

CAST-5 has several related objectives: 1) promoting strategic thinking about the MCH program’s mission and goals in a changing context; 2) assessing performance of the 10 Essential Public Health Services, as articulated specifically for public MCH programs; 3) identifying specific organizational resources necessary for performance of the 10 EPHS; and 4) promoting the development of strategies for building capacity.

CAST-5 (see Exhibit 3 in Appendix) includes a different component for each of these objectives. A series of open-ended questions, the “Core Questions,” (not shown in Exhibit 3) guide strategic thinking about mission and goals, program context, and population health objectives. Performance of the core public health functions is represented by a progression of “Process Indicators” for each essential service (Exhibit 3); there are three to nine process

indicator(s) for each essential service. Each process indicator is accompanied by a set of questions meant to spark discussion and glean qualitative information about program performance and needs. Based on that discussion, states rate their performance with a 4-point adequacy scale; the state program's own goals and mission serve as the reference point for determining adequacy.

The process indicators are linked to lists of related organizational resources ("Capacity Needs") to assist programs in identifying the resources necessary for improving performance in each area assessed (Exhibit 3). Finally, qualitative data on program strengths, weaknesses, opportunities, and needs are used to guide the creation of specific capacity development strategies (not shown in Exhibit 3).

The National Public Health Performance Standards Program

In 1997, the Center for Disease Control and Prevention's Public Health Practice Program Office (PHPPO) launched the National Public Health Performance Standards Program in conjunction with state and local partners to improve the "practice of public health by providing leadership in research, development, and implementation of science-based performance standards" (6). The local and state based performance standards that are part of the NPHPSP are organized around the 10 EPHS.⁴

For every essential service, there are several measures (indicators) and for each indicator there are standards against which to judge performance (see Exhibit 4 in Appendix). In order to assess performance vis a vis these standards, there are a series of questions that assess whether the local or state public health system engages in a variety of activities. These questions are focused on activities that comprise a process associated with the 10 EPHS (e.g., Does the SPHS operate a surveillance system to recognize threats to the public's health?), and in many instances, the capacity to perform this process (e.g., Do laboratories within the SPHS have the capacity to identify all diseases and conditions for which notification is required by state law?). These yes/no questions are followed by two questions that assess the extent to which the state or local public health agency and the state or local public health system meet the standards. The scaled responses are essentially qualitative

although guidance is available to link the percent of questions answered affirmatively to whether the health agency is meeting the model standard for each indicator (not at all or minimally, partially, substantially, fully or almost fully). At the current time, performance measurement using the NPHPSP is intended for self-assessment and quality improvement purposes. As such, there is no specific intent or mechanism to produce or report an "overall score" or profile for each state or local health agency. However, there is potential for the NPHPSP instruments (in total or in part) to be used in this way, particularly as the nation focuses in the aftermath of September 11 on strengthening the infrastructure of state and local health agencies.

METHODS

The Title V MCH Block Grant Performance and Outcome Measures, the Capacity Assessment for State Title V (CAST-5), and the National Public Health Performance Standards Program instruments (NPHPSP) are distinct but related tools. In this paper, they are compared along two metrics, a published conceptual model of the public health system developed by three of the authors (BT, AH, and MI) (Fig. 1) and a series of parameters related to the actual use of each of the tools (Table I). These two metrics are described below:

Conceptual Model of the Public Health System

The conceptual model in Fig. 1 (7, 8) describes the public health system in terms of three major components: capacity, processes/outputs, and outcomes.

Using this model, any assessment or performance measurement instrument for the public health system can be described with respect to whether it focuses on capacity, processes/outputs, or outcomes (see Table II). To determine whether the focus of each of the three tools is on capacity, processes/outputs, or the outcomes of the public health system, the authors individually compared the content of the tool to each of the definitions described below. If there was any disagreement between authors, verbal and written discussion ensued until consensus was reached.

The model in Fig. 1 places the label 10 EPHS directly above the core public health functions of assessment, policy development, and assurance. While in theory the "Assurance" aspect of the 10 EPHS overlaps with the concept of "Outputs," the conceptual model shown here depicts these two phenomenon

⁴For the sake of this discussion, the local and state NPHPSP instruments are considered as one instrument/tool.

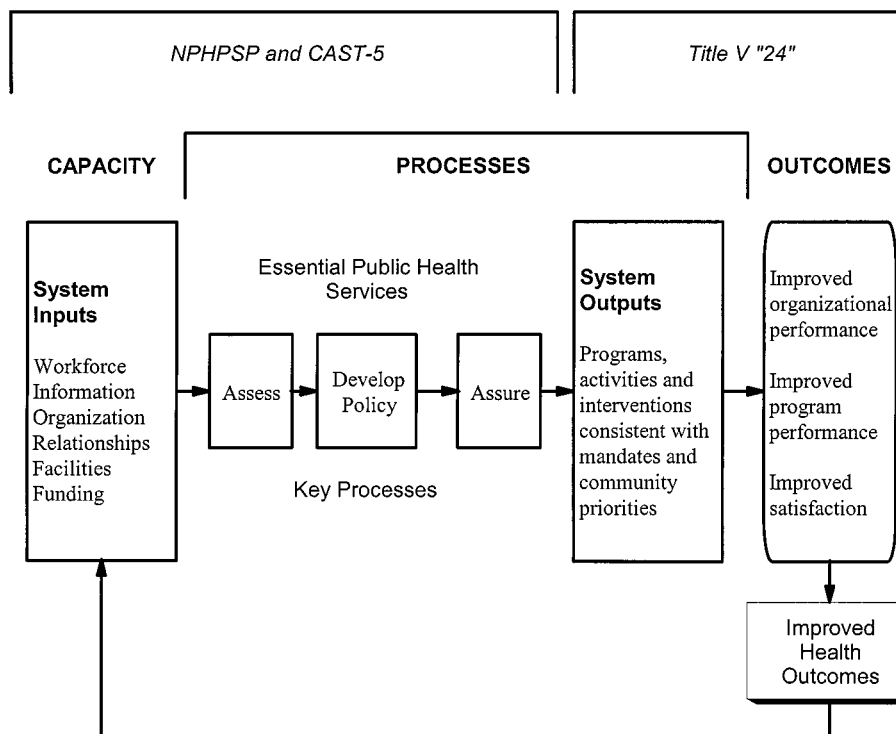


Fig. 1. Performance measurement and capacity assessment tools and their foci with respect to a model of the public health system.

as distinct in order to more clearly distinguish the planning and development of programs, activities, and interventions from their actual implementation.

Attributes Related to the Use of the Tools

The tools were also evaluated with respect to several attributes related to their use by MCH practitioners. The authors independently rated the tools

with respect to the attributes and then discussed their ratings until they reached consensus. The following attributes were selected:

- 1) MCH specific (yes/no): whether the tool is focused only on the MCH population or includes other populations;
- 2) Essential public health services as guiding framework (yes/no): whether the tool uses the EPHS as its guiding framework;

Table I. A Comparison of the Title V "24," CAST-5, and NPHPSP Instruments on Parameters of Relevance for MCH Practitioners

	Title V "24"	CAST-5	NPHPSP
MCH specific (yes/no)	Yes	Yes	No
Essential public health services as guiding framework (yes/no)	No	Yes	Yes
Primary uses/intents (performance measurement or capacity assessment)	Performance measurement	Capacity assessment	Performance measurement
Use (voluntary or mandatory)	Mandatory	Voluntary	Voluntary
Includes "gold" standard for comparison (yes/no)	Yes	No	Yes
Comparison across entities possible (yes/no)	Yes	No	Potentially, but not at current time
Data type (quantitative or qualitative)	Quantitative	Qualitative	Qualitative
Resource intensiveness (intensive or variable)	Variable-dependent on whether data systems are in place	Variable-dependent on how much is completed at any one time	Variable-dependent on how much is completed at any one time

Table II. Public Health System Components

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- *Capacity* is defined as the resources and relationships necessary to carry out the important processes of public health. These resources include the basic infrastructure of the system as well as specific program resources.
 - *Processes* refer to what is done to, for, with, or by defined individuals or groups to identify and address community or population-wide health problems. Performance of “key” processes (e.g., monitoring health status, investigating health hazards, and building constituencies) leads to the development of other processes that are viewed as *outputs* (e.g., programs, activities and interventions).
 - *Outcomes* reflect the immediate and long-term changes experienced by individuals and populations as a result of the key processes and outputs. Measures of outcome reflect the magnitude and direction of the effect of capacity, processes/outputs on health status, risk, social functioning, consumer satisfaction, or on the system itself.
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- 3) Primary uses/intents (performance measurement or capacity assessment): whether the tool is primarily focused on performance measurement or capacity assessment;
- 4) Use (voluntary or mandatory): whether completion of the tool is mandated by a government agency or voluntary;
- 5) Includes “Gold” standard for comparison (yes/no): whether the tool includes uniform standards or benchmarks for comparison;
- 6) Comparison across entities possible (yes/no): whether the results generated by the tool can be used for comparison across MCH programs or states or local health agencies;
- 7) Data type (quantitative or qualitative): whether data are mostly qualitative or quantitative in nature; and
- 8) Resource intensiveness (intensive or variable): the extent to which completion of the tool demands staff resources and time.

RESULTS

Relationship to the Conceptual Model of Public Health System

Although none of the tools were developed with the conceptual model in Fig. 1 as a guiding conceptual framework, this model aids in understanding the distinct and overlapping foci of the tools. Below we use the conceptual model as a way to describe the foci of each of the tools.

Title V Block Grant Performance and Outcome Measures

Using the conceptual model presented in this paper (Fig. 1), the Title V MCH Block Grant Performance and Outcome Measures (“24”) focus on the outputs and outcomes of the MCH system. Thirteen of the Title V performance measures focus on the outputs of the MCH system (#1, #2, #3, #4, #5, #7, #10, #11, #12, #13, #14, #17, #18); they are concerned with the specific programs, activities and interventions intended to achieve improvements in Maternal and Child Health. Examples are “the percent of children through age 2 who have completed immunizations for Measles, Mumps, Rubella, Polio, Diphtheria, Tetanus, Pertussis, Haemophilus, Influenza, Hepatitis B,” and “the percent of newborns screened for PKU, hypothyroidism, galactosemia, hemoglobinopathies.” The list of 18 measures also include outcome measures (#6, #8, #9, #15, #16) as defined in the conceptual model presented here (e.g., percent of very low birth weight live births, the youth suicide rate). These are in addition to the six officially designated outcome measures, also shown in Exhibit 1.

CAST-5

Based on the conceptual model in Fig. 1, CAST-5 is focused on capacity and the “key” processes (10 EPHS) of the public health system. As can be seen in Exhibit 3, CAST-5 includes process indicators to assist Title V agencies in determining how well they are carrying out the 10 MCH-related EPHS. CAST-5 then provides a detailed series of questions to enable the state Title V program to determine their capacity needs with respect to carrying out these processes and provides guidance on how to use the instrument to develop plans for capacity building.

NPHSP

Like CAST-5, based on the conceptual model in Fig. 1, the state and local public health performance standards system (Exhibit 4) is primarily focused on the “key” processes (10 EPHS) of the public health system and the capacity to perform these processes. However, unlike CAST-5, which has capacity assessment and development as its main emphasis, measuring performance of the 10 EPHS is the main focus of the NPHSP.

Attributes of the Three Tools Related to Their Use by Practitioners

Table I provides an overview of the similarities and differences of the three tools described here with respect to characteristics important to practitioners. As can be seen from Table I, both the Title V “24” and CAST-5 are MCH specific, while the NPHPSP is designed for the general public health community. While CAST-5 and the NPHPSP are similar in that they both utilize the 10 EPHS as their guiding framework (Table I), as alluded to above, their intended primary use is different and as such they are conceptualized differently. While measures of performance of the EPHS for MCH are embedded in CAST-5 (i.e., each state rates their adequacy on each process indicator), CAST-5 is primarily designed as a capacity assessment tool. In other words, practitioners completing the CAST-5 tool are expected to use their answers about performance as an internal benchmark to guide decisions about resource and capacity needs related to maximizing performance. On the other hand, the NPHPSP is designed as a performance measurement tool and users are expected to use the answers about performance for self-improvement; unlike CAST-5 however, there is no specific guidance for capacity building in the NPHPSP.

Like NPHPSP, the Title “V” 24 is also intended for performance measurement. However, whereas reporting on the Title V “24” is mandated, state and local health agencies are not mandated to complete the NPHPSP and are currently only using this tool for self-improvement purposes. Use of CAST-5 is also a voluntary process.

Another distinguishing feature of the tools is whether or not they incorporate the use of benchmarks as a way to rate adequacy or achievement of progress. Because the Title V “24” and the NPHPSP are explicitly designed as performance measurement tools, “gold” standards of performance are provided in the tools—state/local model standards in the NPHPSP (Exhibit 4), and the Year 2010 Objectives (Exhibit 2) in the Title “V” 24. The CAST-5 tool, on the other hand, asks a series of questions directly below each process indicator (Exhibit 3), but these are viewed as broad reference points rather than explicit benchmarks of performance.

The three tools can also be compared with respect to whether the data generated by the tools can be used for comparisons across state or local health agencies. At the current time, only the Title V “24” is used for

comparisons across agencies; the “24” are designed for state profiles which are displayed publicly by the federal MCHB. While the NPHPSP is not currently being used to make comparisons between state or local health agencies, because there are explicit “model” standards embedded in the instruments, such comparisons are ultimately possible. Although CAST-5 does include summary sheets that can be used to compare performance of a single program over time (if the assessment is repeated every 3–5 years, for example), it is not appropriate for comparison to other states’ programs.

MCH practitioners approaching all three of these tools may be concerned with the type of data to be collected as well as the amount of resources, both time and labor, necessary for their completion. As the Title V “24” include mainly quantitative measures, this tool requires substantial manipulation of data from a variety of data systems and sources in order to provide the required information to the MCHB. However, the intensity of resources actually required by the MCH program staff for the completion of the “24” depends to some extent on the availability of adequate program and population data systems in the state health agency. For both the NPHPSP and CAST-5, instrument completion is not dependent on collecting statistics from programs or populations; rather, the more “qualitative” data are based on group deliberations regarding program operations and program capacity. Generating this information can be very time intensive and as such, agencies may want to complete these instruments over a period of time in order that routine staff work is not compromised.

DISCUSSION

This paper examines three capacity assessment and performance measurement tools that are likely to be familiar to, or are in current use by, MCH professionals and compares these tools with respect to both focus and parameters related to use. These comparisons were undertaken to help MCH practitioners more clearly understand how the tools relate to each other and therefore how they can be used most effectively to improve performance. However, it must be understood that the results presented here reflect the consensus of the contributing authors on where and how the tools “fit” with respect to a model and criteria developed by the authors; as such, the results are not intended to provide a definitive statement but

rather to give a general relative comparison of the tools.

Based on the comparisons presented here, it is clear that while the CAST-5 tool and the “24” Performance and Outcome measures for the Title V MCH Block Grant are both explicitly focused on MCH, they differ in intent and design. While the Title V “24” focus on the implementation and results of program activities, CAST-5 is based on the EPHS framework and provides an opportunity to reflect on current capacity and resources needed to achieve optimal performance. In a sense, CAST-5 acts as a conceptual bridge between the EPHS framework and measures of program implementation and effects. As such, state MCH programs should be able to strategically link their capacity and process assessment (CAST-5) to their output and outcome performance (Title V “24”). Therefore, use by an MCH program in a state health agency of these two tools in tandem may provide the foundation for a comprehensive approach to assessment of the performance of the MCH system in any particular state.

CAST-5 and the NPHPSP are similar in that they both focus on capacity and processes (the 10 EPHS) and both are designed as voluntary instruments with no national requirement at this point in time for their use. This is different from the Title V “24” for which reporting is mandated by the federal government with the expectation that Title V’s success will be measured by state progress in each of the 24 measures. However, because like the Title V “24,” the NPHPSP is designed for performance measurement, some public health experts and others have discussed using the NPHPSP as the basis for a mandatory national surveillance system for public health practice (EPHS) performance both nationally and longitudinally, and also as the basis for accreditation of public health organizations (9). However, at the current point in time, without a mandate for a compulsory national surveillance system of public health practice performance, the NPHPSP may best be used for short-term program management and long-term strategic planning.

The measures of capacity in CAST-5 and the NPHPSP may be helpful to program staff involved in quality improvement within MCH and local and/or state public health systems; however, these measures are insufficient with respect to quantifying the capacity within the overall public health system or the MCH system. Although CAST-5 has a stronger focus on capacity than the NPHPSP, neither instrument is actually intended for quantifying capacity (e.g., number

of FTE employees, expenditures on activities, precise numbers of computers). In other words, both instruments have questions about specific resources, but do not collect the type of information that can be aggregated into measures such as number of full-time equivalent personnel, the number of agency heads who hold a public health degree, or the amount of resources expended on a particular activity/process. The latter types of measures have been available on the local level in surveys conducted by the National Association of County and City Health Officials (NACCHO) (10–12) and were previously available on the state level through the Association of State and Territorial Health Officers (ASTHO) reporting system. The process of quantifying capacity may be better accomplished through other data collection mechanisms (e.g., NACCHO survey, reinstatement of the ASTHO survey).

Since both the NPHPSP (available for state and local health systems) and CAST-5 (available for state MCH system only) use the EPHS as their framework and both focus on capacity and processes, in state health agencies which implement the NPHPSP, completion of a CAST-5 capacity assessment by the MCH Director and staff will likely contribute greatly to the NPHPSP performance measurement process. Alternatively, if the implementation of the NPHPSP occurs prior to implementation of CAST-5, it is likely that the MCH program will benefit greatly from the results of the former as they carry out their program-specific capacity assessment. A third possibility is that completion of these two instruments might be undertaken as a complementary process with feedback shared between MCH and other program staff as they proceed.

CONCLUSION

Capacity assessment and performance measurement tools within the Maternal and Child Health and broader public health systems can clearly focus on one or more aspects of system capacity, processes/outputs, and outcomes. In addition, these tools can vary according to a variety of other attributes such as whether they are mandated or voluntary or whether they can be used for comparisons across state and local health agencies. Knowing how the various capacity assessment and performance measurement tools relate to each other conceptually, and being able to articulate their defining characteristics, should lead to more effective and productive use by MCH practitioners.

APPENDIX**Exhibit 1****State Title V MCH Block Grant Performance and Health Outcome Measures***Performance Measures*

1. The percent of state Supplemental Security Income (SSI) beneficiaries less than 16 years old receiving rehabilitative services from the state Children with Special Health Care Needs (CSHCN) Program.
2. The degree to which the state Children with Special Health Care Needs (CSHCN) Program provides or pays for specialty and subspecialty services, including care coordination, not otherwise accessible or affordable to its clients.
3. The percent of Children with Special Health Care Needs (CSHCN) in the state who have a “medical/health home.”
4. Percent of newborns in the state with at least one screening for each of PKU, hypothyroidism, galactosemia, hemoglobinopathies [(e.g. the sickle cell disease) (combined)].
5. Percent of children through age 2 who have completed immunizations for Measles, Mumps, Rubella, Polio, Diphtheria, Tetanus, Pertussis, Haemophilus, Influenza, Hepatitis B.
6. The rate of births (per 1000) for teenagers aged 15 through 17 years.
7. Percent of third grade children who have received protective sealants on at least one permanent molar tooth.
8. The rate of deaths to children aged 1–14 caused by motor vehicle crashes per 100,000 children.
9. Percentage of mothers who breast-feed their infants at hospital discharge.
10. Percentage of newborns who have been screened for hearing impairment before hospital discharge.
11. Percent of Children with Special Health Care Needs (CSHCN) in the state program with a source of insurance for primary and specialty care.
12. Percent of children without health insurance.
13. Percent of potentially Medicaid eligible children who have received a service paid by the Medicaid program.
14. The degree to which the state assures family participation in program and policy activities in the state Children with Special Health Care Needs (CSHCN) Program.
15. Percent of very low birth weight live births.
16. The rate (per 100,000) of suicide deaths among youths aged 15–19.
17. Percent of very low birth infants delivered at facilities for high-risk deliveries and neonates.
18. Percent of infants born to pregnant women receiving prenatal care beginning in the first trimester.

Health Outcome Measures

1. The infant mortality rate per 1000 live births.
2. The ratio of the black infant mortality rate to the white infant mortality rate.
3. The neonatal mortality rate per 1000 live births.
4. The post-neonatal mortality rate per 1000 live births.
5. The perinatal mortality rate per 1000 live births.
6. The child death rate per 100,000 children aged 1–14.

Exhibit 2

04	
Performance measure Type: Risk factor Category: Population-based	Percent of newborns in the State with at least one screening for each of PKU, hypothyroidism, galactosemia, hemoglobinopathies [(e.g. the sickle cell diseases) (combined)].
<hr/>	
Goal	To ensure that all newborns with preventable mental retardation and other nonreversible consequences of selected genetic disorders (PKU, congenital hypothyroidism, galactosemia, and hemoglobinopathies) are identified as early as possible in the newborn period.
Measure	The percent of newborns in the State with at least one screening for each of PKU, hypothyroidism, galactosemia, and hemoglobinopathies [(e.g., the sickle cell diseases) (combined)].
Definition	Numerator: The number of occurrent births in the State receiving at least one screen for each of PKU, hypothyroidism, galactosemia, and hemoglobinopathies [(e.g., the sickle cell diseases) (combined)]. Denominator: The number of occurrent births in the State. Units: 100 Text: Percent.
Healthy People 2010 objective	Objective 16–20 (Developmental): Ensure appropriate newborn bloodspot screening, follow-up testing, and referral to services. 16–20a: Ensure that all newborns are screened at birth for conditions mandated by their State-sponsored newborn screening programs, for example, phenylketonuria, and hemoglobinopathies. Related to 16–20b: Ensure that follow up diagnostic testing for screening positives is performed within an appropriate time period.
Data source and data issues	State data system for newborn screening, CORN newborn screening annual report, and the birth registry. Potential data source: Title V Performance Measures, HRSA, MCHB National Newborn Screening, and Genetic Resource Center.
Significance	Newborn screening for PKU, hypothyroidism, and galactosemia is one of the major public health success stories with a significant social and cost benefit. Preventable mental retardation, growth stunting, and other illnesses are averted through early diagnosis and treatment of those with a confirmed diagnosis. It is crucial that the State’s commitment to newborn screening is maintained and accompanied by a commitment for treatment and follow-up of diagnosed newborns.

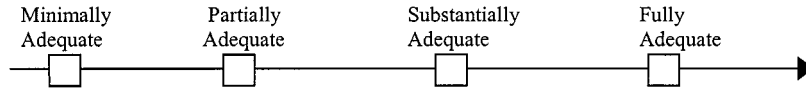
**Exhibit 3
Example of Process Indicator and Selected Capacity Needs from CAST-5:
Preliminary Edition**

Essential Service #8: Assure the capacity and competency of the public health and personal health workforce to effectively and efficiently address maternal and child health needs.

Process Indicator:

8.CM.1 Contribute to availability of continuing education on clinical and public health skills and emerging MCH issues (e.g., cultural competence, developmental assessment, asthma care) for targeted professional audiences in public and private provider sectors

- Does the Title V agency collaborate with state professional associations, universities, and others in providing continuing education courses (face-to-face or distance learning)?
- Does the Title V agency provide training, workshops, or conferences for state and local public health professionals and others on key emerging MCH issues?
- Does the Title V agency provide or support in-service training for program staff?



Performed by another agency/institution (specify): _____

Capacity Needs (Selected):

Structural Resources

Need Have

- Access to distance learning technology

Organizational Relationships

Need Have

- Professional organizations (*check all that are needed*):
- | | |
|---------------------------------------|--|
| ___ State and local medical societies | ___ AAFP state chapter |
| ___ AAP state chapter | ___ Other associations that promulgate professional competencies and provide professional education (e.g., nursing, nutrition, social work, dental, substance abuse) (<i>specify</i>): |
| ___ ACOG state chapter | |
- Universities/academic centers
- Public and private agencies/facilities that finance, organize, and provide health and social services for MCH populations (*check all that are needed*):
- | | |
|----------------------------------|--|
| ___ Medicaid/SCHIP | ___ Community Health Centers |
| ___ Early intervention programs | ___ Hospitals, health plans, and provider networks |
| ___ Child care facilities/system | ___ Other(s) (<i>specify</i>): |
| ___ Local Health Departments | |

Competencies/Skills

Need Have

- Knowledge of different theories on education and learning, and the ability to adapt curricula/approaches to take into account cultural differences
- Knowledge of MCH content areas and clinical skills reflective of the current science base
- Knowledge of performance appraisal systems for state and local public health staff in MCH

Exhibit 4
Example of Public Health Performance Standards from State Public Health Systems Draft Instrument, May 2001

Essential Service #2: Diagnose and investigate health problems and health hazards

This service includes

- Epidemiologic investigation of disease outbreaks and patterns of infectious and chronic diseases, injuries, and other adverse health conditions.
- Population-based screening, case-finding, investigation, and the scientific analysis of health problems.
- Rapid screening, high volume testing, and active infectious disease epidemiology investigations.

Indicator 2.1 Planning and Implementation

State Model Standards

- The SPHS identifies threats to the public’s health, including infectious disease outbreaks, chronic disease prevalence, rising incidence of serious injuries, environmental contaminations, the occurrence of natural disasters, increased risk of exposure to chemical and biological hazards, and other threats.
- The SPHS operates comprehensive state surveillance systems, integrated with national and local surveillance systems, capable of identifying and analyzing threats to the public’s health.
- The SPHS defines the roles and responsibilities of key personnel in developing effective communication and response networks in order to assure the successful performance of the system.
- The SPHS collaborates with private and public laboratories, within the state and in surrounding states, which have the capacity to analyze clinical and environmental specimens in the event of suspected disease outbreaks.
- The SPHS has developed written procedures for receiving information from the state’s public and private laboratories for purposes of monitoring chemical, biological, and infectious disease agents.
- The SPHS shares laboratory health information and data with local, federal, and other state public health agencies.
- The SPHS assures that all regulations and standards for credentialing and evaluating laboratory personnel, facilities, and equipment are enforced.
- The SPHS monitors protocols for the handling, storage, and transportation of specimens collected by private and public laboratories, and ensures the protocols are current and up-to-date.
- The SPHS uses input from these surveillance systems and from various federal, state, and local partners to provide timely and accurate analyses of public health threats, hazards, and adverse events.

- 2.1.1 Does the SPHS operate a surveillance system to recognize threats to the public’s health? If so,
 - 2.1.1.1 Is the system capable of analyzing the type of threat and magnitude of threats?
 - 2.1.1.2 Is the system capable of following the effects of public health threats and hazards over time?
 - 2.1.1.3 Is the system integrated with national and local surveillance systems?
- 2.1.2. Does the SPHS determine which threats require an immediate public health response?
- 2.1.3. Does the SPHS define the roles of key participants, including local officials, in responding to the threats?
- 2.1.4 Does the SPHS inform policymakers of possible threats to the health of the public?
- 2.1.5 Do laboratories within the SPHS have the capacity to identify all diseases and conditions for which notification is required by state law?
- 2.1.6 Do SPHS laboratories share health information and data with local and federal public health agencies?
- 2.1.7 Does the SPHS receive information from public and private laboratories regarding public health threats?
- 2.1.8 Does the SPHS have written protocols for the handling, storage, and transportation of specimens associated with public health threats?
- 2.1.9 Does the SPHS assure laboratories are appropriately credentialed?

L2.1.1 To what extent does the state public health agency meet the model standards for this indicator?

Not at all or minimally, Partially, Substantially, Fully or almost fully

1 2 3 4

L2.1.2 To what extent does the SPHS (including the state public health agency) meet the model standards for this indicator?

Not at all or minimally, Partially, Substantially, Fully or almost fully

1 2 3 4

ACKNOWLEDGMENTS

The work of our colleagues Catherine Hess and Karen VanLandeghem (Association of Maternal and Child Health Programs), Paul Halverson (Public Health Practice Program Office of CDC), and Peter C. van Dyck, (Maternal and Child Health Bureau of HRSA) were critical to the development of the public health tools described in this paper. We greatly appreciate their leadership in this arena, as well as their helpful comments on the manuscript prior to publication.

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