
Anne Dievler, Ph.D., M.P.H.,1,3 Holly A. Grason, M.A.,2 and Bernard Guyer, M.D., M.P.H.2

Objectives: At the close of the 20th century, the government's role in maternal and child health is in a state of transition. What is needed is a framework defining roles and responsibilities and guidance on how to operationalize these functions. This article presents the Maternal and Child Health (MCH) Functions Framework and discusses its value as an advocacy, planning, evaluation, and educational tool. Methods: The Johns Hopkins Child and Adolescent Health Policy Center developed the Framework in collaboration with leading public health organizations. The process entailed formulating a conceptual approach and facilitating consensus among the relevant organizations. Results: The Framework consists of three main components: (a) a list of ten essential public health services to promote maternal and child health, (b) an outline detailing program functions specific to MCH that apply to all levels of government and to all MCH populations, and (c) selected examples of local, state, and federal activities for implementing MCH program functions. Conclusions: The MCH Functions Framework can be used in advocacy, policy development, program planning, organizational assessment, education, and training. To date, it has been used by several state and local MCH agencies and in MCH education and training programs.

KEY WORDS: Maternal and child health; core public health functions; essential public health services; planning; policy; Title V.

INTRODUCTION

At the close of the 20th century, major transformations are occurring in the financing and delivery of health care services and programs in the United States. These include a dramatic growth in managed care and integrated service delivery networks and a downsizing or streamlining of government and industry. Concurrent with this transformation is a persistent debate over the proper roles of government versus the private sector in the delivery of public health programs and services, and whether governmental responsibility should be centered at federal, state, or local levels.

Changes in the field of maternal and child health (MCH) parallel those of the larger health care system. Managed care is significantly altering the service delivery system for women and children. At the same time, maternal and child health agencies are faced with resource constraints, public demands for increased accountability, and agency reorganizations aimed at consolidating government programs. As a result, these agencies are reexamining their roles as direct providers of health care services, while trying to determine the appropriate scope of respon-
sibility for monitoring population health, assuring quality health care in managed care systems, and providing leadership within new types of public organizations.

This period of transformation and reexamination would be assisted by a clear articulation of the roles and responsibilities of government in maternal and child health policy and a basic framework for operationalizing these responsibilities. Toward this end, the Johns Hopkins Child and Adolescent Health Policy Center (CAHPC), in collaboration with leading public health organizations, has developed an “MCH Functions Framework” (1). This Framework lists ten essential public health services to promote maternal and child health and delineates specific functions and examples of activities that should be conducted by local, state, and federal governments.

This paper first describes the background and origins of the Framework and the principles and themes that constitute its core. Next, it presents the basic structure of the Framework, with specific examples of the content. Finally, it discusses the potential and current applications of the Framework at federal, state, and local levels and in other sectors of the health care system.

METHODS

Historically, government programs have played an important role in addressing the health problems of women and children, particularly those in low-income and disadvantaged groups. From the founding of local health departments in the 19th century, to creation of the Children’s Bureau early in this century and passage of Title V of the Social Security Act in 1935, government has assumed responsibility for assessing and monitoring the health status of women and children, developing policy and standards, and providing or assuring access to basic health services (2–4).

In recent years, despite many successes, the actions of government in public health have been criticized. Among the strongest criticisms was the Institute of Medicine’s (IOM) report, The Future of Public Health, which charged that public health was in “disarray” and had failed to address adequately the challenges brought by old and new public health problems, including AIDS, injuries, chronic illness, the aging population, and environmental crises (5). The report also stated that public health was not clearly defined and articulated. Thus The Future of Public Health initiated a process of defining, in concrete terms, the mission and role of government in public health.

The IOM delineated three core functions of public health: assessment, policy development, and assurance (5). Researchers and practitioners then translated these broad concepts into specific components that could be used to measure the work of public health and communicate the message of public health to legislators and other policy makers.

Turnock and Handler, as well as Miller and colleagues, developed ten public health practices, each linked to one of the core functions (6–8). This framework was used to assess the performance of local health departments (LHDS), set standards for LHD certification, and provide a basis for developing leadership skills. The U.S. Public Health Service also outlined ten essential public health services (9). These service descriptions helped external audiences and constituencies understand public health and placed an important role in defining public health during the 1993–1994 health care reform debate (10).

As the public health community mobilized to meet the challenges of the IOM report and to advocate for reform of the American system of health care financing and delivery, leaders in maternal and child health realized that it would be important to define the elements of personal and public health systems and services necessary to assure appropriate focus on the needs of women, children, and youth. In 1994, state MCH program leaders recommended that the Association of Maternal and Child Health Programs (AMCHP) attempt to define the core functions of maternal and child health more clearly in order to strengthen the practice of maternal and child health in communities and at the state level, to improve understanding of the public and policy makers, and to help determine capacity—human, technical, and fiscal resources—needed to implement the functions.

AMCHP contracted with the CAHPC to develop a conceptual approach, including identifying and defining the content of maternal and child health and specific MCH program activities, and to achieve consensus among public health practitioners. The CAHPC collected and reviewed the scientific literature and other appropriate documents, including legislation, reports from the U.S. Public Health Service, state agencies and their MCH program divisions, and organizations representing public health officials, in-
Table I. Basic Tenets in Operationalizing MCH Program Functions

1. Separate standards are needed to address the developmental, dependency, and epidemiological aspects of care specific to women and children (15)

2. Shifts in cultural and ethnic makeup of the population demand special attention in MCH services design and delivery (16, 17)

3. Quality of health care for women and children needs to be addressed at the individual, provider organization, and community levels (18, 19)

4. Government mechanisms are essential to assure responsiveness of the system to the unique needs of women, children, and families (20, 21)

5. A long period of transition in the U.S. health system will require public-private partnerships to blend and share MCH expertise

...including the Association of State and Territorial Health Officials (ASTHO) and the National Association of County and City Health Officials (NACCHO). The structure of the MCH Functions Framework was built upon the previously developed public health practices and essential public health services. The CAHPC also served as neutral convener, bringing together relevant public health groups in a series of working meetings to review drafts and develop consensus among the range of perspectives.4

Central to the development of the Framework was the articulation of underlying principles to address the question: What is unique about caring for women and children within the overall health system? A review of the literature, focusing on sentinel national reviews and reports on maternal and child health, identified the basis for the MCH-specific content of the public health functions (11–14). These themes were operationalized in the function statements and guided the selection of examples of MCH program activities. Table I summarizes these findings.

Taken together, these principles argue for health services that are responsive to developmental factors and that emphasize prevention, special strategies for interacting with caregivers and community institu-

...tions, and advocacy and accountability within the health care system.

RESULTS

The MCH Functions Framework is comprised of three main components: (a) a list of the ten public health services essential to promote maternal and child health, (b) an outline detailing program functions specific to MCH that apply to all levels of government and to all MCH populations, and (c) examples of local, state, and federal activities for implementing MCH program functions. While the three components of the Framework are complementary, each building on the one preceding, they also may be used individually for different purposes and audiences.

Table II lists the ten essential public health services, ranging from assessment and monitoring of maternal and child health status, to research and demonstration into MCH-related problems.

This listing translates the ten essential public health services identified by the U.S. Public Health Service into MCH-specific services. The Appendix details the program functions, or MCH content, of the ten essential services.

The MCH Functions Framework provides examples of local, state, and federal activities for each essential MCH service and function. For purposes of illustration, however, in Table III, we describe only two of the functions (2A and 8D) and their associated local, state, and federal activities.

Function 2A is concerned with diagnosing and investigating health problems and hazards affecting women, children, and youth by conducting population surveys and publishing reports on risk conditions and behaviors. The federal government assumes major responsibility for designing and conducting national surveys that monitor maternal and child health status, such as the National Health Interview Survey, and plays an important role in gathering information on low-prevalence conditions. State agencies participate in these surveys and with adequate sample size, can conduct their own population surveys and disseminate this information to local health agencies. Information about community health concerns is vital to the success of survey design, data gathering, and analysis performed at state and federal levels. Local health departments have essential responsibility for communicating this information to state and

...The interorganizational consensus partnership included the federal Maternal and Child Bureau, AMCHP, ASTHO, NACCHO, and CityMatch. The U.S. Public Health Service Core Public Health Functions Steering Committee also provided consultation.
Table II. Ten Essential Public Health Services to Promote Maternal and Child Health in America

1. Assess and monitor maternal and child health status to identify and address problems
2. Diagnose and investigate health problems and health hazards affecting women, children, and youth
3. Inform and educate the public and families about maternal and child health issues
4. Mobilize community partnerships between policymakers, health care providers, families, the general public, and others to identify and solve maternal and child health problems
5. Provide leadership for priority-setting, planning, and policy development to support community efforts to assure the health of women, children, youth, and their families
6. Promote and enforce legal requirements that protect the health and safety of women, children, and youth, and ensure public accountability for their well-being
7. Link women, children, and youth to health and other community and family services, and assure access to comprehensive, quality systems of care
8. Assure the capacity and competency of the public health and personal health work force to effectively address maternal and child health needs
9. Evaluate the effectiveness, accessibility, and quality of personal health and population-based maternal and child health services
10. Support research and demonstrations to gain new insights and innovative solutions to maternal and child health-related problems

urgent public health concerns such as increasing rates of sexually transmitted diseases among adolescents. At the federal level, government might undertake a national review of MCOs' benefit packages as a way to monitor the provision of essential clinical and preventive services.

DISCUSSION

The MCH Functions Framework can be used in many ways. Because it articulates the substance of MCH work, the Framework can be used to advocate for resources and support and assist in the development of MCH policy. Local, state, and federal MCH agencies can use the Framework in program development as a strategic planning tool to guide planning processes and discussions. The Framework can help clarify roles and relationships between local, state, and federal levels and create linkages and partnerships between the public and private sectors. The Functions Framework also could be used to assess organizational structure and personnel and to assist in building program capacity. Finally, the Framework can be an educational resource in MCH training and leadership development programs.

The MCH Functions Framework can be adopted by state and local governments that vary significantly in organizational capacity and political and economic contexts. Some states, such as Maryland and Illinois, have an extensive network of local health departments that carry out MCH-related functions. Others, like Massachusetts, have no such structures and contract with private, nonprofit community health centers to undertake MCH activities. Changing political and economic contexts also affect the ability of state and local governments to carry out services. For example, anti-immigration sentiment in California has affected the availability of services for undocumented residents. Local budget crises such as the bankruptcy of Orange County, California, or the financial deficit in the local Washington, D.C. government have led to reductions in programs and services. The functions therefore reflect a range of feasible options for public MCH programs depending on their capacity and jurisdictional needs.

The Functions Framework is already being employed by a number of state and local agencies and graduate schools as a tool for planning and educational activities. In Kansas, the Framework was used in the state's five-year MCH strategic planning proc-
### Table III. Examples of Two Specific MCH Program Functions and Related Roles at the Local, State, and Federal Levels

<table>
<thead>
<tr>
<th>Local roles</th>
<th>State roles</th>
<th>Federal roles</th>
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<tbody>
<tr>
<td>2. Diagnose and investigate health problems and hazards affecting women, children, and youth</td>
<td>Maintain local surveillance of health conditions to improve local programming and act as an early warning system for local and state programs; conduct population risk surveys as appropriate</td>
<td>Conduct population risk surveys using adequate sample sizes to assure relevant and valid data for local health organization use</td>
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<td>Share state and local reports with local policymakers and follow-up to ensure identified needs are addressed</td>
<td>Disseminate findings on risk conditions to health care providers for incorporation into practice, to local health agencies to inform needs assessments and program development, and to policymakers</td>
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<td></td>
<td>Provide local information and support state and national survey teams, ensuring that surveys address issues important to local officials and the public</td>
<td>Provide technical assistance as needed</td>
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<td>D. Support health plans/provider networks in assuring appropriate access and care</td>
<td>Provide consultation and technical assistance to private providers, community-based organizations, and MCOs in areas such as case management and culturally competent care, and support involvement in public health initiatives such as disease outbreak investigations, immunizations, etc.</td>
<td>Prepare and disseminate to payors and providers targeted information on public health concerns for MCH populations (special newsletters, conferences, etc.)</td>
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<td>Facilitate MCO contracting with public programs [e.g., Women, Infants and Children (WIC), School-Based Health Centers (SBHCs)] by providing information on the programs, convening meetings; use state incentive program</td>
<td>Provide financial incentives to MCOs achieving MCH target objectives and/or targeted outreach, health education, and family support services to special MCH populations/enrollees</td>
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<td>Advocate for and support the use of midlevel providers and alternative providers (e.g., lay health workers)</td>
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<td>Provide technical assistance to MCOs</td>
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<td>Prepare/disseminate policy transmittals on MCH topics to state MCH programs and health officers, national professional organizations, and agencies and programs serving women and families</td>
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<td></td>
<td></td>
<td>Routinely review benefits package(s) and recommend revisions in collaboration with NIH, CDC, states, and academic medical and public health groups</td>
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<td></td>
<td>Work with state and local MCH programs and representative MCO groups to develop model contracts for linking privately delivered health services and public health programs, and for assuring enrollee access to specialty services</td>
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The development of the FFY 1996 MCH Block Grant Application, the document which serves as a guide for the allocation of Title V funding for the state's MCH programs. In Illinois, the state Division of Family Health used the Framework as background material for a strategic planning retreat that focused on the implementation of the core functions of MCH at the state and local level. In Caldwell County, a rural area northeast of Kansas City, Missouri, the local health department used the
Framework to guide their long-range planning process, to assess progress in resolving priority public health problems, and to identify areas for future action.

Three schools of public health use the Framework in their courses, and it has been integrated into the core curriculum of the MCH Continuing Education Institute organized by the University of Alabama at Birmingham.

The dramatic changes in the nation’s health care financing and delivery system have increased the vulnerability of women, infants, children, and adolescents. The historical experience and institutional presence of the public sector make it uniquely able to respond to the needs of these populations. The public sector cannot, however, forge ahead unless it engages in a strategic planning process that acknowledges the strengths and weaknesses of federal, state, and local agencies; carefully assesses the opportunities and threats in the environment; and evolves collaboratively with private sector providers, purchasers, and community leaders.

The MCH Functions Framework is a valuable, multipurpose tool that can aid in this sometimes difficult, but rewarding reinvention process. At a minimum, it can facilitate dialogue and discussion of roles and responsibilities and be used for training and educational purposes. At a maximum, it can be used by federal, state, and local agencies to evaluate performance, address gaps in the system, and provide a basis for developing leadership and commitment to improving the health of women and children in the U.S. into the 21st century.

APPENDIX. MCH PROGRAM FUNCTIONS5

1. Assess and monitor maternal and child health status to identify and address problems. For example:
   - Develop frameworks, methods, and tools for standardized MCH data in public and private sectors.
   - Implement population-specific accountability for MCH components of data systems.
   - Prepare and report on the descriptive epidemiology of MCH through trend analysis.

2. Diagnose and investigate health problems and hazards affecting women, children, and youth. For example:
   - Conduct population surveys and report on risk conditions and behaviors.
   - Identify environmental hazards and prepare reports specific to MCH health hazards.
   - Provide leadership in maternal, fetal/infant, and child fatality reviews.

3. Inform and educate the public and families about maternal and child health issues. For example:
   - Provide MCH expertise and resources for informational activities such as hotlines, print materials, and media campaigns, to address MCH problems such as teen suicide, inadequate prenatal care, accidental poisoning, child abuse and domestic violence, HIV/AIDS, driving under the influence (DUI), helmet use, etc.
   - Provide MCH expertise and resources to support development of culturally appropriate health education materials/programs for use by health plans/networks, MCOs, local public health and community-based providers.
   - Implement, and/or support, health plan/provider network health education services to address special MCH problems—such as injury/violence, vaccine-preventable illness, underutilization of primary/preventive care, child abuse, domestic violence—delivered in community settings (e.g., schools, child care sites, worksites).
   - Provide families, the general public, and benefit coordinators reports on health plan, provider network, and public health provider process and outcome data related to MCH populations based on independent assessments.

4. Mobilize community partnerships between policymakers, health care providers, families, the general public, and others to identify and solve maternal and child health problems. For example:
   - Provide needs assessment and other information on MCH status and needs to policymakers, all health delivery systems, and the general public.
   - Support/promote public advocacy for policies, legislation, and resources to assure universal access to age-, culture-, and condition-appropriate health services.

5This material has been extracted from the MCH Functions Framework, specifically edited for this article.
5. Provide leadership for priority-setting, planning, and policy development to support community efforts to assure the health of women, children, youth, and their families. For example:

- Develop and promote the MCH agenda using the Year 2000 National Health Objectives or other benchmarks.
- Provide infrastructure/communication structures and vehicles for collaborative partnerships in development of MCH needs assessments, policies, services, and programs.
- Provide MCH expertise to and participate in the planning and service development efforts of other private and public groups and create incentives to promote compatible, integrated service system initiatives.

6. Promote and enforce legal requirements that protect the health and safety of women, children, and youth, and ensure public accountability for their well-being. For example:

- Ensure coordinated legislative mandates, regulation, and policies across family and child-serving programs.
- Provide MCH expertise in development of legislative and regulatory base for universal coverage, medical care (benefits), and insurer/health plan and public health standards.
- Ensure legislative base for MCH-related governance, MCH practice and facility standards, uniform MCH data collection and analysis systems, public health reporting, environmental protections, outcomes and access monitoring, quality assurance/improvement, and professional education and provider recruitment.
- Provide MCH expertise/leadership in the development, promulgation, regular review, and updating of standards, guidelines, regulations, and public program contract specifications.
- Participate in certification, monitoring, and quality improvement efforts of health plans and public providers with respect to MCH standards and regulations.
- Provide MCH expertise in professional licensure and certification processes.
- Monitor MCO marketing practices and enrollment practices.
- Provide MCH expertise and resources to support ombudsman services.

7. Link women, children, and youth to health and other community and family services, and assure access to comprehensive, quality systems of care. For example:

- Provide a range of universally available outreach interventions (including home visiting), with targeted efforts for hard-to-reach MCH populations.
- Provide for culturally and linguistically appropriate staff, materials, and communications for MCH populations/issues, and for scheduling, transportation, and other access-enabling services.
- Develop and disseminate information/materials on health services availability and financing resources.
- Monitor health plan, facility, and public provider enrollment practices with respect to simplified forms, orientation of new enrollees, enrollment screening for chronic conditions/special needs, etc.
- Assist health plans/provider networks and other child/family-serving systems (e.g., education, social services) in identifying at-risk or hard-to-reach individuals and in using effective methods to serve them.
- Provide/arrange/administer women's health, child health, adolescent health, Children with Special Health Care Needs (CSHCN) specialty services not otherwise available through health plans.
- Implement universal screening programs—such as for genetic disorders/metabolic deficiencies in newborns, sickle cell anemia, sensory impairments, breast and cervical cancer—and provide follow-up services.
- Direct and coordinate health services programming for women, children, and adolescents in detention settings, mental health facilities, and foster care, and for families participating in welfare waiver programs that intersect with health services.
- Provide MCH expertise for prior authorization for out-of-plan specialty services for special populations (e.g., CSHCN).
- Administer/implement review processes for pediatric admissions to long-term care facilities and CSHCN home- and community-based services.
- Develop model contracts to provide managed care enrollees access to specialized women's
health services, pediatric centers of excellence, and office/clinic-based pediatric subspecialists and to community-site health services (school-based health clinics, WIC, Head Start, etc.).

- Provide expertise in the development of pediatric risk adjustment methodology and payment mechanisms.
- Identify alternative/additional resources to expand the fiscal capacity of the health and social services systems by providing MCH expertise to insurance commissions and public health care financing agencies, pooling categorical grant funding, and pursuing private sector resources.

8. Assure the capacity and competency of the public health and personal health work force to effectively and efficiently address maternal and child health needs. For example:

- Provide infrastructure and technical capacity and public health leadership skills to perform MCH systems access, integration, and assurance functions.
- Establish competencies, and provide resources for training MCH professionals, especially for public MCH program personnel, school health nurses and school-based health center providers, care coordinators/case managers, home visitors, home health aides, respite workers, and community outreach workers.
- Provide expertise, consultation, and resources to professional organizations in support of continuing education for health professionals, especially regarding emerging MCH problems and interventions.
- Support health plans/networks in assuring appropriate access and care through providing review and update of benefit packages, information on public health areas of concerns, standards, and interventions, plan/provider participation in public planning processes and population-based interventions, technical assistance, and financial incentives for meeting MCH-specific outcome objectives.
- Analyze labor force information with respect to health professionals specific to the care of women and children (e.g., primary care practitioners, pediatric specialists, nutritionists, dentists, social workers, CNMs, PNP, FPNPs, CHNs/PHN).

- Provide consultation/assistance in administration of laboratory capacity related to newborn screening, identification of rare genetic diseases, breast and cervical cancer, STDs, blood lead levels.

9. Evaluate the effectiveness, accessibility, and quality of personal health and population-based maternal and child health services. For example:

- Conduct comparative analyses of health delivery systems to determine effectiveness of interventions and to formulate responsive policies, standards, and programs.
- Survey and develop profiles of knowledge, attitudes, and practices of private and public MCH providers.
- Identify and report on access barriers in communities related to transportation, language, culture, education, and information available to the public.
- Collect and analyze information on community/constituents' perceptions of health problems and needs.

10. Support research and demonstrations to gain new insights and innovative solutions to maternal and child health-related problems. For example:

- Conduct special studies (e.g., PATCH) to improve understanding of longstanding and emerging (e.g., violence, AIDS) health problems for MCH populations.
- Provide MCH expertise and resources to promote "best practice" models, and to support demonstrations and research on integrated services for women, children, adolescents, and families.

ACKNOWLEDGMENTS

The writing of this paper was supported in part by a Cooperative Agreement (MCU 243A19) from the federal Maternal and Child Health Bureau, Health Resources and Services Administration, Department of Health and Human Services to the Child and Adolescent Health Policy Center at the Johns Hopkins School of Hygiene and Public Health. The authors would like to acknowledge the generous technical assistance, commentary, and critique provided by the Bureau, the Association of Maternal and Child Health Programs, the Association of State and Territorial Health Officials, the National Association of County and City Health Officials, and City-
MatCH throughout the development of the MCH Functions Framework. We are also grateful to our MCH colleagues, especially Jan Bueker and Cassie Lauver (Kansas), Ralph Schubert (Illinois), Linda McElwee (Missouri), Arden Handler and Joan Kenedly (University of Illinois at Chicago), and Donna Petersen (University of Alabama at Birmingham), who provided valuable information about the application of the Framework in their jurisdictions and institutions.

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