

# MCH POLICY RESEARCH BRIEF

## Quality, Quality Assessment, and Quality Assurance Considerations for Maternal and Child Health Populations and Practitioners

In the current context of health systems reform efforts to reduce health care costs in the United States, there is a critical need to measure, monitor, and improve the quality of health care services and emerging systems of service delivery. Issues relating to quality of care are of particular importance to those aiming to assure adequate and appropriate care for populations traditionally not well-served by the U.S. health care system. These populations include women, children, adolescents, and children with chronic illnesses or other disabling conditions. Quality assessment and quality assurance are important future roles for MCH agencies, particularly in the public sector.

Despite heightened interest in the question of health care quality, the field truly is in its infancy<sup>1</sup> — albeit a healthy one. Performance based models of quality management developed in the corporate sector hold promise in the health services field, but are not without problems of translation, and application.<sup>2,3,4,5,6</sup>

Particularly problematic is application of both traditional and more contemporary approaches to quality assessment and assurance to the health of populations. To date, our collective understanding and use of principles of quality have been focused predominantly on outcomes specific to individuals. While not unimportant, this focus on the quality of health care for the individual does not assure that we are healthier as a population. This situation is observed in a number of areas, including the continuing high rates of infants born at low birth weight, and the resultant infant and childhood mortality and morbidities, and the alarming incidence and prevalence of breast cancer, and AIDS. Moreover, violence in our communities has become a chief killer of children and youth, as well as their young fathers.

This MCH Policy Research Brief seeks to synthesize several perspectives related to quality concepts, practices and problems as they apply to maternal and child health (MCH). Definitions, domains, and levels of assessment are outlined and discussed. The brief also provides information on mechanisms by which these concepts are implemented — tools of the quality assurance trade. Each of these constructs are complex

in and of themselves: however they must be integrated in order to adequately address MCH quality concerns. In addition, therefore, the brief provides an example of how the concepts can be formulated to provide a framework through which MCH professionals and advocates can observe the comprehensiveness of quality assurance mechanisms over the entire system impacting MCH.

### DEFINITIONAL AND CONCEPTUAL FRAMEWORKS

The Institute of Medicine<sup>7</sup> (IOM) has provided leadership to the field in conceptualizing and articulating ideas related to quality health care.

**Quality of Care** is the degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge.

This definition is an important one, particularly in the context of care for traditional MCH populations — women of reproductive age, infants, children, and youth, including those with special health needs. While this definition might appear straightforward, in fact, it embodies several complex notions, made even more complex when one considers quality with specific respect to children and families. With this definition, a very wide set of health status, patient well-being, and outcome measures are germane.<sup>8</sup> Several key concepts warrant closer examination — including understanding the implications to the recipients of care (individuals *and* populations); consideration of the meaning of “health;” and thinking through the parameters of “current professional knowledge.”

Noteworthy in this definition is the concern for the **health of the population**, as well as for the health status of individuals: that is, unless health care results in a healthier population, quality care is not being delivered. This premise focuses attention to the intended recipients of care — both the users and non-users of health services. For example, if only the insured population or those who come to the attention of the system on their own are immunized, the population is not likely to be healthier: the threat of exposure to disease among the entire population remains. Another example of how the concept of the population as the “recipient” of quality care exists in the area of injury control, where considerations move beyond medical care as the answer to quality health care concerns. In this example, environmental interventions such as traffic laws, fire safety codes, and education are equally as important as trauma response capabilities. To date, environmental and other community interventions

have not been considered within the purview of the medical care community, where the focus of quality assessment and assurance has traditionally rested. Thus, this focus on population health implies different approaches to measurement of outcomes: examination of the health of the population must include methods for assessment in the community, where a range of factors, including psycho-social and environmental factors, impact on health risks and behaviors.

In addition to addressing populations, the IOM definition requires an expanded view of what constitutes "health." To implement a system of quality care for women and children in particular, awareness that health care encompasses much more than medical services must be raised. Quality assessment and assurance needs to extend beyond consideration of medical care to include prevention. The emphasis on "health" incorporates ancillary health interventions, educational services, and supportive care for both individuals and their families. As such, this approach broadens the parameters of who participates in delivering quality health care, and where assessments of quality need to be conducted — not only in doctors offices, hospitals, and clinics, but also home and community sites, schools and child care settings. These latter care settings are as, or more, important for children and youth who depend on social and community institutions for their care.

Thus, the IOM definition prompts consideration of the differing parameters of "health" for various subgroups of the maternal and child health population. Here, concepts of human growth and development,

and age and gender, apply. For example, if a teenager is disease- or disability-free, but is making poor reproductive health choices, it is unlikely that s/he truly is healthy.

Jameson and Wehr<sup>9</sup> provide a succinct review of the literature and compelling arguments for a special standard of medical necessity for children, emphasizing children's developmental vulnerability in the context of rapid growth and development, their dependency on adults and social institutions for both financial and non-financial support in accessing health care, and outlining the differential epidemiology of disease whereby illnesses that occur in both children and adults can differ significantly in expression and severity. The special breadth and diversity of service requirements for children with chronic illness or disability, in particular, highlight the need for a differential standard of MCH care. Similarly, as a population, women in their child-bearing years warrant special consideration within the health care system for broadly conceived preventive interventions, such as those relating to the delivery of reproductive health care.<sup>10</sup> However, our collective understanding of "quality healthcare" for this population remains underdeveloped.<sup>11</sup>

Moreover, measurement of quality against the standard of "current professional knowledge" must include application of what is known about the impact of community-based health, social, and educational interventions on the physical and mental health status of women and children. Care provided to children with special health needs must be provided not only in the context of current professional knowledge with respect to medical technology, but also to the impact of community services and supports. *Bright Futures*<sup>12</sup> represents a major national initiative to identify health supervision guidelines specific to the developmental periods of infancy, early childhood, middle childhood, and adolescence. This report emphasizes the need for partnerships between families and health professionals, partnerships with the community, and the need to integrate with other health services in order to provide effective services to children and youth. In addition to clinical components of care, anticipatory guidance, health promotion and disease prevention activities, and parenting education and support are addressed. Specific professional standards also exist for many women's health services, and for care provided to adolescents.<sup>13,14,15,16</sup> Thus, as the concept of health is broadened and applied to knowledge about human development, contemporary standards of care must be applied to health interventions, and quality must be measured against such standards.

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In summary, several key considerations are fundamental to assuring quality health care and optimal health for the MCH population, including:

- an emphasis on prevention;
- the relatedness of health and development, and the need for linkages between health care and developmental/educational and social services;
- the central role of parents, families, and other caretakers in promoting the health of children, and the consequent need to provide information, education, guidance, and support to families in gaining access to appropriate primary care, quality specialty perinatal, pediatric and adolescent services and community resources;
- the importance of advocacy within the health care system related to interactions between the provider and client/caretaker;
- the availability and application of special pediatric and women's health knowledge in all aspects of system design and operation; and
- the need for organizational structures and authorities to assure adequate attention to women's and children's health concerns.<sup>17</sup>

#### **QUALITY ASSESSMENT, AND ASSURANCE: CONCEPTS AND APPROACHES**

The IOM and others are examining concepts and approaches which can be helpful to public health programs in understanding and measuring the components and context of quality health care for populations.

Fundamentally important to the discussion of quality is the distinction between two terms commonly associated with quality of care — quality assessment, and quality assurance. *Quality assessment* is defined as "the act of measuring quality of care, of detecting problems of quality, or of finding examples of good performance." *Quality assurance* applies broadly to an entire cycle of assessment which extends beyond problem identification, to verification of the problem, identification of what is correctable, initiation of interventions/improvements, and continual review to assure that identified problems have been adequately corrected and that no further problems have been engendered in the process.<sup>8,18</sup> Quality assurance can thus be likened to current notions of "continuous quality improvement (CQI)," or "total quality improvement" (TQI), though there are important differences.<sup>6</sup> Discussion of each follows.

#### **Methodological Dimensions to Consider in Assessing and Assuring Quality:**

1. Addressing structure, process, and outcome elements provides an organizational scheme for adapting quality concepts to systems assessment.
2. Considering quality at all loci of health services delivery — individuals (families); health plans/networks, and populations — provides for comprehensive assessment of systems quality.
3. The full range of quality of care problems — overuse and underuse of services, and deficiencies in the technical and interpersonal aspects of health care — need to be examined.
4. Continuous Quality Improvement (CQI) models entail a cycle of assessment, and intervention, which promotes ongoing examination of system performance.

#### *Measuring Quality*

One framework useful in organizing an approach to measuring quality within systems describes three components of the health services system: structures, process, and outcomes.<sup>19,20</sup> *Structures* are characterized by system resources, such as numbers of health professionals and facilities, education of providers, technological supports, financing, and organization of services. *Processes* are represented by tests and treatments given to patients — examples include immunizations and prenatal care. *Outcomes* are traditionally measured by broad measures of health status, including survival, longevity, activity, physical comfort, and perceived well-being, and by measures of consumer satisfaction.<sup>19,20,21,22</sup>

**Each of these components can be assessed at three levels:**

- **individual** level, where an individual provider or organized team of clinicians assumes responsibility for delivering health care to an individual,
- **health provider network/plan** level, where a single organized provider or payor group assumes responsibility for organizing delivery of an array of health services provided to a defined group of individuals, and

- the **community, and/or state** level, where multiple provider/payor networks, public health programs, and community-based programs share responsibility for addressing the health needs of the entire population, including insured and uninsured, and user and non-user members of the population.<sup>23</sup>

Our collective ability to measure quality at each of these levels with respect to structure, process and outcomes varies. **Structures** are most frequently measured by their existence or absence. However, there is limited documented evidence of the relationship between structural measures and either the process, or the outcome of care.<sup>8</sup>

The IOM outlines the importance of measuring three fundamental aspects of the *process* of care: 1) use of unnecessary or inappropriate care (e.g., excessive sections or using the emergency room for ongoing healthcare); 2) underuse of needed, effective, and appropriate care (e.g., immunizations or mammography); and 3) shortcomings in technical and interpersonal aspects of care (e.g., poor coordination).<sup>24</sup> Measures of process, usually formulated through review of medical records, and, more recently, analysis of insurance claims data,<sup>25</sup> are somewhat less well-developed. While conceptually appealing (especially to practitioners) and easy to explain and interpret, and while valid and reliable criteria and methods to measure processes exist, little evidence exists of the value of processes in improving individual health status. Further, relevant aspects of **systems** of care (i.e., the non-medical, and communications and coordination functions of systems) are not addressed using these traditional approaches. Another limitation of process measures is a lack of information on individuals who do not utilize the health care system.

*Outcome* measurements, the subject of much current attention and activity, are directly relevant to a broad spectrum of stakeholders, including consumers, and are easy to explain and interpret. Nonetheless, measuring outcomes frequently requires longitudinal analyses, can be expensive, and is made difficult by factors such as biological variability and chance. In the case of children, for example, documentation can be problematic because the outcomes of certain preventive interventions may not be expected to appear for a decade or more.<sup>11,26</sup> Moreover, and particularly relevant to children, few outcome measures are scientifically accepted as indicators of effectiveness of psychosocial interventions. Medical treatment outcomes research for specific technological interventions (e.g., oral rehydration therapy) represents a major effort to link

process and outcomes. Here, however, the emphasis remains singularly on the individual level — documentation linking outcomes and the aggregation of structure and process of care with respect to systems as they impact the health of the population in a geographically defined community (i.e., health systems) remains a major challenge for public health.

The “report card” system of standardized performance measures of services provided in managed care plans exemplifies the operationalization of quality assessment. A uniform reporting system, the “Health Plan Employer Data and Information Set” (HEDIS), provides purchasers, consumers, health plan executives, and others with comparable, useful and timely information on health plan performance.<sup>27</sup> These initiatives evolved based on the assumption that market forces will favor “quality.”

The HEDIS includes structure, process and outcome data as summary measures of quality, access, patient satisfaction, membership, utilization, and finance.<sup>28</sup> HEDIS addresses a range of health services, including preventive services, acute and chronic illnesses, and mental health and substance abuse.<sup>28</sup> For example, plans are asked to report on: physician credentials (structure); the percentage of enrolled children having received all vaccines, and the percentage of women ages 21-64 having received annual pap smears (process); and plan asthma inpatient admission, and low birthweight rates (outcome). The conceptual framework for HEDIS is designed to portray “value” (quality and cost effective care), demonstrate a commitment to consumer satisfaction, and to document efficiency in performance.<sup>28,29</sup>

By incorporating in HEDIS measures consistent with Year 2000 Healthy People Objectives, attempts were made to select indicators of public concern, and not those singularly of interest to health plan purchasers, managers and consumers. More recently, HCFA has promoted the inclusion of additional measures in HEDIS related to linkages of services and other issues of concern to the public health MCH community, such as access to family planning, orientation services for new plan members, availability of linguistically appropriate services, and others.<sup>30</sup> Beyond individual plan performance measurement, some states are addressing the challenge of developing methods and vehicles for combining HEDIS-type reporting across plans to examine systems comprehensively to support public policy development, market monitoring, and benchmarking functions.<sup>31</sup> However, HEDIS reporting items include only those within the scope of medical care and insurance coverage, and therefore are

not tied to community-based prevention services (such as injury control or lead poisoning prevention), and are limited in their applicability to MCH quality assessment efforts. Additional work is needed to blend health plan measures with those traditionally used by public health.

While the need for strategies to monitor the effectiveness and efficiency of health care services and provider systems such as managed care plans is unquestioned, researchers advise that "report cards" should be used only as *indicators* to describe performance.<sup>5,32,33</sup> Although promising, it will be several years before comparability, reliability, and validity concerns of such performance measures are resolved.<sup>34</sup> Further, while such "short form" assessments are favored, they are less rigorous than what will be needed for policy decisions or for monitoring maternal and child health populations on an ongoing basis.

### *Improving Quality*

Measuring — or assessing — performance alone does not ensure that problems will be corrected. An array of approaches and tools are available in public and private domains to influence performance of the health system. Traditional quality assurance tools available to and used by both the private and public sectors include health professions training, licensing and accreditation (such as through JCAHO), the exercise of supervisory functions, contracting, and the promulgation of practice guidelines such as found in the ACOG's *Standards for Obstetric-Gynecologic Services*,<sup>35</sup> the March of Dimes' *Towards Improving the Outcomes of Pregnancy*,<sup>16</sup> AAP's *Guidelines for Health Supervision*,<sup>36</sup> the AMA's *Guidelines for Adolescent Preventive Services (GAPS)*,<sup>15</sup> New England SERVE's *Enhancing Quality*,<sup>37</sup> and *Bright Futures*,<sup>12</sup> noted above.

Tools unique to private sector implementation focus heavily on the activities of professional boards for credentialing, restriction of privileges, and other professional sanctions. Also in the private sector, economic credentialing, and selective contracting are used in the constitution of provider panels for health care plans and networks. The most prominent instruments of quality assurance specific to government are laws and regulations wherein civil actions and remedies become available to the public body, and to individual consumers. Market forces are increasingly seen as germane to assuring quality health care. Market theories are based on the premise that a public informed about provider/insurer outcomes will demand quality; and will, by their consumer patterns drive poor performers from the market.

These tools and approaches represent external actions to assure, or improve quality health care. Of more recent interest are approaches which promote quality assurance from within. Continuous Quality Improvement (CQI) models offer an increasingly popular approach to quality assurance. CQI entails a systematic cycle of design, examination, action, and redesign.<sup>8,38,39</sup> Within CQI models there is a focus on current events, measuring everyday performance, and self-testing over time to depict *systems* issues, not individual aberrations. Effective quality improvement efforts thus require in-depth analyses into reasons for performance outcomes, as well as intervention efforts to improve, modify, or maintain those outcomes.<sup>33</sup>

One of the country's largest managed care plans, United HealthCare, has developed a CQI program called "Quality Screening and Management" (QSM).<sup>40,41,42</sup> QSM is implemented in four stages: 1) claims data drawn from HEDIS-related measures is used to identify potential problems of quality, 2) medical record analysis is conducted to validate performance problem findings and to target quality management actions (change in patient, provider or plan behavior); 3) quality management interventions are implemented (e.g., provide patient education, patient appointment reminders, implement practice guidelines, institute case management programs, improve access (clinic hours), change reimbursement structures, and/or expand coverage), and 4) claims data are re-screened to observe outcomes of quality management interventions. Applications of such programs have been reported by United HealthCare for immunizations, asthma management, and cesarean-section procedures.<sup>41</sup> Similarly, the Health Care Financing Administration has developed a CQI model for Medicaid programs called QARI — Quality Assurance Reform Initiative — now being piloted in five states.<sup>43</sup> A number of communities also are reported to be experimenting with the TQI framework.<sup>44</sup>

As a quality assurance strategy, CQI is regarded to hold much promise, though it is not without problems.<sup>2,4,6,45</sup> For public health, concerns lie in the narrow parameters of measurement of plan performance, as well as in the potential for a singular internal focus on improved management for enhanced profits. Thus, maintenance of government roles is needed in performing external checks on these internal processes, and in promoting broader health goals of concern to the community and measurements and interventions targeted for populations to assure public accountability.

## DEVELOPMENT OF A MODEL APPLYING QUALITY OF CARE CONCEPTS TO THE MATERNAL AND CHILD HEALTH POPULATION

To be successful in its overall mission of improving the health of children and their families, MCH must develop a set of concrete activities that operationalize quality improvement concepts for the services provided to this population. The challenges in applying these principles of quality improvement to real world programs are considerable.

At the individual and plan levels, quality improvement research and practice has focused primarily on adult health and needs to be extended with the same scientific rigor to care for children. Application of the quality improvement concepts at the community and/or state level remains essentially in the embryonic stage. In the material that follows, the JHU Child and Adolescent Health Policy Center (JHU CAHPC) outlines an initial effort to apply quality improvement concepts to the health care system for the MCH population.

To organize these quality assessment, assurance, and improvement activities, the JHU CAHPC prepared a matrix that identifies eight specific functions in relation to the three levels of health services programming discussed earlier — the individual patient level, the health provider network/plan level, and the community/state level. While the construct may be applicable to the general population, this framework describes specific aspects of health that uniquely apply to women and children. As introduction, the content and categories used along each of the dimensions of the matrix are described. Detailed tables with specific examples of the quality improvement activities at each of the levels then follow.

### *MCH Content*

Drawing from the Institute of Medicine definition of "quality of care,"<sup>7</sup> the *MCH Quality Functions Framework* considers population health (MCH within a geographic community) and the broader definition of health encompassing the full range of medical, psychosocial, educational interventions. The framework also seeks to recognize differential standards for care in developmental periods.<sup>9</sup> Item content specifying services and activities to address MCH needs are drawn from sentinel national reviews:<sup>12,13,14,15,16,46,47,48</sup> key considerations include an emphasis on prevention, links between health and development, the central role of parents, families, and community caretakers, the importance of advocacy, and the imperative for special pediatric and women's health expertise. Structure, process, and outcome aspects are addressed for these dimensions.

### *Level of Activity*

The model examines quality at three levels of the health care system — the individual patient level, the health provider network/plan level, and the community/state level. Quality assessment and assurance at the *individual patient level* refers to the interaction between patients and their health care providers. The paradigm for this interaction is the disease model in which explicit standards of care are developed for the management of specific conditions, and the treatment of individual patients is measured against these standards. The majority of activities carried out as quality assurance reviews fit into this model. Quality improvement at the *provider network or health care plan level* is a field in an active state of development. The essential focus of quality improvement activities at this level is the assurance that the entire population of subscribers and users of the plan are receiving specific services in an appropriate way, and that the population of subscribers are achieving some measure of improved health status. The HEDIS measures described earlier are the first specific attempts to operationalize these concepts.

Finally, measurement of quality at the *community/state level* represents an adaptation of the traditional roles of public health to assure that populations achieve standards of health care status and utilization of health care services. The National Objectives for the Year 2000 contain multiple objectives of these types for the entire nation and many states have adapted these to their own populations. The challenge in this arena of quality improvement at the community/state level, however, is to develop specific activities that assess the population standards in situations where multiple health care plans and multiple provider networks provide care to a local geographic population and where some families may be uninsured and underserved. This situation is likely to become increasingly common, and therefore forms the assumption for the ideas put forward by the JHU CAHPC in this framework.

### *Systems Functions*

The other dimension of the matrix is made up of three categories of systems functions used to organize the specific activities — assessment, assurance, and coordination. This schema derives from, but is not entirely parallel to, the work of a number of public health groups and the CAHPC which detail essential public health activities that relate to the specific needs of the MCH population.<sup>49</sup> In the model presented here, functions/activities primarily related to policy

development and implementation — such as legislation, research, training, information dissemination, resource leveraging and allocation — which cross-cut many (or all) functions, are incorporated within the three categories of systems activity. Eight specific function components are further outlined to operationalize the quality improvement activities:

- A. The **ASSESSMENT** activities include:
  - 1. Health Risk Measurement;
  - 2. Health Status Measurement;
  - 3. Measurement of Service Capacity & Adequacy;
  - 4. Health Services Utilization Measurement.
- B. The **ASSURANCE** activities include:
  - 5. Standard Setting & Ensuring Compliance;
  - 6. Prevention Programming;
  - 7. Enabling Access for Underserved Populations.
- C. The **COORDINATION** activities include:
  - 8. Promoting a Health Care Continuum and Community Services.

#### *Locus of Responsibility*

The ***MCH Quality Functions Framework*** identifies those functions needed to assure quality health care for women and children without specifying the assignment of quality assessment and assurance roles. Because standard benefits and coverage protections may not evolve legislatively, great variability will continue to exist in service delivery and administration systems organization nationally. In addition, current societal, political, and economic trends are increasing demands for greater privatization of government functions. For many areas of function, the specific delineation of public and private roles in assuring quality health care is likely to be negotiated at the state level.

Quality assessment at the individual, provider/plan, and community/state levels permits discrete examination and significant flexibility in deliberating and determining specific responsibilities based on “local” capacities and politics. Where assignment of roles to government is clear (e.g., such as with legislative, regulatory, and licensure activities), the framework also permits sorting of responsibilities at the local, state, and federal levels for each component function activity.

The model also is predicated on the assumption that managed care strategies will be widely implemented to control health care expenditures. Therefore,

emphasis is placed on accountability tools — such as legislation, regulation, contracting specifications, and external review and auditing of health data and provider practices — to assure that MCH-specific criteria for quality are met and overcome a singular focus on cost savings and/or other private sector interests. Further, the framework implies public leadership to generate participation of the private sector in community response to needs and to provide a population-based, systemwide focus for health services delivery and oversight. Assumption of public responsibility for special populations<sup>50</sup> also is implied in the model.

#### **CONCLUSION**

The complexities inherent in the measurement and assurance of quality health care for all populations, including maternal and child health, demonstrate that stewardship of quality care for women, children and adolescents cannot be the province of any one sector of the health services system. Rather, the development and implementation of mechanisms that assure that health services provided to MCH populations achieve the goal of improved health and well-being must evolve through key partnerships between individual consumers and providers, health plans and insurance purchasers, public health agencies, and local and state legislative bodies. Further, even a cursory review of the literature finds that the research implications are great. Academic medicine, and schools of public health will need to partner with public health agencies, and with health plans and networks of all types to untangle the threads of scientific evidence substantiating that the health system is moving along the appropriate path.

The ***MCH Quality Functions Framework***, which builds on and seeks to operationalize the IOM definition of quality with specific respect to the health of women, children, and families, is provided in this nascent form as a tool for both public and private sector MCH practitioners seeking to examine the existence and/or nature of the quality of care components related to maternal and child health in their individual practices, provider organizations, communities, and/or states. We believe also that the framework can be applied to the process of negotiating quality measurement and assurance roles among players within a geographically defined area, and to health benefits purchasers' design and selection of health plans.

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# MCH QUALITY FUNCTIONS FRAMEWORK

**FUNCTION 1 - ASSESSMENT OF HEALTH SYSTEM POPULATIONS, ENVIRONMENT, STRUCTURE, PROCESS AND OUTCOMES**

<b>LOCUS AND ACTIVITIES</b>			
<b>Function Components</b>	<b>Individual Level</b>	<b>Health Provider Network/Plan Level</b>	<b>Community/State Level</b>
<p><b>A. Health Risk Measurement</b></p>	<ul style="list-style-type: none"> <li>Develop/promulgate developmentally appropriate measurement tools, and implement clinical evaluation of risk for mortality and morbidity related to:               <ul style="list-style-type: none"> <li>- genetic factors</li> <li>- multiple social, economic, health and behavioral factors in the pre- and perinatal periods and early childhood</li> <li>- health-related behaviors in adolescents, such as alcohol and drug use, unprotected sex, driving habits</li> <li>- developmental impairments</li> <li>- child abuse</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Develop profiles and reports on adolescent subscribers' risks, including STDs/HIV, teen pregnancy, alcohol and drug use, driving habits (drinking, seat-belt use), and risks for secondary health conditions in youth with disabilities</li> <li>Track the management of health risks</li> <li>Analyze and report on individuals and families denied services</li> <li>Calculate the costs to the plan of health-related risks that are <u>not</u> addressed</li> </ul>	<ul style="list-style-type: none"> <li>Analyze economic (e.g., poverty and employment levels), demographic (e.g., age, race, ethnicity), and health status information to define vulnerable populations and report/publish findings</li> <li>Conduct population surveys of risk-related behaviors (e.g., BRFS, YBRFS) and report/publish findings</li> <li>Conduct and prepare reports on environmental assessments which determine hazards related to:               <ul style="list-style-type: none"> <li>- traffic safety</li> <li>- playground safety</li> <li>- lead poisoning</li> <li>- product safety</li> <li>- facility safety (schools, child care facilities and adolescent worksites)</li> <li>- dental disease</li> <li>- housing quality</li> <li>- crime trends</li> </ul> </li> <li>Conduct, and publish findings from, special studies (e.g., PATCH)</li> </ul>
<p><b>B. Health Status Measurement</b></p>	<ul style="list-style-type: none"> <li>Develop/promulgate guidelines and instruments for uniform measurement and collection of data on individuals health status including screening for:               <ul style="list-style-type: none"> <li>- developmental problems</li> <li>- sensory impairments</li> <li>- scoliosis</li> <li>- cervical and breast cancer</li> <li>- STDs</li> <li>- immunization status</li> <li>- chronic, acute conditions and long term illness</li> <li>- oral health problems</li> <li>- nutritional problems</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Collect and report data on enrollees':               <ul style="list-style-type: none"> <li>- maternal mortality</li> <li>- fetal/infant mortality</li> <li>- LBW, VLBW</li> <li>- STDs</li> <li>- teen pregnancy</li> <li>- hospital discharge data</li> <li>- vaccine preventable disease rates</li> <li>- chronic illness, handicapping conditions, and developmental disabilities</li> </ul> </li> <li>Develop profiles of functional health</li> </ul>	<ul style="list-style-type: none"> <li>Develop and administer health data and tracking registries and maintain all health system data in a public repository (e.g., vital records, sentinel birth defects, immunization, etc.)</li> <li>Develop and administer universal screening programs such as for newborn metabolic deficiencies</li> <li>Analyze and report trends in:               <ul style="list-style-type: none"> <li>- mortality rates (maternal, infant, child and adolescent)</li> <li>- morbidity rates (violence/injury, substance abuse, vaccine preventable illness, chronic disease)</li> <li>- fertility rates</li> </ul> </li> </ul>
<p><b>C. Measurement of Health Service Capacity and Adequacy</b></p>	<ul style="list-style-type: none"> <li>Implement, and monitor information from, individual/family service planning for women and children (CSHCN, high-risk pregnant women, abused/neglected children, children in foster care, etc.)</li> </ul>	<ul style="list-style-type: none"> <li>Re-assess benefit package on a regular basis</li> <li>Monitor appropriateness of scope and mix of affiliated providers</li> <li>Collect data and report on enrollees':               <ul style="list-style-type: none"> <li>- appointment waiting times/wait lists</li> <li>- referral practices (within plans and to</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Develop and publish health resource (including enabling services) inventories, including profiles of operating characteristics (location, service charges, hours of service, etc.)</li> <li>Analyze labor force information with respect to health professionals specific to the care of women</li> </ul>

		<ul style="list-style-type: none"> <li>- consumer complaint data</li> <li>- client satisfaction</li> <li>• Develop profiles of health plan providers' knowledge, attitudes, and practices</li> <li>• Conduct reviews of mortality: <ul style="list-style-type: none"> <li>- maternal</li> <li>- fetal/infant</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- pediatric specialists</li> <li>- nutritionists</li> <li>- CNM/Ws</li> <li>- P.N.P.s, P.N.P.s, etc.</li> <li>• Collect and compile information on consumer/community perceptions of health services</li> <li>• Develop/promulgate standardized procedures/reporting related to mortality reviews</li> <li>• Conduct child fatality reviews, and analyze and publish findings of maternal mortality, fetal/infant and child mortality reviews</li> <li>• Conduct comparative analyses of health care delivery systems</li> <li>• Profile and publish reports on gaps in community services</li> </ul>
<p><b>D. Health Services Utilization Measurement</b></p>	<ul style="list-style-type: none"> <li>• Develop data system to track individuals'/ families' referral to and use of health and health-related services</li> </ul>	<ul style="list-style-type: none"> <li>• Collect and report data on enrollees': <ul style="list-style-type: none"> <li>- prenatal care utilization</li> <li>- family planning service utilization</li> <li>- hospital admission rates</li> <li>- immunization rates</li> <li>- preventive health visits</li> <li>- requests for out-of-plan referrals: source/frequency/outcome</li> </ul> </li> <li>• Profile discrepancies between enrollee population and users of services</li> </ul>	<ul style="list-style-type: none"> <li>• Analyze and report on community rates of: <ul style="list-style-type: none"> <li>- reproductive health care utilization</li> <li>- preventive and primary child health services utilization</li> <li>- ambulatory care sensitive hospital admissions</li> <li>- immunization coverage rates</li> <li>- utilization of school health services</li> <li>- utilization of social services, mental health services, early intervention services, alcohol and drug abuse services</li> </ul> </li> </ul>

**FUNCTION 2 - ASSURANCE OF COMPREHENSIVE RISK-APPROPRIATE HEALTH SERVICES**

<b>LOCUS AND ACTIVITIES</b>			
<b>Function Components</b>	<b>Individual Level</b>	<b>Health Provider Network/Plan Level</b>	<b>Community/State Level</b>
<p><b>A. Standard Setting and Ensuring Compliance</b></p>	<ul style="list-style-type: none"> <li>• Develop/regularly review and update, and implement standards for age-, risk- and health condition - appropriate health care</li> <li>• Develop and implement guidelines for care coordination for special populations (OSHCN, high-risk perinatal, abused/neglected children, etc.)</li> <li>• Establish competencies for health professionals</li> <li>• Administer professional licensure and certification process</li> <li>• Provide training and continuing education for individual providers</li> </ul>	<ul style="list-style-type: none"> <li>• Provide enrollees health care and enabling services consistent with or exceeding established benefit package requirements</li> <li>• Set enrollee/plan targets for improvements related to Year 2000 Health Objectives</li> <li>• Develop and implement requirements regarding plan use of pediatric and perinatal specialist services/providers, and criteria for out of plan referrals</li> <li>• Establish case-mix enrollment requirements</li> <li>• Develop pediatric risk adjustment methodology and payment mechanisms</li> <li>• Certify and monitor health plan compliance with standards and regulations (includes rate reviews, record reviews, audits)</li> <li>• Provide training and technical assistance to promote compliance with standards and requirements and quality improvement</li> </ul>	<ul style="list-style-type: none"> <li>• Develop and promote the health agenda through Year 2000 National Health Objectives process</li> <li>• Develop legislative and regulatory base for medical care (benefits) and health care provider (facility, plan, professional) standards (including reporting requirements); reassess on a regular basis</li> <li>• Implement/enforce regulations related to medical care and health care provider standards, including, but not limited to: <ul style="list-style-type: none"> <li>- hospital licensure</li> <li>- Health plan and provider data/reporting requirements</li> <li>- case-mix enrollment requirements</li> <li>- laboratory licensure</li> </ul> </li> <li>• Develop and promulgate guidelines and implementation requirements or incentives for adequate and equitable distribution and mix of preventive, primary, specialty, and subspecialty providers needed</li> </ul>

		<ul style="list-style-type: none"> <li>• Provide information to health plan officials and providers regarding public/population health problems</li> <li>• Develop and administer formal appeals procedures applicable to enrollees and providers</li> </ul>	<ul style="list-style-type: none"> <li>• regional, and state levels)</li> <li>• Develop and promulgate standards and quality improvement processes for community prevention, and enabling access service systems</li> <li>• Develop and promulgate standards and quality improvement processes for specialized regionalized services (perinatal, EMSC, low-incidence conditions)</li> <li>• Provide the public and providers information/reports about health system status related to Year 2000 National Health Objectives on a regular basis</li> <li>• Provide the public and consumers (benefit coordinators) objective information/reports regarding health plan process and outcome data</li> <li>• Implement health services evaluation, research, and demonstration activities</li> <li>• Provide infrastructure for quality assurance functions</li> </ul>
<p><b>B. Prevention Programming</b></p>	<ul style="list-style-type: none"> <li>• Develop/regularly review and update clinical preventive care guidelines (schedule of visits and screenings, content of anticipatory guidelines, etc.)</li> <li>• Educate families about individual preventive health activities/behaviors</li> </ul>	<ul style="list-style-type: none"> <li>• Provide health education for health plan enrollees (smoking cessation, nutrition, sexuality, parenting, etc.)</li> <li>• Report communicable diseases in accordance with requirements</li> <li>• Report child abuse/neglect in accordance with requirements</li> <li>• Participate in health hazard/risk response (e.g., epidemic control)</li> <li>• Provide training for plan officials and providers on effective prevention programs</li> </ul>	<ul style="list-style-type: none"> <li>• Provide hazard/risk information (special reports, emergency alerts, etc.)</li> <li>• Direct response to public health emergencies and health epidemics</li> <li>• Establish reportable disease and child abuse/neglect reporting requirements</li> <li>• Develop health education materials/programs for plan use</li> <li>• Implement community-level prevention activities including: <ul style="list-style-type: none"> <li>- health education and screening services designed to address special problems (e.g., injury/violence, prenatal care, early intervention, primary/preventive care utilization, oral health) delivered in community settings (schools, child care sites, etc.)</li> <li>- public information activities (media)</li> <li>- legislative intervention</li> <li>- environmental intervention (roadways, playgrounds, fluoridation, lead abatement).</li> </ul> </li> </ul>
<p><b>C. Enabling Access for Underserved Populations: Uninsured, Non-Users of Needed, Effective and Appropriate Care</b></p>	<ul style="list-style-type: none"> <li>• Conduct outreach (including home visiting)</li> <li>• Provide care (direct delivery/contractual arrangements) not otherwise available through health plans (e.g., rural areas, undocumented residents, services needed but not included in benefit package)</li> <li>• Provide translation, transportation and other access-enabling services</li> <li>• Develop and implement confidential access</li> </ul>	<ul style="list-style-type: none"> <li>• Prepare simplified information on health plan enrollment, and procedures for access to services, and provide orientation for enrollees on use of the system and consumer rights and responsibilities</li> <li>• Conduct outreach to enrolled non-users</li> <li>• Collect and screen enrollment information related to potential need for enabling support or specialty services</li> </ul>	<ul style="list-style-type: none"> <li>• Advocate for resources/legislation</li> <li>• Conduct information activities (hotlines, media campaigns, etc.)</li> <li>• Provide/Arrange/Administer <ul style="list-style-type: none"> <li>- school health services</li> <li>- special publicly financed health services (EPSDT, community long term care)</li> <li>- health care for homeless families</li> <li>- family planning</li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>- reproductive health services</li> <li>- HIV and STDs</li> <li>• Provide ombudsman services (including enrollment assistance)</li> </ul>	<ul style="list-style-type: none"> <li>• Provide information, training, and technical assistance to health plan officials and providers related to cultural competency plans</li> </ul>	<ul style="list-style-type: none"> <li>• Direct and coordinate health care services programming for children in detention settings, mental health facilities, and foster care, and families on welfare</li> <li>• Administer ombudsman and enrollment assistance services</li> </ul>
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**FUNCTION 3 - COORDINATION OF SERVICE DELIVERY, AND SYSTEMS WITHIN COMMUNITIES**

**LOCUS AND ACTIVITIES**

<b>Function Components</b>	<b>Individual Level</b>	<b>Health Provider Network/Plan Level</b>	<b>Community/Systems Level</b>
<b>Health Care Continuum and Community Services Integration</b>	<ul style="list-style-type: none"> <li>• Develop/promulgate and implement protocols and mechanisms for referral assistance and follow-up and coordination of care</li> <li>• Implement hospital discharge planning</li> <li>• Provide or contract for care coordination for special populations</li> <li>• Develop/promulgate and implement protocols for referral to community-based support services (e.g., parent/family support, self-help groups, etc.)</li> </ul>	<ul style="list-style-type: none"> <li>• Develop contracts (or special capitated plans) to provide access to pediatric centers of excellence and office/clinic based pediatric subspecialists (including rehab.)</li> <li>• Develop contracts to provide enrollee access to specialized hospital discharge planning support (e.g., multiple risk newborns, CSHCN)</li> <li>• Develop contracts with publicly administered and other community-based health programs: <ul style="list-style-type: none"> <li>- WIC</li> <li>- family planning</li> <li>- home health</li> <li>- dental services</li> <li>- health education</li> </ul> </li> <li>• Develop contracts to provide enrollee access to community-site health services, such as school-based health clinics, Head Start, and early intervention/special education health and rehabilitative health services</li> </ul>	<ul style="list-style-type: none"> <li>• Provide infrastructure/capacity for MCH data, epidemiologic, health policy and prevention programming functions, including communication structures and vehicles for MCH collaborative community/health provider assessment, planning, policy, and service/program development. Public and private sectors, and communities jointly address special health issues (e.g., violence/injury, infant mortality, community care for CSHCN, etc.).</li> <li>• Provide infrastructure for regionalized perinatal system and emergency medical services for children (EMSC) oversight, including certification of facilities for level of care, and maternal/infant transport services</li> <li>• Provide infrastructure for care coordination services for women, children and families</li> <li>• Ensure consistent/coordinated legislative mandates, regulation and policies</li> <li>• Prepare and publish regular reports on the status of women and children</li> <li>• Operate consolidated information and referral services/systems</li> <li>• Develop and operate data systems to track service use across health plans and public health and other community health and related programs (including, education, social services, etc.)</li> <li>• Pool categorical grant funding to encourage comprehensive, co-located/linked service programming for families</li> </ul>