

Transforming MCH to Enhance
the Health and Safety of Children, Families,
and Communities in Wisconsin

A Work in Progress

by Richard A. Aronson, MD, MPH

Introduction

In 1989, more than 150 citizens from all walks of life generated *Healthier People in Wisconsin: A Public Health Agenda for the Year 2000*. This wide-ranging public health plan provided a context for the Wisconsin Division of Public Health's efforts to enhance the health and safety of the state's children and families. In responding to the complex challenges needed to achieve objectives such as the reduction of low birth weight, the Division established Five Guiding Principles in 1993: family-centered care, community-wide leadership, resiliency, outreach, and cultural competence. The overarching purpose of these principles is to define the culture of maternal and child health services in Wisconsin so that both providers and recipients of services engage in partnerships to enable them to tackle thorny challenges that affect all of us and to build a sense of community.

This paper provides an overview of the Guiding Principles; cites the African American Infant Mortality Resiliency Project as an example of efforts to implement them; describes an effective maternal and child health program (the

Women, Infants, and Children Program); and draws the reader's attention to "Child Health in Wisconsin: Data and Dialogue," a set of slides and speaker notes designed to allow physicians to assume a leadership role in enriching a community-wide dialogue on ways to secure a better future for Wisconsin children.

Challenges

Today's children and families live in a period of rapid social change. The economic organization of the health care and social service systems in the United States, including Wisconsin, is in the midst of profound changes. The structure of families and patterns of family life have undergone major changes during the past 30 years.

No single agency, system, or medical practice can effectively take the action needed to maximize the health and safety of children and families. People, organizations, and systems have worked too often on their own, making it difficult for communities to develop and sustain systems of care that help equip children and families with resources that help them to empower and uplift themselves. Creative and proven-to-work prevention strategies – home visiting, one-stop shopping, and mentoring – have been hindered by systemic tensions that repeated-

ly get in the way. They include reactive rather than proactive leadership, turfdom, political maneuverings, competition for funds, a pervasive lack of trust in government, and historically entrenched cultural chasms caused by racism, sexism, and other institutional inequities.

Five Guiding Principles

1. Family Centered Care

The family plays the central role in the health and safety of children. It is the most powerful, the most humane, and by far the most economical system known for enabling children to become compassionate and productive citizens. Parenthood should be thought of as a profession, requiring levels of preparation, understanding, discipline, and commitment.

Family-centered programs recognize and respect the expertise of families as policy and program advisors; seek out opportunities to involve families in advisory activities; use a variety of strategies to identify and recruit families to serve in advisory roles; and demonstrate appreciation for the contributions that families make to policy and program development.

2. Community-Wide Leadership

A key component of an effective MCH program is the capacity and skill of a community to bring

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people together from many walks of life to achieve public health objectives such as reducing racial and ethnic disparities in infant mortality. The community-wide leadership principle refers to the practice of inclusive leadership that links the health of the community to the health of its children and families.

Community-wide leadership strives to create an environment that affirms the power and responsibility for all stakeholders – citizens, families who receive services, health care and social services providers, business, education, and others – to envision, collaborate, and risk. It honors all stakeholders as equal partners in moving toward achieving the vision of a healthy and secure future for Wisconsin children.

3. Resiliency

The most direct path to a population's optimal health is through healthy relationships among people who value and respect one another, who challenge and support shared responsibilities for each other, and who seek and affirm assets, strengths, talents, and resiliency within themselves, families, neighbors, and the community. The Guiding Principle of resiliency refers to the capacity of children, families, neighborhoods, and communities to "bounce back" in spite of stressful circumstances. It speaks to the power of people to recover, heal, grow, and succeed when faced with adversity. Key components of resiliency include the following:

- Support – Children need to experience support, care, and love from their families and others.
- Dignity and respect – Health care, social service, and educational systems should value children and families as human beings with the potential to succeed in the midst of stress. Pregnant women who participate in Wisconsin's Prenatal

Care Coordination Program repeatedly tell their home visitors they are tired of being viewed as bundles of risk factors, morbidity, and mortality. Like all people, they want to be recognized for their talents and assets.

- Boundaries and expectations – Children need and want to know what is expected of them and whether activities and behaviors are "in-bounds" or "out-of-bounds."
- Constructive use of time – Children need constructive and enriching opportunities for growth through creative activities at home and in the community.
- Commitment to learning – Children need to develop a lifelong commitment to education and learning.
- Positive values – Children need to develop strong moral values that guide their choices and decisions.
- Positive identity – Children need a strong sense of their own power, purpose, worth, and promise.

4. Outreach

Maternal and child health programs should demonstrate leadership in planning and putting into practice local efforts to achieve public health objectives. This requires a concentrated outreach effort that engages patients in helping to design programs that involve families of highest need. They must determine the most effective outreach methods for serving or assuring service for that population. Examples include an effective program of benefits counseling and referral assistance, efforts that increase volunteerism, mechanisms that maximize third party and other revenue sources, measures that eliminate waste and duplication of effort, and techniques that result in increased services to the population. By becoming aware of community resources and getting to know the

people who direct them, physicians can play a central role in outreach.

Recent outreach efforts are bearing fruit both for Medicaid and BadgerCare. BadgerCare, which covers uninsured children and their parents with household incomes below 185% of the federal poverty level, enrolled 60,000 people in its first nine months. The percentage of BadgerCare-eligible people who are actually enrolled is significantly greater than other states' Child Health Improvement Program (CHIP) enrollments at similar program stages. One significant indicator of overall outreach success is that 30% of BadgerCare recipients had not previously received other major public assistance programs such as WIC and family planning.

The State Medical Society has performed a central role in Medicaid outreach, from strong policy endorsement to brochure distribution, especially for "working poor" families. Physicians and their office staff are valuable assets in Medicaid outreach and enrollment.

5. Cultural Competence

US Surgeon General Dr. David Satcher has established a Year 2010 public health objective of 100% access to health care and zero disparities in health status for all citizens. Attaining such an ambitious and significant public health objective depends on the capacity of all of our health systems to deliver culturally-competent care. Cultural competence refers to a set of behaviors, attitudes, and policies that enable a system, organization, or medical practice to work effectively in cross-cultural situations.

Perhaps the biggest challenge in promoting cultural competence is for people, families, communities, and organizations both to celebrate the rich and growing diversity of Wisconsin and, at the same time, to discover and act upon common ground. The underlying task is for systems, organizations, programs, and policies to foster opportunities

to listen to each other's voices in much more profound ways than we have done in the past and to use the information we gain to drive our actions.

Success in shaping family-centered, resiliency-based, and culturally competent systems requires long-term commitment of time, energy, and resources. Physicians can take part in this effort by linking up with informed and engaged citizens. Efforts are needed to build the capacity of both groups to be good collaborators. A tough part of this job is that physicians and other health care providers want to assume the lead based on what we perceive as our expertise. In fact, we are technical experts, and our citizen colleagues frequently have far more expertise in how communities work, how they are organized, and how they make decisions.

The principles reflect an underlying belief in the potential for communities as a whole to become healthy and for the core human values of dignity and respect to become the cornerstones for healthy children and families. This means that the essence of MCH lies not only in the prevention and reduction of morbidity, mortality, and risk, but also in fostering the potential of children and families to become compassionate, productive, and dignified citizens of their communities and of society as a whole.

African American Infant Mortality

An example of a Wisconsin initiative rooted in the Guiding Principles is the African American Infant Mortality Resiliency Project. As reported in another article in this issue of *WMJ*, infants born to African American women in Wisconsin are three times as likely to die in the first year of life as infants born to white mothers are. This disparity has increased in Wisconsin since 1980 and exceeds the disparity for the nation as a whole.

Previous research has attempted to explain disparities in health outcomes by focusing on traditional risk factors such as differences in socioeconomic status and higher levels of risk behavior among African American women. However, according to several studies in the United States,^{1,2,3} the gap between the two groups for low birth weight, a major contributing factor to infant mortality, persists regardless of socioeconomic status. These disparities may be due, at least in part, to chronic stress that all African Americans experience as a result of racism.⁴ This stress may result in physiologic changes that place the individual at higher risk for a variety of illnesses and conditions, including low birth weight. Also, institutional racism may contribute to the barriers African Americans encounter when gaining access to and effectively utilizing the health care system.⁵

The Division of Public Health convened a work group in 1995 to come up with a fresh approach to reducing the African American infant mortality disparity in Wisconsin. The group includes members of the African American community (including faith-based organizations) as well as public health and medical professionals. The group has developed unique partnerships that enrich each other's understanding and practice of the Guiding Principles.

After an extensive literature review, the group concluded that behavioral and other traditional risk factors account for only about two-thirds of the gap between white and black low birth weight and infant mortality rates. The group hypothesized that stress and racism account for the remaining gap.

However, instead of studying the gap within a risk framework, the group decided to develop a study that focuses on the potential for resiliency factors to improve black infant survival. Its purpose is to determine the extent to which

resiliency in African American women, families, and their communities improves infant survival and thriving. The study addresses a person's ability to thrive and takes into account the capacity to deal with less studied risk factors such as the impact of stressful life events, racial discrimination, residential segregation, and gender roles on birth outcomes and infant health. In 1999, the Wisconsin Council on Developmental Disabilities awarded the Black Health Coalition a \$25,000 grant in start-up funds to pilot a resiliency questionnaire and to seek larger funding for the full study itself.

The primary leadership for the study comes from the Black Health Coalition of Wisconsin, which has carried out research on African American family resiliency related to the prevention of interpersonal violence among Milwaukee youth.^{6,7} The Division of Public Health intends to use results from the infant mortality resiliency research to develop resiliency-based policies, programs, and services that specifically address closing the gap between African American and white infant mortality in Wisconsin.

WIC

The Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) provides nutrition education, health care referrals, breastfeeding support, and nutritious foods to pregnant and postpartum Wisconsin women, infants, and children under age 5. WIC is a short-term intervention designed to strengthen families by influencing lifetime nutrition and health behaviors in an at-risk population. WIC helps pregnant women have improved birth outcomes and enables parents to feed their children nutritious foods during the critical early years of growth and development.

WIC serves over 185,000 Wisconsin women, infants, and children per year. In 1997, 40% of all women who gave birth in

Wisconsin's MCH Program: Some Background

Since 1935, the federal government via Title V of the Social Security Act has provided funding to states to help them meet the needs and affirm the strengths of children and families. Recent amendments to Title V emphasize the development of community and statewide systems of care for all families. Title V-funded agencies are only one part of a comprehensive and diverse maternal and child health system in Wisconsin.

In addition to federal law, the Wisconsin Maternal and Child Health (MCH) Program is authorized by state legislation. Specifically, Chapter 253 of the Wisconsin Statutes establishes the MCH Program "to promote the reproductive health of individuals and the growth, development, health, and safety of infants, children and adolescents."

The enactment of Title V of the Social Security Act in 1935, under President Franklin D. Roosevelt, was central to the establishment of state MCH programs. Frequent amendments to Title V over subsequent years were followed by federal legislation in 1981 consolidating a number of programs into the MCH Services Block Grant. These programs included maternal and child health services and services for children with special health needs; supplemental security income for children with disabilities; lead-based paint poisoning prevention; genetic disease; sudden infant death syndrome; hemophilia treatment centers; and adolescent pregnancy.

Each year, every state is required to report a number of MCH performance and outcome mea-

asures to the federal government. Examples of Wisconsin data for 1997 include the percentage of newborns screened for four major congenital disorders (99.8%); rate of deaths to children aged 1-14 caused by motor vehicle crashes (5.1 per 100,000); the percent of very low birth weight births (1.3%); and the percent of infants born to women who received first trimester prenatal care (83.9%). For each of these indicators, Wisconsin as a whole does well compared to most other states. However, racial and ethnic disparities occur for these and other measures. In addition, even the Wisconsin indicators rank behind those of many other nations.

The Division of Public Health is responsible for administering the federal MCH Block Grant in Wisconsin. Within the Division of Public Health, the Bureau of Family and Community Health is responsible for the direct oversight of the MCH Program. The Bureau's Family Health Section provides program planning and consultation. In addition, the Bureau works in concert with the Maternal and Child Health Program Advisory Committee, which includes several physicians and has played an instrumental role in supporting the direction that the MCH Program has taken during the past decade.

For further information about the Wisconsin MCH Program, please contact Millie Jones at 608.266.2684, fax 608.267.3824, or e-mail jonesmj@dhfs.state.wi.us.

Wisconsin were on the WIC program; three-fourths of the WIC births were infants enrolled in Medicaid. In 1998, the WIC program served about 90% of the minority birth to age 5 population and nearly 40% of all Wisconsin children younger than 5.⁶

Numerous federal and state studies of the WIC program have documented its benefits.⁷ They include improved diets for pregnant women and children, including intake of key nutrients such as protein, calories, iron and vitamin C. For pregnant women, studies have demonstrated earlier entry into prenatal medical care, reduced incidence of low birth weight babies, and premature births, and fewer fetal and infant deaths.^{6,7}

WIC is cost-effective; a 1992 General Accounting Office (GAO) study showed that the provision of WIC benefits to pregnant women has a cost-benefit ratio of approximately 3:1.⁸ In addition, other studies that examined Medicaid payments to WIC families showed cost-benefit ratios of \$1.92 to \$4.21 for every dollar spent on the WIC program.⁹

Wisconsin WIC data on low birth weight show that the percentage of babies with low birth weight (< 2500 grams) decreases according to the length of time during pregnancy that a woman is enrolled in WIC. Table 1 shows that pregnant women enrolled in WIC for three trimesters during the period of 1994 through 1998 had a

lower percent of low birth weight babies (<2500 grams) compared to all Wisconsin women who gave birth. The *Healthier People in Wisconsin* low birth weight objective was that no more than 5% of newborns would weigh less than 2500 grams by 2000.

Since 1994, the Wisconsin WIC Program has participated in two surveillance systems, the Pediatric Nutrition Surveillance System (PedNSS) and the Pregnancy Nutrition Surveillance System (PNSS), administered by the Centers for Disease Control and Prevention (CDC). These surveillance systems monitor nutritional and behavioral risk factors among low-income women and their children and progress towards the

Regional centers funded to meet special health care needs of children

An estimated 15% to 18% of children in Wisconsin are children with special health care needs (CSHCN). Children with special needs range in age from birth to 21 years and have a long term, chronic physical, developmental, behavioral, or emotional illness or condition. The illness or condition is defined by the following characteristics:

- It is severe enough to restrict growth, development, or the ability to engage in usual activities.
- It has been or is likely to be present or persist for 12 months to lifelong.
- It is of sufficient complexity to require specialized health care, psychological, or educational services of a type or amount beyond that required generally by children.

Examples of conditions that meet the definition for children with special needs include cerebral palsy, leukemia, diabetes, autism, Attention Deficit Hyperactivity Disorder, and severe asthma.

Recent federal improvements in the CSHCN service system began through amendments in the 1989 Federal Omnibus Budget Reconciliation Act. These amendments to Title V of the 1935 Social Security Act require states to provide family-centered, culturally-competent, community-based, and coordinated care. As a result, in 1991, the Wisconsin CSHCN Program conducted a statewide needs assessment in partnership with parents and providers. Based on the findings of the needs assessment and subsequent recommendations by the MCH Program Advisory Committee, the Wisconsin CSHCN Program articulated a new program vision. This vision reflects a change from the provision of direct financial assistance or payment of medical services to the development of a systems public health approach to services.

Regional CSHCN Centers

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The philosophy and principles of this vision of a systems approach are the following:

- Children are best served within their families.
- Children and families are best supported within the context of their community.
- Families should have convenient access to care coordinators.
- Collaboration among diverse and interdisciplinary people and groups is the best way to provide comprehensive services.
- Family perspectives and presence must be included in all aspects of the system.

Five Regional CSHCN Centers have been funded as of January 2000 and are located in each of the five Division of Public Health Regions. The Centers will increase the capacity of local communities, including local public health departments, to serve families and will work together to form a statewide, integrated system. The Centers

will begin to offer services to families and providers by July 2000, after an initial 6-month period for infrastructure development and start-up activities.

The goals of the Regional CSHCN Centers include the following:

- Provide information, referral, and follow-up services, once a diagnosis has been made, so that all children with special needs, families and providers have access to complete and accurate information.
- Promote a parent-to-parent support network, with parents as paid staff, to assure that all families have access to parent support services and health benefits counseling.
- Increase the capacity of local health departments and other local agencies, such as schools, to provide service coordination through education, training, and ongoing technical assistance.

year 2000 and 2010 national health objectives.

Selected outcomes of the 1998 PedNSS and 1997 PNSS systems for Wisconsin were the following:

- *WIC Enrollment by Trimester of Pregnancy:* Early entry into the WIC program improves birth outcomes through nutrition interventions and linking pregnant women with other needed health and social services. The percentage of pregnant women who enrolled in WIC in the first, second, and third trimesters were 41%, 37%, and 22% respectively in 1998.
- *Gestational Weight Gain:* Women who gain less than ideal weights during pregnancy are at increased risk for preterm birth and delivery of a low birth weight infant. In the 1997 PNSS, about 43% of the WIC women gained the recommended amount of weight during pregnancy. About 29% of women gained more weight than recommended, which increased their risk of having a high birth weight infant and possibly caused them difficulty returning to their prepregnancy weight after delivery. The Year 2010 national objective calls for an increase in the proportion of mothers who achieve a weight gain consistent with the Institute of Medicine guidelines.¹⁰
- *Breastfeeding:* The nutritional, immunologic, allergenic, economic, and psychological advantages of breastfeeding are well recognized. Approximately 49% of WIC infants were breastfed initially. Twenty-nine percent were breastfed for 3 months and 21% for 6 months. Hispanic infants were most likely to be initially breastfed (70%), followed by American Indian (57%), white (56%), black (37%), and Asian (27%) infants. The Year 2010 objectives are to increase to at least 75% the proportion of mothers who breastfeed their babies in the early postpartum period,

Table 1. Percent of Infants Born at Less Than 2500 Grams, Wisconsin WIC Clients (on WIC for 3 Trimesters) and All Wisconsin Births, 1994-1998

Year	Enrolled prenatally on WIC for three trimesters who gave birth	All Wisconsin women who gave birth
1994	4.8	6.4
1996	4.9	6.3
1997	4.4	6.4
1998	4.9	6.5

Sources: WIC 814 report and Wisconsin Department of Health and Family Services. Wisconsin Bureau of Health Information. Wisconsin Births and Infant Deaths, 1994-1998.

and to at least 50% the proportion of mothers who breastfeed until their babies are 6 months old, and to 25% until 1 year old.

- *Overweight Children (>95th percentile weight/height):* The overall prevalence of overweight among WIC children in Wisconsin, ages 2 to 5 years, was almost 8%. The prevalence was highest among American Indian (15%); Hispanic and Asian rates were 11% and 12%; and white (7%) and black (6%) rates were the lowest. The prevalence of overweight in the national PedNSS increased from 7% in 1989 to 9% in 1997. These PedNSS results are consistent with the trend of an increasing overweight child population in the United States.¹¹ The Year 2010 objective is to reduce to 5% the proportion of children and adolescents who are overweight or obese.
- *Anemia:* Iron deficiency in children is associated with developmental delays and behavioral disturbances.¹² In Wisconsin, there was a decrease in the percent of PedNSS WIC records with anemia from 21% in 1994 to 17% in 1998. In the 1998 PedNSS, 18% of children under 2 years and 16% of children ages 2 to 5 years were anemic. The highest rate of anemia was in black children (31%); Asian and Hispanic (16%) had the next highest rate; and American Indian (13%) and white (11%) babies had the lowest rates. 1998 Wisconsin WIC program data indicate that more than 76% of the children

initially identified with anemia had improved hematocrit/hemoglobin values after 6 months of WIC participation.¹³

- *Cigarette Smoking:* Maternal smoking during pregnancy and passive smoking exposure are risk factors for Sudden Infant Death Syndrome (SIDS), low birth weight and preterm infants, and spontaneous abortion. About 42% of Wisconsin WIC women in the 1997 PNSS reported smoking before pregnancy, and about 30% reported smoking during pregnancy. Of these pregnant women, 81% reported smoking less than one-half pack per day. In the 1997 PNSS, the prevalence of self-reported smoking during pregnancy was found higher for American Indian women (44%) and white women (38%). Black women (22%) had the next highest rate and Hispanic (9%) and Asian (2%) women had the lowest rates. The Year 2010 objective calls for a reduction in smoking prevalence to no more than 5% among pregnant women.

To qualify for WIC, a potential recipient must have an identified nutritional need, such as a level of iron in the blood or an inadequate diet. The program serves women and children whose family income is within 185% of federal poverty guidelines, the same upper limit that currently exists for Badger-Care and Healthy Start. For

instance, a family of four with a monthly income less than \$2,574 would qualify. The WIC program is available in every county in the state. It is administered locally through 230 clinics operated by 68 local health departments, private non-profit agencies, and tribal health agencies.

Physicians can play a leadership role in WIC by informing patients of the program's benefits and encouraging them to call or visit a WIC project; giving them the Maternal and Child Hotline number (1-800-722-2295) to locate the nearest WIC Project; displaying WIC posters and brochures; contacting the local WIC Project to obtain these materials, available in English, Spanish, and Hmong; and including WIC outreach brochures in obstetric, newborn, and pediatric packets.

Data and Dialogue Slides

"Child Health in Wisconsin: Data and Dialogue" is a comprehensive slide program that highlights, on a county-by-county basis, the health status of Wisconsin's children. It highlights and expands on much of the information presented in this article. The program includes the following:

1. Health status outcome measures, including low birth weight, infant mortality, child death rates, teen violent death rates, and teen birth rates.
2. Implementation steps to improve these measures.
3. Examples of successes in Wisconsin in addressing them.
4. Persisting and emerging challenges.
5. Socioeconomic status indicators, including poverty rates, gross per capita income levels, single parent households, and high school dropout rates.
6. Health care provider information, including the ratio of children to primary care physicians who serve children.

The packet includes 48 color slides assembled in a slide carousel, and extensive speaker notes go

with each slide. The presentation represents a four-year collaborative effort led by the Wisconsin Chapter of the American Academy of Pediatrics (AAP), in collaboration with the Center for the Advancement of Urban Children at the Medical College of Wisconsin, the Children's Health Alliance of Wisconsin, and the Division of Public Health.

The purpose of the slide presentation is to stimulate all communities in Wisconsin, regardless of how they fare relative to each other, to probe deeper into the health status of their children. Performance and outcome measures of this nature should serve as the driving force for organizing resources and priorities.

By presenting these slides, physicians can play a lead role in enriching a community-wide dialogue on ways to secure a better future for Wisconsin children.

The Children's Health Alliance of Wisconsin is handling the dissemination of the slides. To order or borrow a set, please call the Alliance at 414.266.6172, contact them by fax 414.266.6975, or by e-mail at chaw@chw.org.

The slides and notes are also available from the Wisconsin Chapter of the American Academy of Pediatrics by contacting Carolyn Evenstad at 608.222.7751. For questions about the presentation's content, please call Dr. Richard Aronson at 608.266.5818 or e-mail aronson@dhfs.state.wi.us.

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