Secretary's Advisory Committee on Infant Mortality

Meeting Minutes of
November 29–30, 2006

Washington Marriott Hotel
Washington, DC

GENERAL SESSION

WEDNESDAY, NOVEMBER 29, 2006

WELCOME AND REMARKS

James W. Collins, Jr., M.D., M.P.H., Professor of Pediatrics, Northwestern University Medical School, Chairperson, SACIM

Dr. Collins welcomed the participants to the meeting of the Secretary's Advisory Committee on Infant Mortality (SACIM); thanked the Committee members for their work since the July 2006 meeting; and welcomed David de la Cruz, Ph.D., M.P.H., who is assuming the role of Ann Koontz, Dr.P.H., C.N.M., as SACIM principal staff. After the Committee and audience members introduced themselves, SACIM members voted to approve the minutes of the last meeting.

MCHB UPDATE

Peter C. van Dyck, M.D., M.P.H., Associate Administrator for Maternal and Child Health, Maternal and Child Health Bureau, Health Resources and Services Administration, Executive Secretary for SACIM

Dr. van Dyck called the members' attention to two new publications from the Maternal and Child Health Bureau (MCHB) of the Health Resources and Services Administration (HRSA): the National Survey of Children's Health titled *The Health and Well-Being of Children in Rural Areas: A Portrait of the Nation 2005* and *Women's Health USA 2006.* He highlighted a number of pages from each of the booklets.

The National Survey of Children's Health conducts telephone surveys that result in both national and State data. The charts on pages 8 and 9 of the first booklet indicate the overall health status of children by location (urban areas, large rural areas, and small rural and isolated areas) and age (0 to 5 years, 6 to 11 years, and 12 to 17 years), and by location and race and ethnicity (White, Black, Hispanic, multiracial, American Indian/Alaska Native, and other). The percentage of children in excellent or very good health, as reported by their parents, decreases significantly from White to Black to Hispanic and is better in urban areas than in rural areas. Charts on subsequent pages show emerging trends regarding the percentage of children with moderate or severe health conditions (by location, location and gender, and location and family income) and the percentage of children breastfed 6 months or more (by location, location and family income, and location and race and ethnicity).

These data reveal that fewer mothers breastfeed in rural areas. The percentage of children aged 3 to 17 years with moderate or severe socioemotional difficulties (by location and family income) is significantly higher in poor rural areas than in urban areas. In addition, the percentage of children aged 10 to 17 years who are overweight is two to three times higher in poor rural areas. The charts on page 30 depict the percentage of children with a preventive care dental visit in the past year, which is much higher in the higher income than in the poor areas. The booklet also covers children with a medical home, children who stay home alone after school, children who repeat a grade, children with regular physical activity, and so on.

The second booklet, *Women's Health USA 2006*, is also available on compact disk (CD). Dr. van Dyck pointed out that similarly high rates of obesity, infant mortality, and low birthweight occur in the southeast section of the United States. He also referred to charts that reveal a 30 percent rate for cesarean section deliveries for first births and a precipitous decrease after 1995 in the rate of vaginal delivery after cesarean section (VBAC). Other charts highlight postpartum depression among special populations (page 54), selected health behaviors and conditions among special populations (page 56), and HRSA grants related to women's health (page 75).

Dr. van Dyck concluded by stating that this SACIM meeting will cover several topics that involve major MCHB programs. He reminded Committee members that MCHB cannot create and fund new programs while it is operating under a continuing resolution.

Discussion

Dr. van Dyck's presentation prompted the following questions and comments from SACIM members:

- Maxine Hayes, M.D., M.P.H., asked whether the information from the National Survey of Children's Health could be downloaded by State. Dr. van Dyck directed the members to http://www.childhealthdata.org, which contains all of the data and enables users to draw charts or graphs based on the data.

- Fredric Frigoletto, Jr., M.D., commented on the survey's use of parent-reported health information and the counterintuitive outcome regarding breastfeeding in rural areas. He stated that the "tough job" aspect of breastfeeding is often underplayed. Dr. van Dyck observed that more work must be done in this area, especially with regard to the differences in the levels of breastfeeding between rural and urban locations.

- In response to a question from Robert Sapien, M.D., about whether the surveyors were multilingual, Dr. van Dyck stated that the survey was administered using a total of 12 languages.

- Ann Miller, Ph.D., offered congratulations to MCHB staff on the National Survey of Children's Health and noted that it will enable States and hospitals to choose strategic initiatives based on true need.

- Dr. Frigoletto stated that the highest cesarean section birth rates occur in the southeast section of the country, correlating with the highest rates for obesity, infant mortality, and low birthweight infants.

- Robert Hannemann, M.D., stated that the information found in *Women's Health USA 2006* is extremely important from the standpoint of the Committee and its examination of preterm birth, low birthweight, cesarean section, and high-risk infants. Some factors, perhaps right on the surface and therefore overlooked, deserve to be examined.

- Dr. Frigoletto mentioned the correlation with the revelation of unintended consequences associated with the option of VBAC. Yvonne Moore, M.D., added that malpractice coverage is not available for that option.

- Jennifer Cernoch, Ph.D., recommended that SACIM members use the data from the HRSA booklets to influence their State and national representatives in terms of funding and identification of issues.

CMS NEONATAL OUTCOMES IMPROVEMENT PROJECT

Jean D. Moody-Williams, R.N., M.P.P., Director, Division of Quality, Evaluation, and Health Outcomes, Centers for Medicare & Medicaid Services

Ms. Moody-Williams stated the objectives of her presentation on the Medicaid quality strategy: (1) to introduce the recently created Medicaid and State Children's Health Insurance Program (SCHIP) Division of Quality, Evaluation, and Health Outcomes, of the Centers for Medicare & Medicaid Services (CMS); (2) to answer questions raised during the last SACIM meeting related to the Deficit Reduction Act (DRA); and (3) to explain the Medicaid Neonatal Outcomes Improvement Project.

Creation of the Division of Quality, Evaluation, and Health Outcomes

Several driving forces resulted in the creation of the new CMS Medicaid and SCHIP division. Two driving forces were the documented concerns related to health care quality in the United States and the increasing share of both Federal and State budgets directed toward the financing of Medicaid. In addition, States look to CMS for leadership in exploring options in benefit design. Eligible populations alone will not ensure that payors receive value for the dollars spent on health care. States expect that CMS will help provide leadership in support of Medicaid as national efforts and alliances become increasingly active and challenges to implementing improvement activities continue to exist. Also, providers and employer groups continually request that CMS join national efforts to reduce duplication in effort and administrative burden. Most important, consumers are expected to participate in health care through vehicles such as consumer-directed plans, health savings accounts, and other mechanisms that require information about cost and quality to make informed decisions.

An executive order called for price and quality transparency. Secretary Leavitt's 500-Day Plan is based on the vision that wellness and prevention be sought as rigorously as treatment, Medicare and Medicaid be modernized to provide high-quality health care in a financially sustainable way, Medicare and Medicaid beneficiaries be cost-conscious consumers, and Medicare and Medicaid be leaders in the use of advanced technologies and performance measures.

The vision of the CMS Quality Improvement Roadmap, released during August 2005, is stated as "the right care for every person every time." A CMS Quality Council is led by the administrator, and several forums (on Medicaid and SCHIP, person-centered care, technology and innovation, health information technology, pay for performance, and health disparities) report to the council.

The Division of Quality, Evaluation, and Health Outcomes was created in spring 2005. The Medicaid/SCHIP quality strategy, developed in August 2005 and revised in July 2006, builds on the CMS Quality Improvement Roadmap and is structured to recognize the unique relationship between the Federal Government and States. The pillars of the Medicaid/SCHIP framework are evidence-based care and quality measurement, value-based payment methodologies, health information technology, partnerships with other organizations, and information dissemination and technical assistance.

Information About the Deficit Reduction Act

The DRA provides States with flexibility in establishing benefit plans. Not included in the benchmark benefit plan, unless they choose to opt in, are two groups: (1) pregnant women who receive mandatory benefits and (2) blind or disabled individuals. With regard to early and periodic screening, diagnostic, and treatment services (EPSDTS), any child younger than 19 years of age who is covered under the State plan must be provided EPSDTS either through the benchmark plan itself or through wraparound benefits. Regarding current DRA activity, four States (Idaho, Kansas, Kentucky, and West Virginia) have filed DRA amendments. All DRA amendments to date are reviewed by the CMS central office and the regional office before approval. Some opportunities might exist within the legislation. For example, perhaps States should be encouraged to target benefits to certain populations such as mothers and children.

Neonatal Outcomes Improvement Project

Ms. Moody-Williams explained that the Neonatal Outcomes Improvement Project is based on the vision of a future in which low birthweight infants survive with a high quality of life. The aim of the project is to coordinate efforts to reduce the disease burden and death rate associated with low birthweight and prematurity. Given that it is preferable to prevent low birthweight deliveries, the question remains as to where Medicaid can be most effective in the short term. The Healthy Start Grow Smart prenatal brochure was developed, a childhood obesity steering committee was formed, smoking cessation guidance to the States will be developed, flexible benefit plans will be designed to address healthy behaviors, and health care disparities efforts are in progress.

Medicaid pays a significant proportion of the medical costs of preterm births because it covers low-income women who are at greatest risk for preterm births. Consequently, improving the quality of perinatal care to Medicaid mothers has the potential to reduce infant mortality and morbidity and limit Medicaid costs in the process.

The Neonatal Outcomes Improvement Project is based on the concept that a significant amount of the mortality and morbidity associated with prematurity can be averted by the use of known and proven medical interventions. With the help of national experts on neonatal care, CMS selected seven interventions that, if used, would significantly reduce the burden of mortality and morbidity associated with premature births. All are already widely accepted as standard medical practice; however, variation exists in their implementation. Preliminary study reveals that the interventions have the potential of greatly reducing the risk of death and respiratory distress. Estimates from both the Agency for Healthcare Research and Quality (AHRQ) and CMS indicate the potential for millions of dollars in savings. However, States must make a commitment to achieve a significant breakthrough in the care of premature infants through implementation of these interventions in appropriate situations. The project will move forward as a public and private partnership.

The seven interventions are (1) early identification of mothers at high risk for prematurity and prenatal transfer of these expectant mothers to facilities with tertiary care neonatal intensive care units (NICUs); (2) use of antenatal steroids in pregnant women at risk for preterm delivery; (3) for those seriously ill premature infants born at facilities without tertiary care NICUs, optimal resuscitation and stabilization of the infant before transfer to the appropriate facility; (4) prophylactic or early administration of the first dose of surfactant to premature infants at risk for respiratory distress syndrome; (5) vitamin A prophylaxis in infants with a birthweight less than 1,000 grams to prevent chronic lung disease; (6) proper infection control practices in the NICU and hospital to prevent infections; and (7) optimizing NICU discharge planning and followup.

A CMS pilot project will involve the National Initiative for Children's Healthcare Quality and four State Medicaid agencies in a voluntary effort to improve the outcomes of neonatal care of premature infants over the next few years. Currently, about 15 States have expressed preliminary interest in partnering with CMS on this project. Participating States would agree to encourage use of one or more of the seven interventions in their Medicaid programs. CMS hopes to hold a stakeholders/experts meeting in March 2007, and the selected States will receive professional and financial help in implementing the project. The goals of the Neonatal Outcomes Improvement Project can be accomplished by the formation and successful implementation of statewide quality collaboratives dedicated to increasing the use of evidence-based approaches.

Ms. Moody-Williams asked for input from SACIM members on the development of the Neonatal Outcomes Improvement Project.

Discussion

The presentation elicited the following comments and questions from the Committee:

- Dr. Hayes pointed out that the seven interventions are weighted to the medical model. However, SACIM has considered the importance of going beyond that model, particularly with the intention of focusing on women's health. All of the interventions mentioned occur "after the fact" and have not been proven to be especially effective. Ms. Moody-Williams responded that experts across the country upheld the benefits of the interventions but noted the variation in their implementation across the country. She pointed out that the statement of the seven interventions is meant to draw the interest of the States into the discussion. Ms. Moody-Williams encouraged SACIM to suggest an intervention that focuses on women's health that she could propose to the Medicare director.

- Yvonne Bronner, Sc.D., R.D., L.D., observed that the first of the stated driving forces is wellness and prevention. She asked whether CMS envisions any one area in which that focus could be operationalized. Ms. Moody-Williams referred to her participation on a number of steering committees to learn more about the life span approach to women's health.

- Kevin Ryan, M.D., M.P.H., mentioned that North Carolina successfully advocated in the last general assembly for funding to support a quality improvement initiative in neonatal care. He also pointed out an opportunity for CMS to affect the rate of preterm births by facilitating the States' ability to provide more widespread family planning services. States are currently required to follow a lengthy waiver process to expand Medicaid coverage for family planning. If CMS implemented a change in this policy, the result would be robust cost savings and outcome improvements because of the reduction in unplanned and unwanted pregnancies, which are at very high risk for preterm birth. Regarding family planning waivers, Ms. Moody-Williams referred to the DRA, which presents opportunities for States to acquire benefits without requesting waivers. A recommendation could be made to encourage States to use the DRA to pursue funding for women's and children's services.

- Dr. Hannemann stated that over a 6- to 8-year period, SACIM accumulated information on preventive measures and the research needed to validate them. He asked about the status of the Interagency Working Group (IWG) report that was presented to the Secretary more than a year ago and inquired whether that report is available to researchers. Dr. van Dyck responded that the IWG comprised individuals from CMS and other agencies who had access to the internal report, which is currently under review. Ms. Moody-Williams added that she will determine whether the CMS committee had access to the report. Dr. Hannemann stated that the prevention element of the CMS effort could be strengthened by the information in the report and that SACIM should act to ensure that the information is made public soon.

- Dr. Collins referred to the delicate balance between prevention and treatment. The first six interventions are of particular interest to neonatologists, but the seventh intervention presents a unique opportunity to weave together treatment and prevention. NICU discharge planning entails ancillary services such as family planning, the importance of a medical home, and other prevention aspects. Ms. Moody-Williams noted that the Neonatal Outcomes Improvement Project will be shaped around an examination of this notion. Dr. van Dyck added that discharge planning is the least funded intervention and the most effective. As States are chosen for the project, those whose Medicaid packages include reasonable reimbursement for these activities, or those that are willing to move in that direction, should be given first consideration.

- Dr. Cernoch applauded CMS for examining these quality improvement issues and asked how the agency is coordinating these initiatives and this project with other agencies and organizations that do very similar work. Ms. Moody-Williams responded that she works with all of the partners to coordinate these efforts and that the interest level is very high among the partners.

- Dr. Miller mentioned that hospitals are completing an expensive mandatory training on DRA and CMS for all employees. She asked whether Ms. Moody-Williams could direct her staff to change the requirement so only individuals involved in the provision or billing of services are required to take the training.

- Dr. Frigoletto offered three comments:

1. A growing body of evidence shows that as efforts to prevent neonatal and fetal death become more aggressive, the incidence of cerebral palsy increases, an unintended consequence of a complex situation.
2. The new director of family planning at the Department of Health and Human Services (HHS) is an obstetrician-gynecologist who does not believe in birth control and has been quoted as saying that birth control demeans women.
3. Despite education on the potential advantages of preconception care, the number of individuals who are able or willing to access this type of care has not increased. Some action should be taken to improve this situation.

HEALTHY START UPDATE

Maribeth Badura, R.N., M.S.N., Director, Division of Healthy Start and Perinatal Services, Maternal and Child Health Bureau, Health Resources and Services Administration

Ms. Badura described the target audience for the Healthy Start program as women across the life span, particularly women of reproductive age and their infants. The *Healthy People 2010* goal for infant mortality is 4.5 per 1,000 births. An evidence-based initiative under the Secretary's Office of Minority Health, called Closing the Health Gap on Infant Mortality, has two components: African American risk reduction and Native American risk reduction. Illinois, Michigan, Mississippi, and South Carolina were chosen for the African American component of the initiative. A perinatal and patient safety health disparities collaborative was formed, and collaboration was undertaken with the Indian Health Service on the Native American risk reduction component. In addition, national infant mortality and sudden infant death syndrome (SIDS) media campaigns were developed.

The authorizing legislation for Healthy Start describes the program as an initiative to reduce the rate of infant mortality and improve perinatal outcomes. Grants are made to project areas with high annual rates of infant mortality. Communities are required to partner with statewide systems and other community services funded under the MCHB block grant. Communities also are required to establish a consortium. The authorizing legislation expired in 2005, and efforts for reauthorization are currently under way in Congress.

After mentioning the locations and number of Healthy Start projects and describing the cycles of the projects and highlights of the 2006 Consolidated Appropriations Act, Ms. Badura listed Healthy Start's core services and systems-building activities. She noted that risk reduction and prevention activities in fiscal year 2006 involved the synthesis of emerging practices and lessons learned from interconceptional grants, and the synthesis of emerging practices and lessons learned from risk reduction grants in alcohol screening, smoking, domestic violence, obesity, and perinatal depression.

Under the President's management agenda, Healthy Start has been subject to the Program Assessment Rating Tool (PART), whereby the U.S. Office of Management and Budget (OMB) and Federal agencies together assess the performance of Federal programs. The four components of PART are program design, strategic planning, program management, and program results and accountability. After describing PART's rating scale, Ms. Badura announced that Healthy Start's PART results will be available in February 2008 when the President releases his budget.

The annual measures used on PART for Healthy Start are (1) the percentage of live singleton births weighing less than 2,500 grams among all live births to Healthy Start program participants, (2) the percentage of Healthy Start pregnant program participants who have a prenatal care visit in the first trimester, and (3) the number of community members (providers, consumers, and residents) participating in infant mortality awareness pubic health information and education activities. The long-term measures include reductions in the rates of infant mortality, neonatal mortality, and postneonatal mortality among Healthy Start program participants. Healthy Start has made good progress on all its goals.

The Healthy Start program also is responsible for some national leadership activities, including SACIM, and Bright Futures for Women's Health and Wellness, the Federal Interagency Committee on Safe Motherhood, Interagency Coordinating Committee on Fetal Alcohol Syndrome, National Folic Acid Campaign, National Hispanic Prenatal Hotline, Select Panel on Preconceptional Care, Smoke-Free Families, and Steering Committee on Preconceptional Care. Ms. Badura concluded by reminding the audience that the goal of Healthy Start is healthy women, healthy infants, healthy families, healthy communities, and a healthy Nation.

Discussion

Ms. Badura's presentation prompted the following comments and questions:

- Dr. Frigoletto suggested that a Healthy Start outcome measure be the number of projects that encourage preconception visits.

- Dr. Hayes stated that SACIM should help CMS, working through Ms. Moody-Williams and her office, to discover funding for the concept of well-women's health across the life span. The cornerstone for improved birth outcomes is investment in women's health, avoidance of unintended pregnancies, and provision of health benefits. A system is needed to finance and value the health of women. Healthy Start provides that opportunity, but the CMS interventions are underfinanced.

- Dr. Bronner asked about the extent to which Healthy Start projects generate jobs in the community. Ms. Badura responded that Healthy Start projects initially recruit, train, and employ community health workers and then generate jobs to replace workers who leave the projects.

- Bernard Guyer, M.D., M.P.H., asked about the systems-building aspects of Healthy Start, particularly the nature of collaboration with Title V programs and the possibility of shifting funds. Ms. Badura stated that Healthy Start requires that there be no supplantation of funds.

- Renee Barnes, M.S., R.N., asked for clarification about the number of funded projects to eliminate disparities in the border States and Alaskan and Native Hawaiian communities. Ms. Badura explained that five of these projects are currently funded and two others will be funded for 2007–11. Because of the difficulty many communities along the border area have in collecting data on their participants, the infant mortality rate might not be completely accurate. Therefore, eligibility criteria other than infant mortality are used for those projects.

- Dr. Miller stated that Healthy Start has a more far-reaching vision than merely the medical model. The program serves vulnerable citizens and is a good example of the way in which a large agency can, under able leadership, deliver quality services that are sensitive to the country's diverse populations and help people to help themselves.

- Dr. Guyer asked about the four State initiatives on "Closing the Gap" and expressed surprise that demonstration projects are needed on this subject. Ms. Badura explained that the Closing the Gap initiative, announced by Secretary Thompson, was intended to identify evidence-based practices for women, neonates, and infants. The participating States selected by the Secretary's office were asked to identify the evidence-based practices they would use. The media campaign for this initiative is only about 1 year old.

UPDATE ON THE HEALTHY START NATIONAL EVALUATION

Deborah Klein Walker, Ed.D., Vice President, Abt Associates, Inc.
So Limpa-Amara, M.S., Researcher, Mathematica Policy Resource, Inc.
Andrea Brand, M.P.H., M.S.W., Associate, Abt Associates, Inc.

Dr. Walker outlined the panel presentation, which included an overview of the findings from the National Survey of Healthy Start Programs, the benchmarks paper, and phase II of the national evaluation, which included site visits and a participant survey.

Phase I: The National Survey of Healthy Start Programs

Dr. Walker stated that phase I of the evaluation examined the universe of the Healthy Start programs. That is, it evaluated the national program, not individual programs, and focused on stakeholder input. The evaluation team worked with Healthy Start grantees during their meetings as well as with the Federal Healthy Start staff. In addition, a Healthy Start expert panel was consulted and feedback was elicited from SACIM. A Healthy Start logic model was developed and includes individual participant services and systems-building services. The evaluation focuses on the Healthy Start program changes rather than the long-term outcomes. The evaluation attempted to answer the following key questions:

- What are the features of Healthy Start programs?
- What results have Healthy Start programs achieved?
- What is the link between program features and program results?
- What types of Healthy Start programs (or program features) are associated with improved perinatal outcomes?

Dr. Walker reviewed the findings from the 2004 survey of 95 Healthy Start grantees. The purpose of the survey was to produce a profile of the national Healthy Start program based on self-reported data. The chartbook on Healthy Start programs is under review and will be released soon. The areas of focus include the program structure, process, and outcomes and the community context and grantee characteristics.

Most Healthy Start grantee agencies are nonprofit organizations, and the next largest group comprises local health departments. Most of the projects are urban, but a few are urban-rural or rural. Most are in the second funding cycle (1996–2001). A few are the original projects funded in 1991–97. The amount of total funding for the entire 4-year budget period during the third cycle ranged from less than $3 million to $4 million or more. When the projects were asked whether they implemented each of the nine core functions, they self-reported that they are all implementing all five of the service components (outreach, case management, health education, depression care, and interconceptional care). However, regarding the four systems components (collaboration, consortium, local health systems action plan, and sustainability plan), only 84 percent reported that they have a local health systems action plan and 77 percent reported that they have a sustainability plan. On cultural competence strategies, 86 percent of the project representatives said they hired staff that represented the target population, 64 percent reported that they provide training, and 44 percent said they required contractors to hire diverse staff. Similar strategies were used to address language barriers.

In terms of outreach and client recruitment, the most predominant staff in this area are community health workers (81%), and 19 percent of staff are multidisciplinary (nurses, social workers, etc.). Participants learned about Healthy Start through outreach and recruitment strategies, primarily via referrals (31%) and word of mouth (22%). Only 48 percent of the grantees enrolled most of their prenatal clients in the first trimester of pregnancy. However, if they focused on all women in their communities as opposed to high-risk women, the percentage is higher (59% versus 37%, respectively). Dr. Walker noted that this area of Healthy Start projects clearly needs improvement. Four barriers to enrollment and retention were consistently reported for pregnant and interconceptional clients: (1) lack of transportation, (2) unstable housing, (3) mobility of clients, and (4) low priority of Healthy Start services.

In terms of case management, the predominant background of case management staff was multidisciplinary (45%). As many as 39 percent of the grantees said they conducted home visits for 100 percent of their pregnant clients, and an additional 37 percent said they conducted home visits for the vast majority of their pregnant clients. In the interconceptional period, 37 percent of the grantees said they provided home visits to 100 percent of their clients.

In terms of health education, the audiences targeted by Healthy Start grantees included clients, staff, consortium members, the general population, and providers. Healthy Start grantees provided client health education on a wide range of topics. All or most of the grantees addressed psychosocial risk factors (drug and alcohol abuse, depression, and domestic violence). Less common topics included exercise and management of chronic conditions, infections, or stress. When grantees were asked whether they offered smoking cessation interventions, 77 percent said their case management included cessation counseling, and 6 percent reported that they used pharmacological therapies. When asked about male involvement services, 48 percent reported male participation in the prenatal period and 41 percent reported male involvement in parenting skills activities.

In terms of interconceptional care services, the majority of grantees offered education about family planning (97%), postpartum needs (94%), and folic acid supplementation (91%); and a smaller percentage offered hypertension followup (74%), diabetes followup (73%), and obesity reduction services (71%).

In terms of perinatal depression services, 38 percent of the grantees screened 100 percent of their pregnant clients for perinatal depression, and 43 percent screened 100 percent of their interconceptional clients for depression. Perinatal depression services offered to clients included individual counseling or psychotherapy (95%), medication management (78%), psychiatric consultation (73%), group counseling or psychotherapy (63%), hospitalization (59%), and postpartum support or parenting groups (51%).

Regarding access issues and barriers to services, the easiest services to access were family planning; the 6-week postpartum visit; sexually transmitted disease (STD) treatment, testing, and counseling; and human immunodeficiency virus testing and counseling. The most difficult services to access were a pediatric visit within 24 hours, interconceptional specialty care, substance abuse treatment, and dental visits. Grantees reported that barriers to care included unstable housing (68%), lack of health insurance (67%), lack of transportation (66%), and mobility of clients (66%).

In terms of the four systems components, the grantees stated their views on the purposes of their consortia. The stated purposes included sharing information and referrals (92%), fulfilling the requirements of the grant guidance (84%), changing maternal and child health practices in the community or system (80%), working toward goals in an action plan (80%), and overseeing Healthy Start program operations (57%). Only 29 percent of the grantees envisioned their consortium as a vehicle for changing maternal and child health policy in their State. Some of the strategies used by grantees to encourage consumer participation on the consortia included actively recruiting consumers (97%), serving food at meetings (91%), using convenient locations (84%), using convenient meeting times (81%), providing transportation assistance (76%), and distributing information of interest to families during meetings (75%).

Strategies used by grantees to promote leadership among consumers were inviting consumers to serve on subcommittees (75%), sending consumers to conferences (70%), and conducting training sessions (66%). Fewer than half of the grantees invited consumers to facilitate meetings or held retreats that included consumers. The most frequently reported accomplishments of the consortia were increased awareness of infant mortality (86%), creation of sustainable partnerships (70%), and enhancement of the ability of Healthy Start programs to address disparities in access and utilization (70%).

Establishment of a local health system action plan is a required component of Healthy Start. The grantees involved various entities in the development of local health system action plan goals: 86 percent said they involved Healthy Start staff, 71 percent said they involved key community partners, 68 percent said they involved local health departments, 54 percent said they involved State Title V agencies, and 43 percent said they involved local Title V agencies. The most frequently reported methods of identifying priorities for the development of local health system action plan goals ranged from discussions with community organizations and agencies (74%) to Healthy Start-funded needs assessments (44%).

Grantees also were asked to report on their collaborative activities. They reported that they collaborated with health-related organizations (e.g., State Title V, Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) activities, local health departments, substance abuse programs), service-related organizations (schools, welfare agencies, child protective services, child care agencies, Head Start, and courts), and community and civic entities. The survey results show that Healthy Start projects are well-anchored in their communities and coordinate and collaborate with a significant number of community agencies. When asked about the benefits they received from coordinating with State Title V programs, the grantees reported that the Title V agency had helped them with efforts to advocate for Healthy Start populations (36%), provided them with data and other information for needs assessments (42%), and helped increase their visibility in policy arenas (66%).

In terms of a sustainability plan, the grantees pursued a number of different types of sustainability strategies. The strategies ranged from seeking other local funding (79%), additional Healthy Start funding (79%), and other Federal funding (78%) to collaborating with other organizations (71%) or State or local Title V entities (66%), packaging services for health plan reimbursements (64%), implementing a fund-development strategy (37%), and incorporating to apply for funds (25%).

Dr. Walker reported on grantee reflections on Healthy Start outcomes. The intermediate outcomes were classified as participant/service outcomes, increased awareness outcomes, improved systems of care outcomes, and increased consumer involvement outcomes. The grantees' perception is that they achieved more outcomes in the individual services area than in the systems of care and consumer involvement areas. Ninety-three percent of the grantees reported increased access to the services available for participants, 91 percent reported increased positive health behaviors among participants, and 76 percent reported increased numbers of participants with a medical home. Ninety-two percent reported increased awareness of the importance of interconceptional care, and 87 percent reported increased awareness of the disparities in birth outcomes as a priority in the community.

Seventy-four percent of the grantees said they succeeded in increasing screening for perinatal depression among providers in the community; 69 percent said they increased the integration of prenatal, primary care, and mental health services; and 57 percent said they increased the cultural competence of providers in the community. Sixty-seven percent of the grantees said they succeeded in increasing consumer involvement in Healthy Start decisionmaking, 51 percent said they increased consumer involvement in other community activities addressing systems changes, and 31 percent said they increased consumer involvement in decisionmaking among partner agencies. In terms of service activities, the grantees reported case management as the most important contribution to achieving intermediate outcomes. In terms of system activities, 29 percent of the grantees said that collaboration with community-based organizations was a primary contributor to achieving intermediate outcomes.

After reporting on grantees' responses to statements involving identification of issues, developing the basis for change, change in results, and sustainability in selected community outcomes, Dr. Walker stated that the area of sustainability needs work.

Benchmarks Paper

Ms. Limpa-Amara discussed the benchmarks paper, a literature review to describe racial and ethnic disparities in birth outcomes and risk factors for poor birth outcomes. The paper provides an evidence base for perinatal health initiatives such as Healthy Start. It focuses on racial and ethnic disparities in infant mortality, low birthweight, and risk and protective factors. The risk and protective factors are divided into behavioral factors and biological/social factors. The key finding is that disparities in infant mortality correspond with patterns of risk factors for poor birth outcomes. African Americans had the highest rate of risk factors associated with preterm births and low birthweight infants. The implication for perinatal interventions is that reducing the risk factors (i.e., late or no prenatal care, drug abuse, stress, depression, and bacterial vaginosis) might help to reduce disparities in low birthweight and preterm birth infants. Likewise, American Indian/Alaska Natives had the highest rate of risk factors associated with SIDS. Therefore, reducing the risk factors (i.e., smoking and binge drinking during pregnancy) might help to reduce disparities in SIDS. These findings provide the evidence base for the conceptual framework presented in the benchmarks paper. The paper is currently under review and will be available soon.

Phase II: Evaluation Update

Ms. Brand noted that the information presented by Dr. Walker and Ms. Limpa-Amara was a descriptive analysis of the universe of all 96 grantees. Phase II of the national evaluation involves an indepth focus on a smaller group of the grantee population. The phase II evaluation goals are to obtain a more indepth understanding of a small group of grantee program models; determine the methods that grantees use to meet Healthy Start program objectives, with a particular focus on efforts to influence the systems of care in the community; identify and describe promising practices implemented by Healthy Start grantees; and reflect input and advice from HRSA, SACIM, and the Healthy Start expert panel.

The key evaluation questions are the same as those for the phase I evaluation. The key themes in phase II are to understand strategies used by programs to reduce racial disparities in the community, strategies for including consumer voice in program planning and implementation, approaches to cultural competency, services and supports during the interconceptional period, strategies for addressing perinatal depression, strategies for using planning processes to pursue program goals and objectives, flow of clients from outreach through service referrals and case management activities, and the role of the consortium in community and systems development.

The phase II evaluation approach is based on case studies with eight grantees. Site visits, which included individual and group interviews, were conducted and Healthy Start participants were surveyed. Eight Healthy Start projects were selected based on the following criteria: grantees must have completed the National Survey of Healthy Start Programs, they must have implemented all nine required components of the Healthy Start program, they must track referrals to providers within and outside the Healthy Start program, and they must maintain electronic records to facilitate access to data for the participant survey. From the 26 eligible grantees, 8 were selected to reflect certain characteristics and to achieve maximum variability. Collectively, the selected grantees had to have enough live births to obtain at least 1,000 responses to the participant survey. The grantees selected for phase II evaluation were Fresno, California; Tallahassee, Florida; Des Moines, Iowa; East Baton Rouge, Louisiana; Worcester, Massachusetts; Las Cruces, New Mexico; Pittsburgh, Pennsylvania; and Lac du Flambeau, Wisconsin.

The goals of the site visit portion of the phase II evaluation were to gain an understanding of how projects are designed and implemented to improve perinatal outcomes; determine which program features grantees associate with success; explore how grantees implement culturally competent services and systems; identify promising practices; and assess the links among services, systems, and outcomes. The site visit methods included spending 3 to 4 days at each of the eight sites, during which indepth individual interviews were conducted with the project director, case managers, local evaluators, clinicians, consortium members, and other stakeholders. In addition to individual interviews, a group interview was conducted with outreach/lay workers. Two exercises were conducted: relational mapping with the project director or program manager and client flow graphing with case managers, outreach, or lay workers. Finally, an informal document review was conducted.

All of the eight site visits have been completed, and the eight site visit summary reports have been drafted. The site visit reports include project history, context and issues addressed by the community, overall program design, accomplishments and challenges, and promising practices. After the site summary reports are finalized, a cross-site report will be written. This report will include a summary of grantee characteristics and community profiles, a comparative analysis of program design and implementation, and the typology of successes and challenges at the services and systems levels.

Ms. Limpa-Amara presented information about the participant survey, which incorporates the participant perspective into the evaluation. The goals of the survey are to collect data unique to women’s experiences in Healthy Start and gain insight into the implementation of Healthy Start from the participant perspective. The specific aims of the survey are to develop a Healthy Start participant profile, describe services received during the prenatal and interconceptional periods, assess satisfaction with services, and evaluate participant health behaviors and perinatal outcomes.

The participant survey methods include 30-minute computer-assisted interviews with women who have a 6- to 12-month old infant at the time of the interview. The target is a 75-percent response rate, or 600 cases. The survey was translated into Spanish, and interpreters are used to assist women who speak another language. A $25 gift card is provided to encourage participation.

The survey comprises 12 sections with topics selected with the aid of the Healthy Start expert panel and HRSA. Questions from existing surveys were used, and the chosen questions were based on the conceptual model. The survey went through several clearance procedures, including institutional review board clearance, OMB clearance, and site-specific clearance.

Multiple methods were used to contact respondents, including an advance letter to inform participants about the survey, telephone calls from trained staff to ask individuals to participate in the survey, and contact by grantee staff. Likewise, multiple strategies were used to maximize response rates, including collaboration with grantees in locating participants and encouraging people to take part. The survey center has online locating sources, and postal service "address correction requested" and telephone directory assistance were used to maximize response rates. The survey center operates during business, evening, and weekend hours and includes a toll-free call-in line. Language services encourage participation, and trained professional interviewing staff have experience in conducting surveys with vulnerable populations.

The survey began on October 2, 2006, with 824 cases. As of November 23, 2006, the response rate was 65 percent. With continued collaboration with grantees to locate participants and encourage participation, the survey should be finished in January 2007.

The participant survey analysis plan is to aggregate the data to focus on several areas, such as demographic characteristics, risk status of participants, services received, participant experiences and satisfaction, health behaviors, and perinatal outcomes. In addition to the descriptive analysis, a multivariate analysis will be conducted to understand more in depth the relationship between participant characteristics and behaviors and outcome. Finally, a benchmarks analysis will be conducted to compare the participant survey results with the results of other national surveys.

Discussion

The panel presentation on the evaluation of the Healthy Start program prompted the following comments and questions from SACIM members:

- Dr. Cernoch referred to a slide that indicates that 64 percent of the projects are attempting to package their services for health plan reimbursements to Medicaid. She asked what percentage of Healthy Start core services Medicaid actually pays. Dr. Walker replied that the percentage varies depending on the site or the State. Some States provide case management services. Outreach and enrollment are not usually paid for as a core service. The same is true of perinatal depression care. Dr. Walker also mentioned there is an art and a science to packaging services for Medicaid reimbursement, depending on the individual State Medicaid programs and on the receptivity of the Medicaid director. Ms. Brand added that the site visits can provide information about Medicaid billing practices.

- Dr. Guyer stated that the slide depicting risk and protective factors (slide 54, page 28) misses a series of factors (e.g., preexisting maternal illness) and intermediate variables (e.g., multiple pregnancies). Ms. Limpa-Amara referred to a lack of time and resources and mentioned the intention of focusing on the factors included in the conceptual framework. Dr. Walker added that some of the factors Dr. Guyer mentioned were covered in the participant survey and that the comprehensive literature review focused on disparities.

- Dr. Guyer noted that the ability of the phase II study to reveal salient information hinges on the element of variability in the outcomes among the eight sites and whether that variability reflects what is to be explained. Dr. Walker referred to qualitative methodology, which is illustrative of different examples. The information cannot be generalized to the entire population. A quantitative analysis will not be attempted. Instead, vignettes are the product, which will be anchored in a presentation of the performance measures across all of the sites.

In terms of the participant survey, the analysis will be conducted across all eight sites to be representative only of those eight sites.

- In response to a question about the key outcome of the study, Ms. Limpa-Amara explained that the participant survey attempts to develop a profile of participants across the eight sites to determine how outcomes (i.e., infant mortality, low birthweight, and premature birth) relate to the participant characteristics. Dr. Walker declared that the issue involves examining the program from the participants' perspective. The richness of the experience of these women might not be able to be linked to outcomes.

- Dr. Hayes stated that the Title V community is interested in what has been learned. Healthy Start sites handle the most complex and the worst of all outcomes. Some of the findings will be difficult to generalize, but it is important to get at least a grasp of the program components and the participant side. The social determinants of health can impair the achievement of positive outcomes. Dr. Hayes stated that in April 2006, the Pregnancy Risk Assessment Monitoring System (PRAMS) tool sites represented 75 percent of births nationwide. In 2009, PRAMS will be revamped, and now is the time to work with colleagues at the Centers for Disease Control and Prevention (CDC) to maximize the opportunity to ask specific, pertinent questions like those answered by the eight Healthy Start sites used in phase II of the national evaluation. Questions that capture social determinant components can benefit national surveillance tools. Dr. Walker added that the evaluation provides a framework for ongoing monitoring so individual projects, MCHB, and State Title V agencies can use the information for continual improvement. In addition, States should be encouraged to perform more complicated data analyses using vital statistics "to bring all of the pieces together."

- Dr. Ryan stated that slide 54 concerns the risk and protective factors related to pregnancy itself instead of longer term antecedents for birth outcomes. To gain a better understanding of the longer term antecedents that are consistent with the life span model, a larger number of cases will have to be studied. Dr. Hayes added that State-specific data are linked to the policy and program changes on which leadership within the States can act.

- Dr. Bronner also referred to the slide on risk and protective factors and mentioned that other important factors, such as lifestyle, context, and environment, do not have a strong evidence base. These issues should be examined, and a research agenda should be developed to expand the list of risk factors with an evidence base. Ms. Limpa-Amara stated that the benchmarks report ends with a statement to that effect.

- Dr. Frigoletto stated that the presentation left him with the certainty that the survey will never result in outcome data that will withstand scientific scrutiny and lead to next steps. What he has learned is that African Americans with several risk factors have the poorest perinatal outcomes.

- Dr. Bronner recalled that the goal of Healthy Start is a reduction in infant mortality. Program-oriented evaluations are difficult. Measuring, benchmarking, and monitoring the factors that affect infant mortality must be done to make the numbers change. Dr. Collins remarked that the evaluation examines qualitative research and articulates its meaning to a group of people who have been trained to think quantitatively, which is extremely difficult. To improve infant mortality rates, particularly as they relate to disparities among ethnic groups, will require a team approach involving different perspectives.

- Dr. Hayes stated that the databases around the country must be connected. To lower infant mortality rates, a paradigm shift must occur to change factors related to some populations. Some of the tools to effect the change exist, but their utility has not been maximized. The silos approach misses the big picture. Entities within States that have authority and accountability need an opportunity to make sense of all of the information amassed by individual agencies and organizations. A coordination of efforts is needed.

- Dr. Miller suggested that the aggregate of hard scientific data is not the desirable outcome, but rather a tool to get to the outcome. The outcome is to live out national values, which include the ability of all children to have healthy, fulfilled lives.

- Dr. Guyer suggested that the Healthy Start evaluators state some outcomes, or hypotheses, about what this study uniquely provides via qualitative research that has not been found through other methodologies. Dr. Walker stated that the heart of the benchmarks paper is the logic model. The evaluators state clearly that long-term outcomes cannot be investigated in this study, but examining the projects reveals what is happening in those communities. The hypothesis involves the discovery of a constellation of systems components that result in improved consumer voice or improved local health care systems. The set of site visits was based on that hypothesis. Using the best of the qualitative methods, the evaluation focuses on the Healthy Start intermediate outcomes column of the logic model. Sites that have already integrated all of the activities into one service system are much better able to provide these services—universally to women in the community—as opposed to sites that have not. Dr. Walker reiterated that the evaluation uses the performance measure data as a framework for presenting the findings from the qualitative research.

- Dr. Ryan noted that the nature of Healthy Start requires qualitative analyses because the program does not create “cookie-cutter” projects. Healthy Start is not a randomized controlled trial with a control group. The most important lessons to be learned from Healthy Start relate to qualitative analyses. Dr. Walker added that if the qualitative analysis is combined within the community with the ongoing longitudinal data from PRAMS, vital statistics, and so on, a quasi-experimental design is the result over time.

- Ms. Badura noted that the discretionary data system includes the outcome measures on infant mortality, neonatal mortality, postneonatal mortality, and low birthweight as well as other measures of cultural competence, integration of women’s health as a service system in the community, and family participation. The project team will report on all of that data from all 97 projects, and quality improvement will flow from lessons learned from the projects.

PRECONCEPTION HEALTH

Hani K. Atrash, M.D., M.P.H., Associate Director for Program Development, National Center on Birth Defects and Developmental Disabilities, Centers for Disease Control and Prevention

Dr. Atrash thanked the Committee for inviting him to provide an update on activities surrounding preconception care. The preconception care team includes a steering committee comprising members from CDC, MCHB, the American College of Obstetricians and Gynecologists (ACOG), the Association of Maternal and Child Health Programs (AMCHP), CityMatCH, and consultants; a select panel made up of representatives from 35 partner organizations and subject matter experts; a CDC Agency for Toxic Substances and Disease Registry workgroup with representatives from 22 programs involved in caring for women before pregnancy; and a number of workgroups to develop strategies for implementation of recommendations on preconception care.

Recognized Importance of Preconception Care

Dr. Atrash presented data to uphold the notion of the importance of preconception care. Poor pregnancy outcomes continue to be at unacceptable levels, and women enter pregnancy at risk for adverse outcomes. Intervention currently occurs too late. Dr. Atrash stated that the goal of preconception care is to promote the health of women of reproductive age before conception and thereby improve pregnancy-related outcomes. A paradigm shift must occur from prenatal care, which centers on anticipation and management, to preconception care, which concerns health promotion and prevention of risk factors. The successful Healthy Mothers/Healthy Babies model must be expanded to include healthy women, healthy mothers, and healthy babies. Intervention before pregnancy in the form of screening, vaccination, counseling, and maternal assessment is effective and has been recommended by several organizations.

After reviewing information about the perinatal periods of risk (PPOR), Dr. Atrash restated the consensus that action involving women’s health must be taken before pregnancy to avoid adverse pregnancy outcomes. Published analysis from PPOR projects in New York City; Tulsa, Oklahoma; and Kansas City, Missouri, concluded that racial and ethnic disparities in feto-infant mortality were largely related to maternal health and that interventions to reduce feto-infant mortality should include preconception care and improvements in women’s health. A 2000–2002 PPOR analysis of data from 66 large cities suggested that preventive action must address maternal health before conception and during early pregnancy. In fact, the overall PPOR feto-infant mortality rate was higher in the Nation’s largest cities than in the United States as a whole. Recommendations and clinical practice guidelines have been published by many organizations, including the American Academy of Family Physicians, American Academy of Pediatrics (AAP), ACOG, American College of Nurse-Midwives, March of Dimes, and U.S. Public Health Service. A review of publications since the 1970s on the history of preconception care reveals that preconception care is not a new concept.

A preconception focus is being woven into existing programs and is guiding the development of new initiatives in the United States. An analysis of 60 abstracts presented at the *Healthy People* summit last year and an examination of Web-based Title V information reveal a wide range of activities in preconception care. A total of 23 States list preconception care as one of their priority measures. At the international level, policy directives and practice recommendations include provisions for the enhancement of women's wellness and social status as a means of reducing adverse pregnancy outcomes. The notion of preconception care also is found in various global policy and practice recommendations concerning women's wellness and reproductive health. In addition, international professional organizations and associations have published directives and recommendations in support of preconception health, and several countries have developed guidelines and implemented programs.

In this country, successful models of effective preconception services exist. The Interpregnancy Care program in Atlanta, Georgia, provided monthly services to 21 women over a 2-year period. Unrecognized or poorly managed chronic disease was identified in 7 of 21 women. All of the women developed a reproductive plan for themselves, and none of them became pregnant within 9 months following the birth of their very low birthweight (VLBW) infants. The Magnolia Project in Jacksonville, Florida, aims to reduce key risks in women of childbearing age through case management. It succeeded in resolving the key risks, such as lack of family planning and repeat STDs, in more than 70 percent of case management participants. HRSA's Office of Performance Review reported that 86 percent of the participants with family planning issues began to consistently use a method of birth control and 74 percent of the participants with repeated STDs had no recurrent STDs.

A significant need still exists with respect to the knowledge and practice of providers. A March of Dimes survey of 611 obstetrician/gynecologists and family physicians and 500 physician assistants, nurses, and nurse-midwives found that almost all of the respondents knew that folic acid prevents birth defects, more than 88 percent knew when a woman should start taking folic acid, and more than 85 percent knew that folic acid supplementation is necessary. However, only half of the providers knew that 50 percent of all pregnancies are unplanned, 42 percent did not know the correct folic acid dosage, and providers taking multivitamins were more than twice as likely to recommend multivitamins to their patients. The survey also asked the health professionals whether they provide preconception care for their prenatal care patients. Only one in five responded that they do.

As for consumers, most women know that their health affects their pregnancy outcomes. A survey of 499 women found that 98.6 percent realized the importance of optimizing their health before pregnancy and knew that the best time to receive information about preconception health is before conception. Ninety-five percent of the respondents preferred to receive information about preconception health from their primary care physicians. However, only 39 percent could recall their physicians ever discussing this topic with them. Of 2,000 women surveyed every year from 1995 to 2005 by the March of Dimes, the proportion of women who had heard or read about folic acid increased from 52 to 84 percent, the proportion of women who knew folic acid prevented birth defects increased from 4 to 19 percent, and the proportion of women who reported learning about folic acid from health care providers increased from 13 to 26 percent. However, the proportion of nonpregnant women who reported taking a daily vitamin containing folic acid only increased from 25 to 31 percent. Therefore, although the survey shows improvement, the need is still great.

CDC's Preconception Health and Health Care Initiative

CDC launched its Preconception Health and Health Care initiative 3 years ago because of the missed opportunities to increase the number of women who take folic acid supplements. The purpose of the initiative is to develop new strategies to facilitate collaboration, develop recommendations, and identify and address obstacles and opportunities in various areas, including clinical, public health, consumer, policy and finance, and research. Under the initiative, a total of 22 programs were identified, a workgroup on preconception care was formed, and a partnership meeting was held in November 2004. The National Summit on Preconception Care was held in June 2005. A select panel met to synthesize the recommendations from the Summit and establish a framework, based on guiding principles, that entails a vision, goals, recommendations, and action steps.

The guiding principles encompass a life span approach based on individual behavior and responsibility. Preconception care is a process of care that focuses on change in consumer knowledge, clinical practice, public health programs, health care financing, and data and research activities. The vision involves the notions of reproductive awareness, a reproductive life plan, planned pregnancies, health coverage, risk screening, and intensive interconception care. Four goals were developed to support this vision: (1) improve knowledge, attitudes, and behaviors; (2) ensure preconception care services; (3) ensure interconception interventions for high-risk women; and (4) reduce disparities.

The CDC Select Panel on Preconception Care defined preconception care as a set of interventions that aim to identify and modify biomedical, behavioral, and social risks to a women's health or pregnancy outcome through prevention and management, emphasizing those factors that must be acted on before conception or early in pregnancy to have maximal impact. The select panel issued 10 recommendations that call for (1) individual responsibility across the life span, (2) consumer awareness, (3) preventive health care visits, (4) interventions for identified risks, (5) interconception care, (6) prepregnancy checkups, (7) health coverage for low-income women, (8) public health programs and strategies, (9) research, and (10) monitoring improvements. The recommendations met with widespread support nationwide; *JAMA: The Journal of the American Medical Association* and *The Lancet* published editorials supporting them, and the American Medical Association issued a resolution in support of the panel's recommendations.

The steering committee met to map out the road ahead. It recommended defining the content of preconception care, integrating existing guidelines, disseminating information, demonstrating the effectiveness of preconception care, exploring the means for financing, monitoring practice, studying the association between women's health and pregnancy outcomes, and conducting a cost study. The clinical, public health, and consumer workgroups met in June 2006 to define strategies to implement the recommendations. The strategies for implementation were classified into 10 groups: (1) clinical guidelines and tools, (2) consumer information, (3) public health programs and strategies, (4) monitoring and surveillance, (5) a research agenda, (6) public policy and finance, (7) professional education and training, (8) best practices, (9) demonstration projects, and (10) State and local initiatives.

After reviewing the specific tasks under each strategy, Dr. Atrash touched on the diffusion of innovation theory model and stated the goals of implementation as changing the knowledge, attitudes, and practices of consumers, clinicians, and public health professionals. The areas of activity for implementation include information sharing; guidelines, standards, and tools; professional education; performance monitoring and surveillance; health services and marketing research; demonstration projects; learning collaboratives; and coalitions and advocacy. Dr. Atrash explained that action at the national level is not the same as action at the State and local levels.

Discussion

Dr. Atrash's presentation prompted the following comments and questions:

- Dr. Hayes thanked Dr. Atrash for his leadership on the issue of preconception care. She asked him to explain his reference to slide 21, which depicts the 23 States that reported a priority need focused on preconception health and health care. Dr. Atrash explained that 42 States identified a performance measure associated with preconception health or related indicators, such as increasing the number of women who take folic acid or stop smoking before pregnancy. He also explained that the three cities in the Preconception Health Collaborative are Nashville, Tennessee; Hartford, Connecticut; and Los Angeles, California. Dr. Hayes added that the March of Dimes has been monitoring the States in which individual summits are held to disseminate information about preconception care. She noted that the most significant challenge in the State of Washington entails not professionals but women themselves because they might not be able to respond to the given terminology. The States must make some policy choices about what preconception care means. For example, should the focus be on women of child-bearing age? Or should it be on women's health "from womb to tomb"? Different words might be required to get the message out to consumers. Dr. Atrash commented that some people think of preconception as family planning, but family planning is only one component of preconception care. Message testing and social marketing will discover language that is acceptable and that might vary from population to population. Behavioral modification trumps clinical intervention on the issue of preconception care.

- Dr. Miller mentioned that a booklet for young girls containing tips regarding preparation for pregnancy might be an effective approach. Dr. Atrash supported this suggestion as a means of improving women's health through the life span. Dr. Cernoch added that when families of children with special health care needs were asked where they get their information about health and wellness, they responded that the information came, not from providers, but from other family members. Peer-to-peer model support works. The key is to get information about preconception care into the mainstream to effect a cultural change that will raise awareness.

- Dr. Ryan reiterated that the interventions were conceived in the context of improving birth outcomes, but virtually all of them are good health practices regardless of a woman's pregnancy intentions. Part of the challenge of talking about preconception health activities with consumers is that half of pregnancies are unintended. There is no difference between what a woman should do if she wants to be healthy and live a long, productive life and what she should do if she wants to have a healthy pregnancy.

- Ms. Moody-Williams asked Dr. Atrash to explain the plans for the finance and policy workgroup that will meet in January 2007. Dr. Atrash stated that the workgroup will meet in Washington, D.C., to discuss next steps in the implementation of the recommendations involving preconception care. State Medicaid directors and private insurance companies will be invited to the meeting.

- Dr. Frigoletto referred to slide 4, which indicated a 3.2-percent increase in maternal mortality since 1980. He pointed out that a raw percentage can be misinterpreted and therefore misleading depending on different definitions of maternal mortality, in particular, in terms of the length of the postpartum period. The 26-percent increase in the preterm delivery rate also can be misleading because preterm delivery has been affected by changes in practice. Dr. Atrash stated that, regarding the maternal mortality rate, the issue is one of access to care not quality of care. The numbers of maternal deaths are extremely small. The increase in the numbers of cesarean sections has contributed to the increased rate of preterm delivery. In Florida, for example, 60 to 70 percent of preterm births have been found to be related to cesarean section deliveries.

UPDATE ON SUBCOMMITTEES' INTERIM ACTIVITIES AND COMMITTEE FEEDBACK

Kevin J. Ryan, M.D., M.P.H., Chairperson, Subcommittee on Improving Clinical and Public Health Practice
Yvonne Bronner, Sc.D., R.D., L.D., Chairperson, Subcommittee on Eliminating Health Disparities
Jennifer M. Cernoch, Ph.D., Chairperson, Subcommittee on Maternal and Child Health Funding and Financing

Subcommittee on Improving Clinical and Public Health Practice

Dr. Ryan reported on this subcommittee's two products—a main report and a policy memorandum on reengineering vital statistics. The main report begins with a statement of the problem and examines the epidemiology of birth outcomes over the past few decades. The main point is that past improvements in birth outcomes and infant mortality rates have not continued. Instead, two trends have converged. The primary determinant of better health outcomes has been improvements in birth-specific mortality through the rescue operations of the NICU. That activity has been powerful enough for some time to obscure the countervailing trend of an increase in low birthweight rates, VLBW rates, and prematurity. Most recently, the progress in birthweight-specific mortality has slowed.

A paradigm shift must occur. Strategies are needed to reduce the prevalence of preterm births, low birthweight births, birth defects, and other causes of profound illness in infants. The solution does not begin with the first prenatal visit or with the birth of the infant. Instead, it necessitates supporting the health of girls, women, and families. A broad range of social determinants contributes to the Nation's overall infant mortality rate. The current paradigm examines the issue of birth outcomes as predominantly a medical problem to be addressed through prenatal care over the course of 9 months. The paradigm must be broadened by acknowledging the importance of medical conditions and recognizing that the socioeconomic, or ecologic, perspective is important as well. Life span and intergenerational issues must be included in the paradigm. The subcommittee's four core recommendations are summarized below:

1. The Secretary of HHS should promote and disseminate throughout the Department the life span paradigm for infant mortality prevention, with an emphasis on preconception care for women of childbearing age.

2. The Secretary should convene a state-of-the-evidence conference to identify interventions that, based on clear evidence, effectively reduce infant mortality.

3. The Secretary should appoint an interagency group that will identify and prioritize a research agenda to identify interventions to effectively reduce infant mortality.

4. The Secretary should appoint an interagency group that will identify from existing indicator sets those core measures that are most critical for reducing infant mortality.

Dr. Ryan pointed out that the appendix of the main report contains supplemental recommendations.

Dr. Hannemann stated that part of the third recommendation is that consideration be given to other areas identified in the SACIM low birthweight report and recommendations of December 2001 and the report of the Interagency Work Group on Low Birthweight and SIDS submitted to the Secretary in June 2005.

Dr. Hayes emphasized that the recommendations are for the Secretary, not for SACIM members. However, the appendix contains some recommendations on which the Committee can act. She suggested that this distinction be made clear in the appendix. Dr. Hayes also pointed to the importance of using consistent terminology (for example, "preconception care" versus "preconceptional care"). She recommends use of the term "preconception care."

Dr. Ryan described the memorandum on reengineering vital statistics. It is very difficult for SACIM to implement its mandate to advise the Secretary when knowledge of key indicators of infant mortality and health are several years out of date. Therefore, reengineering vital statistics is needed from the standpoints of accuracy and timeliness. A consensus exists about the nature of the problem and a reasonable approach to solving it. Because vital statistics are the province of the individual States, each State has its own laws, regulations, and practices, and the result is a great deal of variability across the States. Adoption of the 2003 revised birth certificate and development of electronic birth and deaths records would improve the situation. The major barrier to this improvement is the cost (startup cost and cost of maintenance) to both the Federal Government and the jurisdictions. The core recommendation is that the Secretary should seek Federal legislation that will (1) set national standards for the timeliness and accuracy of biostatistics data with which all States would need to comply and (2) provide the funding needed by the Federal Government and the States to implement and maintain the reengineered system.

Dr. Bronner asserted that the ability to measure and monitor SACIM's work with national and systemwide data is essential. Ms. Ryan stated that partnerships and collaborations with health care providers also can be effective in reducing costs. Dr. Moore added that the challenge will be to persuade community hospitals to agree on which system to use. Dr. Guyer stated that the subcommittee anticipated some of these issues but decided to keep the core recommendation simple to get the attention of the policymakers.

SACIM voted unanimously to support the subcommittee's recommendations.

Subcommittee on Eliminating Health Disparities

Dr. Bronner stated that this subcommittee focused on the fact that over the past 100 years significant progress has been made in lowering infant mortality but the gap remains at about 100 percent for African Americans. Given the body of research that exists on the subject, the subcommittee's interest is in the missing evidence that can explain the gap. The subcommittee developed three recommendations to address the problem:

1. Sponsor a multidisciplinary state-of-the-science conference to enhance understanding of what is known about the determinants of the disparity in infant mortality. This knowledge base will be used to develop a strategic plan that will help set the agenda for future research and demonstration projects and their funding.

2. Increase funding for research initiatives designed to eliminate the disparity in infant mortality. Once evidence has been provided in the areas of concern (biological, behavioral, psychosocial, and environmental and contextual), the agenda-setting items will be identified for the research to be conducted.

3. Celebrate and expand funding for Healthy Start programs. The new set of evidence will provide the basis for building the practice modalities that move beyond the clinical model.

Dr. Frigoletto offered some additional recommendations. He suggested adding more specificity in the area of multifactorial explanations for disparities by focusing on VLBW infants (less than 28 weeks) and possible genetic/environmental interactions that might play a role in explaining disparities. He also suggested examining the content and recommendations of a report from the November 2005 Symposium on Prematurity (RP Leavitt, NS Green, and M Katz. Current and Future Directions of Research into Prematurity: Report of the Symposium on Prematurity Held on 21–22 November 2005. *Pediatric Research* 2006;60:777–80).

Dr. Collins stated that an examination of social determinants provides insights into where interventions should occur. Molecular-genetic/environmental interactions are important, but understanding the interactions might not be necessary to pursuing the interventions. Dr. Frigoletto suggested giving credence to the fact that genetic/environmental interactions occur and might help to solve the problem of disparities in infant mortality. Dr. Miller offered a suggestion to include the molecular-genetic area of concern in the first recommendation. Ms. Barnes suggested that a decision about editing the subcommittee report along these lines be made at another time. Dr. Moore mentioned that the simple word "biological" might be enough in this context. Dr. Collins stated that the interaction between the social world and the genetic world, or epigenetics, is of interest. Dr. Ryan suggested that the subcommittee present the results of its wordsmithing efforts on the genetic component during the second day of the meeting. Dr. Guyer added that the first recommendation's reference to demonstration projects is not expanded on elsewhere in the recommendations; perhaps the idea of implementation should be included in the second recommendation. Dr. Bronner explained that the third recommendation encompasses the idea of demonstration projects, and Ms. Frazier pointed out that the idea of implementing findings can be found in the second recommendation.

SACIM voted to approve the recommendations of the subcommittee "in essence."

Subcommittee on Maternal and Child Health Funding and Financing

Dr. Cernoch stated that this subcommittee focused on the public funding aspects of the topic, especially the consequences of the DRA that affect infant mortality, low birthweight births, and overall maternal and child health services. The subcommittee formulated six recommendations that focus on State Medicaid plan services for women and children:

1. CMS should develop consistent policies for approval of State Medicaid plan services to ensure that States have similar benefit packages.

2. Safeguards should be put into place on benchmark plans approved by CMS for State Medicaid services to ensure adequate and quality health care services.

3. The match for targeted case management services within Medicaid should not be reduced.

4. The fiscal year 2005 level of funding should be restored to the maternal and child health block grant program.

5. CMS should work more closely with MCHB programs to improve public health, eliminate health disparities, and coordinate maternal and child health services.

6. HHS should focus its priorities, funding, and services on evidence-based practices and proven strategies to improve birth outcomes.

Dr. Cernoch stated that some edits will be incorporated into the report for the purpose of clarification.

SACIM voted to accept the recommendations of the subcommittee.

Dr. van Dyck explained that his office will edit the reports for consistency and appearance, after which they will go back to the Committee and then be sent to the Secretary. He asserted that the reports can be in different formats, with or without references. He explained that reports to the Secretary are handled in different ways depending on what the Secretary decides. He also stated that the Secretary is invited about once a year to a SACIM meeting. For example, Secretary Thompson came to a meeting once 4 or 5 years ago. Dr. Hayes suggested that the Secretary be invited to the next SACIM meeting. Dr. Hannemann recollected that the December 2001 report was presented to Secretary Thompson by the SACIM chairperson and himself at a meeting in the Secretary’s office.

Dr. van Dyck stated that the transmittal letter from Dr. Collins will suggest that the reports be transmitted in person either at a separate meeting or at the next SACIM meeting. Dr. Bronner suggested the reports be made more cohesive to get the Secretary’s attention. Ms. Barnes seconded that suggestion and asked whether that task can be handled by MCHB staff. Dr. van Dyck recommended that the three reports, which focus on different issues, be kept separate and the transmittal letter highlight the common threads that run through the three reports. He also asserted that the reports are not subcommittee reports; they are Committee reports.

THURSDAY, NOVEMBER 30, 2006

BREASTFEEDING

Michael D. Kogan, Ph.D., Director, Office of Data and Program Development, Maternal and Child Health Bureau, Health Resources and Services Administration
Karen Hench, R.N., M.S., Deputy Director, Division of Healthy Start and Perinatal Services, Maternal and Child Health Bureau, Health Resources and Services Administration
Patricia N. Daniels, M.S., R.D., Director Supplemental Food Programs Division, Food and Nutrition Service, U.S. Department of Agriculture

Geographic Variation in Breastfeeding Rates in the United States

Dr. Kogan stated that, in developed countries, studies have shown that increased rates of breastfeeding are associated with lower risks of neonatal and postneonatal mortality and, specifically, to a lower risk of SIDS. In developing countries, breastfeeding has been used as a child survival strategy because of reduced risks for diarrheal disease and acute respiratory infections. Breastfeeding also has been associated with numerous benefits, including reduced risks of respiratory tract infections and gross motor, language, and developmental delays. Exclusive breastfeeding for 6 months is recommended by organizations such as the AAP, ACOG, and World Health Organization. One of the *Healthy People 2010* goals is a 75 percent prevalence rate for breastfeeding initiation and a 50 percent prevalence rate for breastfeeding at 6 months.

Breastfeeding rates vary by a number of demographic and sociodemographic factors. Whites and women with higher income and higher education levels are more likely to breastfeed. Two sources of State-level data—the Ross Labs Mothers' Survey and the National Immunization Survey—have indicated fairly wide variations in breastfeeding rates among the States. However, neither survey has examined whether these State variations are diminished after multivariate adjustment (taking other factors into account).

Two study questions arose: (1) are geographic disparities in breastfeeding reduced after multivariate adjustment for sociodemographic and behavioral factors and (2) is there a possible influence of breastfeeding promotion legislation on rates of breastfeeding, even after adjustment? The study used two data sources: the 2003 National Survey of Children's Health and the La Leche League's comprehensive information on breastfeeding promotion legislation in each of the 50 States and Washington, D.C. The dependent variables were adjusted State prevalences of breastfeeding initiation and duration of at least 6 months, rate of breastfeeding initiation, and rate of breastfeeding at 6 months. The independent variable was State of residence; and the covariates were poverty level, race and ethnicity, gender, family structure, primary language spoken at home and immigrant status, maternal assessment of general health status, maternal mental health, maternal exercise behavior, and household smoking.

The analysis examined both the unadjusted prevalence and adjusted prevalence of breastfeeding initiation and breastfeeding at 6 months. Logistic regression was then used to examine the odds of not ever breastfeeding and the odds of not breastfeeding at least 6 months. A multilevel analysis was then conducted to examine the possible role of breastfeeding promotion legislation.

The unadjusted prevalence for breastfeeding by State shows large regional variations, with the highest levels of breastfeeding occurring in the western and mountain States (Washington, Oregon, California, Colorado, and Utah) and the lowest rates of breastfeeding occurring in the southern and southeastern States (Louisiana, Mississippi, West Virginia, Arkansas, and Kentucky). The highest rates are almost twice as high as the lowest rates. The adjusted prevalence for breastfeeding initiation seems to diminish the geographic variations by 25 to 30 percent. The pattern for breastfeeding for at least 6 months is similar to that found at breastfeeding initiation.

The logistic regressions were done for unadjusted and adjusted associations between never breastfeeding and the five lowest prevalence States, with Oregon as the reference. The analysis revealed, for example, that for unadjusted prevalence, women in Louisiana are almost 8.5 times more likely not to initiate breastfeeding compared with women in Oregon. For adjusted prevalence, the association is reduced, but there is still a very wide disparity. Even after adjustment, women in Mississippi are still almost four times as likely not to initiate breastfeeding compared with women in Oregon.

In terms of the other factors significantly associated with never breastfeeding, Hispanics were 45 percent more likely not to initiate breastfeeding and African Americans were twice as likely not to initiate breastfeeding. An odds ratio less than one, which occurs for example when Spanish is the primary language spoken at home, means that these mothers were more likely to initiate breastfeeding. Similar wide disparities are found in the logistic regressions for unadjusted and adjusted associations between not breastfeeding at least 6 months and the five lowest prevalence States.

The analysis of breastfeeding legislation in the United States by State was based on four categories: (1) no law in 2003, (2) first law between 1999 and 2003, (3) single law before 1999, and (4) multiple laws before 1999. There was almost a 13 percent difference in States that had no legislation in 2003 versus States that had multiple laws before 1999, and the same effect was seen for breastfeeding at 6 months. Women in States without a law in 2003 were 63 percent more likely not to initiate breastfeeding compared with women in States with multiple laws before 1999.

The limitations of this study are that it was a cross-sectional study, with no information on a number of factors associated with breastfeeding, such as support for breastfeeding in the workplace and hospital. The study contains no information on WIC eligibility and use, on when women returned to work, and on whether children were exclusively breastfed.

The study found significant variation in both breastfeeding initiation and breastfeeding at 6 months by State of residence. It also found that, although sociodemographic and behavioral characteristics are significant determinants of breastfeeding, these characteristics do not explain most of the State-to-State variation in breastfeeding rates. In addition, an acculturation effect is apparent. That is, when either the parents or children were foreign born, the infants were more likely to be breastfed. Finally, breastfeeding laws might have some effect on State variation.

The public health significance of the study is that the prevalence rates for breastfeeding in the study are similar to results from other surveys. Given the many reduced health risks associated with breastfeeding for both mothers and children, it is important to eliminate geographic disparities in breastfeeding initiation and duration. This study points to geographic areas to target for intervention and perhaps identifies places for study to determine the reasons for their high rates and to apply their promotion/support/structural-level efforts in areas with low initiation and duration rates.

HRSA Resource Kit To Improve Lactation Support in the Workplace

Captain Hench reviewed some of the activities in which MCHB has engaged to improve rates of initiation and duration of breastfeeding. MCHB has been an active member of the U.S. Breastfeeding Committee and has initiated several provider support, hospital support, and worksite support programs. Regarding provider support, MCHB has worked with the Academy of Breastfeeding Medicine and AAP to develop an education and support program for residents and other practitioners to promote breastfeeding within their practices. Regarding hospital support, the Baby Friendly hospital project was jointly funded by the HHS Office on Women's Health (OWH), CDC, and MCHB. This project provided resources that outline for hospital staff the procedures and policies that support effective lactation and breastfeeding even when the mother's hospital stay is very short. Regarding worksite support, MCHB has engaged in several activities, including development of an employer breastfeeding tool kit and Webcasts (http://www.mchcom.com). MCHB also supports activities to raise awareness of the value of breastfeeding among maternal and child health stakeholders.

One of the major challenges to improving the rates of breastfeeding is that women are a significant part of the workforce. In 2002, more than 63 million women in the United States were employed, 75 percent of them full time and 25 percent part time. Most of these women had a very structured and rigid workday. Furthermore, approximately 62 percent of employed women were between 16 and 44 years of age (reproductive age). In 1977, only 34 percent of employed women had children younger than 3 years of age, but that percentage almost doubled to 61 percent by 2002.

A number of studies have illuminated some of the details that explain lower breastfeeding rates among women who work. One study found that full-time employment reduces breastfeeding duration by an average of 8 weeks. Another study found that the primary influence on breastfeeding initiation and duration is employment. A third study found that African American women are more likely to return to work full time and sooner and have lower breastfeeding rates than do other racial/ethnic groups. Higher breastfeeding initiation rates are associated with at least 6 weeks of maternity leave. Only 20 percent of mothers are covered by the Family and Medical Leave Act of 1993, which provides some flexibility in employment and prolonging breastfeeding duration. The Act is targeted to large companies and to employees who work at least 24 hours per week and have been in their position for at least 1 year.

Legislation seems to have some association with improved breastfeeding rates. More than 30 States have legislation concerning breastfeeding in public places. Several States have expanded legislation regarding the workplace, that is, provision of reasonable time to breastfeed and provision of private accommodations for milk expression.

The good news about work and breastfeeding is that breastfeeding mothers are half as likely to miss a day of work to care for a sick child compared with mothers of formula-fed infants. In addition, health care costs and insurance claims are significantly lower for breastfed infants. A 1999 study found that for every 1,000 infants not breastfed, there are 2,033 physician visits; 212 excess hospitalization days; and 609 excess prescriptions for ear, respiratory, and gastrointestinal infections.

In the process of developing the worksite tool kit, MCHB interviewed several companies with lactation support programs, two of which are Mutual of Omaha and Cigna. An analysis by Cigna showed that the company saved more than $240,000 in health care expenses annually, paid for 62 percent fewer prescriptions annually, and saved $60,000 in reduced absenteeism rates annually. Mutual of Omaha reported that its lactation support program yields an 83 percent employee retention rate versus the 59 percent national average.

MCHB is currently developing a resource tool to improve the rates of breastfeeding duration and initiation. The tool kit will target employers, human resource managers, lactation consultants, and employees. The goals of the project are to (1) increase awareness among employers of the economic benefits of supporting lactation programs; (2) outline manageable, flexible models for implementing or enhancing a worksite breastfeeding support program; and (3) increase the number of U.S. employers who use a worksite breastfeeding support program. The methodology for developing the various tool kit components entails reviewing the literature, conducting interviews with public and private sector employers, convening a strategy formation session with breastfeeding and employment experts, and soliciting additional feedback from public health professionals.

The proposed resource kit components include an outreach and marketing guide for advocates, return-on-investment and other key considerations for employers, general steps to building a lactation support program for workplace managers, template documents, and an employees' guide to breastfeeding and working. MCHB has received several inquiries from various disciplines eager for the release of the tool kit.

Update on WIC Breastfeeding Education and Support Efforts

Ms. Daniels stated that breastfeeding is a priority in the WIC program even though WIC is the world's largest provider of infant formula. WIC is in the process of establishing a breastfeeding education and support program that extends from pregnancy through delivery and that encourages breastfeeding among WIC participants. Since the early 1990s, WIC has had some regulatory breastfeeding provisions. States are required to have a breastfeeding coordinator and to provide breastfeeding training for local agency staff. Breastfeeding mothers are favored in the priority system. WIC also has an enhanced food package for mothers who breastfeed exclusively. States may use administrative funds for items that directly support the initiation and continuation of breastfeeding and may use food funds for purchasing breast pumps. In addition, WIC targets funds for breastfeeding promotion, education, and support.

After explaining the use of WIC breastfeeding funds, Ms. Daniels described a significant increase in the rate of WIC breastfeeding in the 1990s and a dropoff in the rate of WIC breastfeeding at 6 months duration in 2003. WIC decided to target its efforts toward that drop in the rate of breastfeeding among WIC mothers and is working on regional initiatives.

WIC breastfeeding education and support efforts include the U.S. Department of Agriculture (USDA) breastfeeding campaign initiated in 1997, which is called *Loving Support*. This media campaign provides pamphlets and posters, media materials, promotional items, provider kits, and complimentary materials. The Fathers Supporting Breastfeeding project, begun in 2001, has as its goals to highlight the important supportive role of fathers in successful breastfeeding, provide breastfeeding education and awareness to fathers, and address racial and ethnic disparities in breastfeeding rates with culturally appropriate strategies to reach African American women. WIC also is working with State and local agencies on a project called "Using *Loving Support* to Build a Breastfeeding-Friendly Community." This project provides training for WIC staff on how to develop a community-based breastfeeding promotion and education program and teaches States to work collaboratively with community partners in breastfeeding promotion efforts.

WIC's Model Peer Counseling project is based on the realization that the duration of breastfeeding is a major problem and uses best practices in peer counseling as an approach to that problem. The peer counseling component of the WIC program entails research, development of a training curriculum and program resources, management training sessions, peer counselor train-the-trainer sessions, and an evaluation, which is currently collecting data from all of the sites. The research objectives in the early phase of the peer counseling project were to understand the perspectives of both management and direct services staff about peer counseling program management, identify barriers and motivators for implementing and sustaining peer counseling programs, and determine internal WIC barriers to integrating WIC peer counseling with hospitals and other community partners.

After describing several elements of a model WIC peer counseling program, Ms. Daniels declared that peer counselors provide unique and special qualities and services. They are women in the community with personal breastfeeding experiences who model and provide breastfeeding information and support for other mothers, provide breastfeeding help outside usual clinic hours and outside the WIC clinic environment, and fill the gap in services after hospital discharge to achieve seamless continuity of care.

WIC also supports a Hispanic breastfeeding promotion and education project, which identifies the breastfeeding barriers that Hispanic mothers face, develops culturally appropriate educational materials in print and video, identifies the primary networks within the Hispanic family structure or extended family that provide breastfeeding support, and builds on the community health and support networks that are so significant in the Hispanic culture.

The WIC National Breastfeeding Week theme was "Breastfeeding…Anytime, Anywhere." WIC also has proposed a food package rule that calls for enhancing the food package's ability to support breastfeeding. It establishes three feeding options within each infant food package: (1) fully breastfed, (2) partially breastfed, or (3) fully formula fed. The rule would provide no infant formula for breastfed infants during the first month after birth. Every woman who delivers under WIC would be required to breastfeed at least the first month.

Finally, WIC works with partnerships, such as the Breastfeeding Promotion Consortium created in 1990 as a group of 25 organizations that represent public health, maternal and child health medical and professional organizations, and Federal agencies. The consortium meets twice a year to discuss breastfeeding and to exchange information. WIC also has a liaison to the U.S. Breastfeeding Committee and works closely with the Maternal and Child Nutrition Branch of the Nutrition and Physical Activity Division of CDC. In addition, WIC recently reached a new agreement with the Indian Health Service to exchange resources and establish additional training regarding breastfeeding.

The challenges that WIC faces concern the standardization of training for breastfeeding coordinators and individuals who certify, support, and supervise peer counselors.

Discussion

The presentations of the three panelists prompted the following questions and comments from SACIM members:

- Christina Ryan, R.N., M.P.A., thanked the WIC program for its efforts in recognizing the need for supporting breastfeeding. She suggested that WIC continue to work in partnerships with hospital providers. For example, most hospitals have lactation consultants and rental stations for breast pumps. She asked about enhanced reimbursement for breast pump rentals and certified lactation consultants. Captain Hench reiterated that without constant support, breastfeeding duration rates will decline. A coordinated effort exists between CDC, MCHB, USDA, the National Institute of Child Health and Human Development, and other agencies to determine additional support components once the tool kit is rolled out. Examples of additional support components are training on how to use the kit, what is reimbursed within the community-State package program, what opportunities exist with employers to subsidize or offset the funding of equipment, and how communities' problem-solving efforts can be enhanced through additional grants, contracts, and other programs.

- Dr. Bronner asked about the possibility of CMS funding for the first breastfeeding support visit. She also emphasized that the peer counseling component needs support in terms of certification and benefits, and she asked about the line item support for this component of the WIC program. Captain Hench replied that it is possible to build a bridge with CMS to ensure the funding of the first breastfeeding support visit. She added that the blueprint for a similar bridge is being developed with the U.S. Department of Labor. Ms. Daniels asserted that certification of peer counselors varies from State to State. Peer counselors are trained under a standard curriculum, but training for their supervisors also must be standardized. Once peer counselors are trained, they feel empowered to advance to other paraprofessional positions or return to school. Currently, many peer counselors are WIC mothers. To encourage longer duration in the program, the WIC model includes several levels of peer counselors with varying degrees of responsibility. Ms. Daniels also stated that the line item was approved under the Child Nutrition Reauthorization Act through 2008.

- Dr. Moore noted the striking similarity between the map shown in Dr. Kogan's presentation on the decreased initiation of breastfeeding rates in the Southeast and another map depicting the prevalence of obesity. She asserted that in her experience, very large women are reluctant to begin to breastfeed because of the size of their breasts. Dr. Kogan replied that his study did not examine obesity because data on the mothers' weight and body mass index were not available.

- Dr. Frigoletto asked whether the direct health benefit of breastfeeding might be a proxy for geographic location and socioeconomic status. Dr. Kogan replied that studies on the health benefits of breastfeeding often control for level of poverty or family income. Breastfeeding is not the best proxy of socioeconomic status and does not explain a woman's entire environment. For example, college-educated African American women have higher infant mortality rates than do high school educated White women. He also noted that the proxy measures show health benefits for breastfeeding even in narrow socioeconomic bands.

- Dr. Ryan asserted that breastfeeding is a healthful endeavor. When people engage in one healthy behavior, they are likely to engage in a cluster of other healthful activities. Breastfeeding is very beneficial in many ways, but it is difficult to say how much of that benefit can be attributed to breastfeeding per se. Dr. Kogan stated that his study tried to take this point into consideration by addressing not only sociodemographic factors but also maternal health behaviors, including a constellation of positive health behaviors such as maternal exercise. The study showed that women who are less likely to breastfeed also are less likely to exercise and more likely to have a household smoker. Captain Hench added that other factors, such as depression, violence, alcohol use, and substance abuse, are less studied regarding the association with duration of breastfeeding. Is longer duration of breastfeeding a proxy not only for whether a woman is able to practice improved health behaviors but also for whether she is in a supportive situation that enables her to do so? How can those conditions be replicated and expanded to take into account all of the factors that affect the decision to initiate and the ability to sustain breastfeeding?

- Dr. Cernoch asked about public awareness campaigns that allow women to breastfeed in public. Ms. Daniels noted that the audience of the WIC program is limited to its WIC-eligible clients. However, many of the organizations participating in the Breastfeeding Promotion Consortium include components that address State legislation and public perception.

- Dr. Sapien asked whether peer counselors are available to emergency departments and whether WIC has any provisions for adolescent mothers to receive peer counseling. Ms. Daniels replied that there are no restrictions on adolescents in the WIC program. Adolescents can be peer counselors and peer counselors can serve adolescent mothers. Whether peer counselors are available in emergency departments depends on the local agency's relationship with the hospital.

- Dr. Hannemann mentioned the misleading aspect of the monetary benefits of breastfeeding to companies. The environment for breastfeeding makes it more likely that infants will be less exposed to infectious diseases and conditions, whether they are breastfed or not, if mothers are forced to go back to work sooner. He cautioned against a return to a militant, authoritarian approach regarding breastfeeding.

- Dr. Moore echoed Dr. Hannemann's thoughts and asserted that the idea of mandating breastfeeding is offensive and heavy handed. Dr. Bronner pointed out that the rule does not mandate breastfeeding; instead, it says that for the first month, WIC will not pay for infant formula. Ms. Daniels stated that the best approach is to have a well-informed woman who chooses to breastfeed and that breastfeeding cannot be done successfully under duress. WIC will move very cautiously in this area.

- Dr. Collins asked whether WIC has made an attempt to involve maternal grandmothers in supporting the 6-month duration of breastfeeding. Ms. Daniels responded that WIC has decided to support the Hispanic project at present, but the grandmothers project is a possibility for the future.

PERINATAL DEPRESSION

Maribeth Badura, R.N., M.S.N., Director, Division of Healthy Start and Perinatal Services, Maternal and Child Health Bureau, Health Resources and Services Administration
Isadora Hare, M.S.W., Project Officer, Division of Healthy Start and Perinatal Services, Maternal and Child Health Bureau, Health Resources and Services Administration
Janice Berger, M.P.H., Project Officer, Division of Healthy Start and Perinatal Services, Maternal and Child Health Bureau, Health Resources and Services Administration
Mary L. Zoller, M.P.A., Division of Women's and Infants' Health, Office of Family Health Services, Virginia Department of Health
Joan Corder-Mabe, R.N.C., M.S., Director, Division of Women's and Infants' Health, Office of Family Health Services, Virginia Department of Health

In the absence of any public comments, a five-person panel presented information on the topic of perinatal depression.

Update on the Activities of the Division of Healthy Start and Perinatal Services

Ms. Badura asserted that depression is the world's leading cause of lost years of healthy life among women. Estimates of the prevalence of perinatal depression reach as high as 10 percent at 6 months after delivery. The risk factors for depression from pregnancy to 1 year postpartum include sociodemographic variables (e.g., younger age and lower socioeconomic status) and clinical variables (e.g., past history of depression, high levels of stress and life changes, past history of substance abuse and domestic violence, and hormonal changes during pregnancy). Ms. Badura pointed out that the meeting binder contains, among other materials, information from OWH's womenshealth.gov, a report on evidence-based practices, and material from the Zero to Three program.

Some of the consequences of perinatal depression are inadequate parenting practices, including child safety and follow through on preventive health care for self and children; increased use of the emergency room for self and children; spiraling loss of self-esteem due to increased feelings of inadequacy in the parent role; fraternal depression; school readiness, family discord, and other child behavioral problems; and impact on employment and future economic mobility. Only half of depressions in primary care patients are detected, and even fewer perinatal depressions are detected. A very high percentage of mothers with severe depression do not talk to their health care providers or counselors about depression.

The MCHB Division of Healthy Start and Perinatal Services has worked on the topic of perinatal depression since 2000 and awarded three grants under the Innovative Approaches to Promoting Positive Health Behaviors in Women cycle. One focus area of these grants was mental health and depression. Under its ACOG provider partnerships, MCHB also awarded 12 State action learning laboratories to train providers on perinatal depression. MCHB also participated in a National Institute of Mental Health summit on women and depression. In 2001, the Bureau funded 38 Healthy Start projects in high-risk communities for screening and intervention for depression during pregnancy. In 2002, all 97 Healthy Start projects began screening for depression. Also in 2002, the Safe Motherhood Interagency Work Group identified perinatal depression as a common issue, and AHRQ was commissioned to prepare an Evidence-Based Practice Center report on perinatal depression. The report, which was released in 2005, included the following findings: (1) depression occurs throughout pregnancy, not just postpartum; (2) accurate and feasible screening measures are available; (3) more information about treatment effects on perinatal outcomes is needed; and (4) more research is needed on the rates of perinatal depression among racial and ethnic groups in the U.S. population.

In 2003, as part of the Bright Futures for Women's Health and Wellness initiative, MCHB established a perinatal subcommittee to examine maternal emotional well-being and adaptation from the prevention viewpoint; develop tools for consumers, providers, and communities; and create material to provide anticipatory education on factors associated with increased maternal stress and poor adaptation during the perinatal and parenting periods. Healthy Start technical assistance contracts were established for projects on perinatal depression, and MCHB funded two grants for women's behavioral health systems building. These grants combine maternal and child health primary care, addiction, and mental health at the community level.

In 2004, MCHB received the first of a 3-year series of earmarks for perinatal depression. Some of the funding supported four State systems development planning grants on behavioral health in children and adolescents. MCHB awarded five State perinatal depression grants to develop statewide public health campaigns. The language focused on ultimately establishing a multilingual national public health campaign to decrease the stigmatization of depression by working with a large spectrum of provider groups. In 2005, the earmark for perinatal depression continued the four State systems development planning grants on behavioral health and added five additional State perinatal depression grants.

The 2004 grants went to Title V agencies or their delegates in Illinois, Indiana, Massachusetts, New York, and Virginia. The 2005 grants went to Arkansas, Connecticut, Maryland, Nebraska, and Washington, D.C. Ms. Badura presented some highlights of those projects. More than 2,000 health care professionals were trained; a total of 23 focus groups were held with consumers and providers; and public awareness campaigns resulted in media kits, fact sheets, brochures, public service announcements, and posters. Grantees collaborated with local agencies to test strategies, provided resources for maternal depression screening, and developed provider guidelines and education packets. Grantees also established Web sites for providers and consumers. One site offered facilitated group activities to strengthen social connections among women. Another added a depression case manager to its staff. The Washington, D.C., site offered in-home mental health services and "house parties," which are community-based support groups based on a traditional Afrocentric approach.

Fiscal Year 2006 Earmark for Perinatal Depression

Ms. Hare explained that the fiscal year 2006 earmark for perinatal depression built on the previous grants and expanded their focus. Awards were made to six States: Illinois, Iowa, Kentucky, Louisiana, Massachusetts, and Pennsylvania. Whereas the first set of grants focused on a media campaign, this set of earmarks focuses on providing services to women and infants. States also are encouraged to focus on women with other disorders, for example, anxiety disorders, obsessive-compulsive disorders, and posttraumatic stress disorder. Applicants were asked for proposals that examine the mother-infant dyad, that is, the impact of the mother's mental health on parenting behavior that influences the infant. The grants also called for attention to a comprehensive, coordinated service system that includes linkages to other MCHB-funded projects, such as Healthy Start and Head Start.

Regarding the mother-infant dyad, a growing research base links maternal and infant mental health. Infant mental health is defined as the capacity of infants and toddlers to experience, regulate, and express emotions; form close and secure interpersonal relationships; and explore the environment and learn. Infant mental health is synonymous with healthy social and emotional development. The term also refers to the mental wellness of the caregiving relationship between the primary caregiver and the infant. Research shows that depressed mothers often have a limited capacity to interact appropriately with their infants in a sensitive and empathic manner. In response to negative experiences in a mother-child interaction, infants of clinically depressed mothers might develop withdrawal, irritability, and reduced capacity to form strong emotional connections or attachment to their primary caregivers. There might also be a higher risk of child abuse and neglect.

Six States were awarded 2-year grants. Funding for the second year has not been confirmed. In four States (Iowa, Kentucky, Louisiana, and Massachusetts), the MCH agency is the grantee; two States (Illinois and Pennsylvania) have designees. Illinois and Massachusetts had grants in the previous cycle and are building on the first set of grants. About $1.2 million in funding has been awarded for the first year of the project.

Ms. Hare summarized the themes of the grants. All of the six States have shown effective collaboration and coordination with other State and community-based agencies. All of the States have established provider training workshops using train-the-trainer models and cross-training of mental health and infant mental health specialists. All of the grantees are integrating infant mental health services into perinatal services and home visits. All of the grantees serve low-income and at-risk women with depression and other mental health problems, and all use a variety of innovative and evidence-based models.

Highlights from the 2006 grantees include incorporating fathers and grandparents into services, piloting a one-stop parents' clinic with comprehensive physical and mental health services, using a hotline to provide consultation to obstetrician/gynecologists on managing psychotropic medications for pregnant and postpartum women and recommendations on treatment regiments, and providing outreach and education to address stigma and barriers to seeking care.

Multilingual Public Health Campaign

Ms. Berger stated the goals of the multilingual public health initiative: (1) reduce the stigma associated with perinatal depression, (2) increase the number of women and families who seek treatment, (3) increase the number of providers who can recognize symptoms of perinatal depression, and (4) provide screening for perinatal depression and refer and treat as indicated. The primary messages of educational materials developed in the campaign are recognition of perinatal depression, the importance of seeking help for it, and ways in which young mothers can obtain help from local maternal and child health providers.

The campaign has developed a consumer-oriented booklet titled *Depression During and After Pregnancy: A Resource for Women, Their Families and Friends*. After describing the review process for the booklet and the booklet topics, Ms. Berger declared that the most important message of the booklet is: “You are not alone. Help is near.” A total of 350,000 copies of the booklet will be printed. Each of the Healthy Start grantees and each of the depression grantees will receive 2,000 copies. Other organizations and State Title V offices also will receive copies. In addition, the booklet will be able to be downloaded from the campaign’s Web site.

Three Ps of Perinatal Depression: Perinatal Health, Provider Education, and Public Awareness

Ms. Zoller described the internal team, contractors, and area health education center that work on the perinatal depression grant in Virginia. The primary purpose of the grant is to focus on increasing the capacity of the health care system to assist women with perinatal depression. The project team’s first goal was to increase the number of health and community-based providers who can recognize, screen, and refer pregnant and postpartum women suffering from depression to treatment. This goal is implemented through the development of a Web-based curriculum, marketing the curriculum, and providing continuing education credits for completing it. The second goal is to reduce the negative stigma of mental illness and barriers to care facing women with perinatal depression by identifying ethnic and cultural beliefs and practices affecting women’s choices in seeking mental health care and integrating recurrent themes or findings from five focus groups into the curriculum. The third goal is to enhance the efficiency and effectiveness of the system of care to provide comprehensive, culturally competent, and family-based care for those with perinatal depression by developing an action plan to reduce barriers to care and improve the system of care.

The project team’s approach to achieving the goals was to conduct a baseline survey of perinatal providers to assess their knowledge, attitudes, and practices on screening, identifying, and referring depressed women to treatment. The project team also held focus groups with five different multicultural populations in Virginia to identify barriers to care. In addition, the project team created an expert panel of State-level provider representatives and consumers to assist the Virginia Department of Health (VDH) in identifying the major issues relative to perinatal depression in Virginia, identify and categorize the resources to alleviate perinatal depression, and advise VDH on ways to strengthen the curriculum. The expert panel studied the results from the provider survey, focus groups, and literature review to synthesize the issues, resources, and findings and develop the Web-based curriculum.

Ms. Zoller summarized some of the results from the provider survey, which revealed that perinatal depression frequently goes undiagnosed and that providers are not confident in diagnosing perinatal depression. Providers noted the barriers to treating perinatal depression: limited time, inadequate knowledge and skills, inadequate availability of mental health care, and reimbursement and insurance limitations. Providers want assessment tools, information on diagnosis and treatment modalities, and information on available resources and signs and symptoms.

Five focus groups comprised 51 participants and used 10 depersonalized questions asked by women known to and trusted in their communities. Key findings from the focus groups revealed a number of common experiences among the five groups: lack of support; experience of loss, trauma, anxiety, or depression; poor health of the mother and/or infant; a negative stigma associated with obtaining mental health care; lack of insurance, information, and language interpreters; and experience of racial stereotyping, racism, mistrust, and poor-quality health care. When asked what they wanted, the women cited community-based support from others who know the system and groups where they can share feelings with one another. They also expressed their need to be aware of services available in the community. They had no recommendations for help or support involving mainstream mental health services.

The project team would like to restructure the postpartum period to schedule followup visits within 2 weeks postpartum, prevent social seclusion, promote rest for a prescribed length of time, offer assistance with tasks of motherhood, and provide social recognition of the women's new status. In addition, providers of perinatal services must be educated in the cultural, historical, and socioeconomic factors influencing the lives of their patients. All women must be assessed for physical, mental, spiritual, and social well-being several times during the first year after delivery. Findings from the screening tools for depression must be examined through the lens of the patient's cultural and socioeconomic context. Funds must be allocated to support perinatal women "where they are."

A comparison of the provider survey and focus group findings revealed common themes in terms of barriers to care. Both providers and consumers referred to lack of insurance, difficulty in communicating with each other, inadequate knowledge and skills and resulting poor quality health care, inadequate availability of mental health care and lack of support, and lack of knowledge about available services. All of this information was considered in the development of the Web site. A user-friendly format was developed, and the Web site was marketed to a wide range of providers. The project team worked with the regional perinatal councils and expert panel members to market the curriculum to the provider audience; disseminated press releases on the grant award and the launch of the Web site; provided articles in State association newsletters and on Web sites; exhibited at State meetings for nurses, physicians, social workers, and dietitians; distributed pads and pens with the Web site address; and prepared a table-top display for use at conferences.

The project team is conducting onsite training with providers and is continuing to develop the resource library on the Web site. It also is monitoring Web site usage and making modifications based on evaluations. CDs of the curriculum are being produced and distributed to those without Web access. The project team also is seeking additional funding to maintain the Web site.

In the past 8 months, 612 individuals have completed the curriculum, most of whom are nurses and nurse practitioners and 98 percent of whom are women. Providers from all 50 States and 3 other countries have taken the curriculum. Most of them are from urban areas, but about one-third are from rural locations. Most of the providers work in hospital-based practices, and about one-quarter work in public health. As many as 93 percent of the providers who used the Web site said it was a perfect match for their continuing education needs. Almost one-half of the respondents said that they visited the Web site because they could complete the curriculum at times convenient to them, and 16 percent said they took the course to earn continuing education credits. Most important, the majority of users said they plan to screen for perinatal depression and will change their practices based on the course.

Lessons learned from the Virginia experience are that Web-based training can be an effective method for increasing the capacity of the health care system to identify and treat perinatal depression and that it should be combined with other approaches for maximum impact and involve a wide variety of providers. Capacity-building for referral and treatment is an important component of changing practice patterns and better serving women and their families. Public education campaigns must work toward reducing the stigma of depression and make it acceptable for women to “speak up when you are down.” A multidisciplinary community-based approach to the identification and treatment of perinatal depression will better serve women and their families. In addition, support groups for women and their families might decrease the morbidity associated with perinatal depression. Reimbursement for professionals to screen and treat perinatal depression also might decrease morbidity and mortality.

Web-Based Curriculum

Ms. Corder-Mabe demonstrated the learning modules of the VDH Web site (http://perinataldepression.org). The learning modules contain educational objectives, graphs and charts, significant content, and fact checks. She also referred to the Edinburgh Postnatal Depression Scale screening tool and its scoring, as well as case studies with questions and changing settings. One module is devoted to treatment options and includes the involvement of family members. Tips pages are set up as .pdf files so providers can use them as handouts. Contact information is included as well as a library of resources for providers. The new parent kit is given to every new parent in Virginia at delivery.

Discussion

The panel presentation on perinatal depression prompted the following questions and comments from SACIM members:

- Dr. Miller asked whether VDH has attempted to work with communities of faith on a solution to the problem of stigma associated with perinatal depression. Ms. Corder-Mabe responded by referring to a coalition of parish nurses in Virginia who are included on the expert panel. Other work will be instigated with communities of faith.

- Dr. Moore praised the Web site and asked how other health professionals in practice are being informed about it. Ms. Zoller responded that the project team makes presentations at the annual meetings and conferences of statewide associations, distributes articles for their Web sites and newsletters, issued press releases on the grant, and uses existing channels and relationships to continue to get the word out to the public. Ms. Badura referred to the national brochure and the rollout of the national campaign.

- Dr. Moore referred to a missed opportunity, namely, discharge visits during which physicians can screen for perinatal depression. Ms. Corder-Mabe stated that Virginia requires hospital staff to provide information to all new parents on the issue of perinatal depression. Women should be screened during pregnancy and in the postpartum period. The Navy has now gone on record to require screening women each trimester and postpartum.

- Dr. Ryan commented that some of the grantee activities, such as hotlines and trainings, will be eligible for Medicaid administrative match. He also asked about a possible strategy for providing continued services to mothers who lose their eligibility at 60 days postpartum. Ms. Badura noted that Illinois reimburses nurses for screening and has received a waiver to expand beyond 60 days postpartum up to 1 year. The Medicaid director is very enthusiastic about this situation. Ms. Corder-Mabe stated that Virginia obtained the family planning waiver for 2 years, but what is covered in that waiver is very prescribed. Some interested groups are attempting to persuade Medicaid to cover mental health services. Ms. Berger added that a number of States provide women with information about perinatal depression at hospital discharge.

- Ms. Daniels asked whether the MCHB booklet on perinatal depression will be available in large enough quantities for WIC's quarterly mailings of 8,000 to local WIC agencies. Ms. Badura responded that MCHB would be very happy to send the booklets to WIC.

- Ms. Barnes asked whether the project team has communicated with the Virginia Nurses Association or connected with schools of nursing to incorporate the information on perinatal depression into their curricula. Ms. Corder-Mabe responded that one of the expert panel members is from Virginia Commonwealth University. Additional efforts will be made to contact other schools of nursing in the State. She also mentioned that the expert panel includes a representative from the Virginia Council of Nurse Practitioners.

COMMITTEE BUSINESS: NEXT STEPS AND DISCUSSION OF THE COMMITTEE'S DIRECTION

James W. Collins, Jr., M.D., M.P.H., Chairperson, Secretary's Advisory Committee on Infant Mortality

Dr. Collins asked SACIM members for input on the Committee's future plans and directions. They offered the following comments and suggestions:

- Dr. Hayes mentioned the need for SACIM to monitor progress in areas of change. For example, because the PRAMS surveillance tool is scheduled for revamping, SACIM might offer some suggestions for additional questions about women's health.

- Dr. Miller recommended the topic of neonatal palliative care.

- Dr. Sapien suggested the topic of male involvement projects and recommended an examination of some of the causes of infant death other than preterm delivery and VLBW, specifically homicide.

- Dr. Bronner mentioned the topic of care for the preterm infant after discharge from the NICU.

- Dr. Collins suggested examining the relationship between cesarean section and preterm delivery given the rising rates of both. Another topic might involve the way in which social determinants affect potential genetic mechanisms, along with some of the related issues that the National Institutes of Health (NIH) and the March of Dimes have studied.

- Dr. Hayes stated that SACIM should stay abreast of the effect on the States of the summits on preconception care sponsored by the March of Dimes. She pointed out that raising awareness of preconception care and taking action to guarantee it are two very different activities.

- Dr. Ryan mentioned the State of Illinois Medicaid director's aggressive exploration of waiver opportunities to benefit mothers during the postpartum period.

After SACIM members offered their suggestions for topics to be presented at future meetings, Dr. Miller called the Committee's attention to two of the members' recent accomplishments and honors. Dr. Collins has been named full professor at Northwestern University Medical School, and Dr. Hayes has been inducted into the National Academy of Sciences' Institute of Medicine for her work in public health. Dr. Hayes noted the donation of $100,000 in Dr. Miller's honor for a new prayer garden in Texas.

The next meeting of SACIM will take place in May 2007; the date will be announced soon.

The Committee Business section of the meeting concluded with the understanding that the subcommittees are now disbanded and the Committee as a whole will undertake a review of the subcommittee reports.

PERIODONTAL HEALTH AND BIRTH OUTCOMES

Ann Drum, D.D.S., M.P.H., Director, Division of Research, Training, and Education, Maternal and Child Health Bureau, Health Resources and Services Administration

Dr. Drum presented an update on an important MCHB-led activity regarding periodontal health and birth outcomes. In 2003, the U.S. Surgeon General called for increased attention to oral health education and care during pregnancy as an important strategy for improving maternal and infant health. In 2004, MCHB convened a group of perinatal and oral health experts to examine the science surrounding this topic as well as policies and programs at the Federal level. Individuals in both the public and private sectors were invited to the first session. A number of studies over the past several years have identified periodontal disease as a possible risk factor for preterm birth and low birthweight. Periodontal disease, which is highly prevalent in pregnant women, might represent an infectious and inflammatory exposure that has deleterious effects during pregnancy. Periodontal disease is preventable and curable.

The major questions surrounding this topic are as follows:

1. Is periodontal disease a risk factor for adverse pregnancy outcomes?
2. Will treating periodontal disease in pregnant women prevent adverse pregnancy outcomes?
3. Is the current evidence sufficient to make policy and program changes for periodontal treatment during pregnancy?

A systematic review of 25 studies of periodontal disease and adverse pregnancy outcomes appeared in the *British Journal of Obstetrics and Gynecology* in 2006. Since then, at least 19 new studies have been published. The identified problems involve the lack of a clear definition or common indicators for periodontal disease, insufficient sample sizes in a number of studies, several confounding variables, and lack of common definitions regarding pregnancy outcome. A Research to Policy and Practice Forum, led by MCHB and involving AHRQ, NIH, the Office of the Surgeon General, and OWH, will be held on December 11–12, 2006, to study periodontal health and birth outcomes. The meeting objectives are to (1) review current evidence-based research regarding the relationship between periodontal disease in pregnant women and birth outcomes; (2) review current policies, programs, and practices in the public and private sectors addressing the oral health needs of pregnant women as related to improving birth outcomes and women's overall health; and (3) offer public and private health leaders the opportunity to discuss future directions in research, policy programs, and practice related to women's periodontal health and birth outcomes.

MCHB issued two background papers to be sent to the 50 experts attending the meeting. Each of the SACIM members also will receive a copy of the background papers. The first paper, titled *Periodontal Disease and Pregnancy Outcomes: State of the Science*, is a literature search of 44 studies to extract data from select studies, conduct a quality assessment, and perform statistical pooling and meta-analysis. A large NIH study concluded that treatment of periodontitis in pregnant women did not result in a lower rate of preterm delivery, low birthweight, or fetal growth restriction. Dr. Drum reported that enrollment for another major National Institute of Dental and Craniofacial Research study, called MOTOR (Maternal Oral Therapy to Reduce Obstetric Risk), will be completed in 18 to 24 months. She noted that this study might well move the field forward, but it will not be completed for quite some time. The second background paper is an overview of the state of policies, programs, and practices to improve the oral health of pregnant women, birth outcomes, and women's overall health.

Dr. Drum noted that a representative from SACIM is invited to the December forum. She reiterated that SACIM members will receive the two background issue papers as well as a summary of the forum meeting. In addition, SACIM will be briefed on the forum findings at its next meeting.

INFANT ORAL HEALTH AND EARLY CHILDHOOD CARIES: ISSUES AND PROMISING APPROACHES FROM THE FIELD

Jim Crall, D.D.S., Sc.D., Professor and Chair, Section of Pediatric Dentistry, Director, MCHB National Oral Health Policy Center, University of California, Los Angeles

Dr. Crall stated that his presentation would include an overview of early childhood caries (ECC) and important determinants of oral health status, describe two ECC program initiatives to build systems to address the problem, and summarize the challenges faced when handling the problem.

Conceptual Overview of Early Childhood Caries

ECC is an infectious, transmissible disease. Bacteria that cause tooth decay are transmitted from mothers to children and inhabit the infant's mouth even before teeth erupt. ECC is the most common chronic disease of childhood, with risk varying over time and a multifactorial etiology. Its consequences provide evidence for building implications for the crossover between oral health and general health and the cost of health care. ECC is a controllable disease, but it is poorly understood. The emphasis has been on cavities, which is a consequence of the disease, but "caries" refers to the disease process itself.

After reviewing the early and advanced clinical stages of dental caries, Dr. Crall stated that a 1995 study showed that 56 percent of first graders had evidence of caries and 85 percent of 12th graders had decayed or restored teeth. Primary tooth decay is not declining. Instead, there has been a 14 percent increase in ECC in the past decade. Low-income children, racial and ethnic minority children, and children with special health care needs are at high risk.

A paradigm shift is evident in the way in which dental caries are controlled. The old paradigm dealt with the consequences of the disease through surgical and "drill and fill" practices. The later paradigm called for prevention but used a "one size fits all" approach. The current paradigm is based on early intervention, risk assessment, anticipatory guidance, individualized prevention, and disease management. The current paradigm takes a targeted, systematic approach. Caries risk assessment tools have been developed along with a population-based approach for ECC.

Two Program Initiatives for Dealing With Early Childhood Caries

The goals of an ECC prevention program in Klamath County, Oregon, funded by the Robert Wood Johnson Foundation, are to have cavity-free Medicaid children at 2 years of age and to create a sustainable program that grows and changes over time to meet the needs of the community. A group of community partners has developed a local system of care that connects pregnant women with dental care. The program's key objectives are to develop community-supported strategies to stop the transmission between mothers and children, prevent caries expression in children through parent education about risks and periodic application of fluoride varnish on erupting teeth, and provide a dental home for mothers and children at risk, ensuring success by using a case management model for both clients and providers.

The More Smiling Faces project in South Carolina links dental homes to medical homes. The project works with faith communities in South Carolina to help disseminate information about the program to individuals outside health care settings. More Smiling Faces takes a comprehensive approach that entails an integrated network, pediatric oral health training, community education, systems linkages, and outreach to medical homes. The project has learned that medical providers are interested in helping to establish the connection between a medical home and a dental home. However, part of the challenge is engaging the dental community in the effort because the majority of practitioners are general dentists, not pediatric dentists.

Challenges of Early Childhood Caries

The challenges of dealing with ECC are to increase the proportion of pregnant women who receive anticipatory guidance at home, increase the number of pregnant women using adequate and appropriate dental care, and guarantee a dental home for new mothers and their infants. Emerging challenges in addressing ECC are the increase in poverty and lower socioeconomic status, increasing population diversity, and lack of attention and response.

Discussion

The presentations on periodontal disease and oral health prompted the following questions and comments:

- Dr. Hayes expressed her interest in the concept of connecting the dental home to the medical home. Dr. Crall mentioned that the University of California, Los Angeles, Center for Healthier Children, Families, and Communities is working on this idea. For example, a symposium in early November 2006 united the themes of oral health and school readiness. A conceptual model and an operational model also are under development. In addition, AAP now has a section on pediatric dentistry. Other systematic efforts are in progress.

- Dr. Frigoletto stated that because dental caries is a transmissible disease, programs must include a focus on mothers. Dr. Crall cited a 20-year-old study from Scandinavia that shows that treatment of tooth decay in mothers can at least delay the transmission of organisms that cause decay. A two-pronged approach aims to improve the health of mothers for both the direct and indirect consequences that doing so can have on the health of infants and children.

- Deborah Frazier, R.N., asked about the barriers for treating women and children, in particular, the low Medicaid reimbursement. Dr. Crall noted that dentists list three challenges connected with dealing with Medicaid patients: (1) reimbursement, (2) broken appointments, and (3) the culture clash between general dentists and pediatric dentists. He mentioned that HRSA funded a series of oral health policy academies led by the National Governors Association. Several of the participating States have dealt with the reimbursement issue and are models for overcoming the barrier of reimbursement. Dr. Crall also mentioned that the Healthy Kids dental program in Michigan provided Medicaid beneficiaries with Delta dental insurance, which expanded the network of providers and improved the office situation.

The meeting adjourned at 2:15 p.m.

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