

FALLING THROUGH THE CRACKS



An Analysis of Care Coordination for Low-Income Pregnant Women in Hennepin and Ramsey Counties

**A report from the Minnesota Department of Health and
the Minneapolis Department of Health and Family Support**

June 2002

ACKNOWLEDGEMENTS

Megan Ellingson, Minneapolis Department of Health and Family Support

Cheryl Fogarty, Minnesota Department of Health

Marilyn Kennedy, Minnesota Department of Health

Gretchen Musicant, Minneapolis Department of Health and Family Support

Fritz Ohnsorg, formerly of the Minnesota Department of Health and the Minneapolis Department of Health and Family Support

Mary Rossi, formerly of the Minnesota Department of Health

Alexandra Stillman, formerly of the Minneapolis Department of Health and Family Support

THE MINNESOTA DEPARTMENT OF HEALTH (MDH)

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651-215-5800.

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THE MINNEAPOLIS DEPARTMENT OF HEALTH AND FAMILY SUPPORT (MDHFS)

MDHFS works to ensure that all families are healthy and fully share in the social and economic opportunities of the City of Minneapolis. MDHFS reaches residents by working in partnership with community organizations, other units of government, schools, and health and human service agencies.

David S. Doth, Director



612/673-2301

health.familysupport@ci.minneapolis.mn.us

www.ci.minneapolis.mn.us/dhfs

FOR MORE INFORMATION

Cheryl Fogarty, (MDH) 651-281-9947

cheryl.fogarty@health.state.mn.us

Megan Ellingson, (MDHFS) 612-673-3817

megan.ellingson@ci.minneapolis.mn.us

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EXECUTIVE SUMMARY

The need for focused attention on births to low-income mothers in Hennepin and Ramsey counties is compelling. Within the state of Minnesota, slightly more than one-third (35.7%) of births occur in the metropolitan area represented by the counties of Hennepin and Ramsey.¹ Yet, Hennepin and Ramsey account for over 43.5% of the state's infant deaths annually, a disproportionate share compared to the number of births. Slightly less than one-third (30%) of all Minnesota births occur in the low-income population insured under the state's Medicaid programs or MinnesotaCare.² In Hennepin and Ramsey counties the percentage of newborns eligible to receive Medicaid during 1999 was 40%. This higher percentage of low-income births is likely due to the combination of higher concentrations of poverty and higher birth rates among residents of Minneapolis and St. Paul.³

Two infant mortality review projects conducted in the Twin Cities area in the 1990s concluded that a highly-fragmented perinatal service delivery system was a factor in many urban infant deaths. Reviewers from the two projects repeatedly identified the lack of comprehensive, coordinated support services—above and beyond the provision of basic medical care—as a systems issue contributing to infant mortality. Comprehensive medical, social, and behavioral risk assessments, coupled with indicated support services, have long been recognized as essential components of high quality perinatal care. To provide such comprehensive services requires a coordinated approach and a barrier-free system with sufficient capacity (Brown, 1988).

While the two infant mortality review projects identified weaknesses and gaps in perinatal care coordination, they were not intended to document system-wide capacity. Therefore, in 1999, the Perinatal Survey Team was formed to examine perinatal care coordination and identify capacity issues in the metropolitan area. The vehicle chosen for this study was a qualitative survey, developed specifically for use in this research and administered to health care agencies and organizations serving Hennepin and Ramsey counties. The survey focused on the traditional “safety net” organizations such as the community health centers and the public health nursing agencies. Health plans and hospitals were also surveyed. Because of limited funds, private obstetrical providers and private clinics were not included.

GOALS

The goals of this study were: (1) to describe the existing baseline of perinatal care-coordination activities in Hennepin and Ramsey counties, and (2) to determine customary procedures, connections, and transactions between agencies/organizations delivering perinatal services. The target population was low-income persons living in Hennepin and Ramsey counties.

SUMMARY OF SURVEY FINDINGS

Survey respondents from community health centers reported that many factors have undermined their financial capacity and their ability to provide the comprehensive medical and

FOOTNOTES

- 1 There are 23,542 resident births in Hennepin and Ramsey counties combined, with 65,953 total births statewide. Minnesota Center for Health Statistics, MDH
- 2 Minnesota Department of Human Services, personal communication.
- 3 Minnesota Center for Health Statistics, MDH

social services needed by high-risk populations. Primarily, they commented on poor reimbursement rates, burdensome administrative tasks, heavy workloads for shrinking staff, and increased numbers of patients in need, especially those needing interpreter services.

Public health nursing agencies voiced similar concerns about the burdens of chasing reimbursements from multiple payors, the contradictory need to document “medical necessity” for home visits to address multiple and complex social needs that impact their clients’ pregnancies, lagging technology, and the loss of their community connections. Most of their visits are to new mothers and babies rather than to pregnant women. Consequently, opportunities for prenatal preventive activities are missed.

Hospital responses revealed that some were unaware of how to connect to public health and community-based services that might be needed for follow-up after discharge of high risk postpartum mothers and newborns. Health plans’ surveys described maternity case managers who primarily coordinated services among providers and addressed patient needs by communicating with them by phone instead of in-person.

CONCLUSIONS

Overall, the survey found significant systems issues that may contribute to poor pregnancy outcomes in the two counties:

Health care and social service systems are fragmented by institutional, bureaucratic, and reimbursement barriers. While health plans, hospitals, community health centers, and public health nursing agencies all have admirable missions to provide quality perinatal services, all appear to lack the system integration necessary to meet the multiple and complex needs of high-risk families in Hennepin and Ramsey counties. For public health nursing and community health centers, the findings suggest system capacity is also lacking due to problems with funding, reimbursement, and lagging technology. Health plan findings suggest that they have capacity issues as well, especially in terms of their focus on using telephone contact for case management rather than face-to-face contact. While the telephonic case management model may serve important functions, the health plans’ descriptions of maternity case management did not meet the Survey Framework standard defined in this report. Particularly with respect to at-risk, low-income women, this model does not provide the necessary support, education, and advocacy needed to assure successful outcomes.

Communication between health care and social service systems is poor. Poor communication among health plans, community health centers, hospitals, and public health nursing contributes to fragmented care and services. While these organizations are represented on various collaboratives addressing maternal and child health issues, the working relationships necessary to address individual client needs are lacking.

Populations of color, American Indians, and refugees and immigrants are most heavily impacted. These populations are over-represented in the low-income population of Hennepin and Ramsey counties and, are therefore, most affected by gaps in the system. Recent demographic data indicate that these populations are growing in the urban area. If system problems are not addressed, existing racial and ethnic disparities in infant mortality and other poor birth outcomes are likely to persist and may even worsen.

In Hennepin and Ramsey counties, African American infants are 2 to 3 times more likely to die before their first birthday than white infants. American Indian infants are 3 to 4 times more likely to die before their first birthday than white infants. To address these disparities, local public health received federal funds and established Twin Cities Healthy Start. This program has developed community-based service networks providing coordinated care and improved communication for the African American and American Indian families they serve. But the program has confronted the difficulties of working effectively in an overall system that is fragmented and marked by institutional barriers.

Low-income women are not assured continuous health insurance throughout their childbearing years. Without continuous coverage there is no way to ensure access to primary health care, dental care, care for chronic conditions, family planning, preconception care, early pregnancy identification, and early and continuous prenatal care.

RECOMMENDATIONS

Establish a Perinatal Work Group. The Minnesota Department of Health and local public health should work with the Department of Human Services, health plans and providers, social service and community-based organizations, and the Neighborhood Health Care Network to develop a perinatal care system that is adequately funded and that provides care coordination services shown to be effective in the research literature for socially at-risk pregnant women. The women impacted by this system should also be included in the Work Group.

Provide adequate and stable resources to rebuild system capacities of public health and community-based providers of comprehensive perinatal care coordination services.

Support Twin Cities Healthy Start's "service networks". These networks are piloting a promising model of formalized, interdisciplinary communication and care coordination that are expected to reduce fragmentation of perinatal services to high-risk women.

Provide continuous health insurance to all women of childbearing age enabling them to have a medical home, primary preventive health care, family planning, preconception care, and early and continuous prenatal care.

"We must recognize that, in some large measure, problems with infant ill health are a legacy of women's ill health generally." Paul Wise

Wise, Paul (1993). Confronting Racial Disparities in Infant Mortality: Reconciling Science and Politics. Amer Journal of Prev Med Suppl. to Vol. 9:7-16.

Reference

Brown, S. (Ed.) (1988). Prenatal Care: Reaching Mothers, Reaching Infants. Washington, D.C.: Institute of Medicine, National Academy Press.

INTRODUCTION

The need for focused attention on births to low-income mothers in Hennepin and Ramsey counties is compelling. Within the state of Minnesota, slightly more than one-third (35.7%) of births occur in the metropolitan area represented by the counties of Hennepin and Ramsey.¹ Yet, Hennepin and Ramsey account for over 43.5% of the state's infant deaths annually, a disproportionate share compared to number of births. Slightly less than one-third (30%) of all Minnesota births occur in the low-income population insured under the state's Medicaid program which includes fee-for-service Medical Assistance (MA), the Prepaid Medical Assistance Program (PMAP) and MinnesotaCare.² In Hennepin and Ramsey counties the percentage of newborns eligible to receive Medicaid during 1999 was 40%. This increased number of low-income births is likely due to the combination of higher concentrations of poverty and higher birth rates among residents of Minneapolis and St. Paul.³

Two infant mortality review projects conducted in the Twin Cities area in the 1990s concluded that a highly-fragmented perinatal service delivery system is a factor in many urban infant deaths. Reviewers from the two projects repeatedly identified the lack of comprehensive, coordinated support services—above and beyond the provision of basic medical care—as a systems issue contributing to infant mortality. Comprehensive medical, social, and behavioral risk assessments, coupled with indicated support services, have long been recognized as essential components of high quality perinatal care. To provide such comprehensive services requires a coordinated approach and a barrier-free system with sufficient capacity (Brown, 1988).

Based on estimates of poverty and birth rates described above, it is projected that between 8,000 and 9,000 births annually to women in poverty in the Twin Cities metropolitan area may be impacted by a system of perinatal care that lacks adequate coordination. During the three-year period 1997-99, the overall infant mortality rate for the state of Minnesota was 6 infant deaths per 1000 live births. In Hennepin and Ramsey counties the rate was 7.9 for those years. Within the city limits of Minneapolis and St. Paul, the rate was 8.6 for the same time period.⁴ These data raise the following question: Does fragmented care for low-income women contribute to the excess infant deaths experienced by families in Hennepin and Ramsey counties?

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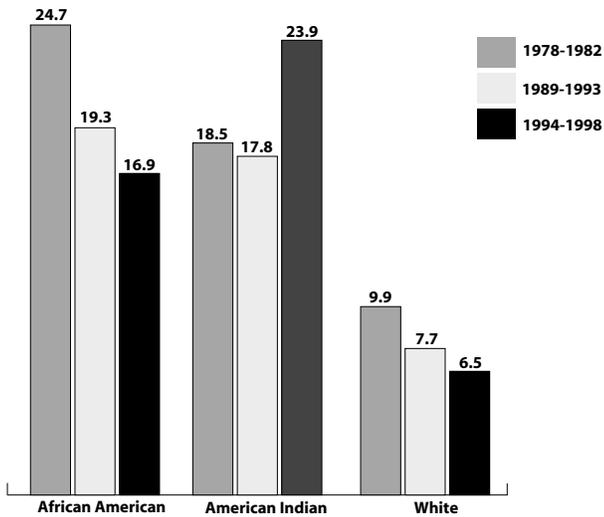
In addition to concerns about the urban disparity, the racial and ethnic infant mortality disparity between populations of color and American Indians as compared to the white population is well-documented and long-standing in Minneapolis and St. Paul as well as in Hennepin and Ramsey counties.

In spite of improvements in health care for all infants, the difference between African American and white infant mortality rates continues to be two- to three-fold. American

Indian infant mortality differences have actually increased in the last time period measured to rates three to four times greater than the white rate. As may be expected, similar

Infant Mortality Rates Minneapolis and St. Paul

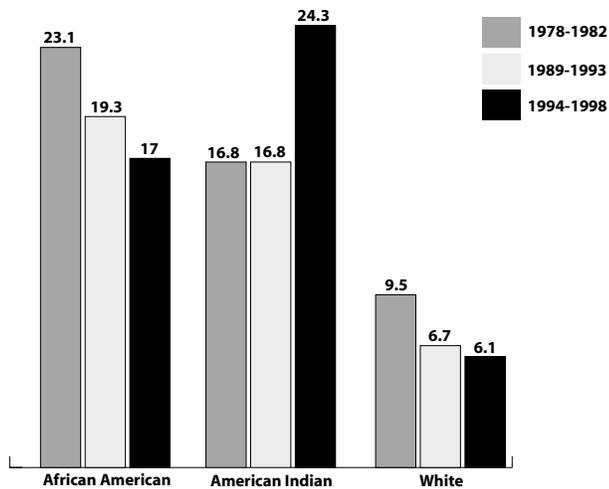
Deaths per 1000 births



Source: Minnesota Department of Health; Center for Health Statistics

Infant Mortality Rates Hennepin and Ramsey Counties

Deaths per 1000 births



Source: Minnesota Department of Health; Center for Health Statistics

disparities are demonstrated at the county level.

Concern about these data prompted maternal and child health leaders in the health departments of Minneapolis and St. Paul to conduct the first infant mortality review project on deaths occurring in 1993. The second project reviewed randomly selected deaths occurring in Hennepin and Ramsey counties in 1996-97.

While the two infant mortality reviews identified weaknesses and gaps in perinatal care coordination, they were not intended to document system-wide capacity. Therefore, in 1999, the Perinatal Survey Team was formed to examine perinatal care coordination and identify capacity issues in the metropolitan area. The vehicle chosen for this study was a qualitative survey, developed specifically for use in this research and administered to health care agencies and organizations serving Hennepin and Ramsey counties. This research report contains the findings of those surveys, a discussion of key issues, conclusions and recommendations, and an update of community changes that have occurred since the surveys were completed.

GOALS, OBJECTIVES, AND PURPOSE OF STUDY

The **goals** of this study are: (1) to describe the existing baseline of perinatal care-coordination activities in Hennepin and Ramsey counties, and (2) to determine customary procedures, connections, and transactions between agencies/organizations delivering perinatal services. The target population is low-income persons living in Hennepin and Ramsey counties.

Primary **objectives** are: (1) to provide a basis for defining a model system of perinatal care in Hennepin and Ramsey counties in which individuals and organizations can envision and consistently predict their specific roles in the perinatal system, and (2) to explain the reimbursement system for care of low-income women and its impact on the manner in which perinatal care services are delivered.

The **purpose** of the study is to address the following research question: Does the current perinatal care system have the capacity to reliably deliver comprehensive, coordinated care and support services to low-income, at-risk pregnant women in Hennepin and Ramsey counties?

BACKGROUND

This study addresses a recommendation generated by the second of two infant mortality review projects in the Twin Cities. Project LID (Lower Infant Deaths) was a community-based infant mortality review project that closely examined infant deaths in Hennepin and Ramsey counties during a one-year period from May 1, 1996 through April 30, 1997. Six agencies worked collaboratively on the project.⁵ Funding and technical support was provided by the Minnesota Department of Health (MDH) Infant Mortality Reduction Initiative.

Footnote

5 Minneapolis Department of Health and Family Support, Hennepin County Community Health Department, St. Paul-Ramsey County Department of Public Health, Bloomington Division of Public Health, Minnesota Sudden Infant Death Center, and the Minnesota Visiting Nurse Agency.

Multidisciplinary, expert case review teams studied summary information gathered from vital records, medical records, and interviews of bereaved mothers who consented to participate. Infant mortality reviews demonstrated that, in many cases, services provided to families during pregnancy and infancy were poorly integrated and lacked coordination. Experienced professionals on the case review teams often expressed the opinion that inadequate care coordination was pervasive and that systems failures occurred for the population in general, not just for the families of infants who died. Based on these reviews, the teams developed recommendations for service systems—including public health, human services, and health systems—to address the problems identified.

The Project LID Task Force, consisting of representatives from each of the original collaborating partners, came together after the reviews were completed to plan for implementation of Project LID recommendations. The task force concluded that the most important recommendation was the need to improve and integrate perinatal care coordination. From the report, *Lowering Infant Deaths: Promoting Change To Save Lives* (1998), the first of the Recommendations for Health Systems is:

Assure that prenatal providers assess medical, social, and behavioral risk factors and identify patients with complex medical and social needs early in pregnancy. Provide case management and coordinated services throughout pregnancy, birth, and infancy based on the risk assessment. (Fogarty & Sidebottom, p. 24)

In October, 1998, Project LID staff presented their findings and recommendations to the Minnesota Council of Health Plans' Community Health Committee. The Committee welcomed the presentation but concluded that a review of infant deaths, such as Project LID, did not provide sufficient information on the entire system of care to guide modification of their practices. Project LID Task Force members concurred and recommended that the information gap be addressed. Accordingly, the Perinatal Survey Team was formed and began developing plans to analyze perinatal care coordination in Hennepin and Ramsey counties.

THEORY AND SURVEY FRAMEWORK

After reviewing the literature on perinatal case management and care coordination, two documents were selected to provide a framework for the study. The first, *Public Health Interventions: Examples From Public Health Nursing* (Keller, Strohschein, Lia-Hoagberg, & Schaffer, 1998) describes a model of case management and care coordination interventions suitable for use with this project. Several expert public health panels conducted a literature review and developed a set of "best practices" supporting each type of intervention specified in the model. Further, funding provided by the Centers

for Disease Control and Prevention (CDC) enabled nationwide presentations of the model through interactive satellite broadcasts.

The theory underlying this model combines the concept of “the community as client” with a traditional epidemiological approach, which draws inferences about the etiology of illness from population-based data. Keller and colleagues also modified the standard classification scheme constructed by previous authors. Earlier writers used only two categories to classify public health interventions: (1) individual-focused and (2) community-focused interventions. The Keller group added a third focus—a systems-level category—creating a more complex classification structure with greater depth. Furthermore, the addition of a systems level reflects more accurately the nature of current public health practice.

In addition, an earlier document—*Coordinating Prenatal Care*, prepared by the National Governor’s Association (Hill & Breyel, 1989)—was used by the Perinatal Survey Team to narrow the Keller et al. model from its original application (i.e., the entire field of public health) to a specific focus on perinatal practice. These two documents provided definitions and a framework against which the survey team measured the performance of the local perinatal care coordination system.

Definition of Perinatal Case Management/Care Coordination

Perinatal case management and care coordination are terms used interchangeably and simultaneously to describe a role, a process, and a service within a system of care. It is a client-centered, goal-oriented process for:

- (1) assessing the needs of a pregnant woman and her family for particular health and social services such as mental health, chemical dependency treatment, housing, and other advocacy;
- (2) assisting women in obtaining those services; and
- (3) coordinating those services to avoid gaps and duplication. It is an ongoing activity that continues until established goals are met.

As a role, case management/care coordination (CM/CC) provides a client with a practitioner who actively coordinates her care. Within this role, the case manager/care coordinator is able to negotiate with multiple providers to obtain a variety of services.

As a process, CM/CC expands on the components of the nursing process: assessment, goal/outcome development, intervention, monitoring, and evaluation. The unique feature of CM/CC is that it is episode-focused and responds to care needs across multiple settings and disciplines.

As a service, CM/CC provides both facilitating and gate-keeping functions for the client. CM/CC has the ability to unravel the health care and social service delivery systems to the client’s best advantage. It can personalize care in an otherwise impersonal system

and can take into consideration the client's health status and diagnoses, treatment plans, payment resources, and health care options.

For purposes of this study, the perinatal care coordination system is defined as hospitals, managed-care organizations, community health centers and clinics, and public health nursing agencies. Due to budget limitations, private providers and clinics, as well as private home health care agencies, were not included in the survey.

Differences between the Medical Model and the Public Health Model

The Western allopathic medical approach generally has been characterized by its adherence to a model which diagnoses symptoms, relieves physical pain, and treats various diseases of the human condition, largely by isolating specific body parts, organs, or systems. It is a very effective model for dealing with critical illness (heart attacks, strokes, serious accidents) or contagious diseases (tuberculosis, measles, chicken pox) but much less effective in dealing with chronic illness (arthritis, diabetes, allergies, mental health conditions). Because of its emphasis on organs/body parts and disease, the medical model often fails to take into account the entire individual—particularly the social, emotional, and psychological aspects of the individual's environment.

In contrast, the public health model is a much broader approach and, by its very definition, focuses on populations and the role of the individual (i.e., how the individual functions) in that population. Some of the distinguishing features of the public health model are its concern for informing the public about general health issues, its emphasis on prevention activities, the assessment and monitoring of population-based health problems, and the development, implementation, and evaluation of health promotion strategies (Lasker, 1997). As such, the public health model would appear to be a more appropriate and effective vehicle for addressing the broad, population-based health needs of low-income persons and their families, particularly after basic medical necessities have been met.

In undertaking this study of perinatal care coordination, the Perinatal Survey Team used a public health model of care coordination as a standard. Medical treatment alone cannot meet all of the social and behavioral challenges of caring for the high-risk pregnant woman. The social and behavioral risk factors identified during pregnancy should prompt appropriate interventions and support services. Because medical, psychological, and social risks often interact, a multidisciplinary strategy is required for successful intervention (Public Health Service Expert Panel on the Content of Prenatal Care, 1989).

METHODOLOGY

ORGANIZATIONS INCLUDED IN SURVEY

Community Health Centers/Clinics

Cedar Riverside People's Center

Community University Health
Care Center

Family Medical Center

Fremont Community Health Services
(includes Fremont, Sheridan, and
Central Avenue Clinics)

Health Start

Hennepin County Women's and
Children's Health Program

Indian Health Board of Minneapolis

Model Cities Health Center

North End Health Center

Pilot City Health Center

Southside and Green Central
Community Clinics

West Side Community Health Services

Public Health Nursing Agencies

Bloomington Division of Public Health

Minnesota Visiting Nurse Agency

St. Paul - Ramsey County Department of
Public Health

Health Plans

Blue Cross/Blue Shield

Health Partners

Medica

Metropolitan Health Plan

U Care Minnesota

Hospitals

Abbott Northwestern Hospital

Fairview Southdale Hospital

Fairview University Medical Center

Hennepin County Medical Center
and OB Clinic

Minneapolis and St. Paul Children's
Hospitals

Regions Hospital

St. John's and St. Joseph's Hospitals
(HealthEast)

This survey research, designed by the Perinatal Survey Team, is descriptive research with primary data gathered from a purposive sample of 32 community agencies, organizations, and hospitals in Ramsey and Hennepin counties in the state of Minnesota during the years 1999-2001. Although data were collected at various times over a 28-month period, the study is basically cross-sectional rather than longitudinal, since it looks at agency policies and procedures as they existed during a specific window of time (1999). Subsequent data were collected solely to amplify and clarify the original data rather than to assess change over time. Qualitative methods were used to gather and analyze the data. Limited, descriptive, quantitative data were also gathered to support the qualitative analysis.

Qualitative Methods

Qualitative methods were selected as the primary strategies for data gathering and analysis in this study, as this approach is the most suitable means of addressing the stated goals and objectives: describing the existing baseline of perinatal care coordination; determining interagency transactions in the delivery of such care; defining a model system of perinatal care; and explaining the current reimbursement system for perinatal care. Inductive methods, such as those employed in qualitative research, focus on obtaining a broad base of detailed knowledge about the subject under study. As such, they lend themselves well to open-ended and/or semi-structured questionnaires and successive waves of data gathering.

Unlike mathematical and statistical procedures which form the backbone of quantitative research and which tend to produce aggregate numeric data patterns, qualitative methods strive to capture the big picture in narrative terms. "Also, qualitative methods can give the intricate details of phenomena that are difficult to convey with quantitative methods" (Strauss & Corbin, 1990, p. 19). These details are then honed to converge on interpretation of the selected social problem(s).

Furthermore, one of the strengths of qualitative analysis is its focus on "... naturally-occurring, ordinary events in natural settings, so that we have a strong handle on what 'real life' is like" (Miles & Huberman, 1994, p. 10). Such is the intent of this research: to look carefully and objectively at the real world of existing perinatal care coordination. Qualitative analysis is a descriptive process, which—if carried out thoroughly and meticulously—is the most effective route to dealing with the research question set forth in this study.

Survey Construction

The survey instrument developed for use in this study was based on the previously-described theoretical model developed by Keller et al (1998). Key components of the model and the survey include:

- 1). Mission, Philosophy, Scope of Practice
- 2). Community and Systems Level Activities
- 3). Client Level Activities
- 4). Financial and Capacity Issues
- 5). Comments and Recommendations

Within these categories were three types of questions: structured, semi-structured, and open-ended, with the latter two types comprising the bulk of the questionnaire. (See Appendix 1) To develop the social, behavioral, and medical risk assessment components of the survey, the *Minnesota Pregnancy Risk Assessment Form (MPAF)* was used. (See Appendix 2)

The basic survey was constructed and presented in two slightly different formats: the original community health center/public health nursing version and the adapted version used with health plans. Both survey instruments included the same content and questions; however, the language in the adapted version was modified slightly to render it applicable to health plans. Neighborhood Health Care Network (NHCN) staff reviewed the instrument, encouraged their Network members to respond, and made suggestions for revisions.

In addition, a shorter survey instrument was designed for gathering information from hospitals based on questions raised at Project LID Task Force meetings. (See Appendix 3.) Depending upon the structure of the organization being surveyed, either the health plan instrument or the hospital instrument, or both, were used. Hospital and health plan responders were instructed to use the survey as a “guide,” answering the questions where appropriate but providing additional information and narrative where the survey did not effectively ask questions about their perinatal care coordination activities.

Data Collection

All data were gathered by the Perinatal Survey Team, which was staffed by the perinatal research scientist, the perinatal and women’s health consultant, and the infant mortality consultant from MDH, as well as the health systems program analyst and Project LID intern from the Minneapolis Department of Health and Family Support (MDHFS). Initially, the Team met with key staff from the other local public health agencies, and with representatives of the NHCN, community health centers, and public health nursing agencies to seek their advice on constructing appropriate objectives for the survey. These agencies were selected because they comprise safety net organizations for low-income and underserved populations, and consequently they serve a disproportionate number of high-risk women and infants.

The resulting survey was completed in writing and returned to the team by 15 of the 18 community health centers, as well as the three public health nursing agencies

serving the two counties. These organizations were reimbursed for their participation in the survey process. In addition, each organization was offered an in-person, follow-up interview with a member of the team to review the survey forms and clarify any questions they might have.

Staff contacted the five health plans and twelve hospitals serving perinatal clients in the two counties and requested information on their perinatal case management and/or perinatal care coordination services. Copies of the surveys were faxed, and the contacts were told that they could either (1) fill-out the surveys and send or fax them back; (2) meet with one or more of the researchers to discuss the content of the surveys in addition to or in lieu of writing their answers; or (3) speak with one of the researchers over the phone to give answers and information.

All five health plans and nine of the twelve hospitals provided information for this study. Some health plans provided limited responses to the survey questions. Within a health plan or health system, there were many individuals and/or departments potentially involved in each element of the survey, and it was not always clear who these contact persons were. Also, the health plans and hospitals were not reimbursed for their participation, which may have influenced the time and effort they could devote to completing the survey. After reviewing an initial draft of this report, health plans provided additional information to complete the data they believed was missing from the original survey responses.

Data Analysis

Analysis of the data was an iterative process, using an inductive method. Each successive wave of data gathering broadened the scope of the analysis and at the same time refined the focus of inquiry. Data gathering continued until no new themes emerged and all questions raised by earlier data were clarified and resolved.

Initially, each team member reviewed a group of surveys individually, using a guide (see Appendix 4) designed to extract and summarize the key themes. Subsequently, the team discussed and revised individual summaries as a group, and then prepared overall summaries of responses from each type of organization. Through discussion, additional questions were generated, and the need for further clarification of responses was evident. Many phone and face-to-face follow-up sessions were conducted by the survey team, which resulted in additional waves of data.

Survey responses from the community health centers and public health agencies indicated that the systems in which they worked had changed significantly in recent years, negatively impacting their ability to provide services. Responses also pointed to major demographic changes in the community that were adding complexity to their work. These issues led the team to an historical analysis of the way in which Minnesota had implemented Medicaid reform in the mid- to late-1980s during the

federal Medicaid expansion opportunity provided to states. Other questions guided the team to analyze Minnesota's health care reform process in the early 1990s, including implementation of the Prepaid Medical Assistance Program (PMAP) for low-income persons. Background information on these activities and on demographic changes were factored into the analysis and were added to the report.

The first draft of the report was completed in February, 2001, and circulated to administrative staff at MDH and MDHFS. After further revisions the report was sent to every survey respondent, to the Minnesota Department of Human Services (DHS), and to the NHCN for review.

Phone and face-to-face follow-up discussions were conducted with survey respondents—as well as with DHS staff—who replied to the team's request for feedback, providing yet another wave of data.

The Minnesota Council of Health Plans hosted two meetings in the summer of 2001 with the plans' representatives and the survey team. All plan representatives had received copies of the report in advance. In the first meeting, the survey team presented highlights of the report for discussion. The plans asked for additional time to respond. The second meeting, a month later provided the plans with the opportunity to respond to the survey team. At this point, the health plans added more detailed information about their care coordination activities. These additional data were added to the analysis and to the report.

Finally, it appeared that no further themes or data were forthcoming, and accordingly, the data-gathering/analysis phase ended.

FINDINGS

Thirty-two (32) of 38 organizations responded to the survey, including 15 of the 18 community health centers, all three agencies providing public health nursing services in the two counties, all five health plans, and 9 of 12 hospitals in the Twin Cities metro area. This constitutes an overall response rate of 84%. The following is a summary of findings across all categories of agencies/organizations, outlined according to the four topic areas included in the survey. (See Appendix 5 for detailed responses categorized by type of respondent.)

Mission and Scope of Practice

The traditional safety net organizations—the community health centers and public health nursing agencies—all had mission statements describing their commitment to serve low-income, underserved populations including immigrants, refugees, and the uninsured. Pregnant women and infants were regarded as particularly vulnerable popu-

“Our public health staff build on family-focused, community-based principles in delivering services to perinatal clients. Staff are skilled in working with families who have complex social needs and use multiple resources in the community to help meet those needs. Staff are also able to address sensitive family issues such as chemical use, violence, and other complex situations. The focus is on prevention and early intervention.”

**Public Health
Nursing Director**

lations requiring outreach activities to assure early, ongoing prenatal care and including an array of additional supportive services requiring formal collaborations among many organizations. The added time and cost required to serve non-English speaking populations was often mentioned.

Health plans' mission statements implied that they exist within a competitive environment and strive to be the plan of choice in the community they serve. Their mission statements described the desire for excellence and the need to be recognized as leaders in improving their members' health.

Hospitals were not asked to provide a mission statement.

Community and Systems-Level Activities

Community health centers described their attempts to provide a model of health care to low-income patients that involved advocacy to improve patients' access to medical care and supportive services, including outreach in the community served. Additional community-level activities included networking with other community-based organizations and participation in community events.

Public health nursing agencies emphasized coalition building and collaboration, particularly around a common, health-related purpose. Most coalitions involved other public health organizations, although some involved partnering with health care and managed care organizations. Collaboratives were formed to share information and resources, as well as to develop policy and advocacy strategies for health-related community issues. Examples are lead-poisoning prevention, violence-free families and communities, child abuse prevention, and child injury prevention. Family Service Collaboratives were listed as partners, as were schools and social service providers.

In responding to this survey topic, health plans and hospitals described their case management programs. Except for one health plan, they reported that their case managers interact and coordinate care among providers as opposed to having regular contact with patients. The reason noted was to minimize confusion for patients. When contact was made with patients, it was almost always made by phone or letter.

All health plans and hospitals reported offering some level of referral to social services. Coordination of follow-up for social issues addressed in prenatal assessment varied widely. One health plan and one hospital had comprehensive referral links and significant administrative capacity for this type of activity. Overall, however, the hospitals and health plans reported using care coordination standards and processes designed primarily to identify and respond to *medical* risk factors.

Great variation exists among health plans regarding the degree to which system capabilities addressing social risk factors are integrated into their processes. When social risk

factors are addressed by case managers, it is done by telephone as opposed to in-person contact. One hospital and one health plan serving specifically high-risk, low income populations reported having more extensive organizational structures and procedures in place to provide perinatal care coordination, including regular use of public health nurses to coordinate the care of prenatal patients.

Client-Level Activities

Community health centers/clinics reported providing primary health care to women and children, including medical care, prenatal and postpartum care, newborn and well/sick child care, and family planning. All fifteen survey respondents also provide supportive services including assistance with insurance applications, assessment, treatment and/or referral for psychosocial issues. All described how they have developed competencies to address the sociocultural needs of the diverse populations they serve.

The three public health nursing agencies described their processes of developing care plans and goals with families' input. They reported that they provide all of the survey components of health teaching, brief counseling, and care coordination/case management. They also discussed their limited ability to monitor patient outcomes, given their current systems. At the time of the survey (May-June, 1999), all three were using paper records. Two of the three agencies used random chart audits to determine whether pre-set goals were met.

The hospital survey, as previously described, asked questions about specific areas considered a problem in the infant mortality review project. As applied to care coordination, the questions concerned with discharge planning and obtaining information from prenatal providers were most relevant. All hospital respondents reported that discharge planning includes informing new mothers about conditions needing immediate medical follow-up and, at minimum, the provision of a phone number for them to call. Other post discharge procedures ranged from referral to home health care, a public health nurse visit, or breastfeeding clinics, to social worker follow-up for families with complex social and behavioral issues.

Four of the five health plans reported having incentive programs to encourage their PMAP patients to keep prenatal appointments and/or attend prenatal classes. Three plans provide written materials to their PMAP patients in the form of a pregnancy information and resource packet. Four plans discussed how assessment of risk factors prompted mail or phone follow-up with specific education materials or phone line resources. Two of these four health plans also reported referring high-risk patients to public health nurses; one refers patients to a community-based organization with family resource workers who have access to advice from a public health nurse consultant. The remaining two health plans reported managing risk factors by phone and/or mail contact only.

Agencies reported that care coordination activities which take place during pregnancy—or for infants and children—are not reimbursed by health plans or by the Minnesota Medicaid Program.

Financial and Capacity Issues

Reduced federal funding combined with increased costs of providing services and poor third-party reimbursement levels have community health centers feeling financially strapped. They reported finding it increasingly difficult to provide “wrap-around” services on site. At the same time, some centers are aware that referring their patients to other agencies may not be effective because of the difficulties families have following through with referrals. They listed missed appointments for clinic services as a source of financial loss. Their attempts to provide continuity and comprehensive health care are often made more difficult by patients who are taken on and off health plans as the family’s economic status changes. For example, a managed care plan reported that four months is the average length of time that PMAP patients are enrolled in their plan. By contrast, a health care center assumes responsibility for continuous patient care as determined by individual patient needs, which typically exceeds four months.

In the context of this report, prenatal/postpartum and infant care requires a commitment of at least one to two years. Most of the community health centers who adhere to this commitment end up providing services that are not fully reimbursed or that require reimbursement from multiple payors for one pregnancy, adding greatly to their administrative costs. Health centers also reported seeing more uninsured patients than in previous years, with incomes insufficient to pay the sliding fees. Insurability is a problem particularly for the growing Latino population. Many Latina women are reluctant to pursue insurance coverage either for themselves or members of their family due to uncertain immigration status.

When asked for recommendations to deal with the foregoing issues, community health centers emphasized the need for financial support to improve technology and data capacity, additional funding for patient outreach and supportive services, and stable funding for their basic programs and infrastructure.

Public health nurse agencies reported both funding and capacity issues. These agencies are unable to do effective public health outreach and in fact have difficulty serving the number of patients referred to them. Fifteen to twenty percent of their attempted home visits are not completed because the client is not at home when the nurse arrives; these visits are not reimbursable. Meanwhile, agencies reported that reimbursement rates from Medical Assistance and PMAPs have not kept pace with the escalating costs of providing professional services. Moreover, obtaining authorization for third-party reimbursement is complex and time consuming. Agencies also reported that care coordination activities which take place during pregnancy—or for infants and children—are not reimbursed by health plans or by the Minnesota Medicaid Program.

Survey respondents from the health plans did not report data on financial and capacity issues. Presumably, staff did not have adequate knowledge of their respective plan’s

financial status. Although the survey team did not make additional inquiries for financial data from the plans themselves, health plan financial information was obtained from other sources and is included in the Discussion section of this report.

For complete survey findings, including specific recommendations provided by each group of survey respondents, see Appendix. 5.

LIMITATIONS OF THE STUDY

All research findings contain inherent limitations, particularly community-based studies conducted in real world conditions which cannot be easily controlled by the researcher(s). Some of the limitations of this study include:

Sampling adequacy: There were no private health care providers or broader-based community organizations (e.g., social services; schools) included in the study due to budgetary constraints and insufficient staff. Likewise, funding limits prevented inclusion of consumers in the survey.

Organizational complexity: Variation among local health plans, as well as the complexity of their organizational structures, presented difficulties both for the survey team (e.g., attempting to obtain responses from appropriate staff) and for health plans (e.g., attempting to describe their operations in a survey based on a public health model).

Selective reimbursement: Community health centers and public health nursing agencies were reimbursed for their participation in the study. Health care plans and hospitals were not reimbursed; thus, the extent of their motivation and participation may have been impacted by the time and consideration they were able to give to this project.

Potential researcher bias: Possible bias is present in all studies; however, qualitative methodology is more vulnerable due to fewer built-in safeguards. Analytic procedures in qualitative methods are not as clearly defined as in quantitative methods. On the other hand, quantitative studies may pursue an inappropriate research question due to lack of sufficient descriptive data.

Local application: This study was limited to Hennepin and Ramsey county organizations; therefore, the findings from this survey are not applicable beyond those counties.

DISCUSSION

Comprehensive, perinatal care coordination—including risk assessment and appropriate follow-up interventions—results in improved pregnancy outcomes and enhanced infant health. Toward this end, the Public Health Service Expert Panel recommended that early and ongoing risk assessment, health promotion, and medical and psychosocial interventions be adopted as routine elements of prenatal care for all women (US Public Health Service Expert Panel on the Content of Prenatal Care, 1989). With a focus on the low-income population, this survey-based systems analysis describes the capacity of health care systems in Hennepin and Ramsey counties to provide this type of care coordination during pregnancy.

Community Update

Since Spring, 1999, when this survey was undertaken, significant changes have occurred in health care, as well as public health itself. These transitions have had an impact on system capacity beyond the survey results reported in this document. Agency mergers and closures, in addition to reorganization and reallocation of funds, have altered the health care delivery system in the metropolitan area, as well as statewide. In addition, consumers of health care services have changed markedly, as individuals and families of many different racial/ethnic groups have taken up residence in the state of Minnesota. The following examples of a shifting health care landscape should be taken into account when reading this report and considering the issues presented here.

Mergers and Closures

North End Medical Center, serving the east side of St. Paul, merged with Model Cities Health Center in October, 2001. North End no longer had sufficient resources to serve its community as a freestanding facility. Although located in a medically underserved area, North End did not enjoy the status and benefits of a federally-funded health clinic. In contrast, Model Cities is federally-qualified and thereby eligible for funds to support its infrastructure. More mergers of this type are expected to occur as centers seek to create efficiency in their systems so they may continue to provide care for underserved communities.

Representing a different decision-making process, the Hennepin County Community Health Department closed its Women's and Children's Health Clinics in Fall of 2000. These clinics, located in St. Louis Park and Brooklyn Center, were the only facilities using a public health model to serve the low-income population of suburban Hennepin County. By utilizing public health nursing, together with a variety of community-based agencies, the centers provided comprehensive, prevention-focused services to an "at-risk" population of women and children. These closures leave a service void in suburban Hennepin County.

A Changing Populace

Early results from the 2000 U.S. Census confirm that minority populations have grown substantially in the past decade in Minnesota, with particularly high numbers in the Twin Cities metro area. This increase includes significant changes in existing African, Asian, Hispanic, and African-American populations, as well as new immigrants and refugees from all parts of the world. Due to such diverse population growth, health care agencies are experiencing increased pressure to provide competent medical interpreters, as required by Title VI of the U.S. Civil Rights Act. Failure to provide qualified interpretation during health care effectively denies the patient access to care, which constitutes a civil rights violation. While acknowledging its importance, survey respondents discussed this mandate largely in terms of the costs involved: additional time to recruit and arrange for interpreters, provision of care with interpreters present, and payment of interpreters. For a full discussion of this issue see: *Bridging the Language Gap: How to Meet the Need for Interpreters in Minnesota* (November, 1998).⁶

Likewise, families living at or below the poverty threshold also appear to be increasing, especially in urban areas.⁷ One program which addresses the needs of this population is Temporary Assistance for Needy Families (TANF), the federal government's welfare-to-work program designed to move families with children off welfare and into the work force within five years. In 2000, the Minnesota legislature provided additional TANF funds to all Minnesota counties, designating that the money be used for public health nurse supervised home-visiting. In Hennepin County, approximately 75 percent of these funds were allocated for visits to pregnant and parenting teens. In Ramsey County, these funds are also being used for home visits to low-income adolescent parents and to young women who began childbearing as teens. This funding may result in capacity building and improved operation of the public health nursing agencies described in this report. It is critical that this home visiting program become integrated with existing systems of perinatal care, rather than contribute to further fragmentation and confusion for families.

Twin Cities Healthy Start

The Twin Cities Healthy Start (TCHS) program was implemented with federal funds from the Maternal and Child Health Bureau of the Department of Health and Human Services. In a highly competitive process, approximately \$1,000,000 per year for fiscal years 2000 and 2001 was awarded to Minneapolis and St. Paul, largely due to data demonstrating severe racial and ethnic disparities in infant mortality within the two cities. The program's purpose is to provide outreach, case management, and health education to American Indian and African American families under the direction of a community consortium. As staff of this new program attempted to navigate the perinatal system, they discovered that the existing structure contained many administrative barriers and was often characterized by fragmentation and poor communication.⁸ Thus, the Healthy Start Collaborative was formed to address barriers faced by pregnant women—even those who have an outreach worker and a nurse case manager provid-

It is critical that this home visiting program (TANF) become integrated with existing systems of perinatal care, rather than contribute to further fragmentation and confusion for families.

Footnotes

- ⁶ This report addresses the question of how to ensure access to public services—beginning with health care—for Minnesotans who speak little or no English. It was prepared and published by the “Working Group” of the Minnesota Interpreter Standards Advisory Committee. It may be downloaded from: www.healthadvocates.org or contact Jeanne Watson at 612-676-5530 or by email: jeanne.watson@health.state.mn.us
- ⁷ Minnesota State Demographer, Preliminary Data from the 2000 Census.
- ⁸ Personal communication with Coral Garner, Director of Twin Cities Healthy Start.

In its interpretation of federal Medicaid enhancements, Minnesota implemented a policy design that relies heavily on the traditional medical model. Policy choices—such as allowing physicians to be reimbursed for prenatal care coordination—do not mirror the direction chosen by many other states.

ed by TCHS. This Collaborative includes representatives from MDH and DHS, as well as the Minnesota Council of Health Plans. It is intended that the Collaborative will be an ongoing problem-solving group committed to assuring the success of TCHS in improving pregnancy/ infancy outcomes. With the second award of federal funding for FY 2002-2005, TCHS is developing service networks among the contracting community partners to improve integration of care.

Minnesota Medicaid Reform

Having considered the most recent community changes, it is also advisable to reflect on earlier history. The federal Consolidated Omnibus Budget Reconciliation Act (COBRA) of 1985 enabled state Medicaid programs to develop enhanced benefits for prenatal clients. These services were intended to expand access to a broad variety of nonmedical supports, especially by exercising the option of care coordination benefits.

One of the specific, stated intentions of COBRA enhancements was to spur states to refine and reform the content, quality, and organization of perinatal services offered through public programs. It was anticipated that this would be accomplished by means of close collaborative relationships between state Medicaid programs and the Maternal and Child Health (MCH) programs of state departments of health. As described by the National Governor's Association Report (1989) on Medicaid Prenatal Care Coordination, the COBRA enhancements were envisioned as supplying the "glue" to hold together delivery systems that are often highly fragmented, thereby providing care that is both comprehensive and continuous.

The Medicaid program is a critical component of any state's infant mortality reduction strategy partly because a large percentage of high risk pregnancies are covered by Medicaid. Medicaid expansion, backed by financial incentives, made it possible for states to improve care during pregnancy by providing enhanced services including care coordination (Hill & Breyel, 1989). In its interpretation of federal Medicaid enhancements, Minnesota implemented a policy design that relies heavily on the traditional medical model. Policy choices—such as allowing physicians to be reimbursed for prenatal care coordination—do not mirror the direction chosen by many other states. Other states have elected not to reimburse physicians for care coordination but to use public health nurses, social workers, and/or community health workers as care coordinators. (See Appendix 6, *Examples of Effective Care Coordination*, for descriptions of programs in North Carolina, Rhode Island, and Washington. Also, the *National Governors' Report* describes programs in Virginia, New Jersey, Alabama, Arkansas, Ohio, and Tennessee.) In some states this new funding allowed reinvestment in public health systems that had been struggling for resources (Gold, Singh, & Frost, 1993).

Minnesota Pregnancy Assessment Form: Origin and Use

The need to administer Medicaid's "enhanced services" for "at-risk" pregnancies for both fee-for-service and PMAP patients prompted some providers to request one form to

document pregnancy risks. A standardized risk assessment tool, the Minnesota Pregnancy Assessment Form (MPAF), was developed to meet this need. DHS and the health plans adopted the MPAF as the form they would accept from providers. Providers use the MPAF to identify risks and document contracted obligations to provide enhanced services to “at-risk” women. The MPAF identifies medical, social, and behavioral risk factors, but does not prompt or facilitate interventions and referrals to deal with them.

The DHS manual which defines “at-risk” pregnancies and enhanced services to address identified risks does not exclude public health nurses from providing home visits during pregnancy. But the manual also allows medical providers to do care coordination, one of the Enhanced Services.⁹ Data provided by the community health centers indicate that often their providers are poorly connected to public health nurses and rarely refer to them, choosing instead to do their own care coordination and other enhanced services internally. There appears to be no incentive to do otherwise either for the surveyed community health center providers or for other providers of medical care to the PMAP population. In this scenario, public health nurses are not utilized and community health center providers are both overworked and poorly reimbursed.

Public Health Nursing and Other Care Coordination Models

Several recent publications report the value of public health nurse home visiting in improving long-term outcomes for infants and children, as well as cost savings for society (Kitzman et al, 2000; Randolph & Sherman, 1993; Wilkinson, Korenbrot, & Greene, 1998). There are also many references to other types of case management and care coordination programs which demonstrate improved birth outcomes, including increased birth weight and reduced health care costs. Although the Survey Framework described in this report suggests that home visiting will be a component of care coordination during pregnancy and infancy, the Survey Team is aware that home visiting may not always be practical or desired by clients. Other effective models of perinatal care coordination and case management take place in agencies and clinics. Some models use social workers, nurses, or other well-trained case managers familiar with the population they serve as well as with community resources, referrals, and various assistance programs. All provide assessment, care plan development, and referrals to community or government resources through face-to-face encounters with their clients. (See Appendix 6) “Telephonic case management,” as described by the health plans surveyed in this study, is not included among these models. Whether it is effective in improving outcomes has not been demonstrated by health plans nor has evidence of effectiveness been found in the research literature.

Safety Net Capacity

The findings of this survey imply that public health nursing has lost many of its community connections because of financial and capacity strains affecting their agencies. Currently, care coordination/case management by public health nurses during pregnan-

In this scenario, public health nurses are not utilized and community health center providers are both overworked and poorly reimbursed.

The findings of this survey imply that public health nursing has lost many of its community connections because of financial and capacity strains affecting their agencies.

Footnote

⁹ Minnesota Health Care Programs Provider Manual, June, 2000. Available from the Minnesota Department of Human Services.

The community health centers described their struggle to provide interpreters, retain qualified providers and other staff, continue to offer quality “wrap-around” services, and keep their doors open to meet the needs of increasing numbers of high risk and underserved families in the two metropolitan counties.

While PMAP ensured prenatal care for a larger number of low-income women, it did not assure that a pregnant woman with psychosocial risk factors would receive the coordinated services that address those risk factors.

cy rarely happens in Hennepin and Ramsey counties. As the survey data indicate, most public health nurse visits are to post partum mothers and newborns. When public health nursing services are initiated during pregnancy, it is usually to address an identifiable medical problem. Opportunities to provide prenatal education and support to other at-risk women during pregnancy are missed. From the survey conducted in this study, it is clear that public health nursing agencies are aware of the increased complexity of issues families face, many of which impact pregnancy outcomes. From their comments (see Appendix 5), it is also clear that these agencies would do additional preventive activities during pregnancy if more resources, including staff, were available.

Community health center capacity is also a significant issue. The centers described their struggle to provide interpreters, retain qualified providers and other staff, continue to offer quality “wrap-around” services, and keep their doors open to meet the needs of increasing numbers of high risk and underserved families in the two metropolitan counties. Since the survey, the only community health clinic serving suburban Hennepin County has closed leaving a service gap in the safety net capacity (see earlier “Community Update” section).

Department of Human Services’ Policies

The Minnesota Department of Human Services (DHS) is the state agency responsible for administering federal Title XIX funds to provide health care to low-income Minnesotans. Related to perinatal care, DHS administers fee-for-service Medical Assistance, and it contracts with health plans for the Prepaid Medical Assistance Program (PMAP), a state program instituted in the early 1990s. As DHS proceeded with Minnesota’s Medicaid reform, they increased the number of low-income women eligible for insurance during pregnancy and also expanded health care options by including private obstetrical providers. The threshold of insurance eligibility for pregnant women was raised to 275 percent of the federal poverty level and the field of potential providers was greatly expanded, thereby improving access to prenatal care for many women.

While PMAP ensured prenatal care for a larger number of low-income women, it did not assure that a pregnant woman with psychosocial risk factors would receive the coordinated services that address those risk factors. In effect, the creation of PMAP moved the public health system a step away from the Medical Assistance funding source, shifting primary provision of care to the health plans. Public health agencies then had to negotiate with managed care organizations in order to serve their customary clients. Survey responses from public health nursing and community health centers indicate that this shift has led to major barriers in providing needed services to their clients.

Additionally, many low-income women do not receive care for chronic conditions, preventive health care, family planning services, preconception care, or dental care because insurance is not activated until pregnancy is documented. Furthermore, sixty days after giving birth, women’s eligibility for Medical Assistance drops back to 67 percent of the

federal poverty level, resulting in abrupt termination of services for many women. Unfortunately, low-income women's interconceptional health care needs are not well served by these aspects of DHS policy.

Perinatal Care Coordination and Managed Care Organizations

It is unreasonable to expect managed care to be an omnipotent resource for all health care challenges. In the case of comprehensive perinatal services, it is unlikely that a managed care organization would encompass enough of the internal system components needed to provide the type of complex, integrated service described in the Survey Framework of this study. For the larger health plans, the PMAP population represents only a small percentage of their total population served. In contrast, the smaller health plans serving only or primarily PMAP clients tend to have the most comprehensive systems in place. However, even they may not be able to provide optimum service integration.

In 1999, the most recent year for which data are available, the net income from Minnesota's Prepaid Medical Assistance Programs (PMAP) was \$57 million. PMAP has been a profitable product for managed care since 1995, producing over \$20 million per year for the plans.¹⁰ According to an article in the *Minneapolis Star Tribune*, the health plans view this profit as offsetting their losses from other government programs. (Howatt, 2000). However, this argument is overstated. When looking at all state public programs combined (PMAP, prepaid GAMC, and MN Care), managed care plans still earned \$30 million in 1999 and also showed profits between \$3 million and \$27 million each year since 1995.¹¹

This report views those profits in light of the apparent unmet needs of pregnant women on PMAP to receive care coordination services. It is hoped that federal Medicaid enhancements distributed to the health plans in Minnesota would support provision of enhanced services to pregnant women, not to potentially offset losses in other areas. While public health and community health centers are competing for scarce resources to serve this high-risk population, health plans, by comparison, have surpluses of Title XIX (Medicaid) dollars through their PMAP contracts. This report suggests that DHS not necessarily renegotiate a lesser contract for PMAP, as was mentioned in the *Star Tribune* article previously referenced, but that DHS redirect these funds for services more in line with the Theory and Framework described in this report—either through health plans or other providers.

Community Perspectives

Families are aware that the issues they face and the types of services available to them have an impact on their pregnancies. In a recent study of American Indian perspectives on pregnancy and infant care in the Twin Cities, American Indian women were asked about the factors contributing to infant mortality in their community. Their responses included "a range of institutional and behavioral factors...from alcohol, substance

Footnotes

- 10 Minnesota Department of Health, Health Economics Program. The Minnesota HMO Profile – Part II: Enrollment and Financial Performance. May, 2001.
- 11 Minnesota Department of Health, Health Economics Program. Unpublished data. August, 2001.

abuse, and lack of education and information, to lack of health care, insurance and discrimination of health care providers.”¹²

In a similar discussion with African-American women, solutions were proposed. As an example, “respondents [who were] in relationships with community-based providers were more likely to follow-through in arranging timely prenatal care.”¹³ Research literature reinforces and supports the finding that women who are connected to a provider or who have a “medical home” before pregnancy are more likely to begin prenatal care early (Gazmararian, Arrington, Bailey, Schwarz, & Koplan, 1999).

With funding from the Federal Centers for Disease Control and Prevention (CDC) the MDH conducted the REACH (Racial and Ethnic Approaches to Community Health) planning process in 1999-2000. The purpose of the project was to engage in a dialogue with communities suffering from infant mortality disparities that would, in part, provide direction and insights to government and private health systems.

Key messages from the REACH African American Work Group related to this report include:

- Provide consistent, affordable, quality insurance coverage for everyone regardless of socioeconomic status (a single-payor system).
- Insurance programs must cover preconception care, preventive health care, and wellness programs.
- Include fathers in insurance coverage to promote healthier babies and families.¹⁴

Advice from the REACH American Indian Work Group includes:

- Implement a revised continuity-of-care system in the American Indian community beginning with prevention/health promotion and prenatal care, and continuing through extended pediatric care.
- Offer preconception care to provide family planning, diet and nutrition, and overall health care before pregnancy.
- Consider the importance of continuity of care in order to build trust between the mother and the health care provider.¹⁵

Footnotes

- 12 American Indian Perspectives on Pregnancy and Infant Care. American Indian Policy Center, September, 2000.
- 13 Twin Cities Healthy Start Project African American Prenatal Care Survey. Rainbow Research, Inc., November 30, 2000.
- 14 Reach Project: A Report of Findings of the African American Work Group. April, 2000. Available from the Minnesota Department of Health, Maternal and Child Health.
- 15 REACH Project: A Report of Findings of the American Indian Work Group. April, 2000. Available from the Minnesota Department of Health, Maternal and Child Health.

SUMMARY AND CONCLUSIONS

For low income women in Hennepin and Ramsey Counties, eligibility for government-funded insurance often follows the diagnosis and confirmation of pregnancy. The process of applying for public program insurance, being assigned to a health plan, and procuring an appointment with a prenatal provider results in delayed care and missed opportunities for early intervention and preventive activities. This process disrupts attempts by all care providers—health plans and hospitals,

community health centers, and public health nursing—to achieve the Survey Framework standard of care coordination and case management.

Health care and social service systems are fragmented by institutional, bureaucratic, and reimbursement barriers. While health plans and hospitals, community health centers, and public health nursing agencies all have admirable missions to provide quality perinatal services, this report maintains that all lack the *system integration* necessary to meet the multiple and complex needs of high-risk families in Hennepin and Ramsey counties. For public health nursing and community health centers, the findings suggest *system capacity* is also lacking due to problems with funding, reimbursement, and lagging technology. Health plan findings suggest that they have capacity issues as well, especially in terms of their focus on using telephone contact for case management rather than face-to-face comprehensive perinatal care coordination. While the telephonic case management model may serve important functions, the health plans' description of maternity case management did not meet the Survey Framework standard defined in this report. Particularly with respect to at-risk, low-income women, this model does not appear to provide the necessary support, education, and advocacy.

Communication between health care and social service systems is poor. Poor communication among health plans, community health centers, hospitals, and public health nursing contributes to fragmented care and services. While these organizations are represented on various collaboratives addressing maternal and child health issues, the working relationships necessary to address individual client needs are lacking.

These circumstances most heavily impact populations of color, American Indians, and refugees and immigrants. These populations are over-represented in the low-income population of Hennepin and Ramsey counties and, therefore, most affected by gaps in the system. As recent demographic data have shown, these populations are growing in the urban area. If system problems are not addressed, existing racial and ethnic disparities in infant mortality and other poor birth outcomes are likely to persist and may even worsen.

Low-income women are not assured continuous health insurance throughout their childbearing years. Without continuous coverage there is no way to ensure access to primary health care, dental care, care for chronic conditions, family planning, preconception care, early pregnancy identification, and early and continuous prenatal care.

PERINATAL SURVEY TEAM RECOMMENDATIONS

Returning to the original research question: Does the current perinatal care system have the capacity to reliably deliver comprehensive, coordinated care and support services to low-income at-risk pregnant women in Hennepin and Ramsey counties? It is the conclusion of this report that it does not. Consequently, the following recommendations were developed to address some of the topics covered in this report:

Establish a Perinatal Work Group. The Minnesota Department of Health and local public health should work with the Department of Human Services, health plans and providers, social service and community-based organizations, and the Neighborhood Health Care Network to develop a perinatal care system that is adequately funded and that provides care coordination services shown to be effective in the research literature for socially at-risk pregnant women. The women impacted by this system should also be included in the Work Group.

Provide adequate and stable resources to rebuild system capacities of public health and community-based providers of comprehensive perinatal care coordination services.

Support Twin Cities Healthy Start’s “service networks”. These networks are piloting a promising model of formalized, interdisciplinary communication and care coordination that should reduce fragmentation of perinatal services to high-risk women.

Provide continuous health insurance to all women of childbearing age enabling them to have a medical home, primary preventive health care, family planning, pre-conception care, and early and continuous prenatal care.

NEXT STEP: FORMATION OF THE PERINATAL WORK GROUP

The Survey Team hopes this report can provide the foundation for a meaningful discussion of system change. Both DHS and the Council of Health Plans have verbally expressed support for an ongoing process to address the concerns identified in this study. Though all readers will not agree with the entirety of the final report, the intention of the Survey Team is that the report will be used as a resource which documents the relevant issues and inspires discussion and action. Toward that end, an interdisciplinary Perinatal Work Group is proposed.

This report describes the role of public health nurses as competent providers of coordinated perinatal care. Many other effective working models of in-person care coordination such as doulas, nurse midwives, patient advocates, and interdisciplinary teams are described in Appendix 6. The task of the proposed Perinatal Work Group will be to review these models, develop a shared vision of comprehensive care coordination for this urban community, and develop resources and funding streams to support the models. These activities, combined, will accomplish the goals of creating system integration, effective communication, and coordinated care for low-income pregnant women in Hennepin and Ramsey counties.

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APPENDIX I

Survey of Health Plans, Community Health Centers/Clinics, Public Health Nursing Agencies

I. Mission, philosophy, and scope of practice:

What is your organization's mission and overall strategic approach to maternal and child health interventions during the perinatal period as defined above? (This can be an important starting point for understanding system structure and function.)

Existing organizational documents may be attached to address the topics below relevant to services for perinatal health. Use general internal sources if more specific documentation is not available, but if there doesn't seem to be any documentation for a particular subject, please indicate as unspecified rather than creating a response.

- A. Formalized "mission statement" for perinatal care:
- B. Statement of program goals and objectives related to perinatal care as stated in your organization's internal and external documents, ie: grants, contracts, etc.:
- C. What is the scope of perinatal services your organization provides (provide examples or attach documents as appropriate):
- D. Intended population served (per mission statement, grant agreements, etc.):
- E. Describe or list your external organizational partners in perinatal services and indicate the nature of the partnership:
 - 1. contracts
 - 2. memos of understanding
 - 3. informal
- F. What type of qualitative or quantitative evaluation summaries or outcome measures do you use in terms of goals and objectives (may identify and attach as addendum)

II. Community and System-level:

A number of activities of local public health might be directed at defining and improving the inter-connectedness of the perinatal care system. To achieve integration of systems for clients, you may have been working with other organizations such as hospitals, clinics and providers, public health nurses, managed care organizations, community clinics, school health, and other community-based organizations. In terms of improving pregnancy outcomes and infant outcomes through the first year of life, describe your organization's activities related to the following areas:

- A. Coalition building: (Creating alliances among different organizations for a common purpose.)
- B. Collaboration, both internal and external: (Exchanging information, altering activities, sharing resources, enhancing the capacity of another for mutual benefit and to achieve a common purpose.)
- C. Community organizing: (A planned process to activate a community to use its own social structure to accomplish community goals consistent with local values.)
- D. Provider education: (Continuing education for providers on assessment and intervention on social and environmental risk factors affecting families.)
- E. System direction: In the last five years, has the system become better or worse? In what ways? Use examples or data. What have been and are some of the forces that are changing the system?
- F. Other

III. Client-level:

A. Perinatal Population Numbers

How many pregnant women do you provide services to per year?

How many post partum women do you provide services to per year?

How many newborns and infants up to the age of one year do you provide services to per year?

B. Perinatal Population Demographics

Estimated % of perinatal population per year

Race of Mother

White, African American, Hispanic, Asian, American Indian, Other

Age of Mother

Under 18, 18-35, 36 and over

Health Insurance or Source of Payment

PMAP, MA (fee for service), MN Care, Other HMO, Commercial Indemnity, Self-pay: full fee, reduced sliding fee

(A number of services might be directed at individual clients, either pregnant women or families with infants. For each of the activities listed below, indicated whether there is a written protocol or standard of care for the provision of this type of service, and whether there are any data on service volume.)

B. Resource Advocacy

1. Determine eligibility for Medical Assistance (MA), Minnesota Care (MN Care) *Protocol? (Y/N) Volume(Y/N) (If yes, report #s per year)*
2. Assist in application process for MA, MN Care *Protocol? (Y/N) Volume(Y/N) (If yes, report #s per year)*
3. Assist in access to benefits i.e., transportation, child care *Protocol? (Y/N) Volume(Y/N) (If yes, report #s per year)*
4. Determine eligibility for WIC *Protocol? (Y/N) Volume(Y/N) (If yes, report #s per year)*
5. Assist in application for WIC *Protocol? (Y/N) Volume(Y/N) (If yes, report #s per year)*

C. Health Teaching *(promote a family's understanding of good health practices through appropriate teaching)*

Protocol? (Y/N); Classes? (Y/N); # class participants/yr; one to one? (Y/N); #/yr

1. healthy pregnancy
2. preterm birth
3. childbirth education
4. parenting
5. child spacing ("rest" intervals between pregnancies to optimize health for mothers and children)

D. Brief Counseling within your organization *(A therapeutic intervention to assist individuals and/or families to become more effective at self care and problem solving. Not a class or support group, just brief counseling by a professional.)*

Protocol? (Y/N) if Y, attach protocols; Data on volume?; If Y, report #s of perinatal patients served per year.

1. Healthy lifestyle
(balance of rest, exercise, nutrition, personal safety)
2. Coping/ psychological support
(stress, depression, alcohol/drug use, violence, support)
3. Smoking cessation

E. Case Management/Care coordination: At the client level, case management/care coordination may be defined as a client- centered, goal-oriented process for assessing the needs of an individual for particular services, assisting them in obtaining those services, and coordinating those services to avoid gaps and duplication. It is ongoing until goals are met. *(You may submit flow sheets or other forms you are using to describe and document these activities.)*

1. **Prescreening:** Are clients “triaged” for risk potential? If yes, what are client triage criteria? Describe your system of setting the first appointment or home visit based on risk potential.

2. **Assessment:** Is activity standardized? If yes, provide protocols and assessment tools for prenatal and post partum/newborns and data on volume.
 - a. medical risk assessment, including preterm risk
 - b. nutrition
 - c. smoking
 - d. alcohol use
 - e. drug abuse
 - f. psychosocial stress
 - g. depression
 - h. heavy physical work
 - i. violence/abuse
 - j. social support system
 - k. housing/living condition
 - l. food resources
 - m. transportation resources
 - n. child care resources
 - o. employment concerns
 - p. education concerns
 - q. attitudes re: this pregnancy
 - r. family planning
 - s. needs counseling/support group
 - t. other

How many prenatal patient assessments do you do each year?

How many infant/mother assessments do you do each year?

3. **Care plan development:** Required? Standard forms? If yes, provide protocol, forms.

How many care plans do you do per year?

How many perinatal care plans end with goals met?

Are care plans monitored over time and reassessed? If yes, describe system for doing this.

4. **Process for tracking prenatal and pediatric patients**

Indicate the process and who is responsible for the following activities regarding logging, review and follow-up of prenatal patients.

Do you maintain a prenatal tracking log?

Prenatal log is: (circle one) Hand written log Electronic log

Log is maintained by: _____ (name/position)

List information that is tracked on this log

(You may attach a copy of your tracking log).

Do your prenatal patients sign consent for record release from the hospital prior to delivery? Yes () No ()

How often do you receive information from the hospital? (circle one)

Never Occasionally Somewhat Regularly Always

Is someone responsible for contacting patients regarding post partum visits?

Yes () No ()

Do you have a system for tracking newborn information of babies born to your prenatal patients? Yes () No ()

Briefly describe your newborn tracking system. Use back of page if necessary.

5. **Referrals for other services:** *For each of these activities, indicate volume of referrals made, whether service is provided on site or off site, and whether there is a system for follow-up to determine success of referral.*

List: approx.#s per yr; off site organization(s) used or indicate if your organization has this service on site; system to determine success of referral (Y/N)

- a. Nutrition counseling
- b. Smoking cessation programs
- c. Alcohol abuse counseling
- d. Substance abuse counseling
- e. Psychosocial counseling
- f. Support groups (list types)
- g. Domestic violence/abuse support
- h. Housing support
- i. Food resources assistance
- j. Transportation assistance
- k. Child care services
- l. Employment counseling
- m. Insurance application assistance
- n. Pregnancy related classes (list types)
- o. Family planning services Service approx. #s per yr
- p. Parenting classes
- q. Public health nurse
- r. Other home visitor
- s. Home care nurse
- t. Other referral(s)

How many total referrals do you make per year to prenatal clients?

To post partum newborn clients?

To pediatric clients up to one year?

6. **Referrals in to your organization:** *For each of the following potential referral sources for prenatal or post-partum clients, indicate data on volume and how the referral gets to you (i.e., phone, letter, client told to call)*

Volume (# per yr) Referral method

- a. site where pregnancy test is given
- b. community clinic
- c. public health clinic
- d. other prenatal care provider
- e. hospital post partum/newborn
- f. local public health
- g. managed care case manager
- h. WIC clinic
- i. public health nurse
- j. birth certificate from MDH
- k. other (describe)
- l. outreach

To locate more clients, especially those at high risk, describe what you do and your budget for this activity.

How many prenatal clients do you get from your own outreach per year?

How many post partum/newborn clients do you get from your own outreach per year?

How many pediatric clients up to one year of age do you get from your own outreach per year?

IV. Financial Structure:

Please describe your sources of income and the approximate percentage of your budget that comes from each. Please indicate which funds are available for perinatal services including prenatal, post partum, and maternal and child health through the first year of life.

Funding source; % of budget; % for perinatal related services

- a. Federal funding
- b. State funding
- c. City/county funding
- d. Charitable donations, fund raising
- e. Private/grant/foundation funding
- f. Insurance reimbursement (which plans? commercial or PMAP? MA?, MN Care?)

Do you anticipate any change in your capacity to provide services in the near future? If so, please describe anticipated changes, either increased or decreased capacity.

Please describe any problems your agency has with reimbursement for perinatal services, especially case management/care coordination, and service integration. (You may include failed appointments or “not home not found” visits if they represent a significant loss of income.)

Does your organization have any financial concerns, past, current, or future that you would like to share with us?

V. Closing

Is there anything else that sets your organization’s model of perinatal service delivery apart from other providers of perinatal care and services in the community?

What are three recommendations you would make to improve the coordination of perinatal services?

Acknowledgement and Reference:

Population-Based Public Health Nursing Interventions: A Model from Practice by Keller, L.O., Strohschein, S., Lia-Hoagberg, B., and Schaffer, M. was used as a model to design this survey.

From Public Health Nursing, (June, 1998) Vol. 15 No. 3, pp. 207-215

Minnesota Pregnancy Assessment Form (Instructions on Reverse)

Patient's Name		DOB	Patient's County of Residence	
Patient's Address			Patient's MHCP ID # or Insurance #	Patient's Phone #
Patient's Health Plan Name	MHCP Provider ID #	Provider's Name/Clinic Name		Provider's Phone #

Please return to health plan (see training manual for address) or, if patient not enrolled in a health plan, to:
 MN Department of Human Services
 Children's Health Section
 P.O. Box 64202
 St. Paul, MN 55164-0202

Does this patient consider herself (check all that apply - optional):

<input type="checkbox"/> Caucasian / White	<input type="checkbox"/> African American / Black
<input type="checkbox"/> Hispanic / Latino	<input type="checkbox"/> Asian/Pacific Islander
<input type="checkbox"/> Native American	<input type="checkbox"/> Other: (please list) _____

EDC / / / /

M M / D D / Y Y **1ST VISIT** **2ND SCREEN**

Gestational Age _____ weeks _____ weeks

Date Screened / / / /

M M / D D / Y Y M M / D D / Y Y

	1ST VISIT	
1. Less than a 12th grade education	<input type="checkbox"/> Y <input type="checkbox"/> N	
2. Currently unmarried	<input type="checkbox"/> Y <input type="checkbox"/> N	
3. Age is < 18 or > 35 yrs.	<input type="checkbox"/> Y <input type="checkbox"/> N	
4. 1st trimester pregnancy loss, any cause (3 or more)	<input type="checkbox"/> Y <input type="checkbox"/> N	
5. 2nd trimester pregnancy loss, any cause (2 or more)	<input type="checkbox"/> Y <input type="checkbox"/> N	
6. Previous preterm labor with term delivery	<input type="checkbox"/> Y <input type="checkbox"/> N	
7. Previous preterm delivery or low birthweight baby	<input type="checkbox"/> Y <input type="checkbox"/> N	
8. Previous stillbirth	<input type="checkbox"/> Y <input type="checkbox"/> N	
9. History of cone biopsy (laser or cold knife cone)	<input type="checkbox"/> Y <input type="checkbox"/> N	
10. DES exposure	<input type="checkbox"/> Y <input type="checkbox"/> N	
11. Any history of cervical cerclage or myomectomy	<input type="checkbox"/> Y <input type="checkbox"/> N	
12. Last birth within 1 year	<input type="checkbox"/> Y <input type="checkbox"/> N	
13. Significantly underweight or overweight during prepregnant period	<input type="checkbox"/> Y <input type="checkbox"/> N	
14. During the last year prior to pregnancy has had gynecological infection (bacterial vaginosis, trichomonas, chlamydia, herpes, gonorrhea, syphilis)	<input type="checkbox"/> Y <input type="checkbox"/> N	

ENHANCED SERVICES: Check all that apply, and indicate person(s)/agencies that will be providing services.

At Risk Antepartum Mgmt. (Primary Provider: MD, CNM, DO)

Care Coordination _____

Prenatal Health Education I _____

Prenatal Health Education II _____

Prenatal Nutrition Education _____

Postpartum Follow-up Home Visit _____

	1ST VISIT	2ND SCREEN (24-28 WKS)
15. Cervix dilated > 1 cm < 34 weeks this pregnancy	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N
16. Cervical shortening < 1 cm < 34 weeks this pregnancy	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N
17. Drank any beer, wine, wine coolers, or liquor since last menstrual period ¹	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N
18. Multiple gestation this pregnancy	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N
19. Diabetes mellitus	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N
20. Uterine anomaly	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N
21. Uterine irritability requiring medication, bed rest, hydration	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N
22. Abdominal surgery during this pregnancy	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N
23. Cocaine, marijuana, benzodiazepines, or street drug use this pregnancy ¹	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N
24. Poly/oligohydramnios this pregnancy	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N
25. Has been physically, sexually, or emotionally hurt by someone ¹	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N
26. Ever been or is currently being treated for an emotional disturbance	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N
27. Felt sad or down for more than 2 weeks in the past year ¹	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N
28. Initial prenatal visit ≥ 20 weeks	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N
29. Febrile illness during this pregnancy	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N
30. Bleeding > 12 wks this pregnancy	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N
31. History of pyelonephritis	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N
32. Smoking more than 10 cigarettes per day this pregnancy	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N
33. Hypertension/preeclampsia	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N
34. Work: standing more than 4 hours/shift or heavy physical exertion	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N
35. Anemia (≤ 10 mg/dl) this pregnancy	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N
36. Inappropriate weight gain or loss this pregnancy	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N
37. Inadequate prenatal care (< 2 visits 2nd or 3rd trimester)	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N
38. During this pregnancy has had gynecological infection (bacterial vaginosis, trichomonas, chlamydia, herpes, gonorrhea, or syphilis)	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N
39. Has tested HIV positive	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N

¹ Additional questions are recommended if yes

Other risks:

At Risk Pregnancy Y N Y N

Signature of Primary Provider 1st Visit	Date
Signature of Primary Provider 2nd Screen	Date

REMINDER — Refer to WIC Services 1-800-657-3942

Copy 1 — Patient Chart

Copy 2 — Payer (2nd Screen)

Copy 3 — Payer (1st Visit)

DHS-3294 (1-97)

HOW TO COMPLETE THIS FORM

This pregnancy assessment form is recommended for use with all pregnant women in Minnesota. This form is required for all persons who receive benefits from Minnesota Health Care Programs (MHCP), which include Medical Assistance (MA), General Assistance Medical Care (GAMC), MinnesotaCare, and MHCP patients enrolled in health plans (Prepaid Medical Assistance Program [PMAP], or MinnesotaCare enrollees). The **first screening** will be done at the **first prenatal visit**, and the **second screening** will be done at a prenatal visit **around 24–28 weeks**.

Identifying information:

- Label or write in the identifying information. **Include patient's:** name, date of birth, county of residence, address, MHCP ID # or insurance #, phone #, and patient's health plan name (if applicable). **Include provider's:** name and/or clinic name, MHCP Provider ID #, and phone #. If using a label, place a label on each of the three copies of the form.
- Submit directly to the health plan for persons with PMAP or MinnesotaCare enrollees. Listed in the manual are the appropriate addresses/fax numbers for the Minnesota Department of Human Services and the participating health plans.

Completion of items:

- Indicate the race/ethnic categories. Ask the patient with which group(s) she identifies (optional).
- Complete the EDC using two digits for month, day, and year.
- Report the number of weeks of gestational age at the **first visit** and at the **second screening** between 24–28 weeks.
- List the actual dates of the screening visit using two digits for month, day and year.

Complete items 1–39 by marking an X in the appropriate box.

Other Risks: If you identify other risks, please write them in this box.

Is this an at risk pregnancy? Check "yes" if you determine this pregnancy to be *at risk* regardless of the number or type of risk factors.

Enhanced services for MHCP enrollees: Please document the services to be provided to MHCP enrollees to address identified risk factors. Check the boxes that apply, and list who will provide these services.

Signatures: Please sign and date the appropriate provider box for **each screening**.

WIC referral: Pregnant women who are on Medical Assistance and/or who are working and meet federal income guidelines can receive free nutritious food and additional nutrition counseling during their pregnancy. Please refer to WIC (1–800–657–3942).

What to do with the completed form: Retain two copies of the completed form for your patient's record. Send one copy to the payer (health plan or DHS) for the first screen. Some health plans encourage providers to **fax** a copy to expedite payment and/or begin case management. After the second screen, send the second copy to the payer. If you are referring this patient to a community health service (CHS) agency, it may be appropriate to send a copy of the form with the referral.

RISK FACTOR DEFINITIONS

Preterm	Less than 37 completed weeks gestation.	AB 2nd trimester	Spontaneous or induced abortion between 12–19 weeks gestation.
Pregnancy loss	Stillbirth, fetal demise.	Alcohol use	Any use of alcohol during current pregnancy.
Hx preterm labor	Spontaneous preterm labor after 20 weeks and before 37 completed weeks, with documented uterine contractions (4/20 or 8/60 minutes); plus ruptured membranes or intact membranes with cervical dilation of > 2 cm or intact membranes > 80% effacement; or intact membranes and cervical change during observation. Preterm labor or preterm delivery during any previous pregnancies whether or not it resulted in preterm or term birth.	Underweight/overweight	Prepregnancy weight < 90% or > 120% of Metropolitan Life Insurance Co. standards.
DES exposure	Exposure to DES (diethylstilbesterol) in utero.	Late prenatal care	First prenatal visit at or after 20 weeks gestation.
Uterine anomaly	Bicornate, T-shaped, septate uterus, etc.	Febrile illness	Systemic illness with temperature of 101°F or greater such as influenza determined by thermometer reading on two or more occasions.
Uterine irritability	Uterine contractions of five contractions in one hour perceived by patient or documented by provider without cervical change at < 34 weeks.	Bleeding after 12th week	Vaginal bleeding or spotting after 12 weeks gestation of any amount, duration, or frequency which is not obviously due to cervical contact.
Surgery	Any abdominal surgery performed at 18 weeks or more gestation or cervical cerclage at any time in this pregnancy.	Pyelonephritis	One or more diagnosed episodes in past or current medical history.
Dilation (internal os)	Cervical dilation of the internal os of 1 cm or more at less than 34 weeks gestation.	Work	Work (paid or unpaid) which involves standing more than four hours per shift or heavy physical exertion. Examples: nurses, cleaning staff, sales staff, babysitters, cashiers, laborers, etc.
Drug use	Any street drug use during this pregnancy, e.g. speed, marijuana, cocaine, heroin (includes methadone), benzodiazepines.	Anemia	Hematocrit ≤ 31% or hemoglobin ≤ 10 mg/dl.
AB 1st trimester	More than three spontaneous or induced abortions at < 13 weeks gestation. Does not include ectopics.	Inappropriate weight gain	Weight gain < 7 pounds at 22 weeks and/or weight loss > 5 pounds at any time in this pregnancy.
		Inadequate prenatal care	Less than two visits per trimester in 2nd and 3rd trimester.

EXAMPLES OF ADDITIONAL RISK FACTORS

Medical	OB History	Poor Social Situation
Thyroid disease	Infertility	Poverty
Type I diabetes	C-section	Personal or family history of abuse
Type II diabetes	Grand multipara	Incarceration
Renal disease	Perinatal loss	Homelessness
Heart disease	Assisted reproductive technology	Exposure to hazardous/toxic agents
Blood borne disease	Previa	Inadequate support system
Autoimmune disease	Abruption	Mental illness of family member
Seizure disorder		Child custody loss
Cervical cancer		Housing instability
Gestational diabetes		Violence or substance abuse in the house or neighborhood
Psychiatric disorder		
Exposure to chicken pox, rubella	Nutrition	Barriers to Care
History of DVT/ pulmonary embolus	Diet deficient in one or more food groups	Child care problems
Breast cancer	Excessive use of supplements	Cultural practices or beliefs about pregnancy
TORCH syndrome	Hyperemesis	Language different than the provider
	Food faddism	Scheduling issues
	Pica	Transportation problems
	Eating disorder	Ambivalent, denying, or rejecting this pregnancy
	Total vegetarianism	Developmental disability
		Number of children under five years of age in the home

Definition for Enhanced Services (See training manual for more complete definitions.)

Enhanced Services are a package of prenatal health services for MHCP enrollees who are determined to be *at risk* by this assessment.

At Risk Antepartum Management: Provider who is primarily responsible for care of patient.

Care Coordination: Development, implementation, and ongoing evaluation of plan of care.

Prenatal Health Education I: Instruction on general information about pregnancy, warning signs of early labor, and education about other medical conditions.

Prenatal Health Education II: Education for patient who requires additional education related to *at risk* behaviors.

Prenatal Nutrition Education: Information and support for appropriate nutritional intake.

Postpartum Follow-up Home Visit: Visit planned within the first two weeks postpartum for assessment and education.

APPENDIX 3

Hospital Survey

I. Integration of systems during pregnancy

Communication and care coordination

What information about risk factors and ongoing prenatal services do you receive from prenatal providers and prenatal home visitors when patients are admitted for labor and delivery?

Whom do you contact to obtain this type of information?

If PMAP patient, do you get a copy of the latest risk assessment form when the prenatal chart is forwarded to the delivery hospital? Do you get a copy of the care plan to address the risks identified if any?

How do you find out what happened during the last month of PNC when the patient's chart is forwarded to the hospital at 36-37 weeks? (Or earlier?)

Please describe the communication system between PNC providers, home visiting staff, labor and delivery staff.

II. Testing and treatment at the hospital during pregnancy:

Interpreters

Describe (or provide) protocols for use of interpreters for testing and treatment during pregnancy.

What training and certification do your interpreters have? What is the availability of interpreters during non traditional business hours?

Domestic Violence

Describe (or provide) protocols for domestic violence screening, assessment, interventions, and referrals when a woman is being tested or treated during pregnancy.

Smoking Cessation

Describe (or provide) protocol for assessing smoking status, interventions, and referrals when a woman is being tested or treated during pregnancy.

III. Labor and Delivery

Interpreters

Describe (or provide) protocol for use of interpreters during labor and delivery.

Domestic Violence

Describe (or provide protocol) for domestic violence screening, assessment, interventions, and referrals during labor and delivery.

IV. Post Partum Newborn Care

Interpreters

Describe (or provide protocol) for use of interpreters during post partum care and teaching.

Domestic Violence

Describe (or provide protocol) for domestic violence screening, assessment, interventions, and referrals during post partum care.

Smoking Cessation

Describe (or provide protocol) for assessment of smoking status, interventions, and referrals during post partum care and teaching.

SIDS Risk Reduction and Sleep Safety

Describe (or provide protocol) for teaching SIDS risk reduction techniques and infant sleep safety issues. Do nursery nurses model Back To Sleep? Describe (or provide protocol) for nursery sleep position for newborns.

V. Discharge Planning

Home Visits

Describe (or provide protocol) how you determine who gets a referral for a home visit after discharge.

How do you determine what type of home visitor to refer?

Please list your referral sources for home visits.

Does the home visitor meet the mother at the hospital before discharge?

What is the volume of your referrals for home visits?

Other Referrals

Describe other referrals that are made at discharge.

Please list other referral sources you commonly use.

Appointments and Other Follow Up

Are appointments made for medical follow up before discharge?

Pediatric newborn care:

Post partum care:

Does the mother have information on infant symptoms requiring immediate medical attention?

Does the mother have a number to call for advice on infant care?

For post partum care?

VI. Grief Support

Do hospital staff get grief support training at regular intervals?

Describe training or provide protocols.

Are float or temporary nurses who care for OB patients included in grief support training?

Are technicians who do testing during pregnancy included?

Describe (or provide) protocols for how technicians should respond when they determine a bad outcome.

APPENDIX 4

Data Analysis Guide

Summaries Worksheet

AGENCY: _____

I. **Services Provided** (Circle the one that best describes the agency's services.

Provide narrative or alternative if none of these fit.)

Medical OB only

Medical OB/Newborn and Family Planning

Medical OB/NB/FP with minimal affiliations with social services

Medical OB/NB/FP with some strong affiliations with social services and/or on-site social services (not including PHN)

Medical OB/NB/FP with some strong affiliations with social services and/or on-site social services, including PHN

II. **State Goals and Objectives** (Circle the one that best describes the agency's services. Provide narrative or alternative if none of these fit.)

None

Non-perinatal goals

Perinatal goals with no indicators

Perinatal goals with indicators and minimal tracking

Perinatal goal with indicators and extensive tracking

Table of Racial Mix (see IIIB too)

Table of Payer Mix (See IIIB and IV table too)

ID. Write a statement about the intended populations served as indicated by the agency's mission statement

IE. Write a few sentences describing the agency's relationships with external partners.

II. Write a descriptive paragraph for IIA & B (Coalition Building and Internal and External Collaboration)

IID. Describe provider education provided

IIG. System direction—List how things are better and worse—summarize

III B Resource Advocacy (circle Y or N)
Eligibility MA/MNCare Y / N
Application MA/MNCare Y / N
Benefit Access Y / N
WIC Y / N

IIIC. Health Teaching

Tally

Descriptive—Describe any additional information about the clinic and its health teaching that will not be captured in a tally of this table.

IIID. Brief Counseling

IIIE. Case Management/Care Coordination

IIIE. Care Plan Development and Tracking (Circle the one that best describes the agency's services. Provide narrative or alternative if none of these fit.)

None

Some patients get care plan but there is no tracking

Some patients get care plan and some are tracked

Some patients get care plan and all are tracked

All patients get care plan and are tracked

IIIE #4—Tally answers to all questions (circle) Log Y /N

Handwritten / Electronic

Who Maintains Log? _____

Information tracked

Sign consent Y / N

Hospital Info. Occasionally / Somewhat regularly / Always

Contacting Pts. Post Partum Y / N

Tracking system for newborns Y /N

IIIE #5

Tally Column 2 (ON/OFF/No Response)

Tally column 3

IIIF. Referrals In—Write approximately one sentence describing this table for the agency.

IIIG. Write a descriptive sentence or paragraph for each agency regarding its outreach activities

IV. What percent of the agency's budget (from the "percent of budget" column) is from insurance? _____

Rank the next three top funding sources:

1. _____

2. _____

3. _____

Capacity—Write a sentence describing the agency's capacity

Write one-two sentences describing the agency's reimbursement problems.

V. Write 1-2 sentences describing how this agency is a model.

List recommendations:

APPENDIX 5

Survey Findings by Site Type

Community Health Centers/Clinics Summary

Fifteen of eighteen centers responded to the survey:

- Pilot City Health Center
- Model Cities Health Center
- Southside and Green Central Community Clinics
- Family Medical Center
- Health Start
- Cedar Riverside People's Center
- West Side Community Health Services
- Fremont Community Health Services (includes Fremont, Sheridan, and Central Avenue Clinics)
- North End Health Center
- Hennepin County Women's and Children's Health Program
- Community University Health Care Center
- Indian Health Board of Minneapolis

I. Mission, Philosophy, and Scope of Practice:

All of the responding community health centers have mission statements describing a commitment to serving low income populations in a defined geographic area. Most focus on serving people at risk of having poor access to health care and who may not be insured. Twelve of the fifteen have mission statements regarding perinatal services and recognize pregnant women and infants as particularly vulnerable populations. They are committed to early prenatal care, outreach and follow up activities, and mentioned the importance of coordinating with other community agencies. They provide primary health care and refer patients in need of high risk medical care to other clinics. They are committed to serving the diverse populations in their service areas. Some centers described themselves as a "safety net" for health care in the community. They are committed both to maintaining their capacity for integrated, "wrap-around" services (all services the family needs) located under one roof ("one-stop shopping") and in maintaining community connections with other service organizations.

II. Community and System-Level Activities:

The centers/clinics reported taking pride in providing a model of health care delivery in a variety of areas. The primary areas of competence were: care for a culturally diverse group of low-income patients and the use of advocacy services to improve patient access to medical care and supportive services. Nine of the centers provide outreach to the communities they serve. A few centers/clinics have outreach workers dedicated to visiting patients in their homes when they have missed perinatal

appointments. Other outreach efforts include networking with other community-based organizations and participating in community events.

III. Client Level Activities:

The community health centers/clinics provide primary health care to women and their children, including medical care, prenatal and postpartum care, newborn and well child care, and family planning. The survey found that all fifteen centers/clinics also provide supportive services, including assistance in completing insurance applications, and assessment and/or treatment or referral for psycho-social issues, food resources, and drug/alcohol abuse. All of the centers/clinics also provide brief counseling on healthy lifestyle, coping skills, psychological support, and smoking cessation.

All of the community health centers/clinics provide services to women who are at risk for poor birth outcomes by virtue of being otherwise underserved, low income, and from diverse cultural and ethnic backgrounds. All of the centers/clinics have developed competencies in addressing the sociocultural needs of their specific communities. Most have experienced recent significant increases in the racial and ethnic diversity of the communities they serve, particularly for new immigrant and refugee populations .

IV. Financial and Capacity Issues:

Community health center respondents discussed decreases in traditional sources of federal funding impacting their capacity to provide “wrap-around” services on site. Centers are trying to work with other local health care providers and social service agencies to assure availability of and access to the services that they are lacking. However, centers acknowledged that referrals to other agencies may not be effective. Quoting a community health center administrator:

“Twenty five years of experience working with our community indicates that often our patients do not keep referral appointments. The lives of our patients are often in enough chaos that even incentives such as child care, transportation, or food coupons are insufficient to get people to keep referrals. Thus, over the years we have learned that if we do not provide the counseling or service ourselves, it often is not done.”

Nine centers/clinics reported an increased difficulty in securing sufficient levels of reimbursement to meet the costs of providing care. All of the centers/clinics report a large number of patients who are enrolled in a Prepaid Medical Assistance Program (PMAP). PMAP is Minnesota’s managed care Medical Assistance (Title XIX) program administered by the State Department of Human Services (DHS). The centers/clinics’ financial analyses of payments from PMAP indicate that they do not cover the actual costs of providing the type of comprehensive care needed to improve outcomes in their low income, often high risk population.

Nine centers/clinics stated that low reimbursement rates for services they provide was one of their primary concerns. Specifically, some centers/clinics described the difficulty they face in providing continuous care for patients who are frequently taken on and off publicly funded insurance programs by their county financial worker due to changes in their financial status and eligibility. For example, a managed care organization reported that four months was the average length of time that PMAP participants were enrolled in their plan. In contrast, a center/clinic assumes the responsibility for continuous patient care, as determined by patient needs. In the context of this report, prenatal and infant care require a center/clinic commitment of one to two years. Most of the centers/clinics reported they are providing services that are not fully reimbursed or require reimbursement from multiple payors for one pregnancy, adding greatly to their administrative costs.

Additionally, nine of the centers/clinics report seeing more uninsured patients than in previous years with incomes insufficient to pay the sliding fees. They reported that this is a problem particularly for the growing Latino population. Many Latina women are reluctant to pursue insurance coverage due to uncertain immigration status either for themselves or members of their family.

Despite the fact that PMAP reimburses for interpreters, some centers/clinics mentioned increasing need for and cost of interpreters as being a financial drain on resources. At the time of the survey (1999), centers/clinics covered the cost of interpreters for fee-for-service Medical Assistance and for their uninsured patients. Several centers/clinics have been serving the Latino and Hmong populations for many years and have good systems in place for doing so efficiently. Providing interpretation for newer immigrant groups such as African immigrants has been an additional challenge of cost and capacity for the centers/clinics.

The issue of failed appointments was listed by five centers/clinics as a major source of lost revenue. Some overbook appointments to compensate. However, when all the patients do show up, the results are longer waiting times for patients and increased stress for rushed providers.

V. Community Health Centers/Clinics' Recommendations:

1. Increase the technological capacity of centers especially in terms of automating functions and in recording data that can be used across systems.
2. Create a system for the centers to be able to learn best practices from each other.
3. Create a list of resources (especially culturally specific and appropriate resources) that would be available to all clinics.

4.. Disallow global billing for high risk patients; assure presumptive eligibility for insurance for these cases.

5. Expand funding for outreach and supportive services.

6. Develop more consistent prenatal assessment and documentation forms and procedures for providers.

7. Provide better access to and reimbursement for interpreters.

8. Devise solutions for failed appointments and long patient waiting times.

9. Assure stable funding for community health centers in order to keep basic programs afloat. Coordinate and educate payors that community health centers need infrastructure support.

10. Devise ways for centers to maintain more direct contact with the services to which they refer patients.

PUBLIC HEALTH NURSING SERVICES SUMMARY

The three agencies providing public health nursing in Hennepin and Ramsey Counties completed the survey:

Minnesota Visiting Nurse Agency (MVNA)

St. Paul - Ramsey County Department of Public Health

Bloomington Division of Public Health

I. Mission, Philosophy, and Scope of Practice:

All three agencies reported that their mission is to serve low income, disadvantaged families. All report having strong formal and informal connections and collaborations with other community organizations and have large networks of potential referrals for families in need of additional services. Services to individual families appeared to be based on a shared professional model of comprehensive public health nursing practice, using assessment, plan development, intervention, health education, referral and follow up. The following quotes from the survey further illuminate how the agencies perceive their mission:

“Our public health staff build on family-focused, community-based principles in delivering services to perinatal clients. Staff are skilled in working with families who have complex social needs and use multiple resources in the community to help meet those needs. Staff are also able to address sensitive family issues such as chemical use, violence, and other complex situations. The focus is on prevention and early intervention.”

“Our agency serves primarily a high risk population, ie, increased perinatal risk factors due to socioeconomic status, age, race, etc. We have attempted to maintain the mission of serving families regardless of financial means or payment source.”

II. Community and System Level Activities:

All three agencies provided many examples of coalition building around a common health-related purpose. Most coalitions involved other public health organizations; some were with health care and managed care organizations.

The agencies listed examples of internal and external collaborations to share information and resources and to develop policy and advocacy for health-related community issues. Examples are lead poisoning prevention, violence-free families and communities, child abuse prevention, chemical health programs, child injury prevention, and follow up for graduates of neonatal intensive care. Family Services Collaboratives were mentioned as partners, as were schools, health care organizations, and social service providers. Additional collaboration among the public health nursing agencies takes place through the Maternal and Child Health (MCH) Coordinators meeting.

Differences in Referral Services

There are differences in referral sources between the three agencies. Most of Bloomington’s referrals are postpartum and are initiated from information on birth certificates sent by MDH several weeks after the delivery. Additionally, large numbers of referrals come from Bloomington’s Women, Infants, and Children Program (WIC) and WIC clinics which work closely with the county public health nurses. MVNA’s referrals primarily come from a single hospital—Hennepin County Medical Center—as postpartum newborns. Only a few, as confirmed by the community health centers/clinics themselves, come directly from the centers/clinics. In Ramsey County, the largest number of referrals come from Regions Hospital, but a significant number also come from the community health centers/clinics and from the county’s WIC clinics.

MVNA serves approximately 500 pregnant women annually and 1700 post partum women. About 1900 newborns and infants up to the age of one year are provided services.

Bloomington serves about 200 pregnant women annually but specified they provide case management/care coordination to 76 women annually. Approximately 100 of their 200 pregnant women are served by public health nurses working with them in the WIC clinics. They serve 130 postpartum women and infants plus about 500 infants are identified as high risk annually from birth certificates and receive some additional follow up activity.

St. Paul – Ramsey County serves 380 pregnant women and 960 newborns and infants to age one through home visiting annually.

In total, approximately 1,000 pregnant women are served by public health nursing in Hennepin and Ramsey Counties annually. Comparing this to the estimated 8,000 to 9,000 low income births occurring annually in the two counties¹, it may be that a large number of pregnant women at risk for a poor birth outcome may not be reached and offered coordinated care by a public health nurse. Although many more infants are served by public health nurses—about 2600 annually—the opportunity for preventive activities and education by public health nurses during pregnancy are missed in over two thirds of these births.

III. Client Level Activities:

Public health nurses in the three agencies use written care plans and goals developed with input from families. Two of the agencies have a quality assurance method of determining whether preset goals were met, based on random chart audits of a percentage of cases that have been closed by the nurse. Beyond these audits by the quality assurance staff, the ability to report outcome data was limited to reports to agency funders on how their money was used in particular programs.

The agencies provided all of the components of health teaching, brief counseling, and care coordination/case management in the survey instrument. All three agencies at the time of the survey (May-June, 1999) were using paper records.

IV. Financial and Capacity Issues:

Public health nurses perform case management/care coordination based on risks they assess with patients who are referred to them. Except for Bloomington, which does outreach through its WIC clinics, they appear to have limited internal capacity for outreach and have difficulty serving the number of patients referred to them. (See Community Update in the Discussion section for increases in home visiting capacity since the survey was administered.) The agencies report that 15 to 20 percent of attempted home visits are not completed because the client was not at home when the nurse arrived. These visits are not reimbursable. Other problems identified include much administrative time spent on securing reimbursement, providing their own interpreters, and using antiquated data and technology systems that hamper their ability to manage cases and report on the effectiveness of what they do.

Reporting of overall service levels and outcomes in the entire population served was not possible. Agencies described data systems that are inadequate for population-based reporting needs. Only one of the three agencies was able to track where referrals to the agency originate, the number of referrals coming from a particular source, and referrals out of the agency to other resources. Another agency could report overall referrals in and out but could not specify type of client receiving the referral.

Public health nursing respondents identified the following financial and reimbursement problems:

Footnote

- 1 Forty percent of all births in the two counties are to low-income women. Minnesota Department of Human Services, personal communication.

“Medical Assistance reimbursement rates have not kept up with escalating costs of providing professional services. Factors such as the increasing acuity of families’ needs, the complexity of the health care delivery system, the high rate of violence and chemical use, and high numbers of residents who are illiterate or non English speaking; these factors require staff to spend much time coordinating care with no reimbursement.”

Reimbursement for service coordination to pregnant women who are mentally ill was discussed as a serious challenge to one agency’s resources.

“Public health nurse agencies face high staff turnover and the high costs of orienting, training, and certifying staff.”

“Obtaining authorization for third party reimbursement continues to be complex and time consuming. Turnover at managed care companies means public health nurses must often orient new managed care staff on the public health nurses’ processes and procedures.”

“Care coordination by public health nurses during pregnancy or for infants and children is not reimbursed either by PMAPs administered by health plans or by fee-for-service Medical Assistance administered by DHS.”

“New home visiting and parent support research demonstrated the effectiveness of public health nursing home visiting services. However, third party payers are not authorizing payment for these types of services. Limited grant money is available for pilot projects of this type.”

V. Public Health Nursing Agencies’ Recommendations:

The three public health nursing agencies recommended the following to improve perinatal services:

1. Pay for care coordination, especially during pregnancy, even if there is no “medical necessity” as required by payors.
2. Improve access to consistent health care throughout the perinatal period by maintaining the same medical insurance and clinic.
3. Use prompt and family-friendly transportation services, not metro buses.
4. Use public health nursing services for coordination of perinatal services. Fully fund public health nursing services without excessive paperwork and phone calls.

5. Address disparities in health outcomes through community-based partnerships of state and local public health, service providers, and community members.

6. Improve cultural competence and responsiveness to individual situations within systems of care.

7. Promote policy changes at state and local levels to acknowledge and support public health nursing services financially to coordinate care for at-risk pregnant women, families, and infants.

HOSPITAL AND HEALTH SYSTEM SUMMARY

Four of the five metro health plans responded to the initial survey:

Blue Cross/Blue Shield

Health Partners

Metropolitan Health Plan

U Care Minnesota

Medica provided information for the report in the summer of 2001, following the meetings arranged by the Minnesota Council of Health Plans. All five health plans provided information to clarify their activities, and to give updates, upon reading an initial draft of the report in Spring, 2001. Their clarifications are included at the end of this section.

Nine of the twelve hospitals located in Hennepin and Ramsey Counties responded:

Abbott Northwestern Hospital

Minneapolis and St. Paul Children's Hospitals

Fairview Southdale Hospital

Fairview University Medical Center

Hennepin County Medical Center and OB Clinic

Regions Hospital

St. John's and St. Joseph's Hospitals (HealthEast)

I. Mission, Philosophy, and Scope of Practice:

Four of the five health plans responded to this question. One health plan noted that they do not have a formal mission statement specifically for prenatal care. The company's overall vision and mission statements are:

"We will be the health system of choice in the communities we serve. It is our mission to ensure access to quality services which are valued by the customer."

"(Health plan) will improve the health of our members through innovative services and partnerships across communities."

"To improve the health of our members and our community."

Vision: "To be the recognized leader in improving the health of the communities we serve." Mission: "To provide an excellent health care experience for our customers."

The hospital survey did not ask for information about their mission statement.

II. Community and System-Level Activities:

Perinatal care coordination is performed by case managers at the health plan or at the hospitals. The case managers' duties, manner and scope of interventions vary widely across the different hospitals, plans and systems. Except for one plan, case managers reported seeing their role as interacting and coordinating among providers, as opposed to having regular contact with patients. The reason noted for this is to minimize confusion for the patients. When care coordinators reported contacting patients, it was always done by phone.

Three hospitals have case managers who have spent significant time building relationships with the physicians who attend the majority of the deliveries at those hospitals. These relationships have led to better coordination of information between the case managers and the physicians during prenatal care, and increased the follow-up case managers do during pregnancy based on assessed risks.

All health plans and hospitals reported offering some level of referral to social services. Coordination of follow-up for social issues addressed in prenatal assessment varied widely. For one plan and one hospital, these referral links appeared to be much more comprehensive in scope, and there was evidence of significant administrative capacity for this type of role. Overall, the hospital and health plans reported using care coordination standards and processes that are primarily designed to identify and respond to medical risk factors. Given this, great variation exists between different hospitals and health plans regarding the degree to which system capabilities to address social risk factors are integrated into their processes. When social risk factors are addressed by care coordinators, this is done by telephone as opposed to in-person.

One hospital and one health plan serving specifically high-risk, low-income and/or Medicaid populations reported having more extensive organizational structures and processes in place for providing perinatal care coordination. The other four responding health plans reported having somewhat different system capabilities for PMAF populations.

One health plan stands out among others for the extent to which it reported providing a significantly expanded capacity for provision of perinatal care coordination services. This plan reported reimbursing providers for both the initial and follow-up completion of the MPAF, and regularly uses public health nursing visits to address and coordinate the care of prenatal patients. Another plan stated that care coordination services are widely available within its provider network, and that the plan provides additional coordination services only to "fill in the gaps." A third plan reported that

case managers contact all pregnant patients deemed “at risk,” and that all State Public Program members are included in the “at risk” category.

All hospitals reported receiving prenatal clinical records via fax at regular points in prenatal care. Faxes are also used to receive the current record if a woman presents at the hospital and current records have not been received from the clinic.

Although under DHS guidelines plans could reimburse public health nurses for visits done prenatally, only one plan reported doing so. Hospitals reported that, when used, public health nurses generally take over home visitation after a health plan no longer covers the visits. Except for one hospital and one health plan, staff working on perinatal care coordination did not have consistent or extensive knowledge of how and when to access public health nursing services. One health plan noted that despite continuing problems or issues for the mother or family, care often drops off dramatically after the baby’s birth.

III. Client Level Activities:

Four health plans reported having developed patient incentive systems for patients to begin prenatal care early, continue care throughout pregnancy, attend prenatal classes, and keep their post partum appointment. Financial incentives are usually in the form of gift certificates.

Three health plans reported providing written materials to their prenatal patients in the form of a pregnancy information and resource packet. These packets provide information about medical expectations during pregnancy, list offerings of prenatal classes, and sometimes contain informational brochures about additional resources such as smoking cessation classes.

One health plan and two hospitals noted they face an increasing challenge to provide services to a growing population of patients who do not speak English. Six hospitals stated that interpreters are available throughout care, and that AT&T interpreter services are used as a back-up. They also commented on the additional time required to serve non-English speaking patients.

All hospitals reported that discharge planning includes informing new mothers of conditions needing immediate medical attention, and providing a phone number for the mothers to call.

Five hospitals reported offering some form of follow-up after discharge regarding breastfeeding issues. The type of follow-up ranged from phone contact to offering breastfeeding clinics.

Four hospitals reported that social workers are sometimes used for post-discharge follow-up on families with complex social and behavioral issues.

Four hospitals reported that new mothers in the hospital are told when they need to see their doctor and their pediatrician for follow-up, but the appointment is not made at the time of discharge and hospitals do not do follow-up on postpartum or newborn appointments. One hospital does make the newborn and postpartum visit appointments.

Six hospitals reported that they offer new mothers one postpartum home visit. These visits are most often provided by hospital home visiting programs or by home visiting agencies approved by the women's insurance. Less frequently, these visits are done by public health nurses. The determination of who does the home visit is almost always dependent upon the payer.

IV. Financial and Capacity Issues:

Health plan respondents to the survey did not report data on the financial status of the health plans. The staff responding to the survey presumably did not have knowledge of their plan's financial status. (The survey staff made no additional efforts to obtain financial information from the plans, but some health plan financial information from other sources is included in the Discussion section of this report.) The hospital survey did not ask for financial information.

V. Hospital and Health Plan Recommendations

One hospital and one health plan submitted recommendations to improve perinatal services. The hospital recommended a need for more space. The health plan respondent recommendations were:

Provide consistent and comprehensive health care coverage early and throughout pregnancy.

More effective and timely communication among care team members, especially between prenatal care staff and infant care staff, would promote family health, especially for at-risk families.

Develop a centralized information resource for prenatal/infant health education tools designed for clients whose primary language is not English.

Clarifications/Additions

In summer, 2001, a draft of this report was discussed with health plan representatives at the Minnesota Council of Health Plans. Some of their comments have been integrated throughout the report. One overall comment was that some of the surveys were completed by people who did not have the full picture of the plans' care coordination/case management activities. Below are comments from each health plan to provide clarification in their own words about the services they provide.

Blue Cross / Blue Shield

“Blue Plus provides ‘Healthy Start,’ a prenatal program for MinnesotaCare and PMAP members. Healthy Start is a telephonic case management program designed to educate and support pregnant women and their health care providers. Healthy Start nurses, trained in obstetrics, work with expectant mothers and their doctors to detect and reduce risks. The program is designed to be consumer friendly with easy access. Two fifty-dollar gift certificate incentives are utilized to encourage expectant mothers to enroll early in the program and continue participation in the program through childbirth and the six-week post-natal examination. MinnesotaCare members must also submit a completed Pregnancy Verification form to receive both gift certificates. Healthy Start is completely confidential and voluntary.

“The program includes a comprehensive initial assessment of medical and psychosocial risk factors, incorporating the MPAF risk assessment. Risk factors are reassessed monthly and an individualized care plan is developed. Telephonic counseling, support and education is supplemented with additional personalized education materials. The case managers provide linkage between primary care providers and the completion of referrals to community resources including public health nursing, WIC, support groups, and specific education programs. Members are also referred to the Blue Cross smoking cessation program, health promotion services, and car seat program. Additional case management services are provided to women with complex perinatal needs, including benefit management services.

Finally, Blue Plus has implemented protocols to streamline public health/home health agency referrals and submission of MPAF records to DHS for participating health providers.”

HealthPartners

“Minnesota Pregnancy Assessments Forms (MPAF): Health Partners requires providers to complete the MPAF form for all women. Forms for women on state public programs are then sent to Health Partners where the information is data entered and electronically submitted to DHS. Health Partners currently uses this information to identify high-risk pregnancies and pregnant women who smoke.

Prenatal Tobacco Cessation Project: When pregnant women are identified as a tobacco user, they become part of HealthPartners prenatal tobacco cessation project. A Health Educator for the Partners for Better Health (PBH) Phone Line calls the identified members. The Health Educator will make three attempts to reach the member. If they are unable to reach the member, a letter and PBH Phone Lines Programs brochure will be mailed. The letter contains information about the health benefits of smoking cessation and related HealthPartners resources. If they are able to reach the member and the member declines tobacco cessation information/education, a follow-up letter and brochure will be mailed. If the member is reached and would like

tobacco cessation information/education, the Health Educator will review the member's options and get them linked with the resource. A letter, brochure, and tobacco cessation information is sent to the member. Pregnant members requesting tobacco cessation support will receive one-to-one counseling. *It should be noted that the MPAF defines tobacco use as 'smoking more than 10 cigarettes per day.' With this definition there may be many tobacco users that go unidentified. Because of this, HealthPartners has decided to send all Public Programs members, who are identified as being pregnant via the MPAF, a letter and brochure about tobacco cessation.

Prenatal/Postnatal Incentive Program: HealthPartners offers a clinic-based prenatal/postnatal incentive program. Women enrolled with specific clinics are eligible to receive a \$5.00 Rainbow Foods gift certificate at the time of each prenatal appointment. The clinics have the gift certificate on-site and then distribute them directly to the member. When the member has completed all scheduled prenatal appointments and delivers, they are eligible to receive a \$75.00 Target gift certificate for completing their postnatal visit within six weeks of delivery.

HealthPartners Case Management: The Case Management Department at HealthPartners calls pregnant HealthPartners Medical Group (HPMG) members who will be delivering at Fairview University Riverside or Regions, around the 32nd week of gestation to discuss the discharge plan and potential referrals that could be helpful before delivery. This provides an opportunity for Case Management to gather information and answer any questions the member may have about the delivery and post delivery concerns. Any clinical questions the member may have are directed back to the clinic. All members who deliver at Fairview University Riverside and Regions are followed through discharge."

Medica

"Maternal case managers provide education, answer any questions and concerns the patient may have, coordinate with health care providers if additional services are required, and provide links with social workers, community resources and interpreters when needed. State Public Programs employs Social Service Specialists as does the case management area to assist clients and make referrals to community agencies regarding non-medical issues. Membership health promotion initiatives coordinated through Medica's Populations Health Department seek to emphasize healthy lifestyle adoption in the areas of nutrition, exercise, avoidance of destructive habits (i.e. smoking, substance abuse) and violence prevention." (Medica confirmed that most contact is made by telephone or mail.)

Metropolitan Health Plan

"'Women In Need' (WIN) Program is a program for public program members who have a high risk pregnancy. Participants who are seen the recommended number of times per trimester and follow their physician's recommendations receive an incen-

tive for that trimester. Participants who need other items (i.e. cribs, car seats, or furniture) are referred to First Call for Help for a variety of sources to help them obtain those items. Those who do not have access to a phone, may qualify for MHP's Cellular Phone program. MHP provides cellular phones that allow members to call a doctor, a nearby relative or friend, social services, or 911. We also inform these participants of the Minneapolis Way to Grow program. At delivery, participants are given a diaper bag with items they can use for the baby. They are also approached about Child and Teen Checkups and registering their child in the BabyTracks and the Follow Along Program. All pregnant members are eligible to use our phone-based Smoking Cessation Program free of charge. Members delivering at HCMC are given a diaper bag with items they can use for the baby. Many of our members sign their children up for the programs."

UCare Minnesota

"The goal of UCare Minnesota's Management of Maternity (MOM) program is to identify pregnant members early and offer them resources they need to experience safe pregnancies and deliver healthy babies. MOM provides: telephonic assessment and education at each trimester for early detection of high-risk factors; assessments of members' needs and identification of social support systems to help meet those needs; and education and coordination of services for high-risk members. MOM also offers the following services to pregnant members: a prenatal care incentive program, assistance with referrals for mental health/chemical dependency assessments; incentives to attend prenatal and childbirth education classes; individualized smoking cessation programs; information about UCare's breastfeeding pump program; information about UCare's car seat program; and public health/home care services."

APPENDIX 6

EXAMPLES OF EFFECTIVE PERINATAL CARE COORDINATION

Dr. Charles Oberg, Chief of Pediatrics at Hennepin County Medical Center, commented in a recent editorial in *Minnesota Medicine* on the system fragmentation faced by high risk families. He advises undertaking a focused, interdisciplinary, and coordinated approach stating: "As a community, county, and state we should regularly collaborate to plan coordinated interventions." (Oberg, 2000) Essential components of this coordinated approach include:

- Interdisciplinary training
- Interagency planning and assessment
- Cultural competency and understanding
- Community involvement in health care
- Patient advocacy

Clearly, addressing infant mortality among the Twin Cities' diverse communities and high-risk families requires systems that communicate well and work together to address each patient's individual needs. Working examples of coordinated care during pregnancy and infancy follow:

The Nurse-Midwife Service at Hennepin County Medical Center

Survey results from community clinics and hospitals often cited nurse-midwives as the primary providers in the continuum of care during and after pregnancy and were interviewed about their practices for this report. The nurse-midwifery model of care incorporates all of the essential factors of primary care and case management/care coordination. Their care includes preconception counseling, care during pregnancy and childbirth, and postpartum follow-up. The model provides assessment and referrals as appropriate for the woman and her family. Such care is inclusive and integrated with the woman's cultural, socioeconomic, and psychological factors that may influence her health status. The model ensures communication and care coordination between clinics and hospital. All pregnant women are assessed using the Minnesota Pregnancy Assessment Form (MPAF).

While in the hospital, based on needs identified during the prenatal period, families are visited by a social worker. Early Childhood Family Education and a public health nurse home visit are offered to everyone. Other possible referrals as needed include lactation consultation, medical care, and care and resources for newborns with special needs.

Appointments are made at hospital discharge for the newborn and postpartum visit. The postpartum discharge packet given to all new mothers includes information on

infant symptoms requiring immediate medical attention, a number to call for advice on infant care and postpartum questions.

The nurse-midwifery model meets the challenge many practice systems are striving to achieve—an integrated continuum of care that provides for collaboration, consultation, and referral for medical and obstetrical complications as well as for psychosocial or financial needs better served by community agencies.

Prairie Regional Health Alliance: Successful Use of the MPAF

A twenty county region in southwest Minnesota received foundation funding to support the implementation of a systems approach to pregnancy and birth. This approach focuses on early initiation of prenatal care, consistent prenatal education, risk assessment and referral using the MPAF for all pregnant women, timely interventions for at risk women, effective use of community resources, and timely and effective communication among providers of prenatal care and other service providers. This project, known as the Southwest Minnesota Integrated Prenatal Project, has required close collaboration and interdisciplinary training and communication between health care providers, hospitals, public health, health plans, and social services. Although the project was initially implemented to focus on early prenatal care and coordinated services throughout pregnancy and birth, the project's patient-centered model, the *Circle of Life*, also includes family planning, preconception care, and early pregnancy recognition components.

This project effectively uses the MPAF as a risk assessment, intervention, and care coordination tool for all pregnant women. With signed consent of the pregnant woman, primary care providers forward completed MPAFs to public health nurses who provide early prenatal education, offer labor/delivery education opportunities, and referral to community resources. Additional interventions are based on identified risk factors and become an individualized plan of care with the pregnant woman. The MPAF becomes a communication link among providers during pregnancy, and is also a source of population-based data for determining prevalence of risk factors, demographics, and birth outcomes that are specific to clinics and sites of delivery as well as county and regional aggregate data.

Ultimately, this systems approach to pregnancy and birth expects to demonstrate improved quality and consistency of care and improved outcomes among the annual 2000 births in the region. This project is an example of organizations coming together in a partnership to create a better perinatal system of care coordination and measures well against the Survey Framework standard of this report.

The Circle of Women

The Circle of Women is an advocacy program for high risk pregnant women in its third year in Minnesota. Programs are active at two community health centers in

Minneapolis and on an Indian Reservation in northern Minnesota. The program provides ongoing case management and counseling to pregnant women for issues such as chemical dependency, domestic abuse, housing, and family planning as well as medical and perinatal issues. The advocates follow the women for three years. Many of these higher risk mothers need that long term support to begin a more self-sufficient and healthy lifestyle for themselves and their children.

The advocates have found that the system is unprepared, at best, to deal with the needs of their clients. It is extremely difficult to get housing that is safe and affordable. It is almost impossible to qualify for an effective period of chemical dependency treatment, and more impossible to have their children with them during that time.

The advocates are the central point from which the women can understand and access resources in the community when they are available, and to help challenge the system when necessary.

Without this kind of case management, the health care community cannot expect to impact the complex issues surrounding the life styles of low income high risk women. What happens to pregnant women and their newborns is much more than whether or how often they make it to the clinic or had a nurse visit. It is about making it possible for them to make health care a priority in their lives.

Turtle Women Doula Project, Ramsey County

“Doula” is a word of Greek origin referring to a woman caregiver of another woman. Currently, it describes an experienced and trained laywoman who provides continuous physical, emotional, and informational support to a mother during labor and delivery. (Scott, Klaus & Klaus, 1999) Locally, the Turtle Women Doula Project of the American Indian Family Center in St. Paul serves American Indian pregnant women in Ramsey County with culturally appropriate service delivery. Working with the Community Health Nurse, the Turtle Women doulas enable pregnant women and their families to identify their strengths and to reconnect with traditional American Indian cultural practices that promote healthy pregnancy, birth, and infancy. During pregnancy, the doula translates medical advice from the clinic into clear language and teaches comfort techniques to use during labor. The doula attends the labor and delivery to support the mother and reduce her fears and stress, sometimes helping to avoid medical intervention in childbirth. The doula advocates for the mother to hospital staff helping to enhance communication and bridge cultural gaps. After birth, doulas support and educate new parents and help identify signs of postpartum blues or depression. The Turtle Women Doula Project is a community-based strategy to reduce the disparity in infant mortality experienced by American Indian families.

Washington's First Steps Program

In August, 1989, the state of Washington implemented their First Steps program of enhanced services to Medicaid maternity patients. It includes obstetric care, public health nursing, nutrition and psychosocial counseling, childbirth education, and case management for high risk women. First Steps provides preventive health services including assessment, education, intervention, counseling, and childbirth education provided by an interdisciplinary team of public health nurses, community health workers, nutritionists, and psychosocial workers. The Washington State Department of Social and Health Services' Office of Research and Data Analysis performed a statewide evaluation of the program. It found that program implementation was correlated with decreased rates of inadequate prenatal care, decreased rates of low birth weight, and decreased rates of infant death. It also found that for every \$1.00 spent on First Steps, \$2.03 in future costs was avoided. (Perry & Ullman, 1996)

North Carolina's Baby Love Program

North Carolina implemented maternity care coordination, the Baby Love Program, which is aimed directly at eliminating the barriers to client use of services. All pregnant women certified for Medicaid are eligible for care coordination without need for further risk identification beyond that of low income status. Although it is a statewide program, it was implemented in stages providing an opportunity to compare the effect of the program on certain pregnancy outcome indicators with women who participated versus matched women who did not. Care coordinators provided their services full time, and placed special emphasis on nutritional, psychosocial, and resource needs. Women who did not receive these services had a low birthweight rate that was 21% higher, a very low birth weight rate that was 62% higher, and an infant mortality rate that was 23% higher. It was estimated that each dollar spent on maternity care coordination saved \$2.02 in Medicaid costs for newborns up to 60 days of age. (Buescher, Roth, Williams & Goforth, 1991)

Rhode Island's Rite Care Program

When Rhode Island implemented Medicaid expansion for pregnant women and children and Medicaid managed care they determined that efforts beyond simply increasing eligibility for insurance would have to be undertaken. The five health plans collaborated to develop the Rite Care Program which implemented a number of measures to improve rates of early and adequate prenatal care. Assuring that each participant had a "medical home" was their first priority. Additional activities included: reducing barriers to enrollment, allowing patients to continue care with their current provider regardless of the provider's plan affiliation, outreach to women of childbearing age, assuring prenatal appointments in the first trimester or by three weeks following a positive pregnancy test, assuring patient transportation and implementing one system for all five plans, and conducting a media campaign for Rite Care, not for individual health plans. Rhode Island birth certificate data confirmed that this cooperative program among plans was successful in improving adequacy of prenatal care

utilization by Medicaid patients. Ongoing monitoring will continue to determine Rlte Care's effect on prenatal care and birth outcomes. (Griffin, Hogan, Buescher & Leddy, 1999)

Appendix 6 References

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**Minneapolis Department of Health and
Family Support**
250 South Fourth Street, Room 510
Minneapolis, MN 55415

Minnesota Department of Health
P.O. Box 64882
Saint Paul, MN 55164-0882