

# Early Findings

The overall goal of Fetal and Infant Mortality Review (FIMR) programs is to enhance the health and well-being of women, infants and families by improving the community resources and service delivery systems available to them. While FIMR has been in existence for more than a decade, and there have been a number of case studies and anecdotal reports of its value in improving perinatal health services delivery systems, a systematic nationwide evaluation of its impact in the community has not been previously conducted. In 1996, the federal Maternal and Child Health Bureau (MCHB) awarded funds to the Women's and Children's Health Policy Center (WCHPC) at the Johns Hopkins University to examine FIMRs nationwide and their impact on perinatal health care systems.

Since 1984, the MCHB has maintained a commitment to implementation of FIMR programs as a community strategy to assess and strengthen the resources that support and promote the health and well-being of women, infants and families. This effort has been aided by collaborations with several key partners including the American College of Obstetricians and Gynecologists (ACOG), the Robert Wood Johnson Foundation, and the March of Dimes Birth Defects Foundation. FIMR programs bring together community members to review information from individual cases of fetal and infant death in order to examine the social, economic, cultural, safety and health systems factors that are associated with them. Based on the review findings, FIMRs make recommendations for interventions and policies that address these factors, participate in or facilitate implementation of the recommended strategies and policies, and assess their progress (NFIMR, 1998).

In consultation with experts from across the country, the WCHPC designed a cross-sectional, observational evaluation to: 1) investigate the different policy, program and practice effects of FIMR; 2) identify the key factors contributing to the effectiveness of FIMR in improving community resources and service systems; and 3) explore the implications of FIMR programs for maternal and child health practice in relation to public MCH functions. Because FIMR often involves population health assessment, policy development, and assurance, the framework of public health functions, as outlined for MCH populations (Grason and Guyer, 1995), provided a means by which to identify the "value added" of FIMRs. This was accomplished by comparing communities with FIMR programs as well as other perinatal systems initiatives in relation to the level of public health activities commonly undertaken in all localities nationally.

The WCHPC gathered information primarily through telephone interviews with local health department officials, FIMR directors, and the coordinators of other Perinatal systems Initiatives (PIs). Examination of communities in which PIs have been active — with and without FIMR programs — provided a more complete assessment of the contributions of FIMR in comparison with other community efforts. It also provided information about the effects of FIMR when other perinatal health systems programs were present in the community. The WCHPC conducted a small number of case studies to augment the structured telephone interviews with more qualitative data, providing a more thorough understanding of FIMR programs within their community contexts. Presented here are the early findings of the WCHPC study. A companion document, *The Evaluation of FIMR Programs Nationwide: FIMR Program Structure, Organization and Process*, provides basic descriptive information about the FIMRs studied.

### Definitions and Eligibility Criteria

A **FIMR** was broadly defined for the evaluation to include programs in which an interdisciplinary group met to discuss cases of fetal and infant deaths (some groups only included infant deaths) with the intent of facilitating systems changes, irrespective of program design.

A **Perinatal systems Initiative (PI)** was defined as a broad-based, collaborative, community-oriented activity involving multiple processes (e.g. assessment, planning, policy development), partnerships and program strategies to improve perinatal health. Healthy Start is an example of a PI. Programs that functioned only to provide services to individuals, such as WIC, home visiting and single site prenatal provider programs were not considered to be PIs.

For the purposes of the evaluation, FIMR programs and PIs must have begun prior to June 30, 1998 and have been operational for at least one year between January 1, 1996 and December 31, 1999. The frame of reference for the questions in the interview was the past four years, even if the program was not in existence for the entire four-year period.



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## Bolstering Community Efforts for Perinatal Health

**The study results show that FIMR programs contribute significantly to improvements in systems of health care for pregnant women and infants through enhanced public health activities in communities.** As noted above, given FIMR's goals and objectives, the evaluation employed a broad framework in which to examine the "value added" of FIMR programs, with a focus on public health (MCH) functions and the development of recommendations for systems changes in perinatal health. **There were five areas in which health departments in communities with a FIMR were more likely to report public health activity as compared to health departments in communities without a FIMR:** 1) data assessment and analysis; 2) client services and access; 3) quality improvement for systems of care; 4) partnerships and collaboration; and 5) population advocacy and policy development.

Significant contributions to these public health activities were also observed where perinatal health initiatives existed that were not FIMRs. Importantly, the study results also suggest that synergy exists between FIMR and non-FIMR perinatal health initiatives in enhancing the MCH functions.

### FIMR-Specific Influences

The results described here are from interviews conducted with MCH professionals in local public health agencies. FIMR communities are compared with communities without a FIMR.

*Data assessment and analysis.* Health agencies in communities with a FIMR were 2 to 3 times more likely to undertake a number of data collection and analysis activities as compared to those in communities without a FIMR. While these activities predominately related to pregnant women and infants, local health agencies in FIMR communities also were about 2 times more likely to report using a client database specific to nonpregnant women of reproductive age.

*Client services and access.* Health departments in communities with a FIMR program were more likely to be engaged in activities involving provision of client services and access to appropriate care, specifically with respect to use of common risk assessment instruments for pregnant women. These communities also were more than twice as likely as communities without a FIMR to have tracking systems to follow up on high-risk infants. In communities with a FIMR, health departments were 2 to 3 times more likely to support or offer outreach activities for prenatal care such as information and referral services, home visits, and public awareness and media campaigns. Grief support was another type of service receiving significant attention in public health departments in communities with FIMRs.

*Quality improvement for systems of care.* Public health agencies in FIMR communities were more than twice as likely as those with no FIMR to report initiating or advancing changes in existing local or state regulations and policies promoting the health of pregnant women. Similarly, these agencies were more than 2 times as likely to lead or participate in the development of population-based standards of care for pregnant women and infants, and were even more likely to be involved in certification

and quality improvement activities specific to facilities or providers of care to women and infants.

*Partnerships and collaboration.* Compared to those without one, health departments in FIMR communities were more than twice as likely to participate in a coalition of local agencies or citizens to advocate for the health or health needs of pregnant women. In FIMR communities, local health departments (LHDs) also were nearly 3 times as likely as those in communities without a FIMR to work with the local ACOG section to advocate for all 3 populations — pregnant women, infants, and nonpregnant women of reproductive age.

*Policy.* Where FIMR programs existed, health departments were more than 3 times as likely as those without a FIMR to report participating in or collaborating with initiatives or programs undertaken by other community groups, and providing them expertise specific to perinatal health concerns. LHDs with a FIMR also were more than twice as likely to produce or disseminate reports about progress in meeting local goals and objectives related to perinatal health, as well as to produce a plan to systematically address priority health problems of pregnant women.

### Perinatal Initiative (PI)-Specific Influences

The evaluation team also compared communities with a Perinatal systems Initiative (PI) other than FIMR to communities without such initiatives, regardless of the presence of FIMR. *Differences in local health department activity between communities with and without PIs were found in the same broad function areas in which differences were noted for FIMR communities.* However, since each MCH function encompasses a number of activities, differences seen for communities having PIs were not always the same specific ones noted for FIMR communities (Table 1).

Health departments in communities with a perinatal initiative (PI) other than FIMR were 2 to 3 times more likely to conduct a number of data assessment and analysis activities as compared to communities without a PI. Again, like FIMRs, these activities predominately related to pregnant women and infants, but LHDs in communities with a PI were also about 2 times more likely to report compiling data for a needs assessment for nonpregnant women of reproductive age. This latter finding is in contrast to the comparisons for FIMRs in which there were no differences between communities with and without a FIMR in the frequency of LHD reporting needs assessments for nonpregnant women.

As in FIMR communities, quality improvement is an area of considerable activity in communities with a PI. Health departments in communities with a PI were over 3 times more likely to report initiating or advancing changes in existing local regulations and policies promoting the health of pregnant women. These health departments were also significantly more likely than those without a PI in the community to have initiated or promoted changes in existing state regulations and policies for nonpregnant women. This latter finding was not seen in the comparisons with FIMR communities.

As was true of FIMR communities, LHDs in PI communities were much more likely than LHDs without one to report participating in or collaborating with initiatives or programs undertaken by

**Table 1. Similar effects of FIMRs and PIs (when each is compared with communities without a program), along with effects that are specific to FIMR (only seen for FIMR vs. no FIMR) and to PIs (only seen for PI vs. no PI) on MCH functions in local health departments.**

	<b>Common effects</b>	<b>FIMR effects</b>	<b>PI effects</b>
<b>Data-Related</b>	Data collection and analysis in relation to perinatal populations	Using client databases	Needs assessment for nonpregnant women
<b>Service Enhancements</b>	Support/offer outreach for pregnant women's perinatal services	Presence of an infant tracking system	Private provider involvement serving low income pregnant women
<b>Partnerships/ Collaboration</b>	Collaboration with community initiatives  Present information to local leaders on health of perinatal populations	Collaboration with ACOG	-----
<b>Quality Improvement</b>	Promotion of changes in local policies/regulations  Development of population-based standards of care for nonpregnant women	Certification processes for providers/facilities, implement CQI  Development of population-based standards of care for pregnant women and infants	Promotion of changes in state policies/regulations for nonpregnant women  Involvement of elected officials and consumers in development of a perinatal health plan
<b>Policy Development</b>	Provision of expertise to local programs re: pregnant women and infants  Development/dissemination of progress reports	Development of plan to address health needs of pregnant women and infants	Development/dissemination of fact sheets re: infants

other groups in their community, or providing expertise specific to the health or health needs of pregnant women and infants. LHDs in communities with a PI were more than twice as likely to have produced or disseminated progress reports on meeting local health goals and objectives for pregnant women, an effect similar in magnitude to comparisons for FIMR. Health agencies in communities with a PI also were more likely to undertake a process to develop or disseminate fact sheets to community agencies, a difference not seen in comparisons by FIMR. Similarly, health departments in communities with a PI were two to three times more likely than those without a PI to involve elected officials, consumers, providers, or agency heads in the development of perinatal health plans.

## FIMR-PI Synergies

**Our results further suggest that for some public health activities, having either a FIMR or a PI alone may have a beneficial effect, but having them both operating concurrently in a community is of even greater advantage.** For instance, although LHDs were over two times more likely to report their progress in meeting community health goals and objectives for pregnant women when either a FIMR or a PI was present, they were nine times more likely to generate such reports in localities with both a FIMR and a PI. Similar synergistic effects were found in the areas of:

- collection of data on infants;
- needs assessment related to perinatal populations;
- presenting information to local political leaders;
- contracting with private providers to provide wrap-around and enhanced services for infants;
- initiating and/or advancing changes in local regulations and policies that promote perinatal health; and
- collaborating with other community initiatives to address perinatal health problems.

One reason for the synergy resulting from the presence of both a FIMR and a PI is that they frequently work together, and both are often located in health departments or work collaboratively with them. In one case study site, the PI initially funded and

staffed the FIMR. In another case study community, data gathered by the Case Review Team were used to make the case for federal funding to initiate a Healthy Start project. This PI now serves as the vehicle for implementing a number of the FIMR recommendations.

## Recommending and Acting on Strategies to Improve Systems of Perinatal Health Care

The FIMR process extends beyond understanding the physiologic and social factors contributing to fetal and infant deaths. Equally integral to FIMR is the process of identifying recommendations and monitoring the implementation of these recommendations (NFIMR, 1998). Some questions posed to the FIMR directors in telephone interviews specifically focused on this aspect of FIMR. FIMR directors were asked about the four most important FIMR recommendations developed within the 4 years prior to the time of the interview. Of potential 296 recommendations, 231 were noted across all respondents. Of the 74 participating FIMR directors, 67 (91%) provided information on implementation of at least one recommendation.

The five perinatal health concerns for which the most respondents reported recommendations involved:

- sudden infant death syndrome (n=36, 54%)
- prenatal screening and care (n=27, 40%)
- bereavement support (n=21, 31%)
- preterm labor (n=20, 30%)
- the complex social and medical needs of high-risk women (n=14, 21%)

Combined, these five specific concerns covered fifty-eight percent of the total number of reported recommendations. Recommendations related to adolescent pregnancy, domestic violence, genetic risks, preconceptional/interconceptional care, and nutrition also were reported, but by fewer respondents.<sup>1</sup> FIMR directors were also asked about recommendations related

to some specific content areas, for example multiple births. Despite evidence of their association with rising rates of very low birth weight (VLBW) births, less than half of FIMR coordinators reported recommendations about multiple births.

Several sources of information, beyond case review findings, were used by most of the FIMRs to develop recommendations. These sources included vital statistics data, health department policies, protocols and policies of perinatal care facilities, epidemiologic research, and assessments of community resources.

The focus of recommendations has been associated in some studies with coalition effectiveness (Kegler et al., 1998). In our evaluation, we asked the FIMR directors to provide information about their strategies for implementing reported recommendations. Using the results of our previous study of Healthy Start FIMRs (Grason and Misra, 1999), and taking a systems perspective, these strategies were analyzed according to whether or not they focused on programs, practices or policies as characterized here:

**Program:** Focuses on a group or subpopulation and/or on a set of activities. Includes the development and implementation of services. The majority of strategies reported by FIMR Directors were program-oriented (n=149, 65%).

**Practice:** Focuses on interventions directed at individuals. Examples would be standards for clinical care, protocols, and new treatments. Practice-oriented strategies (n=62, 27%) were the second most frequently reported.

**Policy:** Focuses on groups/populations. Includes legislation, regulation, financing/budget initiatives, and/or governmental guidelines. Few policy-oriented strategies (n=9, 4%) were reported as resulting from FIMR recommendations.

Although a high percentage of respondents reported at least one strategy that was “program” (n=64, 96%) or “practice” (n=41, 61%) oriented, relatively few reported at least one policy oriented strategy (n=9, 13%) among their top four. Thus, the FIMRs were observed to share the documented tendency of community coalitions to focus on problems and action directly within their span of control. Case study interviews confirmed that this approach was indeed prevalent, in part because it served to instill a sense of contribution, progress, and enthusiasm among team members.

Findings from the FIMR case reviews are generally disseminated to a number of outside groups. Nearly all FIMRs disseminated

findings from both the case reviews and their recommendations to their local and state health departments. The recommendations were more broadly disseminated than the case review findings, per se. As illustrated in Figure 1, more than half of the FIMR programs disseminated recommendations to a perinatal board, committee, or task force, hospitals or hospital associations, consumers, or advocacy groups. Less than half, however, disseminated them to local or state elected officials.

FIMR directors were queried regarding the implementation of their recommendations.<sup>2</sup> Approximately 75 percent of the 231 reported recommendations had been implemented, and approximately 22 percent more were “in the process” of being implemented. Very few recommendations (approximately 4 percent) had not been implemented. These results may not be representative of all recommendations formulated by FIMR programs. Given the constraints of the interview, only information about the four most important FIMR recommendations was collected. We do not know how many other recommendations were formulated; the reported recommendations may be more likely than others to have been implemented.

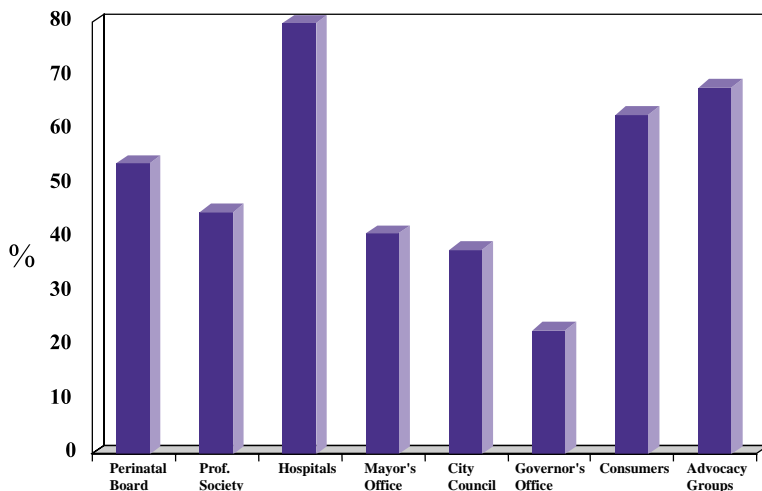
FIMR directors also reported about their monitoring of the implementation of recommendations. Slightly more than half of the 231 recommendations reported appeared to have been formally monitored and a small proportion, informally monitored.<sup>3</sup> However, nearly one-third of the recommendations were not being monitored – either formally or informally — with regard to implementation.

Among recommendations that were monitored, ongoing case reviews often provided feedback for the FIMR on progress related to system changes. However, other sources of information for monitoring were frequently reported, including data from local and state health departments, interviews with FIMR committee members and key members of the community, questionnaire or survey data, and verbal reports of staff activities. The case studies provided examples to illustrate this point. Based on a FIMR recommendation to increase awareness among pregnant women of the importance of assessing fetal movement, one case study community implemented a project called Kicks Count. Monitoring of implementation included tracking the number of women presenting at the emergency department stating that they were not feeling the baby move as well as the number of nonstress tests performed in hospitals. Increases in both were observed following implementation of the program. At another FIMR site, a recommendation resulted in stocking ambulances with warming blankets, and training EMS personnel in resuscitation of the newborn. When nursery personnel collected the blankets and other preemie-sized equipment from EMS personnel, they tracked the number of exchanges as evidence that the blankets were being used and that the EMTs were adopting the new practice.

## FIMR Programs’ Structure, Operational Features, and Associated Activity

The second objective of the evaluation was to identify the key factors contributing to the effectiveness of FIMR programs in improving community resources and service systems. To address this objective, the structural and operational features of FIMR programs were assessed. Of particular interest was the question of how FIMRs organize themselves with respect to the roles of case review and development and implementation of recommendations.

Figure 1. FIMR CRT Recommendations Dissemination by Group



**Team Organization**

Three general team structures were identified among the 74 FIMRs interviewed: Case Review Team (CRT) and Community Action Team (CAT) as separate teams (n=36), CRT only (n=17), and CRT and CAT combined/joint team (n=16).<sup>4</sup> FIMRs with a single team that not only reported conducting case reviews, but also reported activities involving implementation of recommendations were categorized as having a joint team. Table 2 describes the results of comparisons of the roles and attributes of FIMR programs, as reported by the FIMR coordinator, among the 3 team structures. Directors in FIMRs with a separate CRT and CAT were more likely to report all roles and attributes shown in the table than those with joint teams and, in all but two instances, than directors of FIMRs with a CRT only. The role of facilitating communication among clinical perinatal providers and the attribute of community empowerment and mobilization were reported more frequently by directors of FIMRs with only a CRT team as compared with directors with a joint team.

**Table 2. FIMR roles and attributes significantly associated with FIMR team structures.**

FIMR Roles	FIMR Structure
<ul style="list-style-type: none"> <li>• Focused on setting policy for the perinatal health care system</li> <li>• Identified perinatal data needs</li> <li>• Developed protocols for identifying high risk patients</li> <li>• Specified the content and assuring the provision of professional education programs for health care providers</li> </ul>	Separate CRT and CAT
<ul style="list-style-type: none"> <li>• Facilitated communication among clinical perinatal providers</li> </ul>	Separate CRT and CAT CRT – only
FIMR Attributes	FIMR Structure
<ul style="list-style-type: none"> <li>• Established a locus for formulating and implementing policy</li> <li>• Provided stories or a “human face” to problems with the health care system</li> <li>• Served as a base for advocacy about perinatal problems</li> </ul>	Separate CRT and CAT
<ul style="list-style-type: none"> <li>• Community empowerment and mobilization</li> </ul>	Separate CRT and CAT CRT – only

**Training Provided to FIMR Directors, Staff, and Team Members**

Significant efforts in training have been made by the National FIMR Program (NFIMR) – a partnership between ACOG and MCHB – as well as by State MCH programs. FIMR directors were queried about whether they, their staff, or their CRT and/or CAT members received training in a) perinatal health; b) how to use information generated from the case reviews; and c) strategies for implementing objectives or “action agendas.” Over half of the FIMR directors reported having received training in all three areas. Training of program staff in all three areas was reported by 41 percent of FIMR directors, and training of FIMR team members was reported by 37 percent. A significant association was found between receipt of training by FIMR participants and embracing a broader scope of attributes and roles related to improving perinatal health systems and status. Training specifically in “action agendas” was associated with over a 3-fold increased frequency of reported roles related to serving as a forum for community concerns about perinatal health, assessing perinatal health needs or status, educating communities about perinatal health concerns, and perinatal health care system policy implementation.

**System Changes Evolving From FIMR**

Given its goal of improving systems of care, understanding the specific aspects of FIMR that contribute in this regard was considered key to our analysis. Using the definition of a system as, “a set or group of interconnected, interdependent, yet autonomous, components that form a complex whole addressing specified goal(s)” (Levey and Loomba, 1973), the WCHPC evaluation team considered how FIMRs affected each of the elements of the system – the goals, components, and communication mechanisms.

**Focus on Systems Goal**

Information collected in all components of the evaluation points to FIMR’s important role in bringing community members together to focus on issues related to fetal and infant deaths. The subject of infant deaths inspires concern and a call to action in the entire community – medical care providers, public health professionals, policymakers, consumers, and other activists alike – in ways that many other topics of public health concern have not. Moreover, the FIMR structure and process combines the specialized expertise of many professionals such as medical care providers, social welfare professionals, and medical examiners along with those in positions to act on its recommendations (policy leaders). It also creates a setting and a set of concrete activities wherein everyone has a contribution to make and everyone learns from the process. The case study findings indicate that because the FIMR process extends beyond problem identification to promote problem solutions, observable changes in practices and programs occur; “things get fixed” and participants are inspired to take further action.

**Enhance System Components**

As noted previously, FIMR recommendations focused largely on practices and programs. Case review findings often result in recommendations to improve the quality of specific components of the system (practices, services), and to fill gaps in the array of interventions implemented locally to address perinatal health. Community capacity was frequently bolstered as a result of the FIMR process. The case studies provided several examples of system component

enhancements that were initiated or facilitated by the FIMR in the community. For example, a review of SIDS deaths in one FIMR revealed that African American families did not perceive that Back to Sleep messages were directed to them. As a result, a Community Voices program was created to foster peer education about Back to Sleep within the African American population. Thus, the FIMR program enhanced cultural competence within the system of care.

The FIMR’s role in extending community capacity was evident in another program visited, where a police department Community Liaison participated in the FIMR program. Having learned about various risk factors for infant mortality (especially SIDS), this FIMR participant was able to apply her new knowledge when she went into the homes of young inner city women, where much of the fatality occurred. Moreover, she shared her new knowledge with her colleagues, with the result that this knowledge diffused more broadly into the social welfare professional system. In addition, in securing the police department’s participation, the FIMR increased opportunities to reach greater numbers of young families with prevention messages and interventions.

## Enhance Communication Among System Components

Without question, study findings point to the important contributions of FIMR programs in enhancing communication among system components at the agency/organizational level, at the public policy level and among service providers, particularly among team members representing the various system components. Study respondents noted improved communication among the full spectrum of providers. In FIMR programs, clinical, public health, social welfare, and law enforcement professionals (to name a few) work together around a common cause. FIMR participants uniformly reported the value of having professionals with different viewpoints at the same table to brainstorm and problem-solve together. Moreover, the FIMR process gave participants an opportunity to see the number and range of professionals and organizations involved with families, and to understand different perspectives about their families' experiences.

Many of the physicians interviewed in the case studies noted that if it were not for their involvement with FIMR, they would not interface regularly with colleagues from other specialties or other hospitals, nor with professionals from social services, law enforcement or other community agencies. In communities where there was competition between hospitals, the FIMR program was cited as a place where allegiances can be set aside, providing a unique opportunity for physicians affiliated with competing facilities to work together.

FIMR is also an arena where private sector clinicians learn about public health roles and activities and public health professionals learn about concerns and challenges of medical practices. FIMR is a forum for new insights for the private medical community into the public health system and its resources, and for public health to learn how they can better collaborate with the private sector.

Case study data indicate that when a community is positively inclined toward collaboration, the FIMR program can provide the information/data needed to take action. FIMR case review information provides credence to recommended strategies, making arguments for change more convincing to policymakers as well as to clinical providers. For example, in one case study site, the loss of a preterm infant was found to be related to the lack of clinical information available to the physician on call about a mother being admitted to labor and delivery. This information was used to promote an earlier transfer of prenatal records to the delivery hospital among all obstetric providers in the community. In another site, data from FIMR reviews were used as a springboard for monthly reports to providers, hospitals, policymakers and public health professionals, highlighting research findings about specific causes of infant deaths. In a third site, FIMR data were useful in pointing out gaps in the child welfare system and resulted in major changes in how high risk families were identified and followed.

<sup>1</sup> Readers should note that because respondents were asked only about their "most important" FIMR recommendations, some target issues may be under-represented.

<sup>2</sup> We categorized a recommendation as "implemented" if identified action strategies had been initiated. Implementation was considered to be "in process" if efforts to initiate identified strategies were reported to still be in progress. Recommendations were denoted as "not implemented" where attempts to implement the strategy were never initiated or were unsuccessful.

<sup>3</sup> "Formal" monitoring was designated when specified data were collected or when structured feedback was sought from involved agencies/individuals. If efforts to assess the implementation of strategies were based on unplanned, sporadic, and non-specific communications, monitoring was categorized as "informal." The "No monitoring" designation was given when there were no strategies for monitoring outlined by the respondent.

<sup>4</sup> Five FIMRs indicated they had "other" team structures.

## Observations and Conclusions

Several limitations of this evaluation warrant comment. The results from the telephone surveys represent a "snapshot" of the FIMR program at the time of the survey. Our ability to piece together any historical information for all but the case study sites is very limited. As a result, it is not possible to conclude whether it was the FIMR program per se, the community characteristics that made it ready to adopt the FIMR, or both that account for the reported results. We are also limited by the sample, in that it is not representative of all counties or metropolitan areas in the country; in particular, the sample is more urban than all communities throughout the country.

In order to be able to compare communities with and without FIMRs and with and without PIs, it was necessary to select respondents – professionals in local health agencies – who could describe community public health activities and perinatal systems where neither program was available. Nevertheless, we may not have captured some of the differences that might exist between FIMR and non-FIMR communities by our focus on roles of local health departments. On the other hand, this approach provided an opportunity to assess all communities on an equal basis and to use an independent third party respondent; this is a strength of the evaluation.

Another strength of the evaluation is that the sample was drawn from across the country, and in its selection, an attempt was made to equalize some differences that might exist between communities that are and are not able to adopt FIMR as a community perinatal systems strategy. The case studies are also a strength, as they help to explain findings both positive and negative with regard to the impact of the FIMR. In particular, they help us to better understand the community context in which FIMR is implemented, the various ways that communities adapt the FIMR model to their unique needs, and the situations that facilitate or undermine an optimal impact of FIMR.

Given these strengths and limitations, our results suggest that FIMR has some important impacts on public health activities in communities. Some of these impacts are shared by other perinatal initiatives while others may be unique to FIMR. Others appear to be bolstered by having both a FIMR and a PI in the community. One finding that was consistently expressed in all aspects of the evaluation was the importance of FIMR in bringing together professionals from diverse professions and agencies in both the private and public sectors to pursue a common cause.

**Methods:** The design of the FIMR evaluation is a cross-sectional observational study in which geographic units were sampled based on the presence or absence of a FIMR or other Perinatal systems Initiative (PI), geographic area of the country, and population density. To draw the sample, U.S. counties and metropolitan areas were divided into four types of communities using data collected from a survey of state and metropolitan MCH directors, and NFIMR information on active FIMRs. They were: 1) communities with a FIMR and another Perinatal systems Initiative (PI); 2) communities with a FIMR only; 3) communities with a PI only; 4) communities with neither. In addition to the four types of communities (FIMR only, PI only, both, neither), other factors considered in sample selection were: geographic region (East, Midwest, South, West); state representation (at least one community was selected from each state in the U.S.); and population density. Within the four geographic regions and using FIMR communities as the frame of reference for selecting communities with similar population density, we sampled 254 communities (204 counties and 50 metropolitan areas), assuming that an 80 percent response rate would yield about 200 communities.

For each community, a local health department (LHD) representative was contacted to participate in a telephone interview. We were able to complete interviews with LHD personnel in approximately 76 percent (N=193) of all eligible communities in the sample. The LHD interview included questions about MCH functions, community interaction, structure and organization of the LHD, and the structure and organization of perinatal services in the community. Most questions were asked about 3 populations: pregnant women, infants and non-pregnant women of reproductive age.

We used the sample of communities in which the LHD interview was completed to identify respondents for FIMR and PI programs to contact for follow up in the evaluation. In the 193 communities for which the LHD interview was complete, 138 FIMRs and 257 PIs were initially identified as potentially eligible. We then limited the evaluation to FIMRs and PIs in existence for at least one year between January 1, 1996 and December 31, 1999, and which met our definitions of these programs (Page 1). Using a set of screening questions, 89 FIMRs and 84 PIs met our criteria and were deemed eligible for inclusion in the evaluation.<sup>5</sup> Upon screening, many PIs were deemed ineligible because they were personal care service programs.

Like the LHD interview, the FIMR and PI interviews included questions on MCH functions and community interaction. The FIMR and PI interviews also included parallel questions regarding implementation and evaluation of their recommendations (for FIMRs) or objectives (for PIs). These questions asked about the specific recommendations or objectives that were the focus of the project, the strategies used to implement them, and the results of these efforts. For FIMR respondents, additional questions addressed the training of FIMR participants, activities undertaken to determine the success of their efforts, and the characteristics of the project. The FIMR director interview also included questions on FIMR structure and operations.

Analyses of the interview data from LHD, FIMR, and PI respondents involved quantitative as well as qualitative methods. Much of the analysis focused on comparisons of communities to determine the unique effects of FIMR relative to other perinatal initiatives. Because of constraints due to the small number of localities with only a FIMR or only a PI, comparisons were made between the following communities:

- FIMR vs. No FIMR
- Both FIMR and a PI vs. neither a FIMR nor a PI
- PI vs. No PI
- Both FIMR and a PI vs. either a FIMR or a PI.

This approach permitted us to indirectly determine the effect of FIMR alone and, more importantly, to assess the possible synergy of having both a FIMR and a PI.

We also conducted site visits to ten communities with FIMR programs in order to examine and describe in greater depth FIMR characteristics, processes, impacts, and the community context in which they operated. These communities were selected to represent a broad geographic distribution and a mix of FIMR-only and FIMR and PI communities. Criteria for inclusion included a completed local health department interview, FIMR interview and, when applicable, PI interview, by different respondents. Case study information collected focused on: community characteristics; FIMR structure, methods, and processes; implementation of recommendations and impacts (planned and unplanned); integration of FIMR with other community-oriented perinatal initiatives; and other important aspects of FIMR implementation. Data collection generally involved qualitative methods, relying primarily on on-site interviews with a diverse group of respondents and review of historical documents. Although within each site most interviews were conducted with individuals associated with the FIMR, some respondents with no direct affiliation with FIMR (e.g. local government representatives, community organization representatives) were also interviewed.

**Respondents:** Although the distribution across the 4 quadrants of the U.S. was relatively balanced, proportionately more interviews were conducted with respondents in the Southeast; this was due in part to the greater presence of FIMR in southern states. Over half of the LHD respondents were located in large counties and urban areas (at least 250,000 residents). About half of the FIMR program respondents were in FIMR-only communities (36) and half were in FIMR and PI communities (38). Among the PI respondents, 56 percent were in communities with both a PI and a FIMR.

	# Eligible	# (%) Participating
<b>Local Health Dept.</b>	254	193 (76)
<b>FIMRs</b>	89	74 <sup>6</sup> (83)
<b>Other Perinatal Initiatives (PIs)</b>	84	62 (74)

<sup>5</sup> A large proportion of the FIMRs identified in the LHD interview were determined to be Child Death Reviews only and not FIMR.

<sup>6</sup> There were 2 FIMR interviews for which we were unable to obtain the local health department interview. These two FIMRs are represented in the analyses of the FIMR interview data. However, these 2 communities could not be represented in the analyses comparing the 4 community types (FIMR-only; PI-only; Both; and Neither). Thus, 72 communities with a FIMR were represented in these analyses.

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### **The Evaluation of FIMR Programs Nationwide: Early Findings**

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