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The FIMR Evaluation: Objectives, Concepts, Frameworks, and Methods

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INTRODUCTION

The Maternal and Child Health Bureau (MCHB) initiated fetal and infant mortality reviews in the mid-1980s as a community-oriented strategy to improve the health services systems for pregnant women, infants, and their families. Over the next several years, MCHB made a sizable investment in time and money to develop and implement what have become Fetal and Infant Mortality Review (FIMR) programs and the National FIMR (NFIMR) Program, a partnership of MCHB and the American College of Obstetrics and Gynecologists (ACOG). While FIMR programs are now active in more than 200 communities, limited evaluative research has been conducted to determine whether these programs have a measurable impact in the community on their stated objectives. Past studies have suggested potential benefits of FIMR programs, but they are far from conclusive. The articles in this supplement describe the result of the nationwide evaluation of FIMR programs conducted by the Johns Hopkins University (JHU) Women's and Children's Health Policy Center (WCHPC). This most recent evaluation expands on earlier evaluations by extending the scope of the programs studied and including a baseline against which FIMR programs are compared.

In this paper, we outline the three-phase approach taken in the JHU nationwide evaluation of FIMR programs. We include an overview of the evaluation objectives and a brief discussion of the rationale for the study design and outcomes of the evaluation. The conceptual framework and the design and methods used to meet the evaluation objectives are also described.

FIMR EVALUATION OBJECTIVES

There were three major objectives of the FIMR nationwide evaluation. The first was to investigate the relation of FIMR programs with improving community resources and service systems available to pregnant women, infants, and their families. The second involved identifying the factors contributing to the effectiveness of FIMR in improving community resources and perinatal service systems; the third was to examine the implications of FIMR programs for maternal and child health (MCH) practice in terms of core public health functions. Given these objectives, our approach to the evaluation was to link the goals and *model/process of FIMR* with improvements in perinatal service *systems* through the

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performance of *core public health functions* in the community. The plan and conduct of the evaluation was informed by recommendations and comments from a Technical Advisory Group (TAG), including FIMR Directors, Title V State Directors, ACOG, and MCHB representatives, and evaluation researchers.

RATIONALE FOR NATIONWIDE FIMR EVALUATION STUDY DESIGN

Previous research on the benefits of FIMR, by ourselves and others, has primarily focused on the tangible "products" of the FIMR process, such as recommendations for policy and practice changes and the creation of new programs (1–8). While these products are hypothesized, in part, to be the vehicles by which FIMRs may improve perinatal health, previous studies suffer from critical limitations with regard to judging the benefits of FIMR programs. First, no prior study included a comparison group of any kind. As a result, we do not know how communities with a FIMR program compare to communities without any perinatal systems initiatives (PSIs). Prior studies also did not compare the outcomes of the FIMR program with those of other PSIs. FIMR programs are not the only approach used to change systems in the community. Moreover, FIMR programs and other approaches may both be successful, but may have different effects. The need for a comparison group was of paramount importance to us, and weighed heavily in the design of the evaluation.

Second, previous research on FIMR programs is limited with regard to the programs studied. Several reports are case studies of only one FIMR program (1–6). Studies of more than one FIMR reported on programs that began as Healthy Start components (7, 8), restricting their generalizability. Healthy Start FIMRs differ from a broader sample of FIMRs in at least two important ways. First, funding for the FIMR was explicitly included in Healthy Start programs and the programs provided a mechanism to implement recommendations developed by the FIMR. Second, Healthy Start communities are not a random sample of U.S. communities but instead were selected because of high infant mortality rates in comparison to other U.S. localities.

The NFIMR Program also has published reports of FIMR programs. These reports, however, are not evaluative studies, but rather describe best practices and innovative FIMR approaches as a means of providing technical support to new programs. We judged that our evaluation needed to include a broader range of FIMRs, beyond those selectively studied in past research or described as part of performance monitoring efforts.

Previous studies also did not consider outcomes beyond the immediately visible products of FIMR programs, such as recommendations resulting from the case reviews. The development and implementation of recommendations by FIMR programs are laudable objectives, but they do not necessarily translate into systems change. Other intermediate measures were needed to understand how FIMR programs may improve perinatal health in a community. The essential MCH services were selected as these intermediate measures.

RATIONALE FOR EVALUATION STUDY OUTCOME MEASURES

The effect of FIMR programs on fetal and infant mortality has not been studied (1–8), despite an underlying expectation that FIMR should ultimately lead to mortality declines (9). The success of FIMR programs, nonetheless, should not be judged on the basis of fetal and infant mortality rates, for several reasons. First, FIMR is a community-level intervention, and, as such, the impact of FIMR needs to be examined at the community level. Fetal and infant deaths are rare occurrences in the community, even in high-risk areas, often leading to unstable estimates of rates. Second, while FIMR programs address a broad range of issues, fetal and infant mortality may be influenced by factors beyond their scope of control. For example, the federal government could sharply reduce funding for Medicaid, leading to reduced access to prenatal care and a possible increase in adverse pregnancy outcomes among vulnerable pregnant women and infants.

Accordingly, in the evaluation, we moved away from the endpoint of mortality, and instead considered the processes by which FIMR programs seek to accomplish their goals. The objective of FIMR is "to enhance the health and well-being of women, infants, and their families through improving the community resources and service delivery systems available to them" (10). The FIMR process suggests that one of the overall mechanisms by which FIMR programs may

affect the health system in a community are through the development and implementation of recommendations to improve the health and well-being of the perinatal population. To better understand and delineate this process, we turned to the literature on systems.

A system is a set or group of interconnected, interdependent, yet autonomous, components that form a complex whole to accomplish a shared goal. A system has three elements: 1) a shared purpose or goals; 2) components—structures and processes that are differentiated; and 3) a means of communication that allows the components to function in a coordinated fashion to achieve the system's purpose or goals (11). In order to improve a system, one or more of these three elements must be strengthened. Applying this concept of systems, our evaluation examined how FIMRs and other community PSIs affected each of the elements of the system—the goals, components, and communication mechanisms.

Figure 1 shows the FIMR process and its presumed relation to system change through implementation of FIMR recommendations, the performance of public health functions, and other community, clinical and population-focused mechanisms. The solid lines in Fig. 1 indicate the components of the framework that were measured in our evaluation and the dashed lines, the components that were not examined. In the evaluation, we focused on the two intermediate outcomes (outputs): public health functions operationalized as essential MCH services; and development and implementation of recommendations by FIMR programs. The study of both outputs enabled us to conduct a comprehensive evaluation of FIMR that markedly enhanced the rigor of our research, relative to previous evaluations of FIMR programs. The specific rationale for choosing the two intermediate outcomes and the analytic approaches to measuring them are described later.

In the evaluation, we did not address other mechanisms related to systems change, as they were presumed to be too variable across local areas and, as a result, were beyond the scope of the study. We also did not evaluate how FIMR recommendations were related to the performance of the public health functions.

Public Health Functions: Essential MCH Services

From its inception, MCHB's FIMR program was grounded in the core public health functions [see Koontz *et al.*, (10)]. This grounding was critical in selecting appropriate outcomes to assess the impact of FIMR programs. A framework for describing public health functions, as applied to MCH and developed

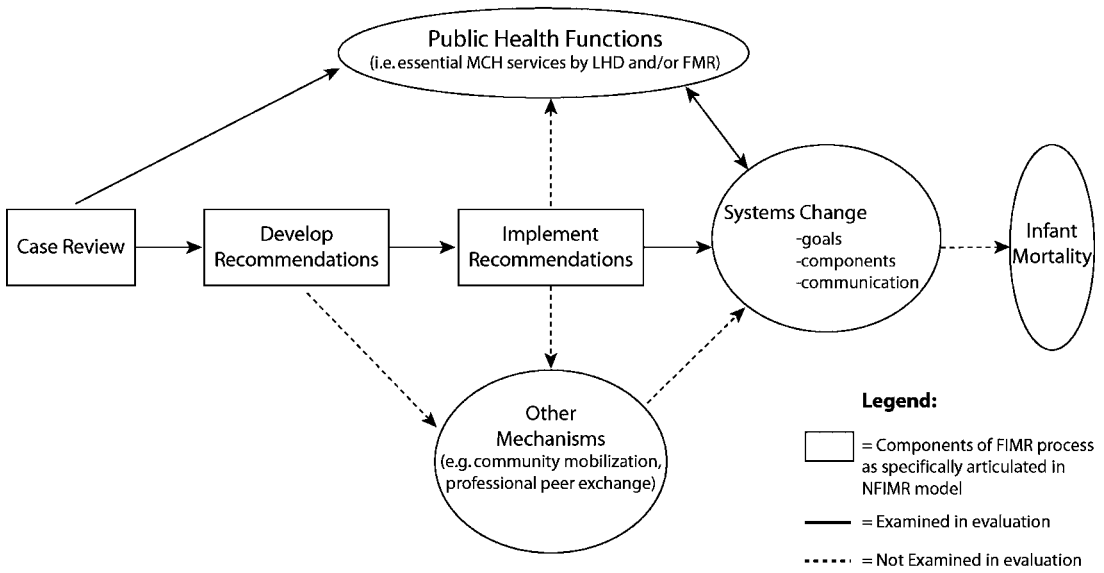

Fig. 1. Study approach: Evaluation of FIMR programs nationwide.

Table I. The 10 Essential Maternal and Child Health Services

Assess, analyze, and monitor MCH status*
Investigate health problems*
Inform and educate the public*
Mobilize community partnerships*
Provide leadership for planning, and for formulating and implementing policy*
Promote legal requirements and public accountability for quality health care (legislation, rules, standards, monitoring, etc.)*
Assure access to health and other community and family services (financing, linking, providing, etc.)*
Enhance capacity of the health care workforce (including education and training)*
Evaluate MCH services and systems
Support research and demonstrations

*The 8 essential services included in the nationwide FIMR evaluation.

by Grason and Guyer (12), was used to guide the selection of public health functions as outcomes for the evaluation. Grason and Guyer outline 10 essential MCH services (Table I) that operationalize the Institute of Medicine's definition of the core public health functions of assessment, policy development, and assurance (13).

Public health functions and the essential MCH services are often thought of as the purview and responsibility of the local health department (LHD) in a community. LHDs, however, are not the only players engaged in these activities. In studies of several diverse health concerns, organizations beyond the LHD have been shown to be involved in performing public health functions (14–17). The work of Halverson and others documented the relative contributions of various entities with regard to public health functions (16, 17). Initiatives that seek systems change also are likely to be involved in essential MCH services in a community.

While the essential MCH services may be measurable for a community, the locus of action may be more difficult to identify. FIMR programs and other PSIs (PSIs) may carry out many essential MCH services as part of their efforts to improve systems. In other instances, the work of these programs may directly or indirectly lead to increased activity of the LHD in performing the essential MCH services. The collaborative nature of many perinatal initiatives with LHDs makes it unlikely that MCH-related activities or outcomes can be attributed to a single entity. We chose, therefore, to examine the performance of the essential MCH services at the community level from two perspectives: 1) essential MCH services reported by the LHD; and, 2) essential MCH services reported by FIMR programs or other PSIs.

Development and Implementation of Recommendations

The review of cases of death in FIMR programs is intended to generate recommendations for change in policy, programs, and the provision of health care to pregnant women, infants, and families. Depending on how the recommendations are prioritized and resources identified, implementation of the recommendations may follow. Beyond the development of the recommendations, assessment of the extent to which FIMR programs were able to implement the articulated recommendations was an important endpoint in the evaluation. FIMR programs may achieve improvements in perinatal health without implementation of their recommendations, such as through changes in professional practice that individual FIMR members may undertake as a result of their experience with FIMR. The most direct and often cited mechanism for achieving systems changes through FIMR, nevertheless, is through the development and implementation of recommendations for change.

Although implementation was a critical outcome of our evaluation, it was difficult to study. An evolving body of work describes implementation of health education and community-based prevention programs (18–22). From our previous evaluation of Healthy Start FIMRs (8), we developed a framework for assessment of the implementation of recommendations that involved identifying specific recommendations, whether or not they were implemented, the strategies used and individuals responsible for implementing them, and the monitoring of their implementation. We also identified if the strategies were related to programs, practice, or policy.

JHU NATIONWIDE FIMR EVALUATION STUDY

Overview

The study design of the nationwide FIMR evaluation attempted to address the limitations of past research. First, we carefully considered the measurement of mechanisms by which FIMR programs may improve the perinatal health and health-related service systems. Second, we were challenged by the need to include comparison communities, as there was no obvious "respondent" analogous to the FIMR director in communities without any PSIs.

The evaluation was conducted in three phases with each phase informing those that followed. In each phase, we identified a sampling frame and the data to be collected. Phase I addressed the question of how to develop a sampling frame for the evaluation. Phase II involved comparing communities with and without FIMR programs and with and without PSIs, as well as collection of data on community and program outcomes for these comparisons. This phase addressed all three evaluation objectives. Phase III examined the impact of FIMR programs on systems of care, with special emphasis on the community context in which the programs were implemented. The evaluation design and methods were approved by the Committee on Human Research at the Johns Hopkins Bloomberg School of Public Health.

Phase I

The first major task of the evaluation was to identify the universe of FIMR programs in operation during the study period from 1996 to 1999. Phase I consisted of a brief *survey of representatives in MCH programs in states and large metropolitan areas* to identify community-oriented systems initiatives (e.g., FIMRs, Healthy Start Initiatives, perinatal/infant mortality commissions or consortia) intended to enhance the health of pregnant women and infants. The appropriate respondents in MCH programs in each state and large metropolitan areas were identified through the assistance of key organizations that work regularly with these programs—the Association of Maternal and Child Health Programs (AMCHP) for state MCH programs and CityMatCH for large urban areas. The NFIMR Program also assisted with identifying communities with FIMR programs.

All MCH program directors (or their designee) in the 50 states, the District of Columbia, Puerto Rico, and the Virgin Islands received surveys asking them to identify initiatives (FIMR and non-FIMR) in counties within their state that focused on changing the perinatal health system through changes in either the system's goals, components (e.g., private providers, health department) or communication methods (e.g., perinatal community board). A specific question was asked about FIMR programs. MCH directors (or their designee) in large metropolitan areas, as defined by CityMatCH, were asked a similar set of questions about initiatives in their area.

Data describing the presence of FIMR programs and PSIs in counties and metropolitan areas from 1996 to 1999 were obtained in Phase I from 44 states and 57 metropolitan area MCH directors or their designee, representing 2687 (88%) of the 3066 U.S. counties, as reported by the National Association of Counties (23). In addition to a report describing the survey results (24), data from the survey were used to form the sampling frame for Phase II.

Phase II

Phase II was the major evaluation phase, providing an assessment of the "value added" of FIMR programs in communities. It had three purposes. The first was to characterize FIMR programs in the study, by describing the development and implementation of recommendations and their performance of essential MCH services (25). The second purpose was to compare the conduct of the essential MCH services reported by the FIMR programs with those reported by other PSIs: that is, to compare the extent to which essential MCH services were implemented by FIMR programs compared with other PSIs (26).

Finally, local health agencies were compared with regard to conduct of essential MCH services as a function of the presence or absence of FIMR and other PSIs in the community (27). While improving on past studies, this design cannot confirm that the programs were responsible for different levels of activity related to the conduct of public health function in the community. Nonetheless, we could determine whether communities with and without the programs differed in terms of the nature and scope of public health function activities. The empirical papers included in this supplement (25–27) are based on data collected during Phase II.

Sampling of Communities for the Evaluation

The different evaluation objectives necessitated a complex sampling design. First, using the sampling frame constructed with Phase I data and NFIMR information about FIMR programs, we selected a nationwide sample of communities to create four groups of approximately equal size. Unites States counties and metropolitan areas were divided into four groups of communities with 1) a FIMR only; 2) a PSI only; 3) both a FIMR and at least one PSI; 4) neither a FIMR nor a PSI. Other factors considered in sample selection were geographic region (East, Midwest, South, West); state representation (at least one community

was selected from each state); and population size of the area. We included these factors so that the sample would be diverse with regard to geographic locale and population size, and to increase generalizability to FIMR programs nationwide.

The limiting factor in selecting the sample was the number of communities with a FIMR program. Within the four geographic regions, we used FIMR communities as the frame of reference for selecting communities without a FIMR program, but with similar population size. We selected 254 communities (204 counties and 50 metropolitan areas), assuming that an 80% response rate would yield a sample of about 200 communities. We chose 200 with the objective of yielding 50 of each type of community described earlier.

Communities with a FIMR were first randomly sampled within the four geographic areas (East, Midwest, South, and West), regardless of whether or not the community also had a PSI. Within these four geographic areas, a comparison community was selected without a FIMR and a PSI but with a similar population size (city or county of over 1 million population; 250,000–999,999 population; 20,000–249,999 population, less than 20,000 population) as the community with a FIMR; this process was then repeated for counties with a PSI, but without a FIMR program. When possible, at least one comparison community was selected from the same state.

Additional criteria for selection of communities were 1) a respondent from the LHD was available to answer questions about the smallest geographic unit for which the local health unit had autonomy, and 2) the LHD was not already represented in the sample in communities where the health unit was organized as a group of counties; the LHDs in about 15% of the selected communities were organized on a regional or district basis. For some communities, the sampling process needed to be repeated if these criteria were not met.

Sample of Programs

FIMR programs and PSIs were identified by state or city MCH directors during Phase I of the evaluation as well as by the LHD respondents described later. Telephone contacts were made with FIMR and PSI directors or representatives to confirm their eligibility. Verification of a program as eligible for the evaluation was complex. In the 193 communities in which a LHD interview was completed, 138 FIMR programs and 257 PSIs were initially identified as potentially eligible for the FIMR/PSI director interviews. We limited the sample to FIMR programs and PSIs in existence for at least one year (between January 1, 1996, and December 31, 1999) that met our definitions of these programs. A FIMR was broadly defined to include programs in which an interdisciplinary group met to discuss cases of fetal and infant deaths (some included infant deaths only) with the intent of facilitating systems changes, regardless of design. A PSI was defined as a broad-based collaborative, community-oriented program involving multiple processes (for example, assessment, planning, and policy development), partnerships, and program strategies to improve perinatal health. Healthy Start is a good example of a PSI. Programs that only provided health care services to individuals, such as home visiting and single-site prenatal provider programs, were not considered as a PSI in the evaluation.

A challenge in conducting research about community-oriented systems initiatives is the varying definition of a systems initiative across different informants. A telephone screening was performed before conducting interviews with FIMR or PSI directors to determine the eligibility of their program. Eighty-eight FIMRs (among 138 potential FIMRs), but only 83 PSIs (among 257 potential PSIs) met our sample criteria. This information was used to reclassify communities into the four community groups (i.e., FIMR only, PSI only, both, neither); that is, the final designation of the four groups of communities was based on the results from the telephone screening about the initiatives.

A reason for excluding some FIMR programs was that they were child death reviews with no FIMR or IMR. Falling outside the eligible dates for the evaluation was another reason for excluding some FIMR programs and PSIs. Most importantly, upon screening, it was found that the majority of ineligible PSIs were direct health service programs (62%), rather than population-based or systems initiatives, or were child health initiatives rather than PSIs (14%).

Study Respondents

Two sets of respondents were selected for communities sampled in Phase II. First, for each community, regardless of presence of a FIMR program or PSI, a representative of the LHD was identified who was knowledgeable about or responsible for MCH activities. These respondents were selected because

the LHD was presumed to be the most likely agency in the community in which the essential MCH services were undertaken. They also were assumed to be the most knowledgeable respondents about perinatal health services and systems and to likely have a population perspective regarding the health of the perinatal population. The LHD respondents also ensured that all communities in the sample, regardless the presence of a FIMR program or PSI, had a comparable respondent from whom similar data could be gathered.

The second set of respondents consisted of directors of the FIMR programs and other PSIs that met the criteria for inclusion in the Phase II sample. This feature of the evaluation allowed us to compare the conduct of essential MCH services reported by FIMR programs with those reported by other PSIs and to compare the development and implementation of recommendations in relation to the characteristics of the FIMR program.

Data Collection

Interviews of all the respondents were conducted by the Batelle Centers for Public Health Research and Evaluation. They were completed with LHD personnel in 76% ($N = 193$) of the 254 eligible communities between November 1999 and June 2000. Interviews of the FIMR or PSI director were completed for 74 (84% percent response rate) eligible FIMR programs and 62 (75% response rate) eligible PSIs between March and August 2000.

Local Health Department Interviews

The content of the questionnaire for the LHD interview was based on literature in four general areas: 1) public health functions and essential MCH services, 2) community strategies, 3) community readiness, and 4) organization of perinatal health services (see Table II). Input on the content of draft questionnaires was obtained from federal and state MCH staff, NFIMR representatives, other researchers, and local FIMR directors/coordinators. Most questions were asked about three populations: pregnant women, infants, and nonpregnant women of reproductive age, consistent with the population focus of the NFIMR program on pregnant women, infants, and families.

The essential MCH services component of the LHD interview was adapted to perinatal health from the work of Grason and Guyer (1995), and Mayer, Konstant, and Wartman (1997) as well as from the work of Strobino (1997), related to PSIs in Maryland (12, 28, 29). Questions about 8 of the 10 essential MCH services (denoted by "*" in Table I) were used to operationalize activities undertaken related to each service. Examples were requested for each activity as a validity check on the responses of the LHD professionals. Moreover, a community interaction component of the questionnaire was developed, based on an extensive review of the literature in the areas of community readiness and coalition building (30). It included questions to assess the interactions among the LHD, FIMR programs, and PSIs with other health and related service agencies in the community.

FIMR and PSI Director Interviews

The interview for the FIMR and PSI directors included questions on essential MCH services parallel to those in the LHD interview, but the questions were asked with regard to the FIMR/PSI as the locus for activity (see Table II). Qualitative and quantitative data were also collected on the development and

Table II. The Content of Phase II Questionnaires by Agency of Respondent

	Questionnaire components			
Type of program/agency	FIMR structure and operations	Implementation issues	Public health functions	Community interaction
Local health department			X[a]	X
FIMR program	X	X	X	X
Other type of perinatal initiative		X	X[b]	X

[a]The Local Health Department questionnaire has additional questions about perinatal boards/committees, perinatal coordinators, and the organization of perinatal services.

[b]The Perinatal Initiative questionnaire contains additional questions about perinatal boards/committees, as well as about the organizations of perinatal services.

implementation of recommendations by FIMR programs, the primary outcomes used in previous FIMR evaluations. Parallel questions were asked of the PSI directors about their program objectives.

The FIMR director was also queried about the FIMR program format, organizational structure, activities, and unique attributes. Although the NFIMR Program recommends some structural features and process components for FIMR programs, it also stresses tailoring these to local needs. As we intentionally sought to sample a broad range of FIMRs, it was critical to characterize the variability in these programs both to validate the sample as well as to examine how FIMR program characteristics might influence the hypothesized outputs (essential MCH services and development and implementation of recommendations).

Phase III

Phase III included 10 in-depth case studies of FIMR programs. The reason for conducting these more focused studies was to learn more about the processes by which FIMR programs were implemented in the community. Site visits were conducted to describe FIMR characteristics, processes, and impacts in greater depth, and the community context in which they operated. The case studies also allowed us to collect information from community respondents who did not participate in the FIMR but for whom FIMR may have had an impact.

Ten case study communities were selected to represent a mix of FIMR-only and FIMR/PSI communities in both rural and urban areas; they were distributed across the four broad geographic areas. Among the 10 communities, we selected 1with a federal Healthy Start FIMR and 2 in states committed to implementing them statewide. A criterion for inclusion was a completed LHD interview, FIMR director interview and, where appropriate, PSI director interview in Phase II with different respondents; in some communities the LHD respondent was also the respondent for the FIMR program or PSI. The sites were not selected on any criteria related to evaluating the success of the programs.

The primary source of information for Phase III was qualitative interviews with multiple respondents that focused on the community context for FIMR, including a history of activism and collaboration around health; FIMR structure, methods, and processes; implementation of recommendations and their impact in the community; integration of the FIMR with other community initiatives; participation of the community in the FIMR program; and challenges experienced by the program. Historical documents describing the FIMR program and any PSI were also sources of information for Phase III.

During each site visit, interviews were conducted with a range of individuals who participated in or were aware of the FIMR program in their community. Some respondents with no affiliations with the FIMR were interviewed in all communities; they generally included government representatives, community organization representatives, and private providers or representatives of local medical professional groups. The FIMR director and chair and at least one representative from the LHD, local hospital, and a community agency or organization completed an interview in all communities. In the majority of communities, interviews also were conducted with local providers and government representatives.

ANALYTIC STRATEGIES OF THE JHU NATIONWIDE FIMR EVALUATION

The three empirical papers presented in this supplement (25–27) primarily report results of the analysis of data collected in Phase II. Data from Phase III are used to provide examples to support Phase II findings or to describe the community context of state and local programs. The empirical papers are organized to first describe the characteristics of the sampled FIMRs, their recommendations, and their conduct of essential MCH services (25), then the relation of the FIMR programs relative to PSIs with respect to the conduct of the MCH essential services (26), and finally to compare the performance of the MCH essential services by LHDs in communities with and without FIMR programs and with and without a PSI (27). This order provides a logical presentation of results from the more descriptive program data to comparisons of FIMR with other programs and comparisons of LHDs in communities by the presence of FIMR programs and other PSIs.

Strengths of Design and Analytic Strategy

Our study design improves on the methodology used in past evaluations of FIMR programs. The inclusion of comparison groups was critical to conducting a scientifically rigorous evaluation, as was the selection

of a broad sample of FIMR programs. Our sample of FIMR programs alone was nearly three times greater than the number of programs in prior studies. We also constrained our time frame so that secular changes would not confound the results. By doing so, we may not, however, have observed an effect of the programs where the lag time for an effect was greater than our 4-year study period. At the same time, we also included programs that were discontinued during the time period, and this may have diluted the overall impact of the programs.

Another strength was our conceptualization and measurement of the outcomes by which to judge the FIMR programs as a strategy for systems change. We believe that our approach is innovative and addresses an important gap in studying systems initiatives in MCH. The collection of data from multiple "actors" in the perinatal health system also enhanced our ability to study the impact of FIMR programs and PSIs in communities nationwide.

Limitations of Design and Analytic Strategy

While the design of this evaluation was an important step forward, a number of limitations remain. First, and foremost, any design short of a randomized clinical trial will leave some questions as to the direction of the cause and effect of the program. Communities with a FIMR program may differ from those without one and, in particular, may have greater baseline levels of public health function activity. A pre- and posttest design may have addressed these underlying differences, but it was not a viable option for either our team or the funding agency. If FIMR is indeed an effective change agent, changes may not occur within a short time frame. Accordingly, we deliberately chose FIMRs that had been in existence for at least one year during the 4-year recall period for data collection.

Another drawback of the evaluation was the limited variability found in outcomes, community characteristics, and program characteristics. For example, few communities reported that none or almost no essential MCH services were carried out, and differences in the report of services across communities were small in many instances. Moreover, despite a much larger sample of FIMR programs than in previous evaluations, the power of the evaluation to detect differences in the relation of FIMR characteristics with the implementation of recommendations or the essential MCH services was limited. The high correlation among community level variables also made adjustment for covariates difficult. It is possible that areas in which FIMR programs were implemented differed from other geographic areas on a variety of factors, in particular, community support and public–private partnerships in maternity and newborn care. We could not, however, control for these differences as a result of insufficient data on the community context prior to implementation of FIMR. Some of these data were collected in Phase III but only for 10 communities.

Finally, although our framework in Fig. 1 indicates that there may be other mechanisms besides implementation of recommendations and of essential MCH services through which FIMR programs influence systems change, we did not measure these mechanisms. These potential factors ranged from community empowerment to changes in prenatal and postpartum practices by clinicians participating in the FIMR. The complexity of measuring these mechanisms across communities was prohibitive both practically and conceptually, other than through the qualitative methods that we used in Phase III.

SUMMARY

FIMR is now a widespread strategy that has been adopted by more than 200 communities nationwide. Examining the impact of FIMR programs in a rigorous fashion presented a formidable challenge. A complex multiphase study design and innovative outcome measures were developed for the nationwide evaluation of FIMR. Data were collected from multiple respondents in nearly 200 communities across the United States. The results of this evaluation are an important contribution to the literature on the value of FIMR. However, while our study represents a substantial improvement over past research, limitations persist. Future work in this area will need to creatively address these limitations in order to better understand the effect of FIMR programs in communities.

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