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FROM THE FIELD

Lessons Learned: Implementation of Pilot Universal Postpartum Nurse Home Visiting Program, Massachusetts 2013–2016

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Abstract *Purpose* Home visiting programs for new families in the United States have traditionally served high-risk families. In contrast, universal home visiting models serve all families regardless of income, age, risk or other criteria. They offer an entry point into a system of care for children and families, with the potential to improve population health. This paper describes lessons learned from the first three years of implementing a universal home visiting model. *Description* Welcome Family is a universal home visiting program in Massachusetts that offers a one-time visit by a nurse to new mothers up to eight weeks postpartum. The Massachusetts Department of Public Health (MDPH) is piloting Welcome Family in four communities with the goal of expanding statewide. *Assessment* Welcome Family served over 3000 families in its first three years. Program performance measures provided a framework to examine successes and challenges related to outreach and enrollment, program operations, and linkages with community resources. Early challenges included increasing referrals to a new program and limited capacity to serve all women giving birth. Local implementing agencies tested innovative strategies and MDPH made program modifications, such as developing quarterly data reports and establishing a learning collaborative, to address identified challenges. *Conclusion* MDPH is committed to the success of Welcome Family and uses continuous quality improvement to maximize the impact of the program on families and the system of care in Massachusetts. Lessons learned from the Massachusetts pilot can inform other states' efforts to enhance their early childhood systems of care through expanding universal home visiting.

Keywords Universal home visiting · Early childhood systems of care · Program implementation

Significance

Universal home visiting models serve all families regardless of risk, income, age or other criteria. These programs

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can reach a broader range of families than programs with need-based enrollment, thereby identifying needs that might otherwise go undetected and reducing the stigma associated with participation in home visiting programs. Successes and challenges identified in the Massachusetts Welcome Family pilot can inform other states' efforts to enhance their early childhood systems of care through universal home visiting.

Purpose

Home visiting programs for new and expectant families offer a strategy for fostering positive child and family health outcomes. Life course theory suggests that addressing social, economic and environmental risk factors early in life can have lasting effects on health and development, making prenatal and early childhood periods ideal times to intervene (Fine and Kotelchuck 2010).

Traditionally, home visiting programs in the United States have served high-risk families who are most likely to benefit from intensive home-based services (Finello et al. 2016). Although they vary in their enrollment criteria, program components, and intensity, most home visiting models involve parental support and education, health screenings, linkages to community resources, and skills training for parents (Finello et al. 2016). Many positive outcomes have been linked to home visiting, such as reduced child abuse and neglect and improved child development and parenting outcomes (Geeraert et al. 2004; Sweet and Appelbaum 2004).

In contrast, universal home visiting models serve all families regardless of income, age, risk or other criteria. These programs can reach a broader range of families than programs with eligibility-based enrollment (Guterman 1999), thereby identifying needs that might otherwise go undetected (Dodge et al. 2013). Universal programs can also reduce the stigma associated with participation in eligibility-based programs (Krugman 1993), allowing home visitors to triage families with varying levels of need and connect them to services accordingly (Dodge et al. 2014).

In 2010, the Affordable Care Act established the Maternal, Infant, and Early Childhood Home Visiting Program (MIECHV), funding states to support home visiting programs to improve the health and development of families and children birth to five. MIECHV also aims to improve coordination of services by enhancing systems of care for families and young children. In Massachusetts, where the high quality and diverse health services and resources for families can be fragmented or inaccessible, the Massachusetts Department of Public Health (MDPH) is committed to reaching all women giving birth and ensuring that children receive services as early as possible. Thus, the MIECHV program provided an opportunity for MDPH to develop and implement its vision for positioning home visiting as an entry point into an early childhood system of care. Using MIECHV funding, MDPH is implementing Welcome Family, a universal postpartum nurse home visiting program that supports women in their role as new mothers, identifies family needs, and facilitates linkages to maternal and infant services.

This paper identifies lessons learned from the first three years of implementation of Welcome Family related to outreach and enrollment, program operations and quality, and follow-up and linkages with community resources. These lessons can inform other states' efforts to enhance their early childhood system of care through universal home visiting.

Description

Program Development

Welcome Family was developed by a Planning Committee including MDPH, state agencies, MIECHV programs, birth hospitals, and program evaluators over a two year period prior to its implementation. The Planning Committee operationalized the vision for a universal postpartum home visiting program, including the goals, objectives, core operational components, and evaluation. The goal for the "universality" of the program was that (1) all mothers would be eligible regardless of income, age, risk or other criteria (2) all mothers with newborns would be offered the program and (3) the program would reach families with diverse sociodemographic characteristics.

The framework and implementation plan for Welcome Family were modeled off of two similar home visiting programs: FIRSTLink and Family Connects. FIRSTLink, a Massachusetts program which ended in 2007, provided a one-time home visit to families with newborns and connected them to services to prevent or mediate adverse child and family health outcomes. A key lesson learned from the FIRSTLink evaluation was that the program was better able to foster community engagement and lessen the stigma of home visiting in communities that followed a universal model of enrollment compared to communities where home visits were provided based on established maternal and infant risk criteria. Family Connects, a universal evidence-based postnatal home visiting program from North Carolina, provides support for the use of universal models in obtaining population-level impacts (Dodge et al. 2014). Findings from a randomized controlled trial indicate that Family Connects increased connections to community services, improved parenting behavior, decreased emergency room visits, and lowered healthcare costs (Dodge et al. 2014).

MDPH launched Welcome Family as a pilot program in Boston and Fall River in September 2013. The communities

were selected from the existing Massachusetts MIECHV communities. The first two local implementing agencies (LIAs) were selected based on factors such as established community connections to child welfare and early education and care, existing community-based family support initiatives, and relationships with birth hospitals. Implementing Welcome Family as a pilot program allowed MDPH and the Planning Committee to use a continuous quality improvement (CQI) framework to modify and improve the program after service delivery began. MDPH's vision is to gradually expand Welcome Family to additional MIECHV communities and eventually statewide to make it a truly universal program.

Current Program

As of September 30, 2016, Welcome Family has served over 3300 mothers living or giving birth in Boston, Fall River, Lawrence, and Lowell. Lawrence and Lowell began implementation in September 2014 after a competitive funding application process. MDPH funds four LIAs in these communities to provide services, including a city health department, visiting nurses association, human service agency, and child and family service agency. As of July 1, 2016, Welcome Family is also available in Holyoke and Springfield.

Women learn about Welcome Family prenatally and/or in the birth hospital prior to discharge, based on referral processes established in each community. While birth hospitals are the primary referral source, referrals also come from community health centers, community service providers, health care providers, and self-referrals. The visit is conducted up to eight weeks postpartum by a maternal and child health nurse; the goal is that visits occur two to four weeks after birth so that needs can be addressed as early as possible. Families provide informed consent to participate in the Welcome Family program.

During the visit, the nurse assesses six areas of health, safety, emotional health and family well-being, addressing both medical and social needs: (1) unmet health needs (2) maternal and infant nutrition, including breastfeeding (3) emotional health, including postpartum depression and social connectedness (4) substance use (5) intimate partner violence (IPV) and (6) physical assessment of mother and infant. The physical assessment was added in September 2014 based on participant feedback. Standardized screening tools are used to assess postpartum depression, social connectedness, substance use, and IPV.

For identified family needs, the nurse provides brief intervention and education and, if needed, refers to community resources. The nurse addresses further questions or concerns the family has and provides a gift bag, including items such as a rattle and book, to prompt discussion between the nurse and the mother about newborn care and maternal health. Families receive a follow-up call from the LIA two to three weeks after the visit to document the outcomes of referrals made during the visit and assess the need for additional referrals.

All LIAs adhere to these core operational components; however, LIAs adapted processes for outreach, operations, and follow-up based on agency and community infrastructure and resources in order to promote innovation and improvement of the pilot program. For example, in one community the Welcome Family nurse introduces the program directly to women before they are discharged from the birth hospital, while other communities rely on the hospital staff to make referrals.

Because Welcome Family is a pilot program, the current grant-funded budget limits each community to serving 459 families annually, recognizing that it will take time to build capacity to serve all women giving birth. As a result, current efforts focus on ensuring that Welcome Family is universally available to and reaches mothers of varied age, income, and risk. MDPH is pursuing sustainable third-party funding to ensure that, as the program grows, Welcome Family is also offered to all women giving birth.

Data Collection and Evaluation

The Welcome Family database is the primary source of data on program implementation. The database, a Microsoft Access application, captures data at every step of the program and is used to generate monthly and quarterly data reports, monitor LIA performance, and inform program planning and CQI. In July 2015, MDPH developed 10 performance measures to strengthen program implementation, monitoring, and data collection. The performance measures reflect program components over which the LIAs have control. Data are discussed at meetings with LIAs and stakeholders to contextualize the successes and challenges related to outreach and enrollment, program operations, and linkages with community resources.

An evaluation of Welcome Family is underway to assess the implementation and outcomes of the pilot program. Evaluation results will be discussed in a separate paper. The MDPH Institutional Review Board granted approval for data collection and evaluation.

Assessment

The performance measures provide a lens through which to report lessons learned from the first three years of Welcome Family implementation. Performance measures focus on three areas: (1) Outreach and Enrollment (2) Program

Table 1 Welcome Family performance measures

Construct	Measure type	Performance measure
Outreach and enrollment	Outcome	PM1: % of eligible births who accepted a Welcome Family referral
	Process	PM2: % of program capacity that was served by the program
Program operations and quality	Outcome	PM3: % of completed visits among caregivers who accepted a referral
	Process	PM4: % of visits completed within 8 weeks of birth
	Process	PM5: % of screenings for social connectedness that are completed
	Process	PM6: % of screenings for depression that are completed
	Process	PM7: % of screenings for substance use that are completed
	Process	PM8: % of screenings for intimate partner violence that are completed
Follow-up & linkages with community resources	Process	PM9: % of concerns identified that received a brief intervention and/or a referral
	Process	PM10: # of referrals made to a MIECHV program

Operations and Quality and (3) Follow-up and Linkages with Community Resources Table 1).

Outreach and Enrollment

Successful outreach and enrollment strategies are critical aspects of program implementation. LIAs receive monthly and quarterly data detailing the number of eligible births in their community and the number and source of accepted referrals to Welcome Family (PM1). Among eligible births in Welcome Family communities during the first three years (n = 38,588), 17% (n = 6,377) of mothers accepted a Welcome Family referral (with a range of 6–46% across the four LIAs). MDPH is unable collect data on mothers who decline a Welcome Family referral. Therefore, the number of mothers who were offered the program is unknown at this time.

The majority (73%) of referrals to Welcome Family were from hospitals, followed by home visiting services (16%) and community health centers (9%). Increasing accepted Welcome Family referrals has been a focus of performance monitoring and CQI.

Hospitals are a common point of contact for women giving birth in the community and are therefore an integral partner and referral source. In most pilot communities, labor and delivery nurses present the program to new mothers and complete the referral form prior to hospital discharge. Because of competing priorities and time constraints, however, introducing Welcome Family to all new mothers in the hospital has proven challenging. LIAs employed creative strategies to address this issue, such as holding regular meetings with hospital staff to maintain engagement and address referral challenges, adding Welcome Family materials to discharge packets, and obtaining permission for the Welcome Family nurse to meet with patients and introduce the program.

While preserving strong relationships with the birth hospitals, LIAs also increased referrals by expanding and diversifying recruitment networks, such as through pediatric and primary care offices and community service agencies. During the first year of implementation, LIAs received additional funding for marketing to raise awareness in the community, and have implemented strategies including billboards and bus advertisements. Community-level marketing and outreach will continue, and MDPH will market Welcome Family at the state level using strategies such as social media and provider mailings. In June 2016, MDPH initiated a CQI project to increase the number of accepted referrals by using electronic birth certificate data to identify and directly contact new mothers to offer them a Welcome Family visit.

LIAs have an annual capacity to serve 459 families per year (PM2), based on current capped funding. To date, of the 4,896 potential visits, 68% were completed. LIAs are expected to reach capacity within one to two years. MDPH is seeking additional and alternative funding to serve an increasing number of families and continue to move the program in the direction of its original vision for universality.

Program Operations and Quality

Following recruitment of a mother into Welcome Family, LIAs attempt to contact the family to schedule a visit. In the first three years, just under two-thirds of mothers who accepted a referral scheduled a visit. Reasons for not scheduling a visit include mother subsequently declined, family moved out of the service area, or inability to contact the mother. The majority (85%) of scheduled visits are completed. Among the 6377 mothers who accepted a referral, 61% (n = 3920) completed a visit (PM3). As expected, 96% of visits were completed within eight weeks postpartum (PM4). LIAs receive monthly updates on the number of visits completed and process flow charts to monitor attrition at each step of the program (Fig. 1).

High screening completion rates for postpartum depression, social connectedness, substance use, and IPV were reported across all LIAs, with an average screening completion of 96% (PMs 5–8). Data on screening outcomes,

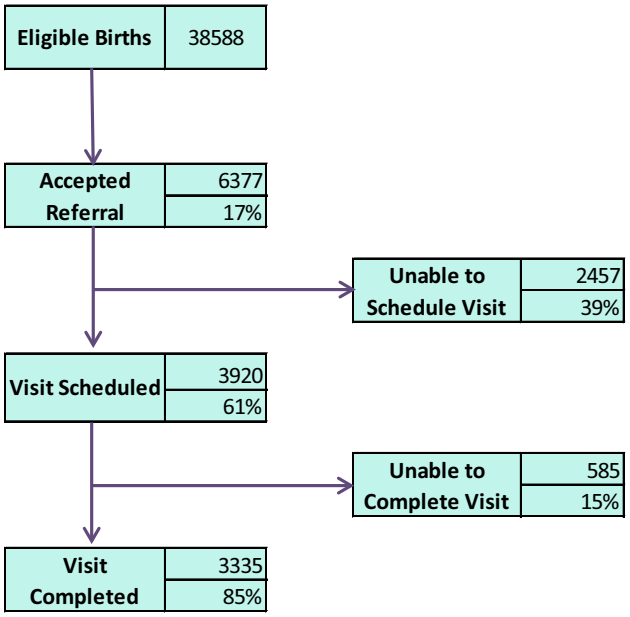

Fig. 1 Welcome Family program flow

needs identified, brief interventions or education provided, and referrals offered are collected during the visit. Nurses report that the substance use and IPV screens infrequently yield disclosures due to the sensitive nature of these topics and the difficulty of developing a relationship with the mother during a one-time visit. MDPH is planning further training to support nurses in this area, with an emphasis on leveraging the universal Welcome Family visit to help destigmatize these topics.

A Welcome Family Program Manual was developed at the time of initial implementation to provide detailed guidance for the LIAs on program requirements and expectations. This manual was revised in June 2016 to reflect modifications made during the pilot phase and to delineate core operational components from processes that LIAs can tailor to support innovation and CQI.

Linkages and Follow-up

When a need is identified during the home visit, the nurse can provide a brief intervention, offering education and support immediately, and/or a referral, which is a linkage with healthcare or community-based services when additional support is needed. The nurse makes a referral by contacting the service agency on the family's behalf, when possible, to facilitate the connection. In some cases the nurse provides contact information for the family to follow-up. Overall, 75% of needs identified during the Welcome Family visit received a brief intervention and/or a referral or were otherwise being met (PM9). The most common referrals made were to the Supplemental Nutrition Assistance Program, food pantries, and child care. Because Welcome Family is available to all new mothers, LIAs offer services and resources that reflect the wide range of family needs, from immediate food assistance to breastfeeding support. PM10 tracks referrals to MIECHV-funded home visiting programs to ensure Welcome Family is embedded in the home visiting system of care. By the third year of implementation, after conducting a CQI project focused on PM10, referrals to MIECHV programs increased by 277% for families in need of longer-term home visiting support.

LIAs completed a follow-up phone call two to three weeks after the visit with 64% of participants. During the follow-up call, LIAs review the status of the referrals made during the visit. Among participants who received a follow-up call and for whom a referral was made, 23% were successfully connected to services, defined as enrolled or waitlisted. Welcome Family will improve referral completion by distinguishing between a referral that requires follow up versus a resource for the family and through clearer instruction from MDPH regarding follow-up call procedures. LIAs will also use CQI methodology to test strategies to support families in connecting to services, such as contacting the referral agency during the home visit.

Another form of follow-up is with the infant's pediatrician to promote connection to the medical home. In September 2015, the program instituted a requirement that LIAs send a letter to the pediatrician to inform him or her of the visit, outcomes of the infant physical assessment, and any referrals that were made.

Conclusion

Responding to Lessons Learned

Several lessons learned during the first three years of Welcome Family implementation informed changes to the initial conception of the program, such as developing performance measures, adding the physical assessment to the visit, and requiring follow-up with the infant's pediatrician. In addition, MDPH began conducting annual site visits with LIAs in September 2015 to systematically review program performance, successes and challenges.

The formation of the Welcome Family Advisory Committee and Welcome Family Learning Collaborative in October 2014 and January 2015, respectively, provide an opportunity and capacity to respond to lessons learned. With a core model in place, the Planning Committee was reconstructed as the Advisory Committee to provide ongoing guidance on program implementation, systems-building, and sustainability. The Advisory Committee includes representation from stakeholders including the state department of early

education and care, Medicaid, healthcare providers, home visiting programs, birth hospitals, and LIAs.

The LIAs comprise the Learning Collaborative, which is a forum to identify and share best practices across sites to improve program effectiveness. LIAs use data to identify areas for improvement, use Plan, Do, Study, Act cycles to conduct tests of change, and measure the impact of the changes. In future cycles of the Learning Collaborative, LIAs will focus improvement strategies on several of the challenges identified above, such as ensuring that families are connected to services to which they are referred.

MDPH also maintains a continuous data feedback loop with LIAs through monthly data reports and quarterly performance measure reports. A culture of improvement is now embedded across the program and principles of CQI drive efforts to implement, refine, and expand Welcome Family.

Next Steps

With the establishment of MIECHV, Massachusetts designed the Welcome Family program to improve coordination and access to services for families and serve as an entry point into an early childhood system of care. Although a gap exists between the initial vision of Welcome Family and how effectively it has been implemented, MDPH and the LIAs will continue to address identified challenges, such as raising awareness of a new program and increasing capacity to serve all women giving birth.

MDPH recognizes the importance of universal home visiting as a source of support and information for all families with newborns, regardless of their risk or level of need, and is committed to maximizing Welcome Family's potential impact on families and the system of care in Massachusetts. Welcome Family has already reached over 3000 families with newborns, and will continue to adapt as the program expands to serve families in two additional communities and moves beyond the pilot phase. Lessons learned from the Welcome Family pilot can inform other states' efforts to enhance their early childhood systems of care through universal home visiting.

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Compliance with Ethical Standards

Conflict of interest The authors declare that they have no conflict of interest.

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