AMCHP
ASSOCIATION OF MATERNAL & CHILD HEALTH PROGRAMS
Innovation Station
Sharing Best Practices in Maternal & Child Health

Early Intervention Partnerships Program (EIPP)

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BACKGROUND
In 2001, 6,739 of the 81,016 births in Massachusetts were born to women with an identified risk on the birth certificate placing either the mother or infant at risk for a health or developmental delay. In response, the Massachusetts Department of Public Health (MDPH) formed an Expert Working Group charged with developing a cost effective program model with limited funds that had clearly articulated measurable objectives, was flexible and could be tailored to the specific needs of families, and was integrated with other programs.

The workgroup implemented the Massachusetts Early Intervention Partnerships Program (EIPP), which is a high-risk maternal and newborn screening, assessment and service system. EIPP has demonstrated capacity for the early identification of maternal and infant risk factors and linkages to services to prevent or mitigate poor health and/or developmental outcomes. Through a variety of interventions and strategies to foster continuity of care, EIPP works to address the complex physical, emotional, and environmental health needs of pregnant and postpartum women who may not be eligible for other programs such as Healthy Families.

PROGRAM OBJECTIVES
The desired outcomes for the program are:

- Improved maternal health and perinatal outcomes
- Optimal infant growth and development through the first year of life

To achieve these outcomes, EIPP has the following goals:

1. Improve access to and utilization of health care services.
2. Improve nutrition, physical activity, and breastfeeding initiation and duration rates.
3. Ensure a safe and healthy social, emotional, and physical environment.
4. Strengthen local perinatal and early childhood systems through collaboration with community entities and active engagement of families.

TITLE V/MCH BLOCK GRANT MEASURES ADDRESSED

#4: A) Percent of infants who are ever breastfed and B) Percent of infants breastfed exclusively through 6 months.

#6: Percent of children, ages 9 through 71 months, receiving a developmental screening using a parent-completed screening tool.

#14: A) Percent of women who smoke during pregnancy and B) Percent of children who live in households where someone smokes.

TARGET POPULATION SERVED
Target population includes families/consumers, infants/newborns, and women in communities with some of the state's highest rates of infant mortality and morbidity including Springfield, Fitchburg, New Bedford, Fall River, Somerville/Cambridge, Lynn, and Lowell. Between state FY03 and FY14, 6,290 pregnant and postpartum women were enrolled into EIPP services.

PROGRAM ACTIVITIES
EIPP provides home visiting and group services to over 550 families annually by a maternal and child health (MCH) team that includes an MCH nurse, a mental health clinical professional, and a community health worker (CHW). EIPP provides maternal and infant health assessment and monitoring; health education and guidance; screening and appropriate referrals; and linkage with WIC and other resources. Programmatic performance measures and maternal and infant outcomes range from improved management of alcohol, tobacco and other drugs, improved parenting skills, improved emotional health, increased rates of exclusive breastfeeding, increased attendance at postpartum visits, and improved nutrition.
Every EIPP participant receives at least one home visit where a Comprehensive Health Assessment (CHA) is conducted. CHAs include at a minimum:

- Clinical assessment with family health history, screening for current or potential factors that impact optimal health, and physical examination as indicated;
- Breastfeeding and infant feeding status;
- Nutritional status and physical activity;
- Screening for alcohol, tobacco and other drug use, mental health including postpartum depression, intimate partner violence, and safe environments; and

- Parent-Infant Attachment.

In addition, EIPP participants are encouraged to engage in group services. Session curricula are community-oriented and culturally sensitive, and are structured to meet the needs of the clients and have included infant massage, nutrition, Mayan wrapping, yoga, self-care, parenting skills, tummy time/floor time, parenting skills, mother-infant attachment, infant development and reading time/literacy. Also, all EIPP infants receive a developmental screening at the key developmental stages of 2, 4, 6, 8, and 12 months of age using the Ages and Stages Questionnaire (ASQ-3) to assess for developmental delays and EI eligibility.

PROGRAM OUTCOMES/EVALUATION DATA
EIPP evaluation activities related to the overall program outcomes, goals, and respective standards have been limited due to funding. However, two specific standards have been analyzed resulting in program outcome data.

Goal 1: EIPP will improve Access and Utilization of Health Services.
Standard 3.0: EIPP facilitates families' access to reproductive, primary and pediatric care and other community services.
Quantitative analysis of EIPP program data demonstrated that during state fiscal years 2004-2013, 83% of EIPP participants reported attending their postpartum visits (PPVs). Overall, 68.4% (n=3,272) of EIPP participants received insurance coverage through MassHealth, and among them 87% reported having attended their PPV. In comparison, PPV participation for a random sample of women enrolled in a MassHealth managed care plan during HEDIS 2007, 2009, and 2011, showed MassHealth weighted means of 59.0%, 64.0%, and 68.7%, respectively, using medical records and claims data. Based on this comparison, EIPP appears to be an effective intervention for improving PPV attendance among mothers who are at risk for not receiving their postpartum care.

Goal 2: Improve Nutrition, Physical Activity, and Breastfeeding Initiation and Duration Rates
Standard 5.0: Families are provided with breastfeeding education and support services.

For this program goal and corresponding standard, two quantitative analyses were conducted.

In 2008, MDPH used linked birth certificate and hospital discharge data in the Pregnancy to Early Life Longitudinal (PELL) Data System to evaluate perinatal outcomes for EIPP Participants compared with a comparison population of women matched on age, race and geographic residence. Controlling for potential confounders, EIPP participants were more likely than non-participants to be breastfeeding at hospital discharge (adjusted odds ratio = 1.4, 95% confidence interval 1.1–1.8). Results indicate that despite the known high prevalence in the EIPP population of risk factors that could not be adjusted for in the comparative analysis (e.g., depression, substance abuse, and domestic violence), comparable or better outcomes among EIPP participants may speak to the success of the program.

In 2013, a graduate intern used both quantitative and qualitative data to determine the effectiveness of the EIPP exclusive breastfeeding counseling. Results indicate that EIPP exclusive breastfeeding rates did not improve significantly since the exclusive breastfeeding counseling began. Hispanic mothers had the lowest rates of exclusive breastfeeding (3% at 6 months postpartum). EIPP had lower general and exclusive breastfeeding rates than PRAMS at all time-points. Her conclusions included a recommendation to implement policies to improve the mother's comfort breastfeeding in public and to decrease their risk of postpartum depression. In addition, improved collaboration and coordination between EIPP counselors and their clients' healthcare providers may also improve exclusive breastfeeding rates. These recommendations are being incorporated into ongoing program quality assurance activities.

PROGRAM COST
At its inception in 2003, EIPP was financially supported through four primary funding sources including federal, state, Medicaid, and third party totaling over $1.6 million. However, due to multiple and competing interests for the same tax dollars over the first few years of operation, funding for EIPP was reduced by more than 45%.

The current funding (Title V, Medicaid and third party) is allocated to each of the EIPP vendors through a $55,000 base grant with the reminder available through unit rate reimbursement for the nursing and mental health clinician direct services.

In 2010, the MDPH Bureau of Family Health & Nutrition Office of Finance & Administration estimated that the cost per family served by EIPP is $1,397 for the duration of receiving EIPP services, from enrollment up to a child's first birthday.

ASSETS & CHALLENGES

Assets
Establishing and strengthening the EIPP Perinatal & Early Childhood Advisory Committees is a key strategy that works to enhance and facilitate communication among providers to ensure a seamless system of maternal and infant health care in the EIPP communities. Information related to needs, capacity and priorities is collected during these meetings and during focus groups,

key informant interviews, and at various other internal and external meetings.

In addition, annual site visits are conducted by the MDPH Program Director where the process of MDPH contract performance review is combined with ongoing program planning and development activities based on the Standards of Care for EIPP services. Indicators of service provision and progress towards program goals are evaluated through a process of data collection, observation, and focus groups. A random number of EIPP Medical Records are selected for review at each program site. The EIPP Medical Records are then compared with their respective EIPP Electronic Records maintained in the EIPP Database for accuracy. During the last cycle of site visits in FY13, the data accuracy rate was 93% across all sites, the highest rate achieved.

Challenges

- **MCH Team:** Home visiting programs have traditionally utilized only one professional in the provisions of services to high need families such as Health Families Massachusetts using a Community Health Worker (CHW) Model and the Nurse-Family Partnerships using a nurse model. Shifting perspective to rely on a team rather than an individual expertise to provide comprehensive services is a challenge for some professionals and community based agencies.

- **Diversity of the MCH Team Members:** Significant disparities persist in birth outcomes and utilization of prenatal care among different groups of the Commonwealth's residents, in particular racial, ethnic, and geographical subpopulations who have traditionally been isolated from the larger health care system. Hiring staff to provide EIPP services who did not reflect the cultural, linguistic and racial diversity of the community being served resulted in low caseloads and poor retention in service provision. This was a contributing factor for the two EIPP sites that closed.

- **Implementing Creative Strategies to Maintain Active Participant Involvement:** Adopting innovative approaches to engaging and retaining high need families within diverse communities has provided the foundation for solid service delivery and for facilitating the ongoing engagement of women in the EIPP service provision system. However, many professionals and institutions were unfamiliar with the difference between marketing activities (distributing brochures) and outreach activities (drive-by visits) which have been proven to be more effective at reaching individuals traditionally isolated from the health care system. This was another contributing factor for the two EIPP sites that closed.

Overcoming Challenges

- **MCH Team:** Developing a partnership within each of the MCH Teams was vital for providing comprehensive services that addressed families' identified needs, to perform community wide outreach and education, and to support individual and family efforts in improving their circumstances. When each MCH Team member acknowledges, utilizes, and relies upon the professional expertise of the other team members, the MCH Team is more effective in engaging and serving high-risk families. Hosting mandatory, quarterly EIPP statewide meetings where training, networking and facilitated discussions by discipline occurred was one strategy used to develop team cohesion.

- **Diversity of the MCH Team Members:** To effectively engage high-risk pregnant and postpartum women who have been traditionally isolated from the health care delivery system, successful EIPPs ensured their MCH Team members reflected the cultural, linguistic, racial, and ethnic diversity of the population served in their respective communities. Annual cultural competence training and pay differentials for bi-lingual staff were two strategies that have been successfully implemented.

- **Implementing Creative Strategies to Maintain Active Participant Involvement:** In order to address this challenge, training and technical assistance was provided to assist the EIPP sites to adopt unique strategies to locate, engage, and maintain the active involvement of eligible pregnant and postpartum women including:
  - Conducting "drive by" visits,
  - building relationships with neighbors and extended family members,
  - collecting a minimum of three emergency/family contacts with signed releases,
  - providing immediate follow ups on undeliverable mail and disconnected phone numbers, and
  - locating families in settings that families frequent including churches, local businesses, and on the street.

LESSONS LEARNED

Integrating this program into an existing EI system of care while also diversifying funding has ensured that EIPP remains an active participant in the national and state discussions around home visiting and resource allocation. At the same time, due to significant funding limitations, EIPP has struggled to come to scale and to conduct a comprehensive program evaluation to prove its effectiveness. MDPH initial administrative decisions included ensuring all remaining available funding was placed in service provision at the community level. As a result, MDPH was unable to fund an evaluation of the program. In

hindsight, funding one less EIPP site in order to fund a program evaluation may have been a more useful allocation of resources to support long term sustainability.

FUTURE STEPS

EIPP is an effective pilot project that has struggled to come to scale, emblematic of a larger fragmented perinatal and early childhood health system of care. Due to funding diversification and strong collaborations with the Medicaid MCO's, EIPP has been able to sustain itself as the Commonwealth continues to grapple with persistent disparities in birth and pregnancy outcomes, and limited public health resources.

With the potential for additional state and federal funding along with continued implementation of the EIPP evaluation plan, a long term sustainability plan is intended.

COLLABORATIONS

In early 2007, the MDPH approached the Massachusetts MCOs with a collaborative programmatic and financial proposal that sought to partner a community health model (EIPP) with the existing medical network of care provided by the MCO (telephonic perinatal case management). Beginning in early 2008, Network Health and Neighborhood Health Plan voluntarily entered into financial contracts with the EIPP vendors for the provision of EIPP services to their respective members. By linking these two models, coordinated and comprehensive services are targeted to high risk pregnant and postpartum mothers experiencing multiple and complex stressors. Through this collaboration, the MDPH and the Medicaid MCOs' are able to complement their respective services, enhance MCO member benefits, leverage respective resources, and improve the health and well-being of pregnant and postpartum women and their infants.

PEER REVIEW & REPLICATION

The EIPP program has been presented at national conferences including the National Perinatal Association (2003); American Public Health Association (2006 & 2008); Association of Maternal and Child Health Programs (2008); and CityMatCH Leadership and MCH Epidemiology Conference (2014).

At this time, EIPP has not been replicated in other settings due to limited resources. DPH will continue to seek additional funding to replicate EIPP in additional communities.

RESOURCES PROVIDED

The following products and resources have been developed and are available:

- EIPP Standards of Care
- EIPP Comprehensive Health Assessment Tool & User Guide

Forms can be downloaded at the EIPP website: http://www.mass.gov/eohhs/gov/departments/dph/programs/family-health/early-intervention-partnerships-program

Key words: Infant Mortality, Pregnancy, Postpartum, Screening, Home Visiting

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