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Practice Summary & Implementation Guidance

Partners in Pregnancy

Partners in Pregnancy provides high-risk pregnant women and their infants with the care they need to survive and grow up healthy. The program involves home visits and case management by CHIP nurses and Parent Educators, in combination with a medical home and regular nurse consultations provided by Optima Health.

Cutting-Edge | Emerging | **Promising** | Best

Location	Topic Area	Setting
Virginia	Primary/Preventative Care	Community

Population Focus	NPM	Date Added
Women/Maternal Health	NPM 3: Risk-Appropriate Perinatal Care	October 2020

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Section 1: Practice Summary

PRACTICE DESCRIPTION

At the start of this project, Virginia had 10,300 babies born each year at low birth weight (LBW), and 3,000 of these were Medicaid births. Virginia's infant mortality rate was 7.2 per 1,000 live births, making it the 18th highest state in the country and above the national average for infant mortality. Despite advances in health care, research, technology, and millions of dollars invested in the prevention of low birth weight, the incidence of LBW had increased; 7-11% of all live births were complicated by LBW. Improvement in neonatal technology has improved survival rates but at a high cost. Neonatal intensive care days are among the most expensive, and the social impact from significant morbidity after birth is staggering. Partners in Pregnancy is a partnership between Comprehensive Health Investment Project (CHIP) of Virginia and the Optima Health Plan aimed at improving health outcomes for high-risk pregnant women and infants.

Partners in Pregnancy provides high-risk pregnant women and infants with the care they need to survive and grow up healthy. The program involves home visits and case management by CHIP Nurses and Parent Educators, in combination with a medical home and regular nurse consultations provided by Optima Health.

CORE COMPONENTS & PRACTICE ACTIVITES

The overall program goal is to improve adverse pregnancy outcomes by decreasing NICU days and dollars. Primary project objectives include:

- Reduction of NICU days and costs
- Maintenance of eligibility for Medicaid coverage for mothers and infants
- Increasing percentage of infants with a medical home
- Promotion of healthy behaviors to improve health outcomes

Relationship-Based Practice:
The core of CHIP home visiting is the team relationship between the family and the home visiting staff and close consultation and collaboration between the Optima Health Plan nursing staff. Effective relationship-based practices among staff members, families, the health plan, and other service providers result in enhanced service continuity, family participation, empowerment, and meaningful change.

Model Elements:
CHIP Registered Nurses and Parent Educators use a collaborative model to work in cooperation with the family, the Optima Health Plan, medical professionals, and community service providers to meet goals related to health, child development, family functioning, and self-sufficiency. CHIP RN and

Parent Educator teams are structured in 1 nurse to 2 or 3 Parent Educator ratios. Teams receive training and quality supervision that includes observation of home visits, child/family problem solving, and monitoring of files/documentation, etc. Reflective supervision offers a context for learning and professional development. Families are offered home visits by the RN, Parent Educator or both at least once per month but often receive visits more frequently, depending on family needs. The CHIP staff and the Optima Health Plan telephonic case manager nurses have monthly calls to discuss that status of cases, to share resources and trouble shoot issues with families. The CHIP model has 3 key components: Family Support, Health Supervision, and Medical Home.

Core Components & Practice Activities

Core Component	Activities	Operational Details
Family Support	Family Support Services	• Family needs assessments to determine family strengths and needs and form the basis for a Comprehensive Family Service Plan • Education related to parenting, literacy, household management, nutrition, home safety • Assistance with problem solving and referrals for housing, transportation, adult education, job training, employment assistance, child care, early childhood education
Family Support	Parent Education and Developmental Services	• Parents as Teachers or other parenting curriculum with emphasis on parent child interaction, development centered parenting, and family well being • Regular developmental screening using the Ages & Stages Questionnaires and ASQ: Social Emotional Questionnaires • Referrals coordination of early intervention or special education services as indicated
Health Supervision and Medical Home	Prenatal and Pediatric	• Prenatal and Postpartum assessments • Newborn health assessments • Age-specific child health assessments • Health education and anticipatory guidance based on AAP Bright Futures materials • Education about appropriate use of medical home and coordination with selected provider and health plan

		• Immunization education and Well Child Visit tracking and facilitation
Health Supervision and Medical Home	Maternal	• Adult health assessments and reproductive life planning • Prenatal assessments, education and case management • Assistance with problem solving and referrals for counseling, substance abuse and/or mental health services

HEALTH EQUITY

African American women across the income spectrum and from all walks of life are dying from preventable pregnancy-related complications at three to four times the rate of non-Hispanic white women, while the death rate for black infants is twice that of infants born to non-Hispanic white mothers. Through the work of nurses, parent educators and social workers, CHIP and Partners in Pregnancy provides health education, resources and referrals, transportation and other vital services to families with high risk for health disparities. Acting as a bridge between the healthcare system and families of color, home visitors help healthcare providers understand the context in which families live and assist parents in overcoming social determinants of health that have impacted generations of people of color.

On average, Black, Hispanic, and American Indian students demonstrate significantly lower reading, math, and vocabulary skills at school entry than White and Asian American children. Through the use of evidence-based parenting and early learning curriculum, CHIP programs provide parents with the tools they need to become their child's first and best teacher. The Center for Law and Social Policy, or CLASP Analysis of Current Population Survey indicated that the share of infants and toddlers in Black poor and low-income households was 61% and 58% in Hispanic poor and low-income households. Women of color make up more than half of mothers with very young children in low-wage jobs. Setting goals for family well-being and self-sufficiency is a central tenant of most home visiting programs. By offering supports and encouragement to achieve educational and occupational goals, home visitors lift up parents in families of color to reach their potential and thrive as members of their local communities.

EVIDENCE OF EFFECTIVENESS

Cost data were calculated Per Member Per Month (PMPM) for control and intervention groups. In both groups cost categories were defined as: Emergency Department (ED), Home Care, Inpatient Admissions, Outpatient Services, Doctor Office Visits, and Pharmacy. Women in the intervention

group had PMPM costs that were higher for Emergency Department, Home Health, outpatient services and office visits (an expected variance due to program participation and encouragement to seek prenatal care). However, the intervention group had a lower cost than the Control group mothers in pharmacy use, and a substantially lower PMPM cost for inpatient admissions ($176 PMPM) when compared to the Control mothers ($185 PMPM).

The data are even more significant for the infants in the intervention group, where the PMPM cost for all indicators was lower when compared to infants in the intervention group, except for a slightly higher ED cost. Most notable was the difference in inpatient cost, which was $239 PMPM for the intervention infant as compared to $539 PMPM for the control infants.

The intervention infants spent less time in the hospital, with 4,584 hospital days/1000 infants compared to 5,444 hospital days/1000 infants for control infants. Healthy behaviors were also impacted by participation in the program, with a 55% decrease in maternal smoking, a 100% decrease in maternal alcohol use and a 70% decrease in stress levels for those who reported high stress levels when they first entered into the program. Behavior changes were self- reported by the participants to program staff.

Pre/Post testing and course evaluations of the trainings demonstrated that outreach workers left with increased knowledge of pregnancy related issues and a greater set of teaching skills to use during home visits. The Partners in Pregnancy program evaluation showed that the average claims of a participating pregnant woman and her child through the first year of life was $6,658, compared with $8,945 for the control group. This is a net savings of $2,287 per pregnancy, and an overall return on investment of 1.26. CHIP babies spent 44% fewer days in the hospital than the control babies. NICU days per 1,000 were 3,086 for CHIP babies and 6,417 for the control group. On average, of children enrolled in CHIP, 92% have health insurance, 95% have a medical home and 94% are up to date on their immunizations. Additional information can be found here.

Section 2: Implementation Guidance

STAKEHOLDER EMPOWERMENT & COLLABORATION

Optima's senior leadership was very committed and involved in the program. The Virginia Department of Medical Assistance Services (DMAS) Policy and Research Division provided support in evaluation planning as staff explored options for an additional comparison group from another geographic area not covered by mandatory Medicaid managed-care enrollment. This did not fully pan out because of the inability to match on risk factors and the lack of data on health behaviors from this group.

Each of the local CHIP programs work closely with a variety of service providers in their respective

communities including healthcare providers, Virginia Departments of Social Services, Health, and Mental Health, public housing, early intervention providers, among others.

REPLICATION

This practice has not yet been replicated.

INTERNAL CAPACITY

Each CHIP program has a Program Director or Coordinator, at least 2 teams consisting of 2-3 Parent Educators to 1 RN per team. Depending on the size of the program, additional supervisors may be added for every 9-12 staff members. Administrative and data support personnel provide support to the program and some programs enhance their service delivery by adding mental health supports such as Licensed Clinical Social Workers. Staff training and on-going reflective supervision are essential to the successful implementation of the model.

PRACTICE TIMELINE

Phase: Planning/Pre-Implementation		
Activity Description	**Time Needed**	**Responsible Party**
Training of staff (Core, March of Dimes, Great Beginnings)	At the launch of the project 8 days of initial training total	Director of Training

Phase: Implementation		
Activity Description	**Time Needed**	**Responsible Party**

Family Support Services	Throughout family enrollment Based on family need – 1-2 visits per month	Parent Educator/Outreach Worker
Parent Education and Developmental Services	Throughout family enrollment Based on family need – 1-2 visits per month	Parent Educator/Outreach Worker
Health Supervision and Medical Home – Prenatal and Pediatric	Throughout family enrollment Based on family need – every 3 weeks prenatally and monthly	RN
Health Supervision and Medical Home – Maternal	Throughout family enrollment Based on family need	RN

Phase: Sustainability		
Activity Description	**Time Needed**	**Responsible Party**
Replicate with other managed care organizations	On-going	CHIP Director

PRACTICE COST

Investment costs for planning the intervention totaled $22,393, which covered expenses for data management, modest funding for a nurse practitioner and nurse case manager, and program leadership. Operating expenses in the first year totaled $170,739. Included in these expenditures were support for the principal investigator, the program manager, data analyst, outreach worker and clinical support. In year two, the operating expenses decreased to $60,099, with most of the decline due to less reimbursement for clinical support.

The project has gone from being grant-funded (initial funding was provided by the Sentara Foundation) to being sustained at Optima and fully integrated into their managed care billing system.

The service is now subject to prior authorization for referred members; CHIP submits claims for reimbursement.

Budget			
Activity/Item	**Brief Description**	**Quantity**	**Total**
Staffing for planning period	Partial funding for data manager, partial funding for nurse practitioner and nurse case manager and program leadership	*N/A.*	$22,393
Staffing for implementation phase	Operating expenses included support for the principal investigator, the program manager, data analyst, nurse, and parent educator.	*N/A.*	$ 230,838
		Total Amount:	**$253,231**

LESSONS LEARNED

A modest investment in intensive case management and education for high-risk pregnant women positively influences their birth outcomes and yields significant medical costs savings.

Assets:

- CHIP had strong data demonstrating improved birth outcomes when pregnant women received at least four months of CHIP services prior to delivery, and therefore was better able to approach Optima healthcare with the idea of partnership.
- Optima had a strong track record of incorporating quality improvement in their health programs.

Challenges:

- The population served can be a challenge to engage due to the variety and complexity of health and socio-economic risk factors.
- The pregnant women served frequently have other children (who may have health issues) and the mothers often need support in meeting their own prenatal health needs within the context of other pressing family demands.

- A consistent mechanism for training new staff (due to periodic turnover of staff) needs to be incorporated into this type of program.

Overcoming challenges:

- Partnering with the family in a goal-setting process, listening to the family's concerns and working in a comprehensive manner to support the whole family provided CHIP with the ability to address many of the barriers to health.
- The CHIP staff became the eyes, ears, and hands of the health plan, bringing nursing and family support into each individual home.

Optima's high-tech data mining and monitoring techniques were paired with CHIP's high-touch, in-home expertise, resulting in a very successful partnership.

NEXT STEPS

The program is ongoing. CHIP has replicated the partnership with one additional Medicaid managed care plan.

RESOURCES PROVIDED

- Demonstrating the Business Case for Quality in Medicaid: Challenges and Opportunities, Published: October 2008 Funder: Robert Wood Johnson Foundation and The Commonwealth Fund
- More information about Partners in Pregnancy can be found here.
- The Logic Model for the Comprehensive Health Investment Project (CHIP of Virginia)

APPENDIX

- *N/A.*