Family Connects in the Transformation Zone
Updates 10/20/2016

Key Outcomes/Local Impact

The Family Connects program in Northeast North Carolina was established in Beaufort, Bertie, Chowan, and Hyde counties as a replication of the Durham Connects program in Durham, North Carolina. After nurses and program support staff were hired and trained, the Family Connects program began scaling up services from July 2014 (with one nurse in Beaufort County), officially beginning services across the counties with a public launch on September 1, 2014; and by the beginning of 2015, the program was fully implemented with four registered nurses (2 in Beaufort, one in Hyde, and 1 in Chowan/Bertie), a nursing supervisor who also provides home visits, and two program support workers (one bilingual in Spanish).

The Family Connects approach is community-wide (all families with newborns in these counties are eligible for the services) and voluntary; and the services include an integrated home visit at approximately 3 weeks post hospital discharge, assessment of family wellbeing and needs, supportive guidance on topics common to all families with newborns (e.g., feeding, sleep), follow-up visits, and linkages to community resources, as needed. The Family Connects model has a number of program components critical for replicating the evidence-based model. These core components include community alignment of relevant resources and services, the nursing interventions, and data and monitoring of the implementation. In addition, North Carolina's Race to the Top effort funded an evaluation of the Family Connects Northeast program.

1. **Community Ownership.** Family Connects is community-based with community ownership. The administrative home for the program in Northeastern North Carolina was transitioned from the central office in Durham to Albemarle Regional Health Center, with additional support provided by the Beaufort County and Hyde County Health Departments.

2. **Community-Wide Reach.** The program is voluntary and designed for all families with newborns in the region, with a goal for community penetration of 60 to 70% of families. The community penetration for the four counties are reported: for the entire program to date and also during full operation after approximately four months of "start up."
    - From 09/01/2014 through 9/26/2016
        - 1492 families were eligible for Family Connects services (residence in one of the four counties).
        - 1158 families were scheduled for the home visiting services (78% of those eligible).
        - 951 families received the Family Connects services (82% of those scheduled).
        - The results indicate a 64% community penetration, well within the program goal of 60-70%.

Of note, these data include the "start-up" period that involved nurse hiring, training, and quality assurance assessments of adherence to the protocol. Full operation began January 1, 2015.

- Implementation data from the time of full operation:
  - 1260 families were eligible for Family Connects Services (residence in one of the four counties).
  - 1009 families scheduled home visiting services (80% of those eligible).
  - 830 families received home visiting services, with 21 additional families scheduled with home visits pending (85% current completion rate).
  - The results indicate a 68% community penetration to date, well within the program goal of 60-70%.

These numbers also reflect some slow down after two nurses left the program (by July 2016); given the anticipated end of the current grant funding in December 2016; and it was not reasonable to hire replacements. By and large, though, the shortage of nurses was made up by the nursing supervisor conducting more home visits in addition to her administrative duties. At this writing, the nurse that covers Beaufort County is full time, the nurse that covers Hyde County is involved in Family Connects activities two days/week, and the nursing supervisor is doing full time visitation.

3. **Assessment of Family Needs.** The Family Connects intervention involves a family friendly initial nurse visit (with possibility of one or two follow-up visits) that includes congratulations on the birth, physical assessment of the infant, a postpartum assessment of the mother, a mutual exploration of family questions and needs about newborn care, and a high inference assessment of family needs and risk factors followed by referrals and active linkages to community services. Risk factors/areas of family needs are summarized:
   - 77% of families seen for Family Connects in the Transformation Zone also received follow-up care (n=734).
   - 54% of all families had at least one risk factor/need that resulted in a community referral.
     - 35% of families had a need for community support in health care for mother or infant.
     - 24% of families had a need for a community linkage in the area of parent support services.
     - 18% of families agreed to a community linkage for supporting a safe home, including material household needs.
     - 5% of families had a need for a referral related to child care.

     (Note, many families have needs in more than one factor.)
   - Areas with relatively high prevalence of family needs occurred in
     - Parent mental health (overall 19% needing services)
     - Child health care (18% needing services)
     - Parent health care (16% needing services)

- Material supports (15% needing services)

(Of note, many families had these risk factors/needs across several areas.)

- Of the 951 families receiving Family Connects services since program start-up, there were a total of 1077 referrals to community services.
- The most frequent community referrals include: mothers' obstetrics provider, child health provider, county department of social services, WIC offices, county health departments, the Coastal Pregnancy Center, mobile crisis team, Care Coordination for Children (CC4C), a child care resource and referral agency, and Beaufort/Hyde Partnership for Children.

4. **High-Quality Implementation.** FC nurses are trained in and achieve program goals for quality assurance quarterly by dyadic home visits with the nursing supervisor to assess adherence to the (62 items) home visit protocol and inter-rater reliability on 12 factors representing family needs/risks on the *Family Support Matrix.*
    - Cumulative assessments of nurses' fidelity to the FC home visits protocol = 87% (range = 67-95%; program goal = 75%).
    - The inter-rater reliability on the Family Support Matrix, measured using Cohen's Kappa statistic = 0.77 (program goal = 0.60).

5. **Community Connections.** One month after each family's case is closed, a program support worker contacts the family to check-in regarding linkages to referred services and any further family needs for services/resources. During the period from 9/14 through 9/16:
    - 83% of families received the services to which they were referred by the Family Connects program.

6. **Impact Evaluation** – The Center for Child and Family Policy at Duke University is conducting an independent evaluation using interview comparisons between families eligible for Family Connects relative to those who had newborns prior to the implementation of the program. Below is a summary of preliminary results available to date; these findings represent a beginning subset of the full evaluation that will be available by the end of 2016.
    - Summary of program implementation in the Transformation Zone
        - <u>Rapid program scale-up</u> - After a four months period of program installation and ramp-up, program participation rates exceeded the program goal of 60% to 70% community penetration.
        - <u>High quality program implementation</u> –The visiting nurse and program nursing director independently rated the family on the assessment tool, the *Family Support Matrix,* with an interrater reliability (Cohen's Kappa statistic) above the program goal. Adherence to the 62 item fidelity checklist for the home visit also exceeded the program goal of 75%.

- Strong connections with community resources – >80% of families made contact with referred resources, and >80% of those received the services to which they were connected.

- Summary of preliminary impact findings
  - Relative to the comparison group, Family Connects families accessed 10% more community resources.
  - Family Connects mothers were 32% more likely to be breast feeding their infant at the time of the evaluation interview.
  - Family Connects infants were 37% less likely to be exposed to household tobacco smoking.
  - Among infants younger than 6 months, Family Connects mothers were more likely to report that their infants were sleeping on their backs.
  - Family Connects infants utilized 26% less emergency medical care since hospital discharge, including 24% fewer urgent care or emergency department visits and 50% fewer overnights in the hospital.
  - Relative to mothers in the comparison group, Family Connects mothers reported 69% fewer hospital overnight stays for themselves since the infants' births.

Key Outcomes/Local Impact by Counties

1. Eligible births by county residence
   - Beaufort = 408
   - Bertie = 137
   - Chowan = 105
   - Hyde = 45

2. Rate of successful scheduling for Family Connects/program completion rates
   - Beaufort = 86%/85%
   - Bertie = 80%/84%
   - Chowan = 82%/80%
   - Hyde = 87%/90%

3. Family risk and needs by county
   - Beaufort – 58% of families had needs requiring referrals for community services; 41% had specific needs for education/support for mild risk factors.
   - Bertie = 57% of families had needs requiring referrals for community services; 43% had specific needs for education/support for mild risk factors.
   - Chowan = 41% of families had needs requiring referrals for community services; 58% had specific needs for education/support for mild risk factors.
   - Hyde = 46% of families had needs requiring referrals for community services; 51% had specific needs for education/support for mild risk factors.

(Note that very few families reported no needs for education or further intervention.)

4. Remarkable observations by the Family Connects team in the Transformation Zone include:
   - There were very high ratings of significant parental mental health needs (>20% across counties; national averages are 10-11%).
   - There was a quite frequent endorsement of infant health needs, for as many as 38% of families seen.
   - Many families we seen as at risk because of the lack of adequate material resources, average 20%.

Lessons Learned with Family Connects in the Transformation Zone

1. Initially, when the Durham Connects team was approached for dissemination of the model to the Northeastern counties, there was concern about how the model would function in these rural areas relative to an urban area like Durham with many community services for newborns and their families. Contrary to expectations, the program scale-up, buy-in by families and community providers, and access to resources has validated the effectiveness and importance of the model to even the most low-resource, rural areas. The linkages to resources that match family needs are very high, in part (perhaps) because of the strong and growing relationships among providers and their dependence upon these home visiting nurses.

2. The Family Connects team in these four counties has expanded their services by offering earlier "pre" visits to families about which health providers have specific concerns about the infants' weight gain, mothers' needs for lactation support, and so forth. The team learned that this effort contributed significantly to the buy-in by local providers.

3. While all counties have appreciated and benefited from the services, Beaufort County is, for several reasons including highest population, the busiest. There has been a rapid increase in referrals from primary health care providers in Beaufort County. This is a strong health department that had an existing relationship with the local birthing hospital before the installation of Family Connects.

4. The failures of efforts to engage Vidant Health Services has been disappointing, especially given that the national dissemination of the Family Connects model has been informative about how health systems can provide an ideal base for Family Connects services—to the advantage of marketing the health system as well as serving their clients.

5. If Family Connects ceases to provide its services in the Northeastern counties after the Transformation Zone grant period ends, it will be a significant loss not only to the families it serves but the community providers who have learned to depend on the

program to provide a needed bridge between them and the families, especially for those families who live large distances from the service provider(s).

6. An evaluation of the program costs for implementation resulted in an estimate of $683/birth. The estimate may be on the high side of previous Family Connects estimates at $500-700/birth; and this is possibly due multiple factors, including: 1) the high community penetration; 2) the considerable effort from the nurses' team in pre- initial home visit work as well as their detailed and persistent follow-up of families; and 3) the greater travel required to conduct home visits with families in rural communities.

7. It should be emphasized, again, that Family Connects provides the first step into a community's system of care for children and families. The family-friendly assessment of family needs results in individualized referrals into the community, so that families get what they need, no more and no less. In this way, the Family Connects home visiting model is not competitive with but is compatible with demographically targeted and more intense early intervention models.