FIRST 5 KERN
ANNUAL REPORT
FISCAL YEAR 2012-2013

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FIRST 5 KERN
15 years for kids
A HAND IN MOVING CHILDREN FORWARD

Acknowledgements

Development of this report was grounded on extensive collaboration with internal evaluators of First 5 Kern. The team effort has substantially strengthened the report in numerous ways, including content design, results confirmation, graph enhancement, and document formatting.

First 5 Kern's fiscal and program staff was very helpful in clarifying budget allocation and program spending. The Communications Officer at First 5 Kern provided confidentiality training to support program data collection and worked closely with the evaluation team to disseminate report findings in quarterly newsletters, *Handprints*.

Last but not the least, the partnership building was led by First 5 Kern Commission and supported by various local stakeholders. As an external evaluator, I thank the following professionals and organizations for their persistent support:

- Current and Past Commissioners Larry J. Rhoades, Al Sandrini, Emily Silva, Pat Cheadle, Claudia Jonah, M.D., Roland Maier, Leticia Perez, Rick Robles, James Waterman, Ph.D., Mimi Audelo, Karen K. Goh, and Nancy Puckett.
- First 5 Kern Technical Advisory Committee.
- First 5 Kern Commission staff:
  - Jamie Henderson, Executive Director
  - Judith Harniman, Assistant Director
  - Kathy Ives, CPA, MPA, Chief Finance Officer
  - Sharon Powell, Administrative Assistant
  - Anastasia Lester, Program Officer
  - Paula De La Riva-Barrera, Program Officer
  - Wilknica Jefferson, Program Officer
  - Theresa Martinez-Ortiz, Senior Research Analyst
  - Heather Schreiner, Research Associate
  - Charlene McNama, Administrative Finance Specialist
  - Diana Navarro, Finance Specialist
  - Patti Taylor, Senior Finance Officer
  - Jan St Pierre, Communications Officer.
- Service providers, children ages 0-5 and their families.
- Institutional Review Board of California State University, Bakersfield led by Drs. Paul Newberry and Steve Suter.

Alternate commission members are listed in Exhibit 1 and TAC members are recognized in Appendix B. While appreciating all the support, I conducted the data analyses and shall be fully responsible for any report inaccuracies.

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Executive Summary

Kern County Children and Families Commission (First 5 Kern) receives funding from the Proposition 10 Ballot Initiative to support services for children ages 0-5 and their families in Kern County. Since 1998, state revenue has been generated from a 50-cent-per-pack tax on cigarettes and other tobacco products. Distribution of the local funds is based on the proportion of live births in each county. Kern County is the third largest county in land area and supports the third largest percentage of child population among California counties[1].

To date, First 5 Kern has provided more than $160 million dollars to support child development throughout Kern County. According to Proposition 10, "county commissions shall use outcome-based accountability [OBA] to determine future expenditures" (p. 4). In this report, outcomes of state investment are examined to assess the program effectiveness. A model of Results-Based Accountability (RBA)[2] is adopted from Proposition 10 to guide the result summary.

New Features of This Report

In comparison to last year, additional improvements have been made on content alignment and research methodology. The content adjustments followed a new Annual Report Glossary, which resulted in switching 13 local programs across the hierarchy of *result* and *service* areas. Details of the program affiliations are described in **Chapter 1** to document First 5 Kern's leadership in implementing the new glossary proposal from the Evaluation Committee of the First 5 Association of California.

In FY 2012-13, First 5 Kern distributed a total of $10,433,925 to support 40 programs[3] across culturally diversified *mountain, desert*, and *valley* communities. In addition, First 5 Kern has leveraged $3,102,099 from other organizations through partnership building. **Chapter 2** provides summaries of program-specific results across the focus areas of *Child Health*, *Family Functioning*, and *Child Development*. **Chapter 3** contains findings from social network analyses to guide the integration of services in Kern County. **Chapter 4** includes longitudinal results from the Core Data Elements (CDE) survey and Family Stability Rubric (FSR) to sustain the ongoing improvement of local services across time. This report ends with a *Conclusions and Future Directions* chapter to highlight recommendations derived from the evaluation outcomes (**Chapter 5**).

Along with the report re-structuring is a consistent enhancement of evaluation methodology to address four professional standards, *Utility, Feasibility, Propriety*, and *Accuracy*, advocated by the Joint Committee on Standards for Program Evaluation (Yarbrough, Shulha, Hopson, & Caruthers, 2010). In particular, internal and external evaluators developed a *Co-Existing, Cooperation, Coordination*, and *Creation* (4C) model and used it to describe partnership building among First 5 Kern-funded programs. Following the requirement of Proposition 10 on service integration, the 4C model

[1] Kern County Network for Children's 2013 Report Card.
[2] RBA and OBA are used interchangeably in First 5 Literature.
[3] The program count is strictly based on the number of service providers receiving money from First 5 Kern. An acronym index of those programs is provided in Appendix A.

provides a conceptual framework to synthesize evaluation findings according to the ***Utility*** standard.

To articulate both quantitative and qualitative information, the evaluation team designed a new interview protocol to link program funding with in-depth description of service integration under an interactive research design (Appendix C). Along with the improvement of ***Feasibility***, collaboration has been enhanced between the evaluation team and the IRB panel of California State University, Bakersfield to create a field-based instrument for monitoring potential adverse effects during data collections (Appendix D). The new instrument observes the ***Propriety*** standard to expand client protection beyond the existing confidentiality training and consent form administration. For those programs including services for children older than age 5, a method of post-stratification is applied to extract the age-specific results within the first 5 years, and thus, increases ***Accuracy*** of the reporting according to the statute of Proposition 10.

Highlights of Evaluation Findings

In the RBA model adopted by Proposition 10, evaluation findings are expected to "define success as turning the curve away from the baseline or beating the baseline" (Friedman, 2005, p. 58). Accordingly, baseline indicators are contrasted against outcome measures to assess sustainable improvements across the focus areas of *Child Health*, *Family Functioning*, and *Child Development*.

In ***Child Health***, annual progresses are indicated by changes of the baseline figures from last year

1. More mothers received prenatal care in the first trimester, impacting 950 children in 16 programs;
2. An increase in full-term pregnancy occurred for 641 children in 11 programs;
3. The rate of *low birth weight* dropped for 648 children in 10 programs;
4. The percent of children without annual health checkups dropped in 16 programs impacting a total of 1,192 children;
5. Dental service access improved for 1,314 children in 17 programs;
6. Fourteen programs maintained an increase in the percent of children receiving all immunizations;
7. The percent of mothers *smoking during pregnancy* dropped in 13 programs;
8. Kern County Children's Dental Health Network significantly reduced the average plaque index for 299 children;
9. The Successful Application Stipend program renewed Medi-Cal insurance coverage for 1,243 children ages 0-5, a 28% increase over the baseline count last from year.

Family Functioning is monitored throughout FY 2012-13 and the following improvements are found at both family and individual levels:

1. The number of families with *unmet food needs* dropped from 122 to 28 across nine programs;
2. The number of families with *unmet childcare needs* plunged from 203 to 62 throughout 16 programs;

3. The number of families with *unmet transportation needs* declined from 164 to 25 in 13 programs;
4. The number of families *lacking convenient childcare* providers decreased from 252 to 71 among 14 programs;
5. The number of families with members *missed work or school due to childcare* reduced from 223 to 66 across 14 programs;
6. The number of families with members *missed work or school due to transportation* dropped from 178 to 30 in 15 programs;
7. The rate of *smoke exposure* in home settings decreased across 12 programs;
8. Results from Adult-Adolescent Parenting Inventory-2 (AAPI-2) showed significant improvement of an AAPI-2 construct, *Parental Empathy Towards Children's Needs*, across eight court-mandated, parent education programs;
9. West Side Community Resource Center (WSCRC) and Richardson Special Needs Collaborative (RSNC) demonstrated significant improvement of knowledge and application on the Nurturing Skills Competency Scale (NSCS) for 57 participants in *group-based* and/or *home-based* parent education services;
10. Kern County Children's Dental Health Network assisted 247 parents to significantly improve their knowledge on child dental care this year.

In the area of ***Child Development***, the Child Signature Program (CSP) is a **new** project funded by the State Commission to enhance early childcare centers that support 664 children across six infant/toddler classes and 28 preschool classes. On average, a 93% completion rate has been achieved for data gatherings over 18 baseline variables in CSP. The majority of classes provided comprehensive information on Technology Infrastructure (91%), Classroom Instruction (68%), Social Emotional Development (56%), and Parent Involvement and Support (91%). Meanwhile, **existing** programs have demonstrated the following improvements of evaluation outcomes from last year:

1. Breastfeeding rate increased in 16 programs over the last year across Kern County;
2. Nineteen programs showed an increase in the number of parents maintaining two or more reading activities per week for 1,611 children;
3. Twelve programs demonstrated increases in child development activities for 1,120 children;
4. Desired Results Developmental Profile–Infant/Toddler (DRDP-IT) assessments indicated significant improvements in *Self and Social Development*, *Language and Literacy Development*, *Cognitive Development*, and *Health* across three child development programs;
5. Significant improvements have been found in all domains of *DRDP–Preschool* assessment for a total of 76 children in four preschool programs;
6. The Ages and Stages Questionnaire-3 (ASQ-3) results indicated that children performed significantly above the corresponding thresholds in *Communication, Gross Motor, Fine Motor, Personal Social*, and *Problem Solving* categories at 36th and 48th months across 20 programs;
7. Based on Child Assessment-Summer Bridge (CASB), significant cognitive development has been found among 357 children in 13 programs and non-cognitive skills were developed significantly for 203 children across seven programs;
8. 2-1-1 Kern County answered phone calls of parents/guardians to assist 9,104 children ages 0-5, a 7.5% increase over last year;

9. Ready to Start (R2S) demonstrated significant improvement of school readiness skills (math, reading, & social skills) for 838 pre-kindergarteners through its five-week summer programs in five school districts.

In summary, First 5 Kern's (2012) strategic plan "requires the collection and analysis of data and a report of findings in order to evaluate the effectiveness of funded programs" (p. 16). To meet this requirement, development of this report is guided by the Statewide Evaluation Framework to triangulate information from three aspects: (1) descriptive data of service counts at the program level, (2) assessment data of the service impacts at the individual level, and (3) trend data to sustain ongoing progresses on the time dimension (First 5 California, 2005). The results highlighted here also conform to professional guidelines of the Annual Report Glossary and the *Utility, Feasibility, Propriety*, and *Accuracy* standards for program evaluation.

Chapter 1: First 5 Kern Overview

In November 1998, California voters passed Proposition 10, the *California Children and Families Act*, to distribute tobacco tax to each county and fund local programs in early childhood development, health care, and parent education. The state trust fund for Kern County is administered by First 5 Kern.

Pursuant to California Health and Safety Code section 130140, "The county commission shall be appointed by the board of supervisors and shall consist of at least five but not more than nine members." First 5 Kern Commission has nine commissioners and four alternate members to represent key stakeholders, including elected officials, service providers, program administrators, community volunteers, and First 5 Kern advocates. The current and past commissioners are listed in Exhibit 1.

Exhibit 1: First 5 Kern Commission Members

Commissioner	Affiliation
Mimi Audelo (Chairperson)*	Director of Special Events, San Joaquin Community Hospital
Roland Maier (Vice-Chairperson)	Superintendent, Cuyama Joint Unified School District
Larry J. Rhoades (Treasurer)	Retired Kern County Administrator
Pat Cheadle (Secretary)	Director, Kern County Department of Human Services
Karen K. Goh*	President/Chief Executive Officer, Garden Pathways
Claudia Jonah, M.D.	Health Officer, County of Kern Public Health Services Department
Leticia Perez	Supervisor, 5th District
Rick Robles	Superintendent, Lamont School District
Nancy Puckett	Retired Program Coordinator, Kern River Valley Family Resource Center
Al Sandrini	Retired School District Superintendent
Emily Silva	Director of Provider Relations, Kern Health Systems
James Waterman, Ph.D.	Director, Kern County Department of Mental Health
Alternate Members	
Dena Murphy	Chief Deputy Director, Kern County Department of Human Services
Deanna Cloud	Children's System of Care Administrator, Kern County Mental Health System of Care
Mick Gleason	Supervisor, 1st District
Mike Maggard	Supervisor, 3rd District
Lucinda Wasson, R.N.	Retired Director, Public Health Nursing, County of Kern Public Health Services Department

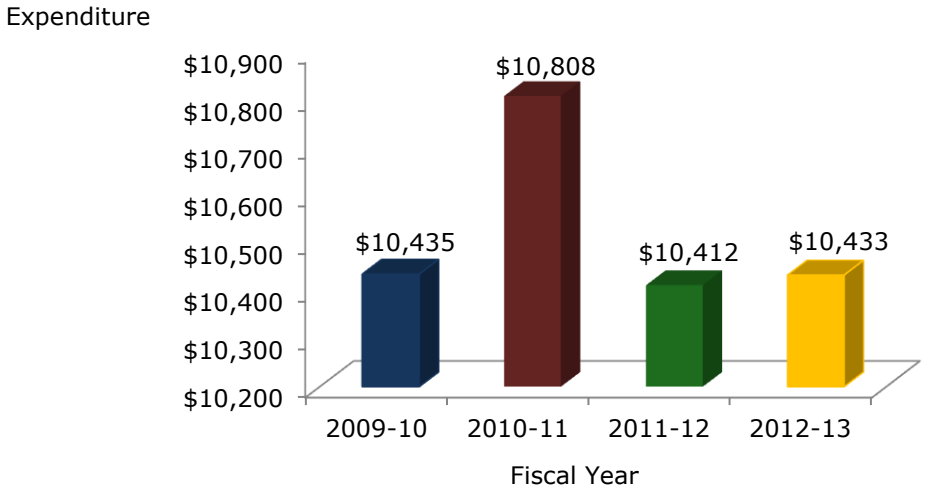
*Past Commissioners of FY 2012-13 who discontinued their services in FY 2013-14.

Following the statute of Proposition 10, the Executive Director (ED) is the chief executive officer hired by each county commission. Under the ED's leadership, First 5 Kern manages the state trust fund through *program administration, fiscal accounting, internal evaluation*, and *public communication*. In FY 2012-13, the ED of First 5 Kern also chaired the Evaluation Committee of the *First 5 Association of California* to develop a new Annual Report Glossary for county commissions across the state. The glossary definitions are supported by a crosswalk document, which is particularly needed for those counties yet to review the glossary in recent years. The statewide movement on glossary alignment was intended to promote greater consistency in local data collection. It was also designed to strengthen data reporting in certain areas where First 5 counties have significant statewide impact.

Trend of First 5 Kern Investments

Led by fiscal and program staff of First 5 Kern, the new glossary was employed to reconfigure budget allocations for various services in Kern County. As a result, 13 programs have been switched across focus areas during the crosswalk alignment. Although the number of programs has been altered in each focus area, the category change does not impact the overall commitment of First 5 Kern in supporting local services. Figure 1 shows the trend of total program spending to portray the pattern of First 5 Kern's annual investment within the current funding cycle.

Figure 1: Total First 5 Kern Investment Since 2009 (in $1,000)



Except for a budget fluctuation in FY 2010-11, the longitudinal trend shows stability of First 5 Kern funding since FY 2009-10. As indicated in the last annual report, First 5 Kern invested over $300,000 in FY 2010-11 to purchase service equipment for Children's Mobile Immunization Program of San Joaquin Community Hospital (Wang, 2013). The one-time spending has been found essential to supporting children and their families in remote communities.

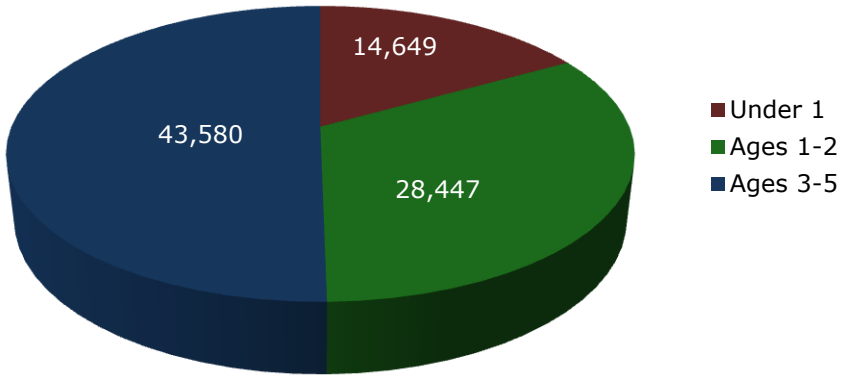
Proposition 10 funding comes from state tobacco tax. "Each year in the United States, cigarette smoking and exposure to secondhand smoke causes 443,000-or 1 in 5 deaths" (St Pierre, 2013, p. 3). Fortunately, tobacco use is declining in recent years. In 2011, the smoking rate in California was the second lowest among the 50 states. As the state revenue dwindled down steadily for less tobacco consumption, a decision was

made by First 5 Kern in FY 2011-12 to extend the current funding cycle from three years to five years. The consistent trend in Figure 1 reflects the policy impact of First 5 Kern to reduce local reserve and maintain budget stability for service providers throughout this funding cycle.

Population of Kern County Children

In FY 2012-13, 86,676 children ages 0-5 lived in Kern County[4]. Figure 2 shows an approximately equal proportion of children below and above age 3. Thus, little attrition occurred in the population size across the first 5 years of child age. The trend over time also confirmed a slight increase in the local child population from 86,496 in FY 2011-12. Accordingly, funding stability is needed to meet the steady service demands in Kern County.

Figure 2: Age Distribution of Child Population in FY 2012-13

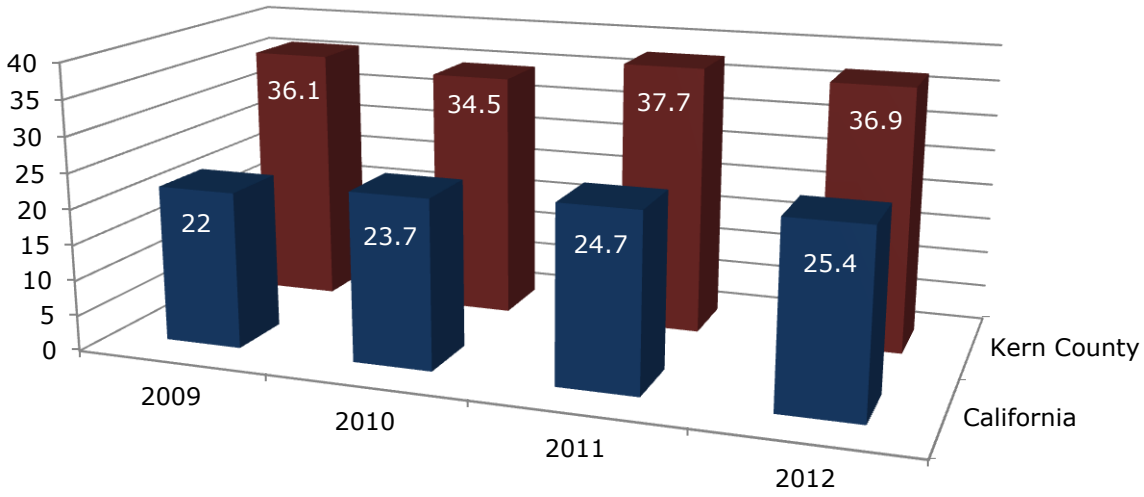


During the current economic recession, many families have encountered financial challenges and 27,938 additional households received food assistance in Kern County since 2007[5]. In 2012, Kern County's annual average unemployment rate remained at 13.3% while the corresponding rate dropped to 10.5% for California and 8.1% for the nation. Consequently, Figure 3 shows that children in Kern County are more likely than their peers across California to live in poverty prior to age 5.

"Children from economically disadvantaged families tend to enter school with lower levels of academic, cognitive, and mathematical skills" (Chen, 2012, p. 4). Thus, First 5 Kern is expected to not only strengthen *child health* and *development*, but also enhance *family functioning* through parent education and support services. In this context, the impact of First 5 Kern funding is broadly portrayed through *Systems of Care* at both child and family levels.

[4] Source: Kern County Network for Children's Report Card.
[5] Source: Kern County Network for Children's Report Card.

Figure 3: Trend of Children in Poverty Prior to Age 5*



*The population data in this chapter came from Kern County Network for Children. Results for FY 2012 are projected from the longitudinal trends.

The extensive service needs have been prioritized in First 5 Kern's (2012) strategic plan to address accountability of state funding in specific focus areas. In describing his OBA model that was adopted by Proposition 10, Mark Friedman (2011) stressed that "OBA [Outcome Based Accountability] keeps population accountability separate from performance accountability. Population accountability belongs to partnerships" (p. 4). To expand the partnership capacity, Integration of Services has been identified as the fourth focus area to sustain services for the youngest children and their families in Kern County. Table 1 shows alignments of the four focus areas between First 5 Kern and the State Commission.

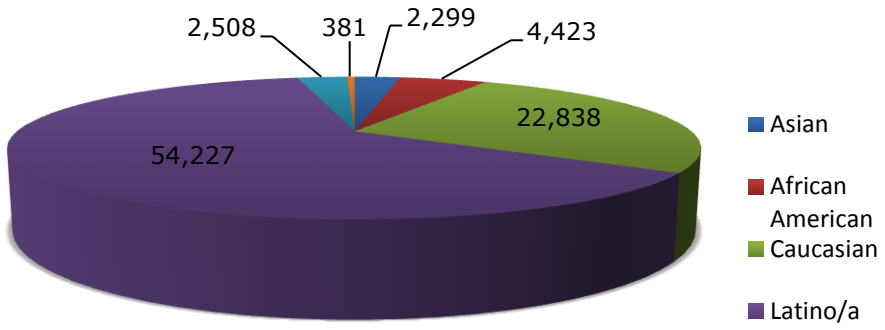
TABLE 1: FOCUS AREA ALIGNMENTS AT LOCAL AND STATE LEVELS*

State Focus Area		First 5 Kern Focus Area
I.	Child Health	Health and Wellness
II.	Family Functioning	Parent Education and Support Services
III.	Child Development	Early Childcare and Education
IV.	Systems of Care	Integration of Services

*Adapted First 5 Kern's FY 2012-13 Strategic Plan.

While the focus-area designation ensures general alignment of service outcomes with state expectations, First 5 Kern is also mindful in providing specific support for children from diversified culture backgrounds. Mateo and Gallardo (2001) projected that "Kern County's ethnic population is increasing dramatically. Latinos are expected to increase by 67 percent over the next ten years and Asian and Pacific Islanders by 47 percent" (p. 20). The population change has been illustrated by the fact that the Latino ethnic group accounts for the majority of children in Kern County in FY 2012-13 (Figure 4).

Figure 4: Ethnic Diversity of the Child Population at Ages 0-5



Ethnic grouping has been found to impact the family environment that supports early childhood growth (Magnuson & Waldfogel, 2005). A recent local report confirmed that African-American and Latino children were more likely to live in poor families than are Caucasian and Asian children (Kern County Network for Children, 2013). Meanwhile, Kern County's licensed childcare providers and programs have a limited capacity to serve only 20% of the childcare need for working parents. Therefore, First 5 Kern has been providing much-needed support in a traditionally underserved county that has more childcare demands and less community resources.

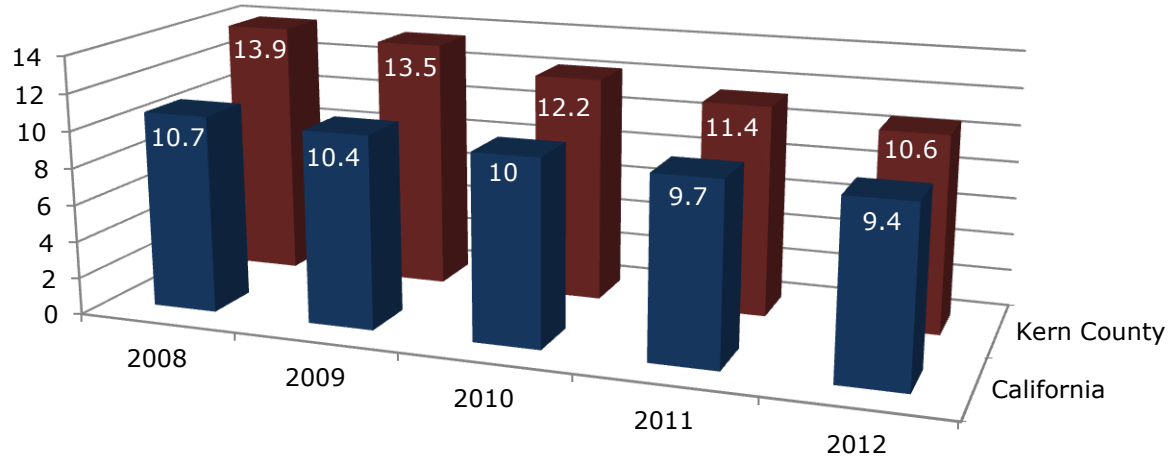
Overall, Kern County children and families struggled with economic and childcare challenges across valley, desert, and mountain communities. First 5 Kern has strengthened its collaboration in delivering *healthcare, childcare,* and *parent education* services for local children and their families during the current economic recession. Despite the state revenue decline, service demands have been remaining steady in Kern County, which led First 5 Kern to extend the current funding cycle from three years to five years. Thus, all 40 programs from last year continue receiving the same funding in FY 2012-13. The persistent support is guided by First 5 Kern's strategic plan that articulates the service commitments under clearly-defined vision and mission statements according to the state statute.

Vision Statement

Kern County was established in 1866 and named after Kern River in the southern valley. The geographic location has attracted severe air pollution, which is particularly harmful to more vulnerable populations. While Marsa (2013) reported California's air pollution as a major cause for premature births, Figure 5 indicates that Kern County has a much higher rate of premature birth than the state average over past five years.

It was further indicated by scientific research that the first 5 years of child growth was a critical period of brain development (First 5 Kern, 2013a). Hence, protection and support of the youngest generation directly impact the future of Kern County. Built on the collective wisdom of local stakeholders, the following vision statement has been endorsed by First 5 Kern through strategic planning to meet service needs of the youngest generation:

Figure 5: Percent of Premature Births in Kern County and California



Vision

All Kern County children will be born into and thrive in supportive, safe, loving homes and neighborhoods and will enter school healthy and ready to learn. (First 5 Kern, 2012, p. 2)

Mission Statement

While the vision statement describes the intended future of Kern County, the state law requires county commissions to consider "how programs, services, and projects relating to early childhood development within the county will be integrated into a consumer-oriented and easily accessible system" [Proposition 10, Section C (ii)]. Following the state statutes, First 5 Kern reviews its strategic plan annually to incorporate public input and disseminates quarterly newsletters to keep all stakeholders informed. The Technical Advisory Committee (TAC) is also involved in designing Request for Proposals (RFP) and recommending policy suggestions to improve the fund administration. In this funding cycle, the following mission statement has been adopted by First 5 Kern according to TAC's recommendation:

Mission

To strengthen and support the children of Kern County prenatal to five and their families by empowering our providers through the integration of services with an emphasis on health and wellness, parent education, and early childcare and education. (First 5 Kern, 2011, p. 2)

This mission statement not only included the specific focus areas of *Child Health, Family Functioning,* and *Child Development*, but also recognized the needs of service integration to strengthen comprehensive supports for children and their families.

Both the vision and mission statements have been reviewed in FY 2012-13 during commission meetings to ensure their compliance with the original intent of Proposition

10, i.e., to "facilitate the creation and implementation of an integrated, comprehensive, and collaborative system of information and services to enhance optimal early childhood development and to ensure that children are ready to enter school" [Section 5(a)].

Partnership Building

To support service integration, First 5 Kern staff initiated and/or supported 39 outreach undertakings at both state and community levels to enhance public awareness of child needs and local supports in Kern County (Table 2). In this regard, First 5 Kern provides unique leadership in expanding capacity building with local service providers.

Prior to the passage of Proposition 10, local programs were not strategically planned for early childhood services, nor did they attempt to establish *Systems of Care* for children ages 0-5 and their families. As was indicated by the First 5 Association of California (2009),

> The impact of First 5 goes beyond the multitude of essential programs and services that it has helped to create and sustain. To fully appreciate the effect that First 5 has had, it is necessary to understand the many roles that are served by First 5 – roles that were not being addressed or not fulfilled sufficiently before First 5 was created – and the characteristics that make First 5 unique. (p. 7)

Table 2 lists 39 counts of outreach activities that were accomplished by First 5 Kern in FY 2012-13 beyond administering the Children and Families First Trust Fund in Kern County. Meanwhile, the partnership building reciprocally supports First 5 Kern's effort on establishing a coalition to integrate local programs into a family-focused, culturally-appropriate, and community-based service system.

TABLE 2: FIRST 5 KERN'S OUTREACH EFFORT TO PROMOTE PUBLIC AWARENESS

Event Level	Initiator	Participant	Count
Community	• Arvin City Council • First 5 Kern Newsletter • First 5 Kern Strategic Plan • First 5 Kern Website • Ridgecrest City Council • Rotary Groups • Taft City Council	• Community Fairs – Exhibit Booth (7) • Community Presentation (5)	18
County	• Chamber of Commerce Governmental Review Council • First 5 Kern Contractor Gathering • Kern County Board of Supervisors Meetings • Kern County School Boards Association • News Conferences (3) • Nurturing Parenting – Best Practices Meetings	• Kern Council for Social Emotional Learning Meetings • Kern County Tobacco Free Coalition • Kern County Network for Children Collaborative • Kern County Nut Festival Committee • Oildale Collaborative • Purple Ribbon Month Committee – Safety in and around vehicles • Safely Surrendered Babies Committee • Water Safety Coalition	16
State		• Central Valley Regional Meeting • First 5 California – Staff Development Summit • First 5 State Association of California Meetings • First 5 California – Communications Teleconference • Southern California Regional Communications Committee	5

*Numbers inside the parentheses are the counts for reoccurring events.

As was stipulated by its strategic plan, "First 5 Kern has built a strong reputation in the community as an expert and advocate for children from prenatal through age five and their families" (First 5 Kern, 2013a, p. 2). The professional respect was based on various leadership roles served by First 5 Kern staff in both the public and private sectors. In FY 2012-13, a total of 19 undertakings have been completed with First 5 Kern's collaboration (Table 3). The external partnership building allows First 5 Kern to serve "as the 'glue' to bring services together and fill critical gaps that no other funding source is able to address" (First 5 Association of California, 2009 p. 7).

TABLE 3: FIRST 5 KERN'S LEADERSHIP ROLES IN LOCAL COMMUNITIES

Sector	Initiator	Participant	Count
Public	• Children's Health Initiative Outreach and Enrollment Committee • Children's Health Initiative Outreach and Technical Advisory Committee • Medically Vulnerable Care Coordination Committee • School Readiness Coordinators Meeting – Facilitator	• Bakersfield College Child Development Advisory Committee • Buttonwillow Collaborative • CSUB National Children's Study – Board Member • Childhood Council of Kern Meetings • Clinica Sierra Vista – Key Informant/Partner • East Kern Collaborative • Good Neighbor Festival Committee • Greenfield Collaborative • H.E.A.R.T.S Connection • Kern County Juvenile Justice/ Delinquency Prevention Commission – Member • Kern County Network for Children – Board Member • Lost Hills Collaborative • Shafter Collaborative	17
Private	• Mendiburu Magic Foundation – Community Advisory Board	• Dignity Health, Community Benefit Committee	2

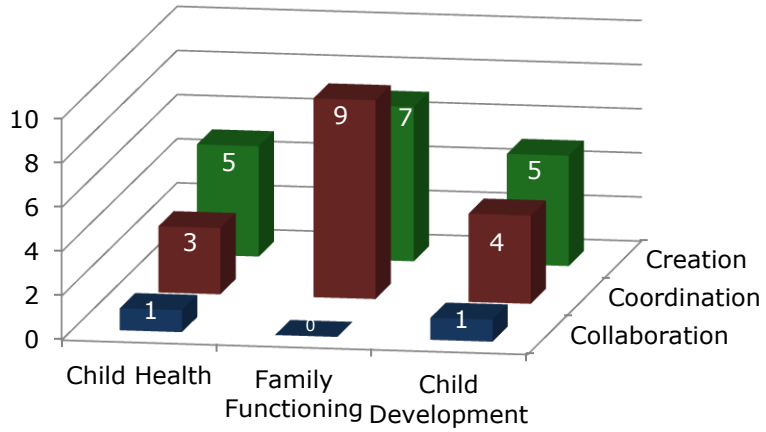
During the recession, "Health and human services programs that serve children are among the most seriously affected by this lack of funding" (California Assembly Committee on Budget, 2011, p. 1). Accordingly, it was indicated in Objective 4.1.4 of the strategic plan that "Funded organizations will leverage resources as a result of capacity building and sustainability efforts." In FY 2012-13, First 5 Kern provided $19,766.47 to support nine community events and leveraged $721,317 from local community partners. The mutual support demonstrates First 5 Kern's role as an active initiator and participant in local capacity building.

Led by First 5 Kern's efforts on community outreach, local programs receiving Proposition 10 funding have established 35 collaborative relationships with local agencies to support services in the focus areas of *Child Health, Family Functioning*, and *Child Development*. A 4C Model has been adopted to describe the partnership building:

Co-Existing : No partnership except for awareness of others' existence;
Cooperation : Mutual partnership with roles of support seeker and provider;
Coordination : Multilateral partnerships with structured-leadership building;
Creation : Expansion of multilateral relationships beyond the existing Partnership capacity.

Figure 6 shows that all external partnerships have surpassed the *Co-Existing* level. Two of the partnerships have reached the *Cooperation* level, 16 relations involved *Coordination*, and 17 connections demonstrated features of *Creation*.

Figure 6: Partnership Building with Local Agencies



In summary, Proposition 10 offers an unprecedented opportunity to flexibly invest in the health and well-being of young children and their families. In order to get the most benefit from the state investment, First 5 Kern has adopted a strategic plan to meet the service demands of Kern County. Because of its decision to reduce local reserve and extend the current funding cycle, First 5 Kern has maintained stable support for all funded programs in FY 2012-13. In addition, First 5 Kern leveraged additional funds through community outreach and partnership building to enhance service capacities in this culturally-diversified and traditionally-underserved region.

The emphasis on partnership building not only addresses local needs, but also reflects the core spirit of the new report glossary from the First 5 Association of California (F5AC) (2013). In particular, four new items have been added to the glossary by F5AC to strengthen First 5 counties' impact across the state (Kenney, 2013, p. 1):

1. Quality Family Functioning Systems Improvement (QFFSI);
2. Quality Early Childhood Education Investments (QECEI);
3. Quality Health Systems Improvement (QHSI);
4. Policy and Broad Systems Improvement (PBSI).

On the PBSI dimension, the impact of community outreach has been described in this chapter to support external partnership building at both *commission* and *program* levels. Results of QHSI, QFFSI, and QECEI are presented in Chapter 2 to assess program effectiveness within the focus areas of *Child Health, Family Functioning,* and *Child Development*.

Chapter 2: Impact of First 5 Kern-Funded Programs

Proposition 10 requires county commissions to submit evaluation reports and justify results-based accountability on their annual spending. In particular, First 5 California (2011) elaborated, "While counties design their programs to fit their specific local needs, they must provide services in each of the following four focus areas: Family Functioning, Child Development, Child Health, [and] Systems of Care" (p. 15). To facilitate the evidence gathering, an annual report glossary was provided by F5AC to define service categories under each focus area.

In clarifying the legislative expectation across focus areas, the State Commission added that "One result area, Systems of Care, differs from the others. It consists of programs and initiatives that support program providers in the other three result areas" (First 5 California, 2013, p. 12). Accordingly, this chapter focuses on program-specific results in *Child Health, Family Functioning,* and *Child Development*. Program collaboration is examined in Chapter 3 to summarize the local capacity building in service integration.

Improvement of Child Health Systems

Child health has been recognized as an indispensable foundation for early childhood development (Mattheus, 2013). Clark (1992) observed that "there has been a growing interest in the development of health concepts, beliefs, and behaviors in young children. This interest stems largely from educators concerned with the provision of optimal health care services and health education to children" (p. 1). Similar to the division between *general* and *special* education, services in child health are evaluated on dual tracks, one for the general population and the other for children with special needs. This approach follows First 5 Kern's (2012) strategic plan to support health services for all children ages 0-5.

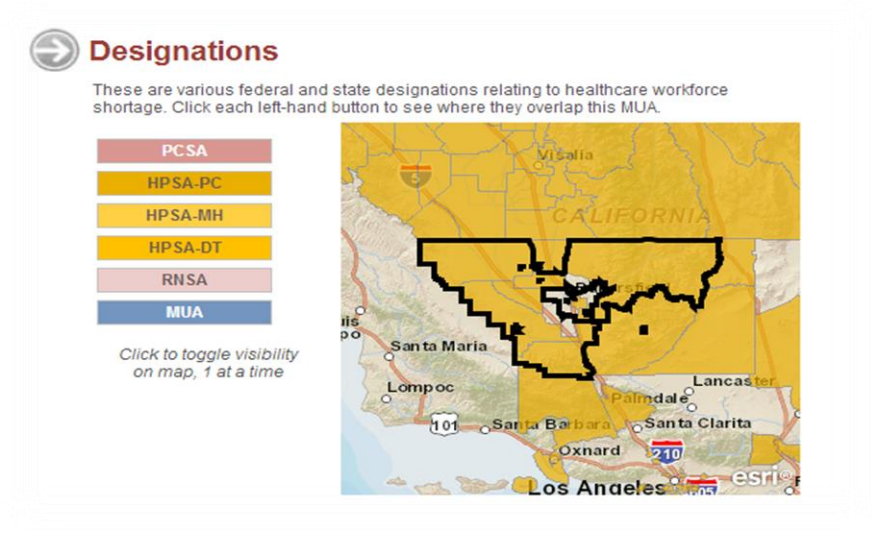
Healthcare Support for All Children

As outlined by black boundary lines in Figure 7, a large portion of Kern County has been identified as Medically Underserved Areas (MUA) according to federal regulations. The southeastern part outside of the boundary represents Mojave Desert that has a sparse population density. Although "Approximately 17% of Californians live in a MUA"[6], MUAs are spread across the majority areas of Kern County. Hence, it has been a countywide challenge to address the extensive local needs with limited healthcare resources.

In addition, Figure 7 indicates *Health Professional Shortage Areas for Primary Care* (HPSA-PC) according to the latest information from Office of Statewide Health Planning and Development (OSHPD). Except for a small area surrounding Bakersfield, most communities across Kern County are highlighted as HPSA-PC in yellow color. To amend the service gap, First 5 Kern funded programs to reach the entire county and ensure adequate healthcare access for all children ages 0-5 and their families.

[6] http://gis.oshpd.ca.gov/atlas/topics/shortage/mua

Figure 7: MUA and HPSA-PC Areas in Kern County



Source: Office of Statewide Health Planning and Development (OSHPD)[7].

In First 5 Kern's (2012) strategic plan, one of the service priorities is on "Enrollment, access, retention and utilization of health insurance, and oral, physical and mental health care" (p. 5). To expand the service access, outreach efforts have been made by Children's Health Initiative (CHI) and Successful Application Stipend (SAS) programs to assist health insurance enrollment at 24 Census Designated Places in Kern County. The enrollment support was designed to overcome information barriers from the past, i.e., "Many families may qualify for insurance but because of a lack of information, they do not access it" (Smith et al., 2009, p. 6). The countywide support network has enhanced the local communication and made enrollment assistance available for any children within a 10-mile radius of their home location.

While children were granted access to medical facilities, First 5 Kern also sponsored mobile services to actively reach children in rural communities. In FY 2012-13, Kern County Children's Dental Health Network (KC_Dental) provided dental screening, cleaning, preventive care, fluoride treatment, and parent education at 224 sites. Children's Mobile Immunization Program (CMIP) offered immunizations at 193 clinics. The extensive service deliveries provided sustainable healthcare support across a region as large as the state of New Jersey.

Beyond the child-focused programs, Wilson and Durbin (2013) noted that "The parent-child relationship has long been seen as a critical source of influence on child health and adjustment across multiple developmental domains" (p. 249). Hence, healthcare services are inseparable from parent education. First 5 Kern funded Heath Literacy Program (HLP) at Bakersfield Adult School to offer courses on nutrition and fitness to enhance family health. In addition, Make a Splash (MAS) received funding from First 5 Kern to support CPR classes, swimming instruction, and other protection strategies for local families.

HLP and MAS services were center-based and open to the public, which complemented community-based programs, such as CHI, SAS, KC_Dental, and CMIP,

[7] http://gis.oshpd.ca.gov/atlas/topics/shortage/mua/kern-service-area

across the mountain, desert, and valley locations. Although those programs maintained different goals, capacities, and delivery methods, they have jointly formed a collaborative network to address First 5 Kern's (2012) local focus on *Health and Wellness*, i.e., "All children will have an early start toward good health" (p. 8).

Healthcare for Children with Special Needs

Healthcare needs are spread across physical, mental, spiritual, and social dimensions. The dimension identification is based on a definition of health as "a dynamic state of complete physical, mental, spiritual and social well-being and not merely the absence of disease or infirmity" (Ceglarek, 2008, p. 3). In FY 2012-13, First 5 Kern funded six additional programs to serve children with special needs on those dimensions.

On the *physical* dimension, Medically Vulnerable Infant Program (MVIP) supported nurse visits to monitor medical conditions of infants after their release from Neonatal Intensive Care Unit at local hospitals. Besides providing intensive case management services, MVIP offered education services to family members on infant safety, childcare, developmental milestones, and availability of community support. Because "Health, developmental, and mental health services are more likely to be located in urban areas than in rural areas" (Smith et al., 2009, p. 6), nurse visitations were particularly helpful in eliminating transportation barriers for traditionally underserved families.

On the *mental* or *spiritual* dimension, Early Intervention Program (EIP) was established in Delano to offer mental health services near the northern border of Kern County. The EIP facility is situated in a community where 71.5% of the population has Latino origin. In addition, First 5 Kern funded *Special Start for Exceptional Children* (SSEC) to provide early intervention services to children with disabilities and other special needs. Both EIP and SSEC supported parent education programs for children with language barriers and developmental delays.

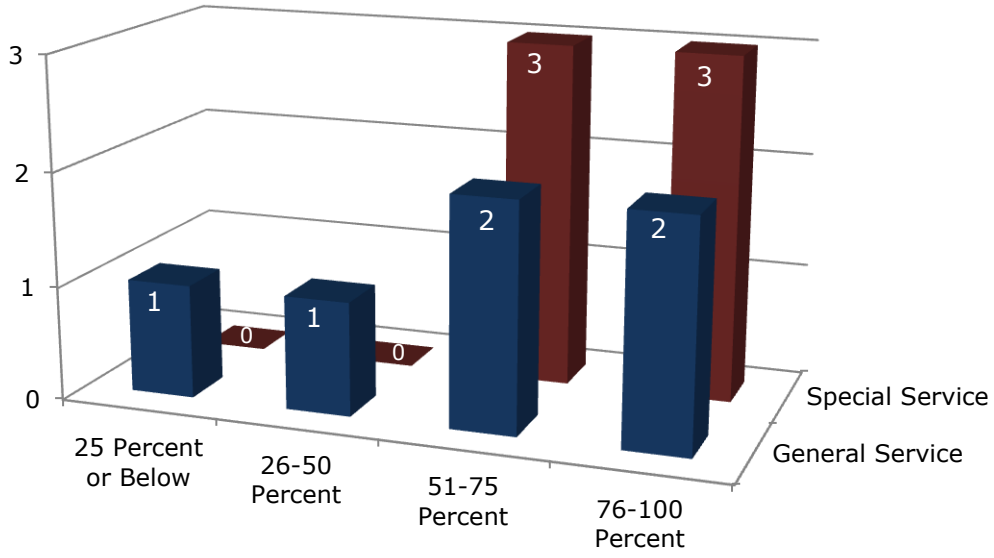
The *social* dimension deserves special consideration because "Racial/ethnic disparities in health status prevent many young children in California from the optimal developmental trajectories that First 5 hopes to help achieve" (Inkelas et al., 2003, p. viii). In Kern County, African-American children were 1.5 to 2 times as likely as their White peers to have low birth weights and more than twice as likely to die before their first birthday (Kern County Public Health Services Department, 2012). In FY 2012-13, Black Infant Health (BIH) received funding from First 5 Kern to reduce rate of infant mortality and improve health indicators in African-American communities. Meanwhile, Nurse Family Partnership (NFP) program was funded to monitor pregnancy outcomes of high-risk, low-income, and first-time mothers. Public health nurses offered intensive case management and parental education services to increase local rates of breastfeeding, full-term pregnancy, and normal birth weight.

For children beyond the infant stage, Richardson Special Needs Collaborative (RSNC) provided countywide services to screen and identify behavioral needs of infants under age 3. Based on the results, RSNC integrated multidisciplinary prevention and/or intervention services to strengthen linkages between healthcare and early childhood development during ages 3-5. As Bells (2009) observed, "Universal prevention systems include early detection strategies as essential to supporting healthy developmental

outcomes in young children" (p. iv). Accordingly, a seamless mechanism of early detection has been sustained by NFP and RSNC to support healthy children ages 0-5 and their families across Kern County.

F5AC (2010) pointed out, "Because of the commission's legal mandate for outcome-based accountability and the program evaluation requirements associated with the grant funds, commissions are encouraged to employ program accounting" (p. 53). In the previous section, healthcare programs for general services, such as CHI, SAS, KC_Dental, and CMIP, concurrently received additional funding from other sources to support children older than age 5. In contrast, all six programs in this section were exclusively dedicated to serving children ages 0-5 with special needs and used First 5 Kern funding to fill more than half of their budgets (Figure 8). The program accounting indicates a more indispensable role of First 5 Kern in supporting the youngest children with special needs.

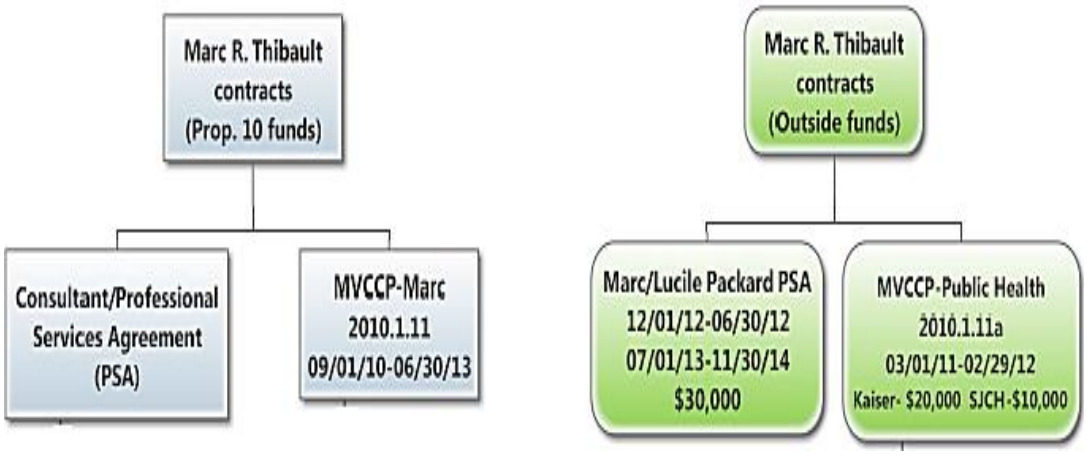
Figure 8: Number of Programs with Percent of Funding from First 5 Kern



Across those *general* and *special* programs was the Medically Vulnerable Care Coordination Project (MVCCP) to integrate health, education, and social services according to each child's medical prognosis, developmental track, support system, and any other needs from case reviews and regular assessments. Since 2008, over 40 partners took part in monthly meetings at First 5 Kern to examine medical cases pertaining to (1) preterm infants, (2) infants with special healthcare needs, (3) infants at risk for socioeconomic or medical reasons, and (4) infants with high morbidity rates.

Smith et al. (2009) noted that "While many entities purportedly provide care coordination, there is a lack of communication among the multiple agencies serving the same child" (p. 7). The partnership building through MVCCP has filled this void. As a result, child health services have been coordinated to optimize resource integrations from Proposition 10 and other agencies (Figure 9) and communications have been enhanced among healthcare providers, such as *Health Net* and *Kern Health Systems*, to streamline their supports in Kern County.

Figure 9: Funding Combination for MVCCP



In summary, First 5 Kern funded a total of 13 programs in Focus Area I: *Child Health* – six for general health supports, six for children with special needs, and one program for service coordination. Through the extensive partnership building, primary services are listed for each program to delineate their contributions to *Systems of Care* across different age groups.

TABLE 4: FEATURES OF CHILD HEALTH PROGRAMS FUNDED BY FIRST 5 KERN

Domain	Program	Primary Services	Age
General Services for All Children	CHI	Health Insurance Enrollment and Training	0-5
	SAS	Health Insurance Enrollment	0-5
	KC_Dental*	Mobile Program for Oral Healthcare	0-5
	CMIP	Mobile Program for Immunizations	0-5
	HLP	Health Education	0-5
	MAS	Safety Education	0-5
Services for Children with Special Needs	MVIP	Targeted Intensive Intervention	0-2
	EIP	Intensive Intervention	0-5
	SSEC	Targeted Intensive Intervention	0-5
	BIH	Maternal/Child Healthcare	0-2
	NFP	Maternal/Child Healthcare	0-2
	RSNC	Targeted Intensive Intervention	3-5
Coordination	MVCCP	Quality Health Systems Improvement	0-5

*May serve children up to 7 years old

Service Delivery and Improvement in Child Health

According to the Statewide Evaluation Framework, two levels of data are needed "to provide accountability information to all stakeholders" (First 5 California, 2005, p. 5). At the first level, descriptive data indicate *who is being served, how many are served, by whom*, and *for what purposes*. The fact findings are intended to document the impact of Proposition 10 funding in service deliveries. At the second level, outcome data are employed in value-added assessments to track service improvement. In FY 2012-13, programs funded by First 5 Kern delivered the following services to support child health in Kern County:

1. MVCCP received 293 case referrals this year and worked with a 25-member Ad Hoc Committee to adopt a protocol for managing Respiratory Syncytial Virus cases in Kern County. In addition, Lucile Packard Foundation awarded a $40,000 grant on December 1, 2012 to replicate the care coordination model in Contra Costa, Monterey, and Orange counties;
2. HLP offered 74 developmental assessments and distributed 130 information kits. A total of 903 parents/guardians participated in parent education activities and 135 parents attended reading literacy workshops at Bakersfield Adult School;
3. BIH performed 108 developmental assessments and maintained immunization records for 156 children. In addition, 194 case management services have been maintained for smoking, alcohol, and drug cessation;
4. CHI identified medical homes for 74 children and provided health insurance assistance to 290 families. Four hundred eighty-seven parents and community members participated in CHI health insurance education trainings;
5. EIP served 114 children and 67 families with special needs. Six hundred fifty-nine parents took part in EIP parent education classes;
6. KC_Dental connected 234 children to dental homes. In addition, 271 preventative services and 2,552 restorative treatments have been completed for children ages 0-5;
7. MAS visited 100 school sites to provide water safety education for preschool children. Swimming lessons were offered at four city pools and served 4,336 children. Five hundred sixty-four parents and children attended MAS center-based trainings;
8. MVIP found medical homes for 108 children and maintained immunization records for 100 children. Developmental assessments were provided for 130 children and 108 parents/guardians participated in home-based parent education;
9. NFP case-managed 113 first-time mothers. NFP also maintained immunization records for 213 children and offered development assessments for 84 children;
10. RSNC provided in-service education for 94 parents and offered home-based parent education for 54 families. It also handled 66 case management services and assisted 53 children with special needs;
11. CMIP contributed 16,258 vaccines and updated immunizations for 4,216 children ages 0-5 across 193 clinics;
12. SSEC offered center-based services for 43 children with special needs. Twenty children were served during non-traditional hours;
13. SAS completed new enrollments of 1,483 children in health insurance. It also renewed Medi-Cal insurance coverage for 1,243 children ages 0-5, a 28% increase over the baseline count from last year.

While service counts indicated the impact of First 5 Kern funding at the program level, Albert Einstein cautioned that "not everything that counts can be counted"[8]. Thus, assessment data have been gathered at the individual level to identify improvements of service outcomes under a pretest and posttest setting:

1. Oral Health Indicators

KC_Dental conducted assessments to show significant reduction of plaque index for 299 children ages 0-5[9] [$t(298)=27.64$, $p<.0001$]. In terms of the practical impact,

[8] www.quotationspage.com/quote/26950.html

the average plaque index dropped from 73 in the pretest to 39 in the posttest. Meanwhile, parent knowledge on dental care was assessed on a three-point scale (1=no knowledge, 2=some knowledge, and 3=full knowledge). The average score of 247 parents significantly increased from 2.34 in the pretest to 2.99 in the posttest [t(246)=19.48, p<.0001].

2. Adult-Adolescent Parenting Inventory-2 Measures

Because "the role of parents is paramount in the development of healthy children" (BC Council for Families, 2011, ¶. 3), HLP and EIP offered court-mandated parent education classes in Focus Area I: *Child Health*. Adult-Adolescent Parenting Inventory-2 (AAPI-2) was employed to collect pretest and posttest data from 90 parents in HLP and 10 parents in EIP. The HLP results indicated significant improvement of the *Nurturing Parenting* constructs in five domains:

Construct A: Inappropriate Expectations of Children [t(89)=11.98, p<.0001];
Construct B: Lack of Empathy towards Child Needs [t(89)=14.90, p<.0001];
Construct C: Belief in the Use of Corporal Punishment [t(89)=8.48, p<.0001];
Construct D: Reversing Parent-Child Family Roles [t(89)=8.89, p<.0001];
Construct E: Oppressing Children's Power/Independence [t(89)=9.38, p<.0001].

Despite the small sample size for EIP, significant improvements have been found on Constructs A [t(9)=4.62, p=.0012], B [t(9)=3.29, p=.0094], and D [t(9)=4.27, p=.0021].

Effect sizes have been computed for the AAPI-2 construct measures. The results show an effect size larger than 1.8 for all construct improvements in HLP, and 2.19 for improvements of Constructs A, B, and D in EIP. According to Cohen (1969), an effect size of 0.8 is "grossly perceptible and therefore large" (p. 23). Hence, both EIP and HLP have made strong practical impacts on improvement of *Nurturing Parenting* constructs.

3. Nurturing Skills Competency Scale Results

The Nurturing Skills Competency Scale (NSCS) is a criterion-referenced inventory aligned with the Nurturing Parenting Curriculum (NPC). "The Nurturing Parenting Program is an internationally recognized, group-based approach for working with parents and their children in reducing dysfunction and building healthy, positive interactions" (Edwards, Landry, & Slone, 2012, p. 1). Outcomes of the NSCS assessment includes two subscales: Part A assesses knowledge of the nurturing parenting attitudes and skills and Part B covers application of nurturing parenting concepts, practices and strategies. Bavolek (2009) recommended that "The NSCS is ideally utilized as a pre and post-test" (p. 1). Thirty-four parents from the RSNC program participated in both pretest and posttest of the NSCS assessment. The results showed significant improvement of parenting knowledge [t(33)=2.78, p=.0090] and skills [t(33)=7.13, p<.0001]. The corresponding effect sizes remained above 0.96 on both subscales, which suggested a strong practical impact of RSNC on parental education.

[9] Post-stratification weight has been used to delimit the child count within ages 0-5.

4. Desired Results Developmental Profile-Preschool Outcomes

Researchers found a clear link between child health and child development (see Mattheus, 2013). Based on pretest and posttest data from Desired Results Developmental Profile-Preschool (DRDP-PS), HLP demonstrated significant improvements across different domains of child development, including Self and Social Development [t(12)=3.73, p=.0029], Language and Literacy Development [t(12)=3.36, p=.0057], English Language Development [t(6)=5.20, p=.0020], Cognitive Development [t(12)=3.43, p=.0050], Mathematical Development [t(12)=7.10, p<.0001], Physical Development [t(12)=3.25, p=.0069], and Health [t(12)=5.39, p=.0002]. The corresponding Cohen's d indices were larger than 1.87, which represented a strong effect size that impacted child development.

For younger children, MVIP assessed infant development indicators at age 2 using Ages and Stages Questionnaire-3 (ASQ-3). The results showed the average performance of 31 infants significantly above the corresponding thresholds in Communication [t(30)=10.35, p<.0001], Gross Motor [t(30)=2.87, p=.0075], Fine Motor [t(30)=6.16, p<.0001], Problem Solving [t(30)=5.81, p<.0001], and Personal-Social [t(30)=5.02, p<.0001] domains.

5. Early Intervention Program Findings

EIP offered child therapy services and parent education classes in its behavioral or mental health program. Six parents responded on the Incredible Years Parenting Scale (IYPS) to indicate the need of providing multiple reminders to children before pretest. In the posttest, five out of eight parents indicated improvement of child performance in eliminating the repeated reminders. In addition, 81 responses were gathered from Comprehensive Needs Assessment (CNA). Eight children were able to regulate their emotions in the CNA pretest. In the posttest, that number increased to 22.

The Sutter-Eyberg Student Behavior Inventory-Revised (SESBIR) was employed to assess the performance of 29 children in EIP. The results indicated significant decreases in both *intensity* [t(28)=2.33, p=.0275] and *problem* [t(28)=2.66, p=.0128] scores between pretest and posttest. Similarly, effectiveness of the intervention was confirmed by responses from 45 parents using Eyberg Child Behavior Inventory (ECBI). The ECBI results showed significant reductions in *intensity* [t(44)=4.31, p<.0001] and *problem* [t(44)=3.33, p=.0017] scores.

6. Health Knowledge Development

HLP developed a "Be Choosey Be Healthy" (BCBH) instrument to track improvement of child health knowledge among 102 parents. For instance, parents reported whether they agreed that "preschool children need 11-13 hours of sleep a day". The rate of positive response increased from 48% at the program entry to 75% in the 12th month.

In summary, evidences of service delivery have been gathered in this section for all 13 programs in Focus Area I: *Child Health*. Following the new state report glossary, a systematic approach has been taken to track improvement of family functioning through

value-added assessments of pertinent indicators, such as pretest and posttest results from AAPI-2, ASQ-2, BCBH, CNA, DRDP-PS, ECBI, IYPS, NSCS, and SESBIR. The results substantiated the momentum of Quality Health Systems Improvement (QHSI) through well-coordinated services. F5AC made a timely move to add QHSI as a new glossary item because "Too often child health is viewed as separate and distinct from early childhood care and learning" (Bruner, 2009, p. 1). Both descriptive and assessment findings in this section consistently revealed enhancement of the *Quality Health Systems* for children ages 0-5 across Kern County.

Improvement of Family Functioning

To improve family functioning, First 5 Kern (2013a) listed the following outcomes as its funding priority – "All parents and caregivers will be knowledgeable about early childhood development, effective parenting and community services" (p. 10). In FY 2012-13, 17 programs were funded in Focus Area II: *Family Functioning*. To expand the service access, three programs offered transportation support for 559 families in remote communities and another program provided 2,041 transportation services for families with children 0-5 in a poverty-stricken area of Bakersfield.

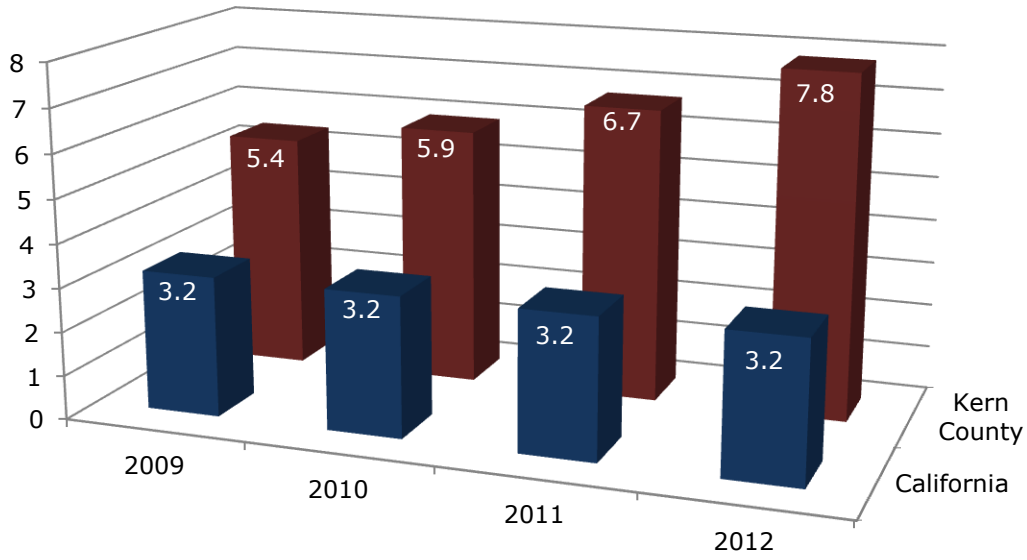
The local investment was guided by Proposition 10 to "provide parental education and family support services relevant to effective childhood development" [Sec. 2(l)]. Because of the service overlap between family functioning and child development, this section also includes additional results of parent education from 10 programs in Focus Area III: *Child Development*. Therefore, program affiliations are grounded on the primary budget allocation, rather than service separations across focus areas.

Referral System for Service Access

Like the referral role of MVCCP in Focus Area I: *Child Health*, Community Action Partnership of Kern (2-1-1 Kern County) received funding from First 5 Kern to provide referrals through Helpline 2-1-1. An extensive resource database was employed to disseminate health and human service information from more than 1,200 programs and 600 agencies. The network support was designed to connect callers to appropriate programs in Kern County. In FY 2012-13, 2-1-1 Kern County answered various phone calls to assist 9,104 children ages 0-5 and their families, a 7.5% increase over last year.

During 2003-11, California showed a slight drop in the proportion of mothers who received prenatal care during the first trimester of pregnancy (KCNC, 2013). Prenatal care has been identified as an important aspect of family functioning to support child development (Olds et al., 2004). Chen (2012) concurred that "From a life course perspective, the concept of early childhood health may begin with prenatal health" (p. 2). More recent trends indicate a much higher percent of children with *late or no prenatal* care in Kern County (Figure 10).

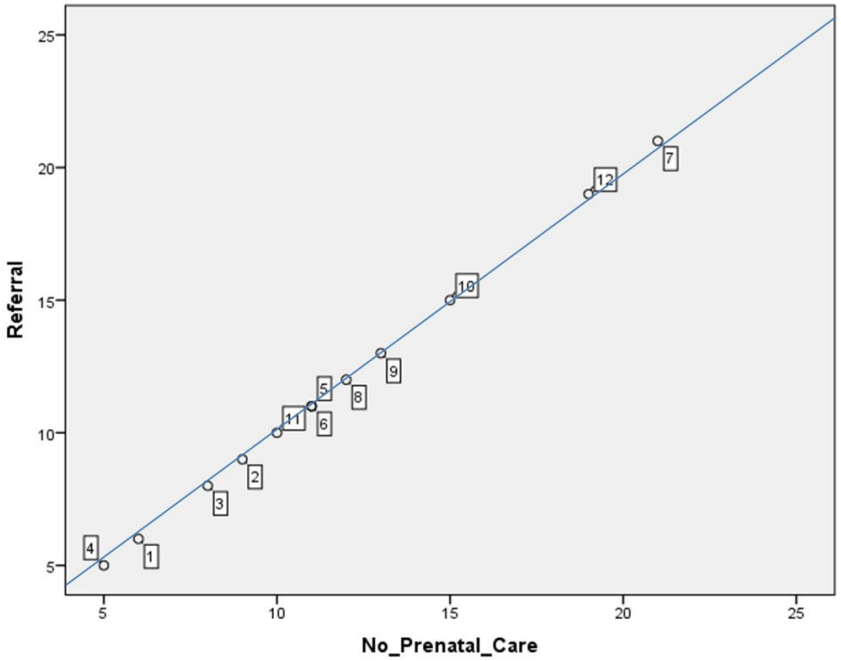
Figure 10: Percent of Children with Late or No Prenatal Care



Source: 2013 Report Cards of KCNC with rates for 2012 estimated from the past trend.

In FY 2012-13, service referrals in prenatal care were tracked over a 12-month period (Figure 11). Through 2-1-1 Kern County assistance in more than 150 languages, all phone calls have led to specific referrals at the program level. Figure 11 shows a perfect correlation (r=1.00) between the number of phone calls and the number of successful referrals in a 12-month period.

Figure 11: Trend of Phone Calls and Referrals for Prenatal Care

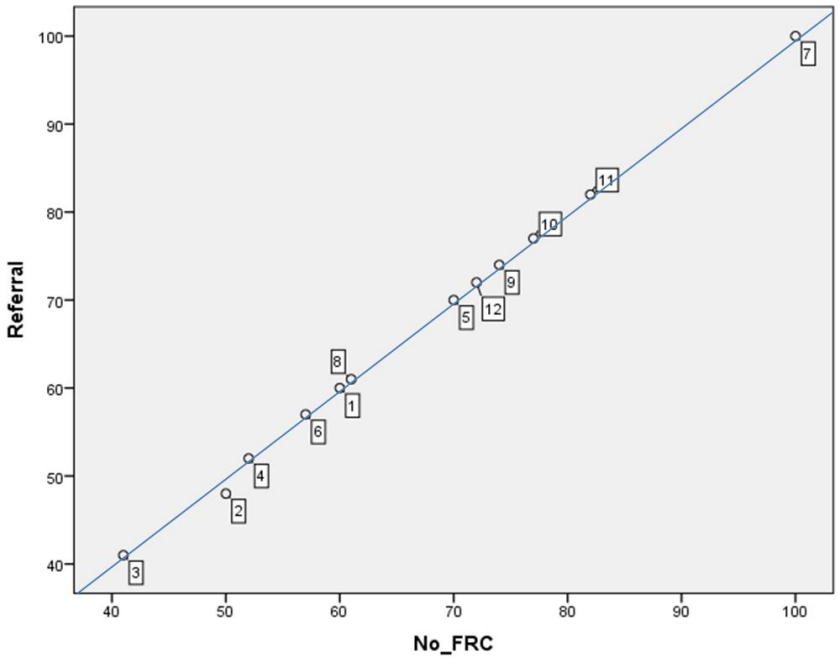


Note: Numeric labels are used to track the month information.

Effectiveness of the service coordination depends on family support. "The family context is thought to play a particularly important role in the cognitive and socio-emotional development of young children … This is because the family is at times a child's entire social and interactive world" (Loutzenhiser, 2001, p. 31-32). Therefore, programs in Focus Area II offered services under various home conditions, including guardianship assistance, violence control, drug prevention, teenage parenting, and protection against child abuse and neglect.

First 5 Kern funded center-based services to comprehensively address these needs. In FY 2012-13, 2-1-1 Kern County has made 794 referrals to Family Resource Centers (FRC) for families with children ages 0-5. Figure 12 shows a near perfect correlation (r=.99) between the number of phone calls and the number of FRC referrals across 12 months.

Figure 12: Trend of Phone Calls and FRC Referrals



Note: Numeric numbers are used track the month information.

While 2-1-1 Kern County's responsibility was to link children and families to service providers, the referral impact was further expanded by additional support at the program level. In Focus Area II, most programs not only provided direct services, but also made peer referrals for local families. The collaboration has made the referral system more reliable when local families can allocate the support from multiple sources. According to Kumar, Izui, Masataka, and Nishiwaki (2008), "Multilevel redundancy allocation is an especially powerful approach for improving the system reliability" (p. 650).

In combination, 14 programs made a total of 10,305 referrals in FY 2012-13 (Table 5). Meanwhile, 2-1-1 Kern County assisted 10,976 callers with children ages 0-5. Hence, service access has been guided by mutual referrals from *countywide* (i.e., 2-1-1 Kern County) and *local programs*. While 2-1-1 Kern County services are accessible

through phone calls, peer referrals at the program level are deeply grounded on accurate understanding of community resources for each case. The multilevel support has contributed to Quality Family Functioning Systems Improvement (QFFSI), a new item of the state report glossary added by the First 5 Association of California this year.

TABLE 5: PEER REFERRALS FROM PROGRAMS IN FAMILY FUNCTIONING

Program	Referral Count
Arvin Family Resource Center	1,020
Buttonwillow Community Resource Center	548
Differential Response Services	850
East Kern Family Resource Center	950
Greenfield School Readiness	361
Indian Wells Valley Family Resource Center	305
Kern River Valley Family Resource Center – Great Beginnings Program	461
Lamont Vineland School Readiness Program	521
McFarland Family Resource Center	2,441
Mountain Communities Family Resource Center	171
Shafter Healthy Start	380
Southeast Neighborhood Partnership Family Resource Center	1,708
West Side Community Resource Center	523
Women's Shelter Network	66

Descriptive Evidences for Population Accountability

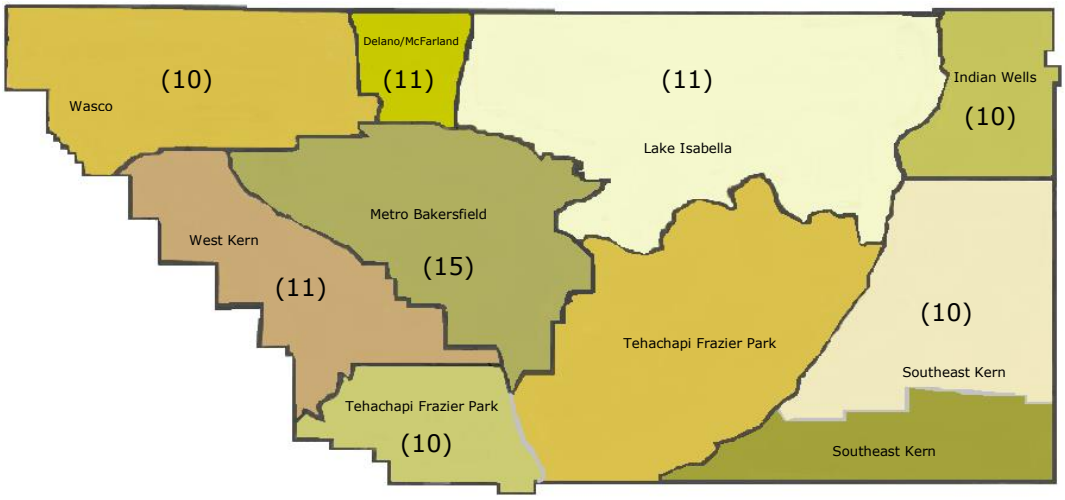
According to Friedman (2009), "RBA [Results-Based Accountability] makes a fundamental distinction between Population Accountability and Performance Accountability" (p. 2). In comparison, performance accountability is demonstrated by program effectiveness and population accountability requires delivery of the intended services to the target population.

Kern County population has been divided into nine subareas by Kern Council of Governments (KCOG) based on local housing development[10]. Seven subareas were designated for mountain and desert communities, including Tehachapi and Frazier Park that were often combined in KCOG reports due to their sparse population density. Figure 13 shows a map of programs from Focus Areas II and III that share the responsibility of supporting family functioning in Kern County.

As part of the countywide support, First 5 Kern funded three programs, Differential Response (DR), Domestic Violence Reduction Project (DVRP), and Guardianship Caregiver Project (GCP), to improve living conditions of children in unstable families. The need to strengthen family functioning is increasing because "Over the last decade, the share of Kern County children living in married-couple homes has declined to 62%" (KCNC, 2013, p. 1).

[10] http://www.co.kern.ca.us/planning/pdfs/he/HE2008_Ch1.pdf

Figure 13: Distribution of Parent Education Programs in Kern County*



*Numbers are aggregated across countywide and local programs inside the parentheses

In FY 2012-13, these programs established case management services to support 3,625 families experiencing substantiated child abuse and/or neglect (Table 6). In addition, seven programs offered court-mandated, parent education classes for 245 parents to learn child development milestones, parenting skills, and health protection measures. In order to enhance family stability and expand child protection against potential risk factors, 19 programs provided regular case management services in 1,391 homes. Table 6 also shows delivery of *center-based, home-based*, and *in-service* parent education for a total of 2,353 parents/guardians.

TABLE 6: SERVICE COUNTS TO SUPPORT FAMILY FUNCTIONING

Service	Focus Area	Program
Case Management	I	AFRC (55), BCRC (15), DVRP (170), EKFRC (65), GSR (31), GCP (205), IWVFRC (63), KRVFRC (64), LVSRP (66), MFRC (56), MCFRC (34), SHS (40), SENP (159), WSCRC (28), WSN (54)
	II	BCSD (300), BCDC (35), DSR (22), LHFRC (29)
Court-Mandated Parent Education	II	EKFRC (25), IWVFRC (44), KRVFRC (17), SHS (53), SENP (49)
	III	NOR (57)
In-Service Parent Education	II	MCFRC (40), WSCRC (272)
	III	BCSD (437), BCDC (159), DDLCCC (20), SFP (20)
Group-Based Parent Education	II	AFRC (20), BCRC (22), GSR (86), LVSRP (25), MCFRC (33), MFRC (102), SENP (42), WSCRC (39)
	III	BCSD (378), BCDC (35), DSR (51), LHFRC (61), NOR (258), SSCDC (30)
Home-Based Parent Education	II	BCRC (40), DSR (14), KRVFRC (45), LVSRP (53), MFRC (36)
	III	DSR (35)

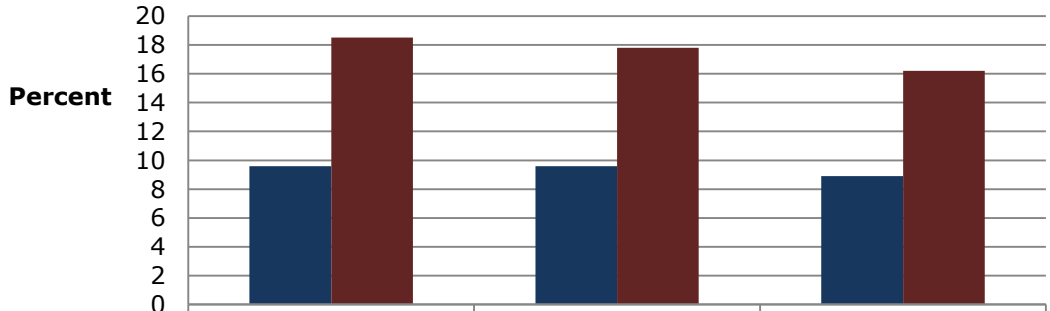
*Numbers inside parentheses indicate how many families benefited from each service.

In summary, First 5 Kern's funding has enhanced family functioning through various *case management* and *parent education* services (see Table 6). As Samuelson (2010) pointed out, "Effective parent education programs have been linked with decreased rates of child abuse and neglect, better physical, cognitive and emotional development in children, increased parental knowledge of child development and parenting skills" (p. 1). Meanwhile, First 5 Kern has ensured a balanced distribution of service providers across Kern County to address the Proposition 10 requirement of population accountability (Figure 13).

Assessment Results on Family Functioning

Ongoing improvements of service outcomes are tracked in the categories of case management and parent education services. In comparison to the state average index, KCNC (2013) reported a much higher rate of substantiated child abuse in Kern County (Figure 14), which raised an imperative demand for First 5 Kern to sustain its support for programs in Focus Area II: *Family Functioning*.

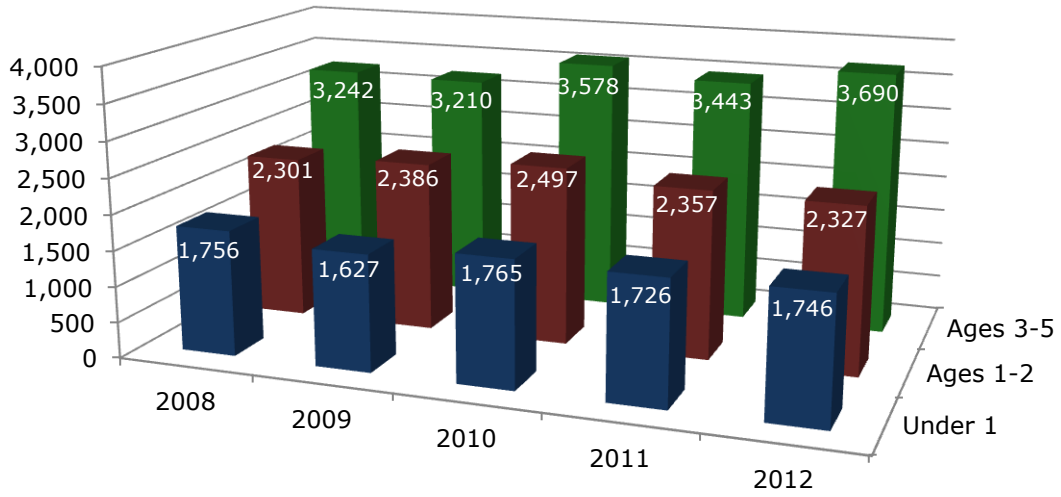
Figure 14: Substantiated Child Abuse Rates per 1,000 Children



	2010	2011	2012
California	9.6	9.6	8.9
Kern County	18.5	17.8	16.2

Furthermore, Figure 15 shows a persistent trend of *child abuse* and *neglect* in Kern County across all age groups. With First 5 Kern's funding, family advocates were sent to solve child safety issues identified by Kern Child Abuse Hotline. The Differential Response (DR) program was funded to support protective services pertinent to specific reports of abuse and neglect for children ages 0-5 and their siblings.

Figure 15: Distribution of Kern County Child Abuse Cases by Age Grouping



Source: Kern Count Network for Children (2013).

DR also collaborated with nine county agencies and 14 community-based organizations to increase parent knowledge and skills among at-risk families (Table 7). The countywide support included agencies in charge of education, health, and social services. To strengthen family functioning, "Many communities have brought together health and social service agencies to offer locally based family-centered services."[11] Four of the community organizations in **blue** also received funding from First 5 Kern to support children ages 0-5 and their families. Twenty-one family resource centers were involved in the local DR collaboration and 18 of them were accredited by Kern County Network for Children[12].

TABLE 7: DR PARTNERS FOR STRENGTHENING FAMILY FUNCTIONING

County Agencies	Community-Based Organizations
Child Support Services	Alliance Against Family Violence and Sexual Assault
County Library	American Red Cross of Kern County
Economic Development	Aspira Foster and Family Services
Housing Authority	**Clinica Sierra Vista**
Human Services	**Community Action Partnership of Kern**
Mental Health	Court Appointed Special Advocates of Kern County
Planning and Community Development	Covenant Community Service Inc.
Parks and Recreation	Domestic Violence Advisory Council - DVAC
Public Health	Garden Pathways
Superintendent of Schools	**Greater Bakersfield Legal Assistance**
	H.E.A.R.T.S. Connection
	Henrietta Weill Memorial Child Guidance Clinic
	Kern Stop Meth Now
	Reach 4 Greatness and Stay Focused Ministries

[11] ¶. 1 of http://www.kcnc.org/Local_Collaboratives
[12] http://www.kcnc.org/Local_Collaboratives

In FY 2012-13, DR adopted North Carolina Family Assessment Scale for General Services (NCFAS-G) to evaluate its service improvement. Five hundred eighty cases participated in intake assessments and 158 of them completed closure assessments. The longitudinal data retained over 80% of the pairwise observations from both *intake* and *closure* assessments. Table 8 shows significant improvements of family functioning on eight dimensions. The effect size indices reconfirmed strong impacts of DR on the NCFAS-G indicators of *Environment, Child Well-being, Self-Sufficiency*, and *Family Health*. For the remaining dimensions, effect sizes were larger than 0.5, and thus, suggested moderate practical impacts (Cohen, 1967).

TABLE 8: IMPACT OF PARENT EDUCATION ON THE NCFAS-G DIMENSIONS

NCFAS-G Scale	Result	
Environment	t(131)=5.28, p<.0001;	Effect Size=0.92
Parental Capabilities	t(130)=4.05, p<.0001;	Effect Size=0.71
Family Interactions	t(130)=4.25, p<.0001;	Effect Size=0.75
Family Safety	t(129)=3.86, p=.0002;	Effect Size=0.68
Child Well-being	t(126)=5.29, p<.0001;	Effect Size=0.94
Social/Community Life	t(131)=3.77, p=.0002;	Effect Size=0.66
Self-Sufficiency	t(131)=5.27, p<.0001;	Effect Size=0.92
Family Health	t(130)=6.32, p<.0001;	Effect Size=1.11

Since it may take *communities* and *families* to raise children, First 5 Kern funded programs to adopt both approaches. On one hand, DR employed an integrated service model to support *community-based* case management services. On the other hand, Greater Bakersfield Legal Assistance (GBLA) delivered DVRP and GCP services with a clear focus on improvement of family environment. By design, parental education was embedded in DVRP case management services to help children and survivors of domestic violence attain greater economic and family stability. This year, GCP provided medical homes in order to smooth transitions of 171 cases from foster homes to permanent homes and offered case management services for families to gain access to various support services, including healthcare access, mental health screenings, and local school enrollments. Table 9 indicates consistent progress within the first three months of DVRP and GCP case management services.

TABLE 9: IMPACT OF DVRP AND GCP PROGRAMS WITHIN FIRST THREE MONTHS

Indicators	DVRP (n=129)		GCP (n=118)	
	Initial	Month3	Initial	Month3
Miss school/work for transportation	33	6	5	0
Lack transportation for all household	30	5	4	1
Unmet food needs for all household	6	1	4	1
Inconvenient childcare provider	15	7	36	15
Miss school/work for childcare	16	3	10	2
Unmet childcare needs at home	16	4	15	4

For parent education, *group-based, home-based*, and *court-mandated* classes were offered by local programs in Focus Areas II and III. Based on NSCS pretest and posttest data from *group-based* and *home-based* parent education classes, significant

improvements occurred in nurturing parenting skills for a total of 194 participants across six programs (Table 10). Like RSNC in the *Child Health* focus area, West Side Community Resource Center (WSCRC) showed significant improvement of parenting knowledge and application on the Nurturing Skills Competency Scale (NSCS).

TABLE 10: IMPACT OF PARENT EDUCATION ON THE NSCS SCALES

NSCS Scale	Focus Area	Program*	Result		
A: Parenting Knowledge	II	MFRC	t(37)=1.75,	p=.0892;	Effect Size=0.58
		WSCRC	t(22)=7.99,	p=<.0001;	Effect Size=3.41
	III	DSR	t(30)=1.70,	p=.0987;	Effect Size=0.62
B: Parenting Skills	II	AFRC	t(21)=2.55,	p=.0186;	Effect Size=1.11
		BCRC	t(27)=4.22,	p=.0002;	Effect Size=1.64
		GSR	t(54)=4.29,	p=<.0001;	Effect Size=1.17
		MFRC	t(37)=4.12,	p=.0002;	Effect Size=1.35
		WSCRC	t(22)=12.12,	p=<.0001;	Effect Size=5.17
	III	DSR	t(30)=10.06,	p<.0001;	Effect Size=3.87

*Program acronyms are listed in Appendix A.

Prior to this funding cycle, past annual reports included results from statistical testing. As indicated by Corporation for Standards and Outcomes (2010),

> Many findings are described as being "statistically significant." This means that the difference between the groups being compared (typically, this is a comparison of pre-test to post-test) is not due to chance alone. Statistical significance is described using p-values, which express the likelihood that a result is due to chance. (p. 6)

While probabilistic inference is needed to model uncertainty of the results, it is the effect size, not a p-value that measures the magnitude of program impact (Wilkinson, 1999). In particular, Table 10 shows insignificant improvement of nurturing parenting knowledge at McFarland Family Resource Center (MFRC) and Delano School Readiness (DSR), but their effect sizes were above 0.5. As Cohen (1967) pointed out, an effect size of 0.5 is considered to have "medium" practical impact and is "large enough to be visible to the naked eye" (p. 23).

Because statistical significance cannot always be equivalent to practical importance, the American Psychological Association (2001) suggested that "For the reader to fully understand the importance of your findings, it is almost always necessary to include some index of effect size or strength of relationship in your Results section" (p. 25). Therefore, Table 10 includes the results of both *statistical testing* and *effect size* to assess the service impact on NSCS scales.

NSCS is grounded on a Nurturing Parenting Curriculum (NPC) and the instrument has been adopted by at least six First 5 county commissions (e.g., Butte, Lake, Madera, San Mateo, Tehama, and Tuolumne) over the past eight years. In most cases, "agencies countywide have received 3-days of training on the Nurturing Parenting curriculum to be able to utilize the program in their service delivery with families through groups, home

visits, or individual counseling" (Ferron & Jordan, 2012, p. 3). According to the NPC developers:

> The ineffectiveness of the parenting education being offered to the parents, which includes: a) the dosage (number of total lessons offered are inadequate to the level of parental need); b) the intensity of the dosage (classes are condensed into a short period of time not allowing the information time to incubate into normal parenting patterns); or c) parenting lessons that do not meet the needs of the parents. That is, program focused lessons not parent focused lessons. (Assessing Parenting, 2012, p. 1)

NPC training was designed to introduce professional curricula, and thus, reduce program ineffectiveness. In FY 2012-13, 14 programs in Focus Areas II and III adopted the NPC outcome measures[13]. Nonetheless, First 5 Kern-funded programs did not receive training from the NSCS developers or attend a "train-the-trainer" session from a sister county. The last annual report included a recommendation to "enhance alignment of parent education programs with professional practice" (Wang, 2013, p. 93). That recommendation addressed the need of NPC training to improve the results from NSCS assessments.

The AAPI-2 is another instrument to assess improvement of parent knowledge and applications according to NPC. In addition to two programs in *Child Health*, six additional programs adopted AAPI-2 to evaluate the effectiveness of court-mandated parent education in Focus Areas II and III. Outcome measures from the AAPI-2 assessment were designed to reflect five parenting constructs in Table 11 (see Ferron & Jordan, 2012).

Similar to the findings from NSCS, AAPI-2 showed that not all the programs demonstrated the same level of effectiveness. However, perhaps because of the court-mandated requirements, AAPI-2 results in Table 12 showed a higher consistency than the outcomes from NSCS. Like EIP and HLP in the *Child Health* focus area, all six programs in this section showed significant improvements in the AAPI-2 constructs of *Parental Empathy Towards Children's Needs* and *Use of Corporal Punishment*. Effect sizes in Table 12 are larger than 0.8, and thus, strong practical impacts have been found from those court-mandated programs on improvements of NPC outcomes.

[13] East Kern Family Resource Center and Lost Hills Family Resource Center have 1 and 2 recall observations, respectively. Those observations did not match the same students from initial assessments.

TABLE 11: NURTURING PARENTING ASSESSMENT STRUCTURE

Parenting Constructs	High Risk > Medium Risk > Low Risk	
Expectations of Children	• Lack understanding of normal child growth and development • Tends to be demanding and controlling	• Understands growth and development of children • Tends to be supportive of children
Parental Empathy toward Children's Needs	• Fears spoiling children • Lacks nurturing skills	• Allows children to display normal developmental behaviors • Recognizes feelings of children
Use of Corporal Punishment	• Thinks hitting, spanking, and/or slapping children appropriate and required • Lacks knowledge of alternatives and/or inability to use	• Understands and uses alternatives to physical force • Rules set for family, not just for children • Values mutual parent-child relationships
Parent-Child Family Roles	• Perceives children as objects for adult gratification • Tends to treat children as confidant and peer	• Tends to have own needs met appropriately • Finds comfort, support and companionship from own social peers
Children's Power and Independence	• Tends to view children with power as threatening • Tends of view independent thinking as disrespectful	• Places high value on children's ability to problem-solve • Empowers children to make good choices

Parents are children's first and most important teachers. Therefore, Proposition 10 stipulates that First 5 commissions address "Parental education and support services in **all areas** required for, and relevant to, informed and healthy parenting" (p. 7). In complying with the state statute, parental education and support services were provided by HLP, EIP, and RSNC in ***Focus Area I: Child Health*** in the previous section. Additional results of case management and parent education services are reported in this section to address results-based accountability in ***Focus Area II: Family Functioning***. Furthermore, Delano School Readiness (DSR) and Neighborhood Place Parent Community Learning Center (NOR) are funded in ***Focus Area III: Child Development*** and their practical impact on parent education are included in Tables 10 and 12 for confirmation of the NSCS and AAPI-2 findings.

TABLE 12: IMPACT OF COURT-MANDATED PARENT EDUCATION IN FOCUS AREAS 2 & 3

AAPI-2 Subscale	Focus Area	Program*	Result	
Expectations of Children	II	IWVFRC	t(18)=5.31, p=<.0001;	Effect Size=2.50
		SHS	t(15)=2.72, p=.0159;	Effect Size=1.40
		SENP	t(20)=7.49, p<.0001;	Effect Size=3.35
	III	NOR	t(28)=4.46, p=.0001;	Effect Size=1.69
Parental Empathy Towards Children's Needs	II	EKFRC	t(15)=5.52, p<.0001;	Effect Size=2.85
		IWVFRC	t(18)=6.80, p=<.0001;	Effect Size=3.21
		KRVFRC	t(5)=5.58, p=.0025;	Effect Size=4.99
		SHS	t(15)=4.44, p=.0005;	Effect Size=2.29
		SENP	t(20)=7.88, p<.0001;	Effect Size=3.52
	III	NOR	t(28)=8.15, p<.0001;	Effect Size=3.08
Use of Corporal Punishment	II	EKFRC	t(15)=3.66, p=.0023;	Effect Size=1.89
		IWVFRC	t(18)=6.47, p=<.0001;	Effect Size=3.05
		KRVFRC	t(5)=3.05, p=.0284;	Effect Size=2.73
		SHS	t(15)=3.27, p=.0051;	Effect Size=1.69
		SENP	t(20)=6.22, p<.0001;	Effect Size=2.78
	III	NOR	t(28)=6.53, p<.0001;	Effect Size=2.47
Parent-Child Family Roles	II	EKFRC	t(15)=6.79, p<.0001;	Effect Size=3.51
		IWVFRC	t(18)=6.57, p=<.0001;	Effect Size=3.10
		SENP	t(20)=8.88, p<.0001;	Effect Size=3.97
	III	NOR	t(28)=7.36, p<.0001;	Effect Size=2.87
Children's Power and Independence	II	EKFRC	t(15)=2.74, p=.0152;	Effect Size=1.41
		IWVFRC	t(18)=5.18, p=<.0001;	Effect Size=2.44
		KRVFRC	t(5)=2.71, p=.0422;	Effect Size=2.42
		SENP	t(20)=8.53, p<.0001;	Effect Size=3.81
	III	NOR	t(28)=5.51, p<.0001;	Effect Size=2.08

*Program acronyms are listed in Appendix A.

Enhancement of Early Childhood Education

Proposition 10 indicates that "There is a further compelling need in California to ensure that early childhood development programs and services are universally and continuously available for children until the beginning of kindergarten" (p. 1). To enhance school readiness, First 5 Kern funded 10 programs in Focus Area III: *Child Development* – seven of them supporting preschool services and kindergarten transitions, and the remaining three for childcare and early literacy development. Altogether these programs collaboratively delivered early education services for all children in Kern County, including those living in *homeless shelters* and *at-risk families*. Table 13 lists service capacities of each program in early childhood development.

TABLE 13: SERVICE CAPACITY OF PROGRAMS IN FOCUS AREA III

Service	Capacity	Program*
Early education program for children	Childcare support for all children, including addressing early literacy and special needs for homeless children and children from at-risk families.	BCDC DDLCCC SSCDC
Preschool for 3 & 4 years old	Preschool services and Child Signature Programs 1 & 3 for 3 & 4 years old.	SFP WIW
Kindergarten transition	Classes, home visits, summer bridge programs to support kindergarten transition for children and families.	BCSD DSR LHFRC NOR R2S

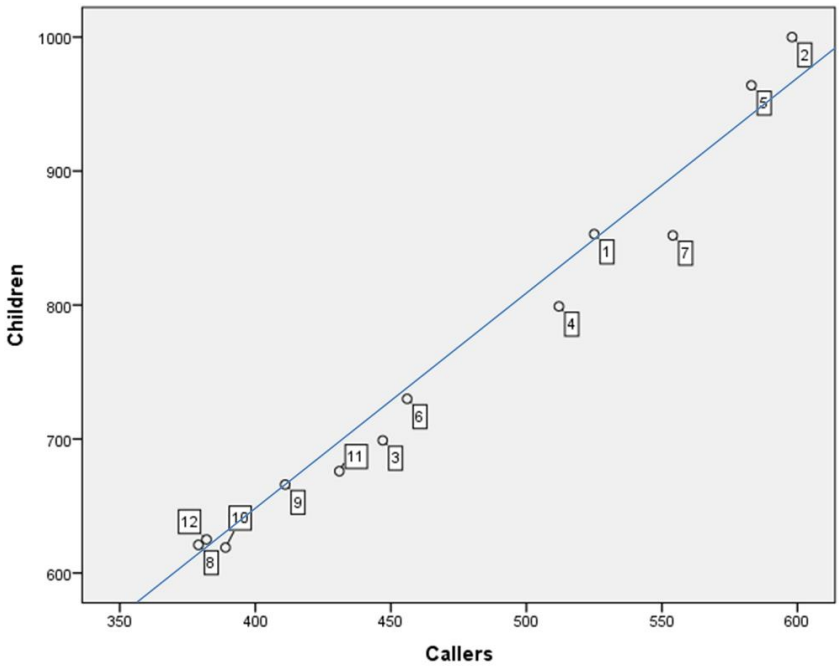
*Program acronyms are listed in Appendix A.

Access of Services in Child Development

Through 2-1-1 Kern County, local callers have been referred to various services in Focus Area III: *Child Development*. In FY 2012-13, 2-1-1 Kern County referred 5,667 new callers to service providers. The service record has been tracked monthly to document the numbers of unduplicated phone calls from parents/guardians to assist children ages 0-5. Figure 16 shows a strong correlation (r=.99) between the unduplicated counts of callers and the number of child referrals this year.

Meanwhile, 761 peer referrals have been made at the program level to expand service access in early childhood development. For instance, South Fork Preschool (SFP) is located in a small community in Kern River Valley. First 5 Kern funded half-day preschool opportunities for 30 children. In the original plan, SFP budgeted transportation support for 10 children. The referral services have led to the recruitment of 16 children in need of transportation. This example not only demonstrated expansion of accessibility, but also exhibited a comprehensive service system that naturally integrated education, referral, and transportation support for children in hard-to-reach communities.

Figure 16: Relation of Unduplicated Numbers of Callers and Children



Note: Numeric numbers are used to track the month information.

In FY 2012-13, support for early childhood development has been offered in multiple platforms to address local needs. As a result, 18 programs provided *center-based* childcare services, eight programs sponsored *home-based* childcare support, and 14 programs offered *school-based* Summer-Bridge curricula. In addition, five programs in Focus Area II completed child developmental assessments in traditionally underserved communities. Two programs in Focus Area III offered health screening services and two other programs delivered nutrition support for local children. The early childhood education investment has enriched learning opportunities for children, including those from remote areas and/or at-risk families. It also fit a priority of First 5 Kern's strategic plan to offer quality early childcare and education services.

Table 14 summarizes child development services in Kern County. Overall, 1,324 children enrolled in Summer-Bridge programs, 1,254 children took part in center-based programs, and 127 children participated in home-based programs. Meanwhile, 533 children received developmental assessments and 1,022 children had a health screening. A total of 1,576 nutrition services, including snacks and lunches, were delivered to support center-based activities at Discovery Depot Licensed Child Care Center (DDLCCC) and Small Steps Child Development Center (SSCDC). Programs in Focus Areas II and III shared the responsibility of the service delivery (Table 14).

TABLE 14: SERVICE COUNTS TO SUPPORT CHILD DEVELOPMENT

Service	Focus Area	Program*
Summer Bridge	II	AFRC (25), BCRC (28), EKFRC (21), GSR (46), IWVFRC (17), LVSRP (56), MFRC (56), MCFRC (30), SHS (25), WSCRC (37)
	III	BCSD (96), DSR (30), LHFRC (19), R2S (838)
Center-Based Child Development	II	AFRC(25), BCRC (20), EKFRC (54), GSR (130), LVSRP (40), MFRC (43), MCFRC (14), SHS (56), WSCRC (37)
	III	BCSD (279), BCDC (37), DSR (30), DDLCCC (37), LHFRC (20), NOR (315), SSCDC (47), SFP (30), WWP (40)
Home-Based Child Development	II	AFRC (17), BCRC (17), EKFRC (6), SHS (10), WSCRC (20)
	III	BCSD (17), DSR (20), LHFRC (20)
Developmental Assessment	II	IWVFRC (112), KRVFRC (153), MCFRC (14), SENP (190), WSN (64)
Health Screenings	III	BCSD (300), R2S (722)
Nutrition Services	III	DDLCCC (6046), SSCDC (9030)

*Parentheses include the number of families benefited from each service. Program acronyms are listed in Appendix A.

In combination, First 5 Kern has created "a seamless system of integrated and comprehensive programs and services" (Proposition 10, p. 2). Nine programs are focused on a single task, such as Summer-Bridge (R2S & IVWFRC) or center-based child development (BCDC, DDLCCC, MMFRC, NOR, SFP, SSCDC, & WWP). Eleven other programs are engaged in multiple services. Single task programs like SFP also adopted a systematic approach to jointly provide preschool education, referral, and transportation services. For children with special needs, Women's Shelter Network (WSN) added 24 social emotional assessments this year. Based on the result aggregation, evidence of service delivery has been substantiated in Table 14 to "ensure that children enter kindergarten physically, mentally, emotionally and cognitively ready to learn" (First 5 Kern, 2012, p. 2).

Assessment of Quality in Early Childhood Education

Following the model of Results-Based Accountability (RBA), service outcomes are analyzed in this section to examine the quality of early childhood education. Table 15 lists instruments for data collection to support value-added assessments across different stages of child development.

1. Ages and Stages Questionnaire Findings

In FY 2012-13, an attempt was made to screen child development using two versions of Ages and Stages Questionnaire (ASQ). In addition to ASQ-3 in Table 14, ASQ-Social Emotional (ASQ-SE) was adopted by Women's Shelter Network (WSN) to identify children who may be at risk due to emotional difficulties. The special needs were subsequently examined for mental service referrals. As the only program using ASQ-SE, WSN's sample per age group was no larger than six. Thus, this instrument was not listed in Table 14 for statistical reporting.

TABLE 15: INSTRUMENTS FOR DATA COLLECTIONS IN FOCUS AREAS II AND III

Instrument	Feature	Population
Ages and Stages Questionnaire-3 (ASQ-3)	Age-appropriate measures to assess child development in *Communication, Gross Motor, Fine Motor, Personal-Social*, and *Problem Solving* domains.	Ages 0-5
Child Assessment-Summer Bridge (CASB)	Value-added assessment child *Communication, Cognitive, Self-Help, Social Emotional* and *Motor* Skills.	Ages 4-5
Desired Results Developmental Profile – Infant/Toddler (DRDP-IT)	Indicators of *Self and Social Development*, *Language and Literacy Development*, *Cognitive Development*, *Motor and Perceptual Development*, and *Health*.	Infant or Toddler
Desired Results Developmental Profile – Preschool (DRDP-PS)	Indicators of *Self and Social Development*, *Language and Literacy Development*, *English Language/Cognitive/Math/Physical Development*, and *Health*.	Preschooler
School Readiness Articulation Survey (SRAS)	Survey of indirect responses from adults on quality of early childhood education for kindergarten entry.	Education Stakeholders

In contrast, ASQ-3 was employed by 20 programs. At 36th month, the largest program assessed 55 children. To support ASQ-3 data analyses at the program level, results of single sample t tests are reported in Table 16 to show child development significantly above the corresponding thresholds across *Communication, Gross Motor, Fine Motor, Personal-Social*, and *Problem Solving* domains. In addition, Table 16 shows significant differences above the ASQ-3 thresholds for other programs that serve a dozen or more children. Although small samples could have made the results unlikely to reach statistical significance (Johnson & Bhattacharyya, 2013), two of the programs (GSR and SENP) in Table 16 have demonstrated child development significantly above the corresponding thresholds at age 3. Effect size results in Table 16 were much larger than 0.8, reconfirming a strong practical impact on child growth across those programs.

TABLE 16: ASQ-3 RESULTS AT AGE 3

Domain	Level of Analysis*	Result	
Communication	**Across Programs**	t(176)=27.15, p<.0001;	Effect Size=4.09
	BCSD	t(54)=15.61, p<.0001;	Effect Size=4.25
	GSR	t(11)=4.86, p=.0005;	Effect Size=2.93
	SENP	t(15)=10.07, p<.0001;	Effect Size=5.20
	NOR	t(38)=13.01, p<.0001;	Effect Size=4.22
Gross Motor	Across Programs	t(176)=41.07, p<.0001;	Effect Size=6.19
	BCSD	t(54)=31.77, p<.0001;	Effect Size=8.65
	GSR	t(11)=6.57, p=.0005;	Effect Size=3.96
	SENP	t(15)=17.28, p<.0001;	Effect Size=8.92
	NOR	t(38)=23.90, p<.0001;	Effect Size=7.75
Fine Motor	**Across Programs**	t(176)=23.77, p<.0001;	Effect Size=3.58
	BCSD	t(54)=12.26, p<.0001;	Effect Size=3.34
	GSR	t(11)=5.06, p=.0005;	Effect Size=3.05
	SENP	t(15)=9.05, p<.0001;	Effect Size=4.67
	NOR	t(38)=10.52, p<.0001;	Effect Size=3.41
Problem Solving	**Across Programs**	t(176)=24.68, p<.0001;	Effect Size=3.72
	BCSD	t(54)=15.80, p<.0001;	Effect Size=4.30
	GSR	t(11)=8.28, p=.0005;	Effect Size=4.99
	SENP	t(15)=13.35, p<.0001;	Effect Size=6.89
	NOR	t(38)=9.08, p<.0001;	Effect Size=2.95
Personal-Social	**Across Programs**	t(176)=27.74, p<.0001;	Effect Size=4.18
	BCSD	t(54)=13.56, p<.0001;	Effect Size=3.69
	GSR	t(11)=6.78, p=.0005;	Effect Size=4.09
	SENP	t(15)=9.78, p<.0001;	Effect Size=5.05
	NOR	t(38)=12.67, p<.0001;	Effect Size=4.11

*Program acronyms are listed in Appendix A.

The United Nations Children's Fund (2011) reported that "A country's position in the global economy depends on the competencies of its people and those competencies are set early in life — before the child is three years old" (¶. 7). To support value-added assessment beyond age 3, ASQ-3 findings have been examined at age 4. Table 17 shows the participation of 286 children (i.e., df=285) in ASQ-3 assessments at 48th month.

TABLE 17: ASQ-3 RESULTS AT AGE 4

Domain	Level of Analysis*	Result	
Communication	**Across Programs**	t(285)=27.73, p<.0001;	Effect Size=3.28
	AFRC	t(21)=3.99, p=.0007;	Effect Size=1.74
	BCRC	t(16)=3.26, p=.0049;	Effect Size=1.63
	BCSD	t(59)=17.87, p<.0001;	Effect Size=4.65
	EKFRC	t(11)=20.72, p<.0001;	Effect Size=12.49
	MFRC	t(13)=5.83, p<.0001;	Effect Size=3.23
	NOR	t(63)=24.74, p<.0001;	Effect Size=6.23
	WSCRC	t(11)=7.53, p<.0001;	Effect Size=4.54
Gross Motor	**Across Programs**	t(285)=35.98, p<.0001;	Effect Size=4.26
	AFRC	t(21)=2.97, p=.0073;	Effect Size=1.30
	BCRC	t(16)=10.53, p<.0001;	Effect Size=5.27
	BCSD	t(59)=29.39, p<.0001;	Effect Size=7.65
	EKFRC	t(11)=26.61, p<.0001;	Effect Size=16.05
	MFRC	t(13)=6.62, p<.0001;	Effect Size=3.67
	NOR	t(63)=20.40, p<.0001;	Effect Size=5.14
	WSCRC	t(11)=4.76, p<.0001;	Effect Size=2.87
Fine Motor	**Across Programs**	t(285)=29.45, p<.0001;	Effect Size=3.48
	AFRC	t(21)=6.93, p<.0001;	Effect Size=3.02
	BCRC	t(16)=10.29, p<.0001;	Effect Size=5.15
	BCSD	t(59)=15.78, p<.0001;	Effect Size=4.13
	EKFRC	t(11)=6.89, p<.0001;	Effect Size=4.15
	MFRC	t(13)=6.24, p<.0001;	Effect Size=3.46
	NOR	t(63)=14.03, p<.0001;	Effect Size=3.54
	WSCRC	t(11)=11.11, p<.0001;	Effect Size=6.70
Problem Solving	**Across Programs**	t(285)=31.39, p<.0001;	Effect Size=3.71
	AFRC	t(21)=7.80, p<.0001;	Effect Size=3.40
	BCRC	t(16)=5.19, p<.0001;	Effect Size=2.60
	BCSD	t(59)=15.40, p<.0001;	Effect Size=4.01
	EKFRC	t(11)=11.65, p<.0001;	Effect Size=7.03
	MFRC	t(13)=7.84, p<.0001;	Effect Size=4.35
	NOR	t(63)=21.58, p<.0001;	Effect Size=5.44
	WSCRC	t(11)=10.42, p<.0001;	Effect Size=6.28
Personal-Social	**Across Programs**	t(285)=34.67, p<.0001;	Effect Size=4.10
	AFRC	t(21)=6.01, p<.0001;	Effect Size=2.62
	BCRC	t(16)=7.18, p<.0001;	Effect Size=3.59
	BCSD	t(59)=16.41, p<.0001;	Effect Size=4.27
	EKFRC	t(11)=11.92, p<.0001;	Effect Size=7.19
	MFRC	t(13)=4.91, p=.0003;	Effect Size=2.72
	NOR	t(63)=12.67, p<.0001;	Effect Size=3.19
	WSCRC	t(11)=19.72, p<.0001;	Effect Size=11.89

*Program acronyms are listed in Appendix A.

All programs in Table 17 tracked the ASQ-3 data from a dozen or more children across five domains of child development and the results were significantly above the corresponding thresholds in *Communication, Gross Motor, Fine Motor, Personal-Social*, and *Problem Solving* categories. The effect sizes also indicated practical impacts from First 5 Kern-funded programs on early childhood development. When the results were aggregated across the programs, significant differences have been found at 36th and 48th months in favor of children served by First 5 Kern in *Communication, Gross Motor, Fine Motor, Personal Social*, and *Problem Solving* categories (Tables 16 & 17).

2. Child Assessment-Summer Bridge Results

Summer Bridge (SB) is a general term to describe school-readiness programs for preschool-aged children before kindergarten entry. Thirteen programs employed Child Assessment-Summer Bridge (CASB) to assess the C*ommunication, Cognitive, Self-Help, Social Emotional,* and *Motor* Skills of children ages 4-5. Table 18 contains the results of statistical analyses in cognitive skills.

TABLE 18: TEST OF AVERAGE SCORE DIFFERENCE ON CASB COGNITIVE SKILLS

Program*	N	Pretest	Posttest	t	p-value	Effect Size
AFRC	21	27.54	51.14	4.83	.0001	2.16
BCRC	26	59.46	70.85	8.72	.0001	3.49
BCSD	94	47.47	57.72	11.83	.0001	2.45
DSR	29	46.90	53.03	6.69	.0001	2.53
EKFRC	12	58.25	74.08	4.99	.0005	2.71
GSR	44	48.72	76.23	10.66	.0001	3.25
IWVFRC	11	57.42	60.55	2.44	.0372	1.54
LVSRP	41	43.11	49.07	1.84	.0735	0.58
LHFRC	20	42.80	57.05	8.47	.0001	3.89
MFRC	20	64.60	72.65	3.05	.0072	1.40
MCFRC	13	43.53	87.85	8.78	.0001	5.07
SHS	25	50.40	72.92	10.86	.0001	4.43
WSCRC	42	20.98	64.19	16.22	.0001	5.07

*Program acronyms are listed in Appendix A.

With the exception of one program (i.e., LVSRP), all children demonstrated significant improvements of cognitive skills across SB programs. The results also illustrated a strong practical support (i.e., effect size larger than 0.8) for children prior to kindergarten entry. Meanwhile, due to the alignment between SB programs and CASB assessment, less emphasis might have been placed on child development in non-cognitive domains, such as the preparations of *Communication, Fine Motor, Self-help,* and *Social Emotional* skills. On those dimensions, the CASB instrument has designated fewer items for assessing each non-cognitive skill, and thus, the results were less confirmatory across programs. Table 19 lists the programs with significant improvements on non-cognitive dimensions.

TABLE 19: DEVELOPMENT OF NON-COGNITIVE SKILLS IN SB PROGRAMS

Non-Cognitive Skills	Program
Communication	AFRC (21), BCRC (26), BCSD (94), GSR (44), LVSRP (41), SHS (25), WSCRC (42), DSR (29), MCFRC (13)
Fine Motor	AFRC (21), BCRC (26), BCSD (94), GSR (44), LVSRP (41), SHS (25), WSCRC (42), DSR (29), LHFRC (20), MCFRC (13)
Self-Help	AFRC (21), BCRC (26), BCSD (94), GSR (44), LVSRP (41), SHS (25), WSCRC (42)
Social Emotional	AFRC (21), BCRC (26), BCSD (94), GSR (44), LVSRP (41), SHS (25), WSCRC (42), LHFRC (20)

*Parentheses include the number of children who tracked by the results of pretest and posttest. Blue-colored programs showed significant improvements across non-cognitive domains.

Altogether, a total of seven programs made significant improvement at α=.05 in *Communication, Cognitive, Self-Help, Social Emotional,* and *Motor* skills for 321 children. In particular, significant cognitive development has been found among 357 children in 12 programs (Table 18). In non-cognitive dimensions, 334 children demonstrated a significant improvement in *Communication* skills across nine programs, 354 children from 10 programs showed a significant enhancement of *Fine Motor* skills, 292 children from seven programs illustrated a significant increase of *Self-Help* skills, and 341 children from nine programs significantly strengthened their skills in the *Social Emotional* domain (Table 19). Therefore, CASB results showed specific enhancement in both *cognitive* and *non-cognitive* domains.

3. Ready to Start Findings

Ready to Start (R2S) is another SB program that has lasted five weeks each summer since 2003 to enhance school-readiness for four-year-old, pre-kindergarteners. In FY 2012-13, R2S was offered in five school districts for 838 children. Pretest and posttest data were gathered from 823 children using a R2S standard test that designated a maximum of 22 points in the areas of *Reading Readiness* (0-8 points), *Math Readiness* (0-10 points), and *Supportive Skills* (0-4 points). Based on the value-added assessment design, the mean score across three areas showed an increase from 13.6 in pretest to 19.8 in posttest. Table 20 delineates average scores for each discipline area at the district level.

TABLE 20: COMPARISON OF AVERAGE SCORES FROM R2S PRETEST AND POSTTEST

District	n	Math		Reading		Social Skills	
		Pretest	Posttest	Pretest	Posttest	Pretest	Posttest
Beardsley	42	6.64	9.29	5.69	7.60	2.57	3.52
Greenfield	352	5.09	8.56	4.39	7.15	1.90	3.51
PBVUSD	241	6.49	9.47	5.65	7.73	2.30	3.57
Rosedale	120	6.43	9.49	5.78	7.63	2.73	3.45
Standard	78	6.63	9.00	6.23	7.69	3.16	3.59

Although the program sizes vary from 42 to 352, Table 20 indicates significant improvements in math, reading, and social skills among R2S participants at each district. With effect sizes larger than 0.8, the findings in Table 21 illustrate a strong impact of the

R2S program on early childhood development. In comparison to other SB programs, R2S is more standardized, requiring "All classrooms throughout the program [to] follow the same structured curriculum each day" (Ready to Start, 2012, p. 1). Thus, the results were more homogeneous in Table 21. In FY 2012-13, R2S has been highlighted as an exemplary program in First 5 Kern's report to the State Commission.

TABLE 21: R2S T TEST AND EFFECT SIZE RESULTS

District	Df	Math		Reading		Social Skills	
		t*	Effect Size	t*	Effect Size	t*	Effect Size
Beardsley	41	8.18	2.56	7.35	2.30	7.23	2.26
Greenfield	334	29.80	3.26	26.98	2.95	23.73	2.60
PBVUSD	240	23.48	3.03	19.07	2.46	17.07	2.20
Rosedale	119	19.89	3.65	13.60	2.49	9.32	1.71
Standard	77	14.67	3.34	8.58	1.96	6.33	1.44

*The t values were all highly significant at α=.0001.

4. Desired Results Developmental Profile-Infant/Toddler Indicators

Desired Results Developmental Profile-Infant/Toddler (DRDP-IT) was designed for teachers to observe, document, and reflect on learning and development of all infants and toddlers in *early care and education* programs. First 5 Kern funded three programs that employed DRDP-IT to assess the service impact on child development. Table 22 lists sample sizes and total average scores across five DRDP-IT domains at the program level.

TABLE 22: CROSS-SECTIONAL DESCRIPTION OF DRDP-IT DATA IN THREE PROGRAMS

Program*	Initial Assessment		Follow-up Assessment	
	N	Mean	N	Mean
BCDC	14	12.30	9	17.70
DDLCCC	10	20.75	6	20.57
SSCDC	12	16.66	5	22.39

*Program acronyms are listed in Appendix A.

Apparently, sample attritions occurred between the initial and follow-up assessments. When the DRDP-IT data were tracked in both assessments, less than 10 cases were left for any measures across three programs. Hence, the mean score comparison in Table 22 served an exploratory purpose of trend description. The preliminary results indicated an improvement of child development in two out of three programs (i.e., BCDC & SSCDC).

Despite the small sample sizes, significant differences have been found across three programs in important domains of *Self and Social Development* (SSD), *Language and Literacy Development* (LLD), *Cognitive Development* (COG), and *Health* (HLTH) (Table 23). Because effect sizes are less impacted the sample size, results in Table 23 consistently ranked the program impact with large effect sizes. Even for the insignificant result in *Motor and Perceptual Development* (MPD), the effect size has reached 0.97. Hence, the strong practical impact was unlikely resulted from statistical artifacts in each of the DRDP-IT domains.

TABLE 23: RESULTS FROM DRDP-IT MATCHED CASES ACROSS THREE PROGRAMS

Domain	Df	t	p-value	Effect Size
SSD	8	5.40	.0006	3.82
LLD	8	5.07	.0010	3.59
COG	8	4.18	.0031	2.96
MPD	7	1.28	.2422	0.97
HLTH	6	6.97	.0004	5.69

5. Desired Results Developmental Profile-Preschool Summary

The Desired Results Developmental Profile–Preschool (DRDP-PS) assesses program effectiveness according to child competency in seven domains: Self and Social Development (SSD), Language and Literacy Development (LLD), English Language Development (ELD), Cognitive Development (COG), Mathematical Development (MATH), Physical Development (PD), and Health (HLTH).

In FY 2012-13, six programs gathered DRDP-PS data in a pretest and posttest setting. Results from the Health Literacy Program were presented in the *Child Health* section of this chapter. For the remaining programs, it was found that only 22% of ELD observations were valid across six programs and two programs (SSCDC and WIW) did not collect ELD data due to the population characteristics (i.e., English Language Learners). Hence, the total scores have been computed for the six other domains to provide aggregated results from DRDP-PS assessments for five programs.

TABLE 24: CROSS-SECTIONAL DESCRIPTION OF DRDP-PS DATA IN FIVE PROGRAMS

Program*	Initial Assessment		Follow-up Assessment	
	N	Mean	N	Mean
DSR	30	22.33	30	23.40
DDLCCC	5	18.61	5	19.28
SSCDC	12	17.56	5	18.86
SFP	27	16.63	17	18.38
WIW	23	20.78	40	23.90

*Program acronyms are listed in Appendix A.

Although the descriptive summary in Table 24 showed an enhancement of child competency, the initial and follow-up data in Discovery Depot Licensed Child Care Center (DDLCCC) and Small Steps Child Development Center (SSCDC) were gathered from different children, and thus, no value-added assessments could be conducted in those programs. Table 25 includes inferential statistics and effect sizes from three leftover programs, i.e., Delano School Readiness (DSR), South Fork Preschool (SFP), and Wind in the Willows Preschool (WIW).

TABLE 25: RESULTS FROM DRDP-PS MATCHED CASES IN THREE PROGRAMS

Domain	Program*	df	t	p-value	Effect Size
SSD	DSR	29	11.09	.0001	4.12
	SFP	16	14.58	.0001	7.29
	WIW	15	4.25	.0007	2.18
LLD	DSR	29	8.76	.0001	3.25
	SFP	16	13.80	.0001	6.90
	WIW	15	5.43	.0001	2.80
COG	DSR	29	7.83	.0001	2.91
	SFP	16	2.63	.0184	1.32
	WIW	15	4.46	.0005	2.30
MATH	DSR	29	6.98	.0001	2.59
	SFP	16	9.62	.0001	4.81
	WIW	15	4.33	.0006	2.24
PD	DSR	29	9.63	.0001	3.58
	SFP	16	4.85	.0002	2.43
	WIW	15	6.58	.0001	2.50
HLTH	DSR	29	4.76	.0001	1.77
	SFP	16	3.20	.0055	1.60
	WIW	15	5.77	.0001	2.98

*Program acronyms are listed in Appendix A.

Best and Kahn (2006) noted that "Samples of 30 or more are usually considered large samples and those with fewer than 30, small samples" (p. 20). In general, small samples are less likely to have adequate statistical power to detect significant difference (Johnson & Bhattacharyya, 2013). Despite this disadvantage, Table 25 shows significant improvements in all domains of DRDP-PS across DSR, SFP and WIW programs. The effect sizes are larger than 0.8, suggesting a strong practical impact from those programs.

6. School Readiness Articulation Survey Results

School Readiness Articulation Survey (SRAS) data have been gathered annually from classroom teachers, school administrators, and community members to assess the impact of local services on child development in Kern County. To facilitate value-added assessment, Table 26 shows a comparison of SRAS findings between this year (n=188) and last year (n=160). According to the results in Table 25, more local stakeholders believe that community programs "do a good job of mixing services for children and families" this year. Similarly, more respondents agree that parents know *good parenting* and *early childhood learning*. At the child level, more respondents are confident about children's health and preparation for kindergarten. In combination, First 5 Kern's dual foci on **child development** and **family functioning** have closely aligned its support for Proposition 10 as *California **Children** and **Families** First Initiative*.

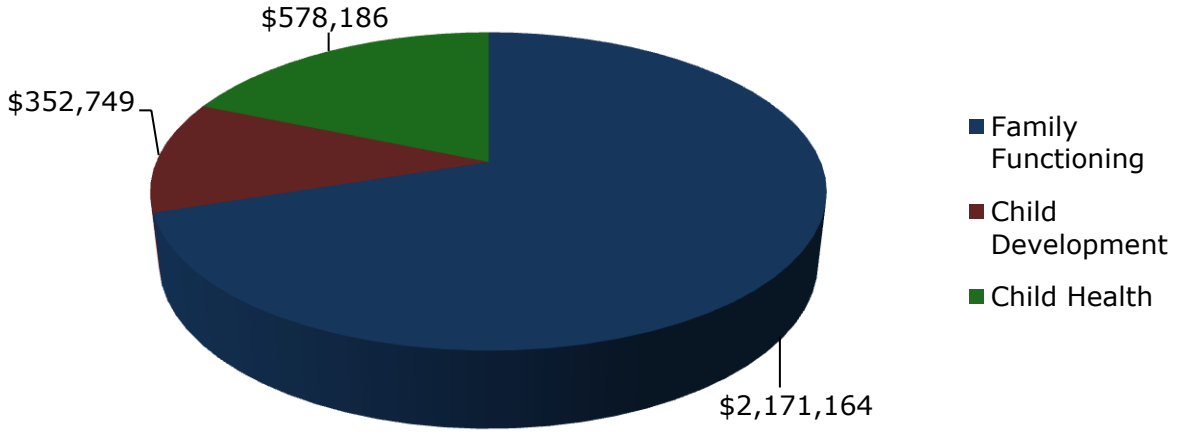
TABLE 26: PERCENT OF "AGREE" OR "STRONGLY AGREE" RESPONSES TO SRAS ITEMS

SRAS Items	2011-12	2012-13
Parents know about early childhood learning	30	43
Parents know about good parenting	28	35
Children have an early start toward good health	43	53
Programs do a good job of mixing services for children and families	74	76
Overall, children are well prepared for kindergarten	36	49

Allen (2004) pointed out, "Value-added assessment generally involves comparing two measurements that establish baseline and final performance" (p. 9). Because of the requirement of repeated measures across different time points, evaluation findings can be employed to support improvements of program outcomes under a pretest and posttest setting. Meanwhile, the data tracking demands special attention on sample attrition. Similar to the lack of sufficient sample from ASQ-SE assessment, the DRDP-Access data from Special Start for Exceptional Children (SSEC) contained only three observations in its 2012 Fall assessment. The lack of follow-up data has eliminated reports of the DRDP-Access results from value-added assessment. Therefore, this section is based on the availability of six assessment data from *teachers* (DRDP-IT & DRDP-PS), *children* (ASQ-3, CASB, & R2S), and *education stakeholders* (SRAS). The results unanimously indicate *significant* and *practical* impacts of First 5 Kern's investment in Focus Area III: *Child Development*.

In summary, this chapter is divided into three sections to aggregate program results in the focus areas of ***Child Health, Family Functioning***, and ***Child Development***. Besides its status as California's third-largest county in land area, "Kern is also one of the State's youngest counties with children constituting almost one in three of the people living within the County during 2012" (KCNC, 2013, p. 1). During the current recession, the state revenue dwindles down because "Real spending on tobacco products fell by 23%" (The Economist, 2011, ¶. 1). To address the local needs with less resource, First 5 Kern leveraged $3,102,099 in FY 2012-13 to support extensive service deliveries in three focus areas (Figure 17). Including the annual revenue spending of $10,433,925 from Proposition 10, the total investment generated by First 5 Kern has reached $13,536,024 for local children and families in Kern County in FY 2012-13.

Figure 17: Funds Leveraged Across Focus Areas



Service outcomes are presented in this chapter to address (1) Quality Health Systems Improvement, (2) Quality Family Functioning Systems Improvement, and (3) Quality Early Childhood Education Investments. The three-section structure for this chapter comprehensively addresses new components of the state report glossary in the first three focus areas. In each section, value-added assessments are conducted to evaluate program effectiveness in improving service outcomes at both child and family levels.

In addition, population accountability of the RBA model is described by frequency counts of service deliveries across valley, desert, and mountain communities of Kern County. The service systems in each focus area incorporate both center-based coordination (e.g., 2-1-1 Kern County and MVCCP) and program-initiated referrals to expand service access by local children ages 0-5 and their families. Built on the program-specific findings in this chapter, more information is presented in Chapter 3 to address the fourth component of the state report glossary, i.e., network building for improving service integrations.

Chapter 3: Effectiveness of Service Integration

According to Proposition 10, "No county strategic plan shall be deemed adequate or complete until and unless the plan describes how programs, services, and projects relating to early childhood development within the county will be integrated into a consumer-oriented and easily accessible system" (p. 10). While partnership building has been promoted to deliver the systems of care across the three focus areas in Chapter 2, researchers cautioned that "Evaluating interagency collaboration is notoriously challenging because of the complexity of collaborative efforts and the inadequacy of existing methods" (Cross, Dickman, Newman-Gonchar, & Fagen, 2009, p. 310).

To enrich the research methodology, the evaluation team reviewed literature in social network analyses (SNA) and explored new approaches to assess the improvement of service integration. In particular, Provan, Veazie, Staten, and Teufel-Shone (2005) observed,

> In the academic literature, network analysis has been used to analyze and understand the structure of the relationships that make up multiorganizational partnerships. But this tool is not well-known outside the small group of researchers who study networks, and it is seldom used as a method of assisting communities. (p. 603)

Over the last decade, SNA gained more public attention after computer software packages, such as Net*draw*, have been made available to support analyses of partnership capacities (Borgatti, 2002). In FY 2012-13, the evaluation team incorporated SNA and Net*draw* to summarize results of service integration in a research proposal, "An Examination of Partnership Building in Early Childhood Education". The proposal was peer-reviewed and accepted for presentation at the 2013 National Association for the Education of Young Children (NAEYC) Annual Conference in Washington, D.C. (Wang, Ortiz, & Schreiner, 2013). A new research direction was introduced in the proposal to develop a *Co-Existing, Cooperation, Coordination*, and *Creation* (4C) model for evaluation of partnership enhancement.

To assess the network capacity, the evaluation team converted an Integration Service Questionnaire into an interview protocol for conformation of the data gathering according to the 4C model (Appendix C). In addition, multilevel data analyses were incorporated into this chapter to reflect the hierarchical structure in which networks are grouped by programs and programs are nested into focus areas. In combination, both network ties and partnership structures have been recognized as dual emphases in research literature. Cross et al. (2009) pointed out, "Existing research has demonstrated that two primary features of networks, network structure and the strength of ties, have distinct effects on outcomes of interest" (p. 311).

Network Capacity for Service Integration

Need of Taxonomy for Partnership Classification

Among 40 programs receiving First 5 Kern funding in FY 2012-13, each program could establish partnerships with the other 39 programs. Thus, the network contains a total of 1,560 links. More links can be added to the network structure because service

integration has been expected to support multiple *systems of care* across focus areas. To justify the accountability of service integration, taxonomy is needed to maintain rigorous classification of the hierarchical network relations.

In line with results-based accountability (RBA), Proposition 10 further requires assessment of program improvement. Friedman (2011) coined the phrase "turning the curve" in his RBA model to demand ongoing improvement beyond a linear trend of the existing progress. Thus, the taxonomy is expected to rank network strength to assess the outcomes of institutional learning in service integration. As Tom Angelo (1999), former director of the national assessment forum, maintained, "Though accountability matters, learning still matters most" (¶. 1).

Besides First 5 Kern, other government agencies, such as the U.S. Departments of Education, Health and Human Services, and Justice, have also endorsed service integration as a key strategy in childcare and protection to support well-rounded child development (Substance Abuse and Mental Health Services Administration, 2005). The support for partnership building was not only derived from evaluation methodology, but also hinged on the fact that an integrated system would be more effective in promoting child health, improving family stability, and reducing the risk of substance abuse (Osher, Dwyer, & Jackson, 2003).

Despite the demand for partnership classification, no consensus has been established in the research community on the number of categories for network differentiation (e.g., Chrislip & Larson, 1994; Frey et al., 2006). More recently, Project Safety Net of Palo Alto (2011) synthesized past literature and suggested a five-level model for partnership categorization. However, categories in that model were not mutually exclusive, making it impossible to assess the improvement of network capacity. For instance, "formal communication" was featured in a characteristic for the *Cooperation* category. Because the communication could be described as *frequent, prioritized,* and/or *trustworthy*, it remained unclear whether a partnership should be included in the categories of *Coordination, Coalition*, or *Collaboration* according to the definition from Project Safety Net of Palo Alto (2011).

In contrast, the 4C model embraces the assessment of service integration as an outcome of institutional learning. In the past, extensive literature has been disseminated to support SOLO [Structure of the Observed Learning Outcome] taxonomy (Atherton, 2013; Biggs & Collis, 1982). The taxonomy was employed in a validity study of national board certification (see Smith, Gorden, Colby, & Wang, 2005). According to the SOLO taxonomy, there were four levels of learning outcomes beyond the initial *pre-structural* category. Each level of the classification has been clearly defined with specific benchmarks (Table 27).

The 4C model is built on a one-to-one match with the levels of SOLO taxonomy. As a result, the 4C model has strengthened its utility in ranking the network capacities. Table 27 lists classification structure between the SOLO taxonomy and the 4C model. The literature supports the application of the 4C model to achieve comprehensive and mutually exclusive rankings of service integration across programs. The capacity differentiation also expanded the assessment of partnership enhancement to sustain the "turning the curve" process according to the RBA model.

TABLE 27: ALIGNMENT BETWEEN SOLO TAXONOMY AND THE 4C MODEL

SOLO	The 4C Model
Uni-Structural: Limited to one relevant aspect	Co-Existing: Confined in a simple awareness of co-existence
Multi-Structural: Added more aspects independently	Cooperation: Added mutual links for partnership support
Relational: United multiple parts as a whole	Coordination: United multiple links with structural leadership
Extended Abstract: Generalized the whole to new areas	Creation: Expanded capacity beyond existing partnership

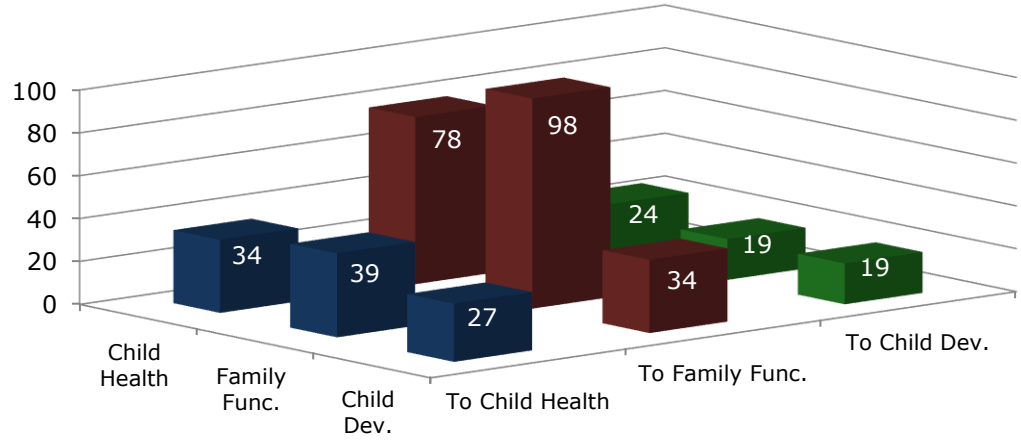
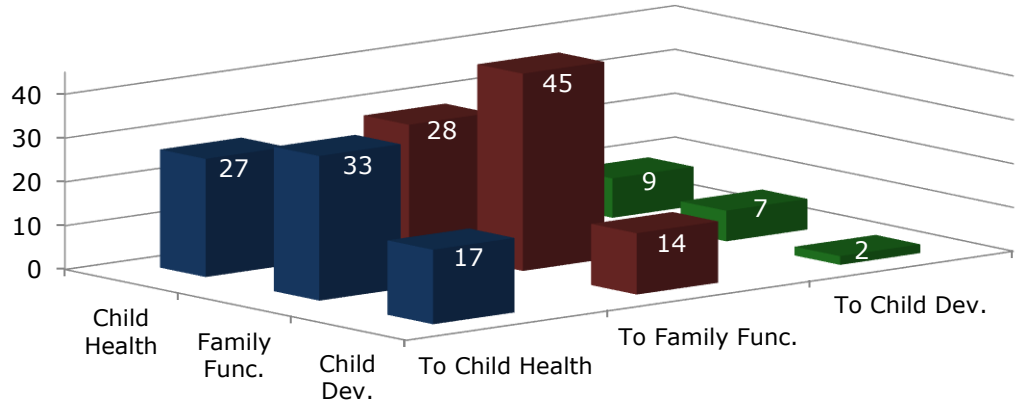
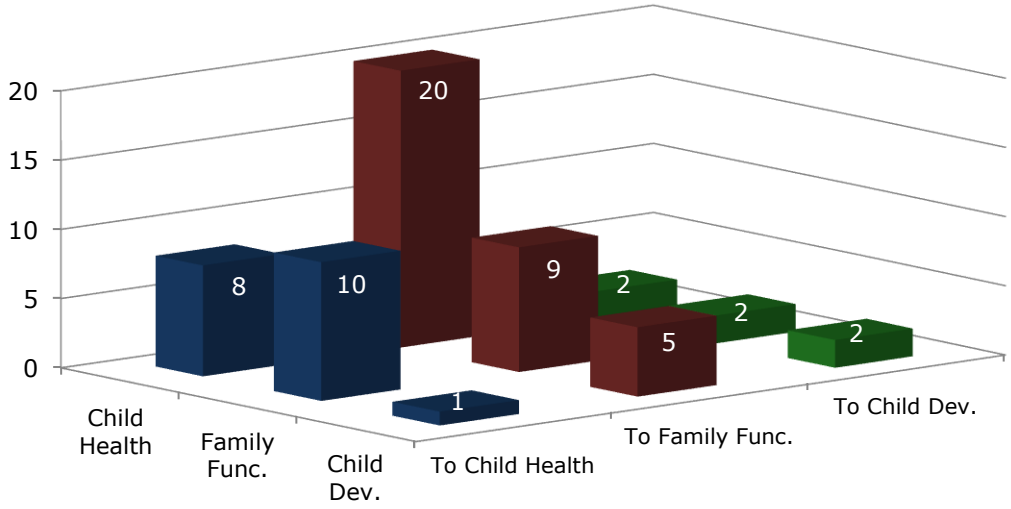
In summary, both confirmatory and exploratory approaches have been taken to develop the 4C model. The confirmatory examination followed Proposition 10 to strengthen results-based accountability and sustainable improvement of service integration. The taxonomy also filled a void of the literature for considering partnership building as outcomes of institutional learning. With network taxonomies specified in the 4C categories, the new paradigm has addressed dual utilities of the model: (1) it classifies different kinds of service integration to respond to results-based accountability, and (2) it differentiates the strength of partnership building to assess the ongoing improvement.

Empirical Evidence of Partnership Building under the 4C Model

The mission statement of First 5 Kern (2012) included a key component of "empowering our providers through the integration of services with an emphasis on health and wellness, parent education, and early childcare and education" (p. 2). Under the Commission's leadership, each program has identified its own Scope of Work-Evaluation Plan (SOW-EP). As each service provider established a unique group of partners according to its SOW-EP, the systems of care have merged across the focus areas of *Child Health*, *Family Functioning*, and *Child Development*. Table 28 shows the network capacity among service providers beyond the *Co-Existing* level.

Inspection of Table 28 revealed empirical reconfirmation of the network hierarchy across levels of *Cooperation*, *Coordination*, and *Creation*. As the partnership expanded from *Cooperation* to *Coordination*, the network capacity has been enhanced from mutual relationships to multilateral groupings. The increase in complexity may cause more organizational demand that fewer programs can meet. Thus, the number of partnerships dropped from 372 to 182 as the C levels increased from *Cooperation* to *Coordination*. When creative partnerships were established beyond the existing capacity, the number of network connections further reduced to 59. Hence, the 4C model reflected the strength of ties at different levels of service integration.

TABLE 28: NETWORK CAPACITIES ACROSS FOCUS AREAS

All Links	Network Counts
Cooperation (372 Links)	
Coordination (182 Links)	
Creation (59 Links)	

For partnerships within each focus area, *Child Development* had fewer network links than the other focus areas. In part this was because child development services were often delivered by Family Resources Centers within local communities. Meanwhile, most programs in *Child Health* were not self-contained within a community. Countywide features of *Child Health* programs also demanded cooperation among programs in different fields, including insurance enrollments, dental care, and immunization services. Thus, more partnerships were demonstrated in *Child Health* than in *Child Development*

Similarly, *Family Functioning* was another focus area that had more diversified programs, such as legal supports, referrals, homeless shelters, and differential response services. More importantly, this focus area contained 17 programs, much more than the number of programs in other focus areas. Accordingly, more network links have been established within the focus area of *Family Functioning*. In addition, Figure 18 further confirms the establishment of more program partnerships between *Child Health* and *Family Functioning* across levels of *Cooperation*, *Coordination*, and *Creation*, which can be attributed to the existence of more programs for specialized services in both focus areas.

Confirmation of Network Capacity Across Focus Areas

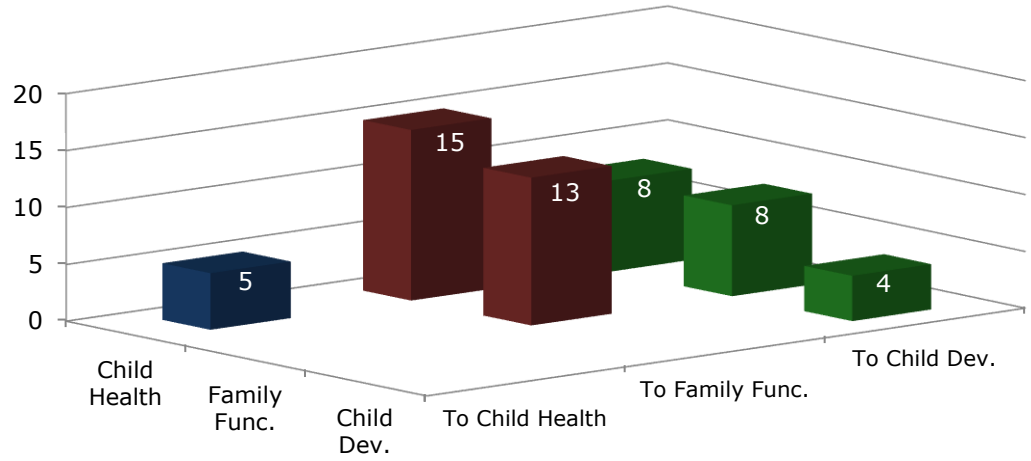
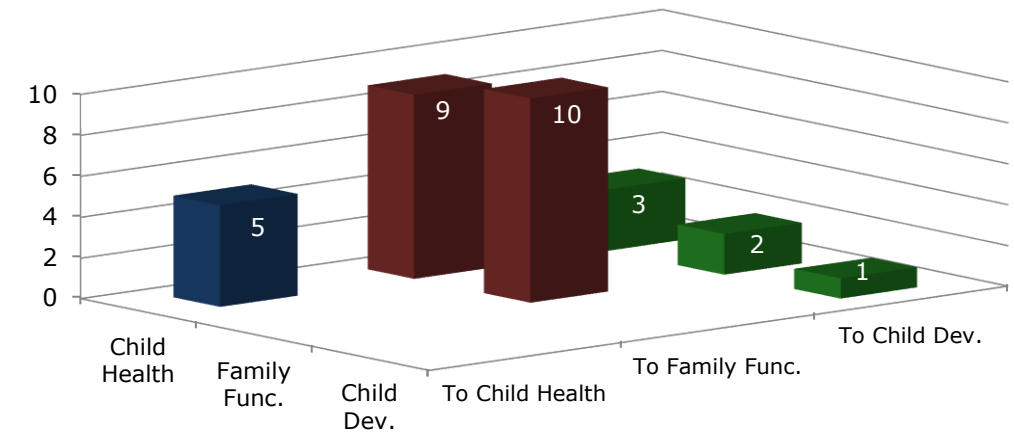
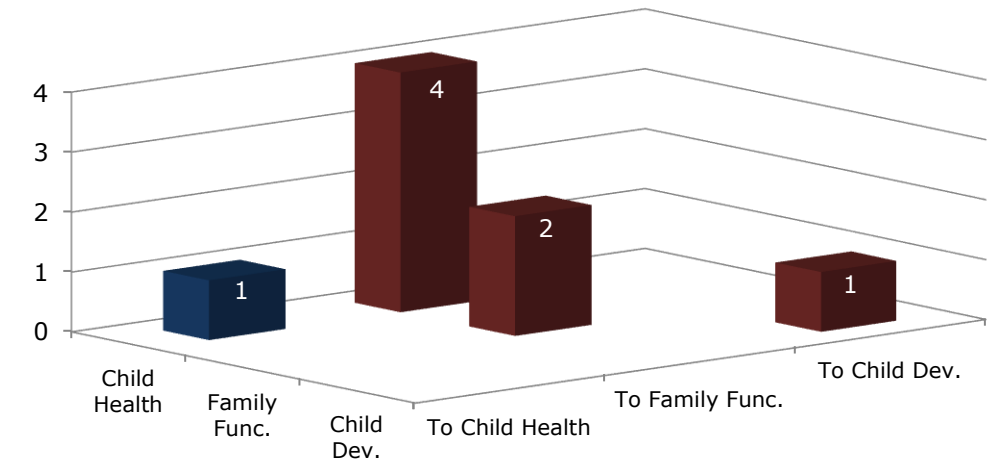
As a unit of service delivery, a program may actively link to other programs as their collaborators, or passively become a partner of other organizations. Thus, program identities were portrayed as a *doer* (i.e., the "I" perspective) or an *object* (the "me" perspective) during partnership building (Wang, 2007; Wang, Oliver, & Staver, 2008). The partnership initiation may lead to development of reciprocal relationships to enhance mutual network support. According to Provan et al. (2005), confirmation occurred when "the relationships reported by an organization confirmed by its link partner" (p. 605).

Table 29 shows the capacity of mutual links across focus areas, which reconfirms the following findings from the capacity of all links in Table 28:

(1) As the strength of ties increases across the *Cooperation*, *Coordination*, and *Creation* levels, the confirmed links drop to 53, 30, and 8, respectively. Hence, the 4C taxonomy has provided a useful platform to effectively differentiate the capacity of service integration among different stages;
(2) Within each focus area, programs of *Family Functioning* have established more mutual connections than their counterparts in other focus areas. Programs in *Child Health* have demonstrated more network links than ones in *Child Development*;
(3) For partnerships between focus areas, more network building has occurred in programs from *Family Functioning* and *Child Health*.

While Point (1) is largely expected from the design of 4C classifications, Points (2) and (3) hinge on strong need of service integration across the focus areas that house more programs for extensive integration of different services.

TABLE 29: CAPACITY OF MUTUAL NETWORK ACROSS FOCUS AREAS

Mutual Links	Network Counts
Cooperation (53 Links)	
Coordination (30 Links)	
Creation (8 Links)	

Network Building in Kern County

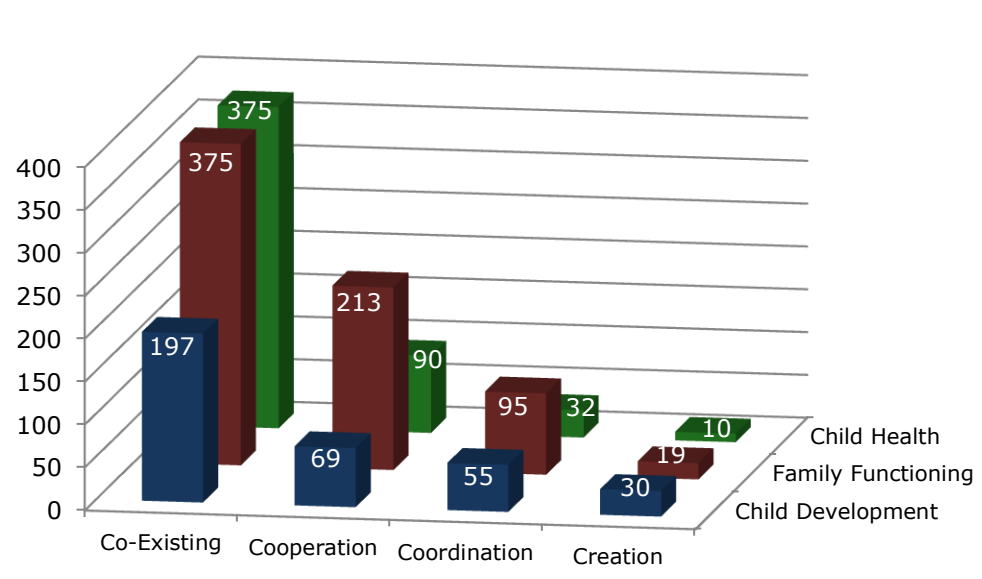
Multilateral Support for Service Integration

While network ties have been summarized in Figures 18 and 19 to describe the capacities of *Cooperation*, *Coordination*, and *Creation* across focus areas, not all programs played the same role in developing a consumer-oriented and easily accessible system. According to the SOW-EP document, center-based programs have been designated to engage local stakeholders and make referrals to facilitate service access. In FY 2012-13, MVCCP worked on 293 cases of care coordination for medically vulnerable children in Focus Area I. 2-1-1 Kern County in Focus Area II made 794 referrals to family resource centers and offered consumer-oriented guidance to assist access to child development services for 9,104 families with children ages 0-5. Since outcomes at the program level were aggregated in Chapter 2 and the capacities for focus areas were summarized in Tables 28 and 29, this section is devoted to assessment of partnership building between *service providers* and *center-based coordination supports* across focus areas.

1. Incorporation of Multilevel Support to Expand Service Access

Although partnership buildings in the previous section were focused on levels of *Cooperation*, *Coordination*, and *Creation*, awareness of program co-existence also laid the foundation for service referrals. To support information exchange among service providers, First 5 Kern held an annual Contractor Gathering on November 30, 2012 to feature the theme of partnership building through round-table discussions and presentations among 40 programs. As a result, Figure 18 shows that the majority of partnerships have attained the *Co-Existing* level.

Figure 18: Network Capacity Across Different Levels



To expand service access to healthcare, SAS and CHI were the primary agencies to create an enrollment network across Kern County. The partnership building is plotted in Figure 19 for network capacity at the *Creation* level. Node shapes indicated the focus area of program affiliation in *Child Health* (circle inside a square), *Family Functioning* (square), and *Child Development* (diamond). While the referral service generally relied on the support from family resource centers for health insurance enrollment, leaders of Bakersfield City School District (BCSD) regularly participated in quarterly CHI coordination meetings to design strategies for extending insurance coverage for local children. Thus, healthcare access is linked to the BCSD program for child development.

Figure 19: Partnership of Healthcare Access at the Creation Level

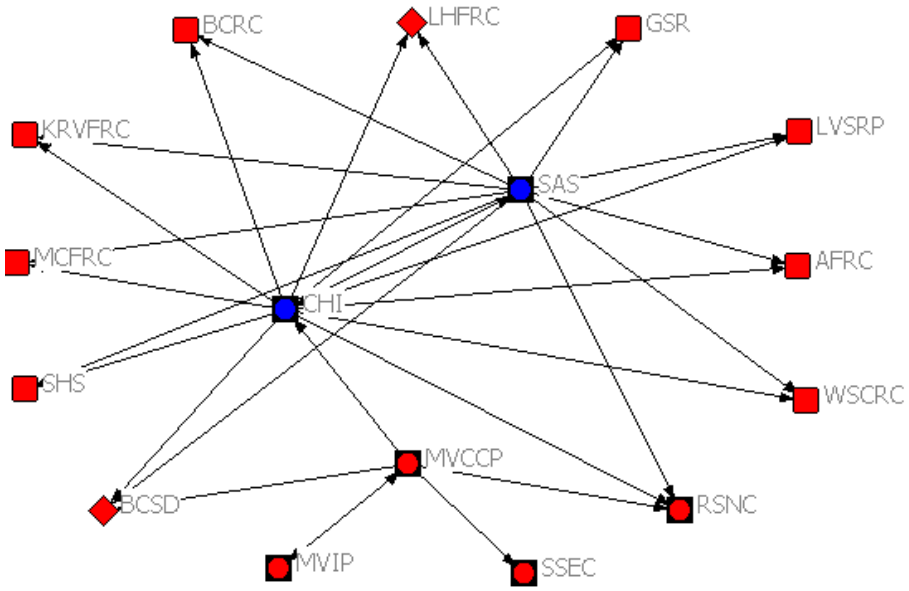


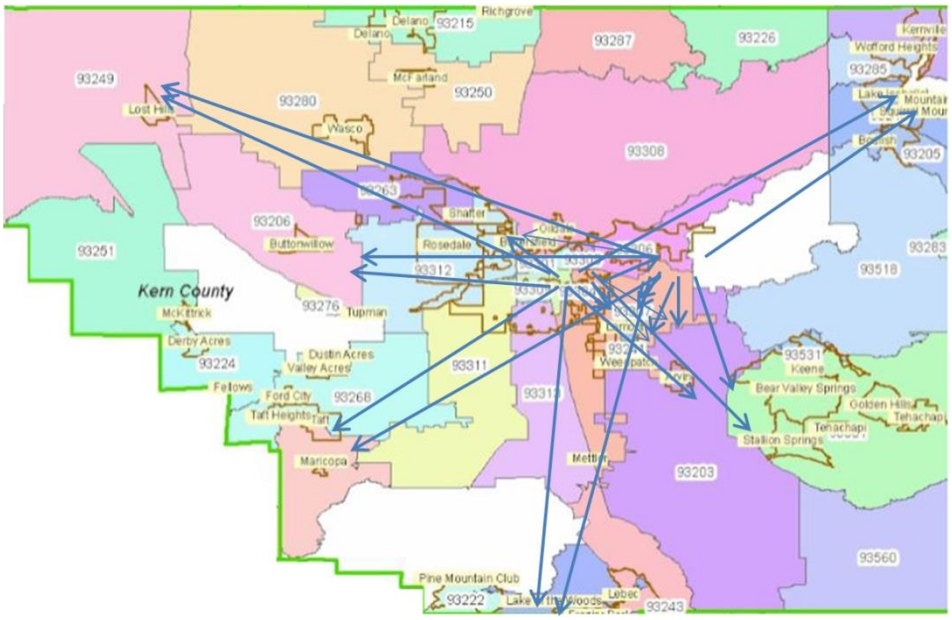
Figure 19 confirmed the leading roles of CHI and SAS in supporting health insurance enrollment for local children. According to the SOW-EP, all programs in red nodes provided referral services. In particular, Thompson and Uyeda (2004) pointed out,

> Family resource centers have also emerged as a key platform for delivering family support services in an integrated fashion. They serve as "one-stop" community-based hubs that are designed to improve access to integrated information and to provide direct and referral services on site or through community outreach and home visitation. (p. 14)

As the support network extended the enrollment outreach in various communities, a special group of programs were involved in extending the service access for children with special needs (see red nodes with a circle inside). Medically Vulnerable Care Coordination Project (MVCCP) served a central function in bridging CHI and SAS with Medically Vulnerable Infant Program (MVIP) and Special Start for Exceptional Children (SSEC). Similar to SSEC, Richardson Special Needs Collaborative (RSNC) provided consumer-oriented services for children with disabilities and other special needs (see Figure 19).

While co-existing referrals are widespread across the 40 programs funded by First 5 Kern, Figure 20 depicts locations of partnership at the creation level to represent the outcomes of the program outreach across Kern County. This section placed a focus on the highest level of partnership (i.e., creation) because of the demand of service commitment to expand healthcare access in a county area as large as the state of New Jersey. Without creative partnership building, it would be difficult to keep partners motivated in repetitive work of the same kind (Dall, 2012).

Figure 20: CHI and SAS Partnerships at the Creation Level in Kern County

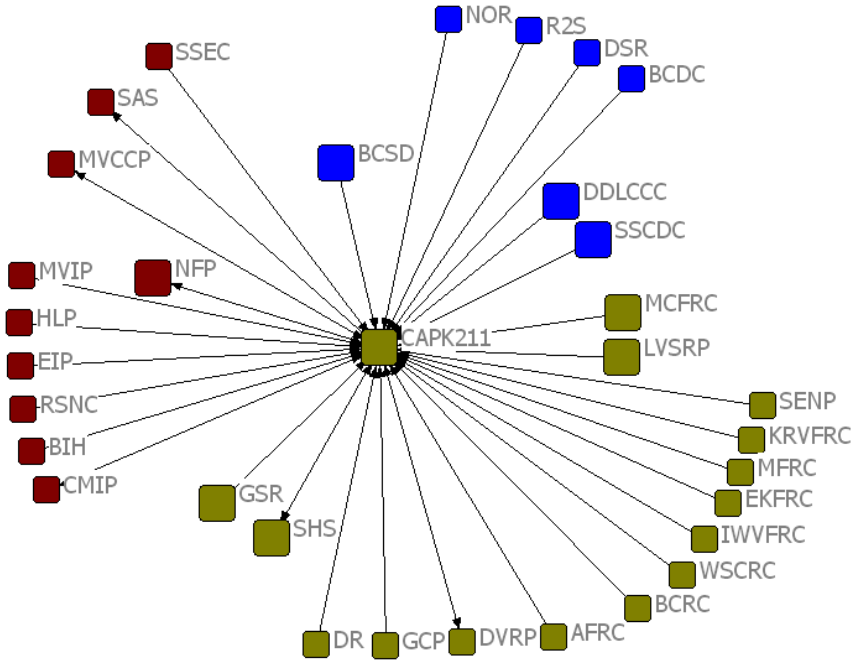


In summary, the expansion of service access is built on multilevel support. In addition to the center leadership from CHI and SAS, all creative partners have included referral support in their SOW-EP. At the *Creation* level of partnership capacity, the network outreach not only assisted children of special needs, but also reached traditionally under-served populations in remote communities.

2. Coverage of 2-1-1 Kern County Network Across Focus Areas

2-1-1 Kern County answered free phone calls for residents of Kern County to address various family needs. The service capacity was supported by a current database of community resources from more than 1,550 programs. Although this program was classified in the focus area of *Family Functioning*, its service coverage was extended through a broad network across focus areas. More importantly, Figure 21 shows its pivotal role in connecting over 80% of First 5 Kern programs beyond the level of *Co-Existence*. With services available 24 hours a day and 7 days a week in 150 different languages, 2-1-1 Kern County has made the referral system convenient and consumer-oriented for residents across Kern County.

Figure 21: Network for Service Access by Local Families and Children



Notes: Brown color indicates *Child Health* programs, blue color represents *Child Development* programs, and olive color specifies *Family Functioning* programs.

Figure 21 includes two sizes of nodes to differentiate the network capacity at the Cooperation (the larger nodes) and Coordination (the smaller nodes) levels. As a referral agency, 2-1-1 Kern County primarily handled information dissemination to and from its partner. Thus, most nodes are in smaller size to reflect the mutual *Cooperation*. Still, program classifications in the First 5 Kern strategic plan represented funding emphases of service providers and contributed to coordination of more partnership buildings within the same focus area (olive-color nodes).

In addition, external factors are identified to strengthen the partnership capacity across focus areas. More specifically, BCSD and 2-1-1 Kern County established partnership beyond the level of mutual cooperation (Figure 21). In part, this was because both organizations were involved as community partners for multilateral coordination in the California Connects project[14]. Similarly, NFP and 2-1-1 Kern County were parts of the organized services across the nation and Figure 19 shows coordination of their partnership above mutual cooperation. 2-1-1 Kern County also collected data on "gaps in services" for future planning. In FY 2012-13, the #1 service gap identified by CAPK (2013) was food service. Figure 21 showed stronger partnerships with Discovery Depot Licensed Child Care Center (DDLCCC) and Small Steps Child Development Center (SSCDC) because those programs had a primary function of providing food services (see Chapter 2).

It should be noted that 2-1-1 Kern County served as a general referral agency to guide service access across focus areas. The program did not have the authority to alter

[14] http://www.greatvalley.org/work/caconnects/community-partners

the support from service providers, which excluded its opportunity to raise the level of partnerships to the creation level. As a result, 2-1-1 Kern County had no position in Figure 19, nor did Figure 21 include larger nodes for additional network creation.

3. Creation of MVCCP Network for Health Service Coordination

MVCCP employed an Acuity Scale Form to collect information and connect medically vulnerable children with service providers. The top three reasons for expedited referrals were prematurity, congenital anomalies, and neurological issues, all demanding extensive collaborations between MVCCP and other programs in the Child Health domain. While the database used by 2-1-1 Kern County also supported healthcare referrals, MVCCP incorporated case tracking in an Insight Data Entry and Electronic Health Record (IDEEHR) system to enhance in-depth monitoring of child conditions. The network expansion was also reflected by participation of 165 professionals in the annual conference of MVCCP on November 1, 2012, which exceeded the original expectation of 150 attendees.

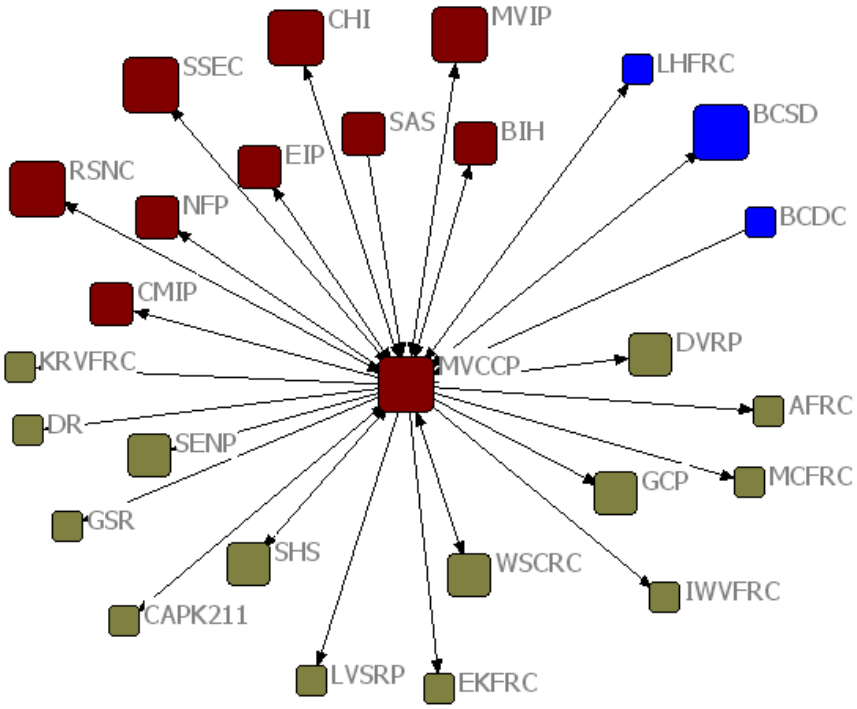
With its primary focus on premature birth caused by various factors, MVCCP has established sustainable partnerships across healthcare professionals, social workers, insurers, case managers, foster parents, therapists, clinicians, parent educators, child care staff, and community service providers. Figure 22 shows the central role of MVCCP in building the support network across service providers in *Child Health* (brown color), *Family Functioning* (olive color), and *Child Development* (blue color). Node sizes have been employed to differentiate strengths of the partnership building beyond the *Co-Existing* level.

In FY 2012-13, MVCCP engaged in network expansion to recruit new organizations for developing a case-management protocol of Respiratory Syncytial Virus (RSV) in Kern County. Thus, four out of the largest nodes in Figure 22 were identified at the *Creation* level from programs in *Child Health* (CHI, MVIP, RSNC, & SSEC). In addition, Bakersfield City School District (BCSD) is the largest non-unified elementary school district in the state of California[15]. The MVCCP initiative not only impacted the baseline condition of child health upon kindergarten entry, but also involved BCSD leaders in planning and improving the annual MVCCP conference for FY 2013-14. As a result, although the focus area of *Child Development* included fewer programs, BCSD demonstrated mutual partnerships with MVCCP at the creation level.

Meanwhile, *Child Health* outcomes were inseparable from family support. MVCCP incorporated panel discussions on *Infant-Family Mental Health* and *Treating Substance Exposed Infants and Children* to expand the network capacity in *Family Functioning* (see Figure 22). In addition to information exchange on a one-to-one basis, MVCCP sponsored nine information booths to promote partnership building with First 5 Kern and other agencies of childcare, healthcare, family support, and referral services in Kern County. The result in Figure 22 confirmed the partnership capacity for a total 27 programs that received First 5 Kern funding in FY 2012-13.

[15] http://static.tbc.zope.net/pdfs/grandjurybcsd.source.prod_affiliate.25.pdf

Figure 22: Network for Service Access by Medically Vulnerable Children



In summary, First 5 Kern funded MVCCP and 2-1-1 Kern County to enhance systems of care in *Child Health, Family Functioning,* and *Child Development*. As Ramanadhan et al. (2012) observed, "Networks that are highly centralized can spread information and resources effectively from the influential members" (p. 3). The network analyses confirmed the central roles of both MVCCP and 2-1-1 Kern County programs in strengthening service integration across focus areas (Figures 21 & 22). In contrast, 2-1-1 Kern County did not delimit the service coverage within a particular child group, and thus, the network was broadened to accommodate the partnership buildings across focus areas. Meanwhile, 2-1-1 Kern County confined the network capacity within levels of *Cooperation* or *Coordination* and did not include the partnership *Creation* beyond available services from each program.

TABLE 30: PARTNERSHIP BUILDING IN TWO ADJACENT YEARS

Category	FY 2011-12	FY 2012-13
Child Health	157	230
Family Functioning	220	263
Child Development	85	121
Total Links	462	614

Improvement of Network Capacity across Adjacent Years

Because of no change in the number of programs receiving First 5 Kern funding between last year and this year, the expansion of the network capacity can be assessed on the number of partnership links across focus areas. Table 30 shows improvement of

the network capacity beyond the level of co-existence across programs in each focus area.

An increase of 152 network partnerships occurred across the 40 programs between the two adjacent years. Edelhart (2013) recollected, "First 5 Kern expenditures last year included $3.9 million for parent education and support services, $2.9 million for health and wellness services, $2.9 million for early child care and education, and $700,000 for integration of services across focus areas" (¶. 20). *Parent Education and Support Service* is a focus area of the First 5 Kern strategic plan to match *Family Functioning* in the state categorization. Additional funding in that category has generated more partnerships than any other category (Table 27). As a result, "With one in four California children living in poverty, there is still much work to do, but First 5 Kern is steadily improving family stability in Kern County" (Henderson, 2013, ¶. 8).

In the area of Child Health, policy changes occurred this year at the state level to merge the Healthy Families and Medi-Cal services. As a program director reported, "Whenever there is a disruption in one of the state health insurance programs, it seems others are also affected"[16]. In reaction, programs in *Child Health* have been actively seeking new partnership supports. For instance, "Kern County Children's Dental Health Network, which is funded solely by First 5 Kern, has already started exploring other funding sources" (Edelhart, 2013, ¶. 29). The external policy impact is reflected by a stronger partnership capacity in *Child Health* than in *Child Development* (see Table 27), despite comparable funding from First 5 Kern between the two areas (Edelhart, 2013).

TABLE 31: CONFIRMED PARTNERSHIP COUNTS IN TWO ADJACENT YEARS

Category	FY 2011-12	FY 2012-13
Child Health (CH)	10	22
Family Functioning (FF)	21	38
Child Development (CD)	3	7
Between CH and FF	56	63
Between FF and CD	15	20
Between CH and CD	17	27
Total Links	122	177

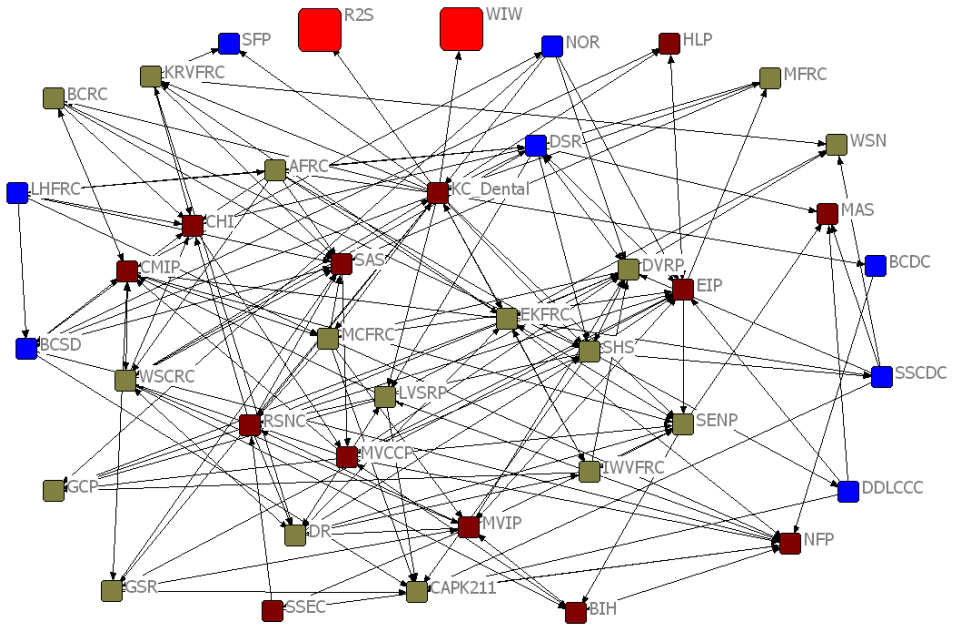
The network capacity is reconfirmed by the establishment of reciprocal links for mutual partnership building (see Table 28). In addition to showing the parallel sizes of the partnership network across *Child Health*, *Family Functioning*, and *Child Development*, Tables 30 and 31 indicate more unilateral and mutual partnerships in FY 2012-13. Moreover, Table 31 also illustrates more partnership networks across those focus areas. Those partnerships are more likely to involve programs in *Child Health* during the two adjacent years.

It should be noted that "when links among organizations are not confirmed, this does not necessarily reflect the absence of a link" (Provan et al., 2005, p. 607). For instance, Figure 23 displays the network at the *Coordination* level across focus areas. The nodes for Ready to Start (R2S) and Wind in the Willows (WIW) were highlighted in

[16] Personal communication with Ms. Janet Hefner on October 3, 2013 for data verification.

red and large sizes. Although the links were unconfirmed in Figure 23, both programs played unique roles in the network function.

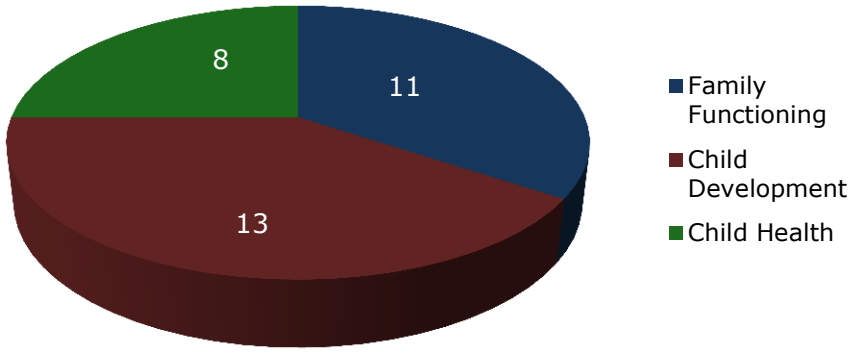
Figure 23: Inclusion of R2S and WIW in the Network of Coordination



As indicated in Chapter 2, R2S was the largest Summer Bridge program to serve 838 preschool children in five school districts this year. Its partnership with healthcare programs has supported 722 health screenings and 211 dental screenings in 10 zip-code locations. WIW served children on the western edge of the Mojave Desert. The network outreach showed delivery of preschool and child health services through the partnership building at the eastern border of Kern County. Thus, those sparse links in Figure 23 played an indispensable role in addressing population accountability of Proposition 10. In this regard, the network analyses confirmed an exception to the common wisdom of "the more connections, the better". As Krebs (2011) pointed out, "What really matters is where those connections lead to -- and how they connect the otherwise unconnected!" (¶. 4).

Within the current funding cycle, 80% of the programs relied on First 5 Kern's support to cover half or more of their annual budgets. Eleven of the programs were in *Child Health*, 13 in *Family Functioning*, and eight in *Child Development* (Figure 24). Meanwhile, improvement of the partnership capacity has been tracked between last year and this year. Tables 28 and 29 showed a parallel match of the network capacity across the focus areas of *Family Functioning*, *Child Health*, and *Child Development*. Tables 30 and 31 also verified the same sequence of network expansion that matched the funding of First 5 Kern.

Figure 24: Number of Programs with Over 50% of Budget from First 5 Kern



The State Commission pointed out, "Systems of Care addresses system-wide structural supports which allow county commissions to effectively work towards achievement in the other three result areas of Family Functioning, Child Health and Development" (First 5 California, 2013, p. 40). In this chapter, information on service integration has been analyzed across the structural supports to differentiate the roles of center-based coordination (e.g., MVCCP & 2-1-1 Kern County) and peer-initiated referrals among service providers in expanding service access (see Figures 19-22).

To enhance utility of this report, an interview protocol was developed this year to assess network capacity according to the 4C taxonomy. The Net*draw* plot also revealed unique roles of R2S and WIW in supporting network connections that were otherwise not available from multilateral coordination (Figure 23). According to Resnick (2012),

> An important goal of First 5 funding is to act as a catalyst for change in each county's systems of care. ... Increases in coordination and cooperation would indicate that agencies are better able to share resources and clients, reduce redundancies and service gaps, and increase efficiency (p. 1).

At the county commission level, "A local fiscal impact report shows that every $1 of First 5 Kern monies spent produces a $17.49 return to Kern County's economy" (Henderson, 2013, ¶. 8). Therefore, the multilevel analyses have confirmed both population and program accountability of First 5 Kern funding in support of effective service integration.

Chapter 4: Turning the Curve

While improvement of service outcomes was summarized in Chapters 2 and 3 for **each program** in *Family Functioning, Child Health,* and *Child Development*, the State Commission also indicated the importance of results aggregation, i.e., "Evaluation should be conducted in such a way that it provides direct feedback to the County Commission and to the community **as a whole**" (First 5 California, 2010, p. 17). Built on an assumption that the whole could be larger than the sum of its parts, this chapter is devoted to synthesizing program results from the Core Data Elements (CDE) survey and Family Stability Rubric (FSR) across time.

Based on a contractual document (i.e., SOW-EP), FSR data were collected from 18 programs to track family stability on a quarterly basis. CDE data were gathered at the individual level to monitor the trend of service improvements for children ages 0-5 across 29 programs. The evaluation mechanism was reviewed and approved by the Institution Review Board (IRB) of California State University, Bakersfield (CSUB), which mandated quarterly reports of a research protocol for human subject protection according to federal and state regulations. Because the same instruments were employed in this funding cycle, value-added assessments have been conducted to summarize FSR and CDE results at both family and individual levels.

Strengthening of Family Functioning in FY 2012-13

Maslow's (1954) *Hierarchy of Needs* maintained, "Needs at the bottom of the pyramid are basic physical requirements including the need for food, ... Once these lower-level needs have been met, people can move on to the next level of needs, which are for safety and security" (Cherry, 2013, ¶. 2). Therefore, family stability was indicated by whether the needs of food, child safety, and job security have been met during the period of service delivery. In 2012, a 2.6% increase occurred in childrearing cost in the U.S. (Bjerga, 2013). First 5 Kern's funding has helped families support their children ages 0-5, and thus, strengthened family functioning in addressing multilevel needs of Maslow's (1954) hierarchy.

Food Needs

Food needs were identified as a key foundation of Maslow's (1954) hierarchy. Researchers suggested that family functioning should be indicated by the daily food coverage for all family members (Devine, 2005; Vermeir & Verbeke, 2006). The food indicator was particularly pertinent for families with young children because "The birth of a child might also result in the family eating healthier if the goal is to feed their children a proper diet" (Wethington & Johnson-Askew, 2009, p. S75).

FSR data have been employed to track the number of families with unmet needs in each program. Table 32 shows a consistent trend in the improvement of family conditions in FY 2012-13. At the initial stage of program entry, the average number of families with *unmet food needs* was 13.6 per program. The number dropped to 5.1 in the midyear and 3.1 by the end of the year. 2-1-1 Kern County's annual report suggested that food was most needed among its callers in 2012 (CAPK, 2013). Families with children ages 0-5 received support from First 5 Kern, which allowed them to redirect family resources and improve food supplies. The annual impact has

strengthened the functioning of 94 families at the basic level of Maslow's (1954) across nine programs in Table 32.

TABLE 32: NUMBER OF FAMILIES WITH UNMET FOOD NEEDS

Program*	Initial	6th Month	12th Month
BCRC	1	1	0
DVRP	6	1	0
EKFRC	8	2	0
GSR	4	1	1
GCP	36	15	3
LHFRC	46	23	23
MFRC	4	2	0
MCFRC	5	1	1
WSCRC	12	0	0

*Program acronyms are listed in Appendix A.

Unmet Childcare Needs

First 5 Kern funded both center-based and home-based childcare services through extensive partnership building. While convenient childcare centers are important for some families, "For many working parents, hiring a caregiver to work in their home is the best solution for their child care and household needs" (Child Care Inc., 2012, p. 1). The strengthening of family function is thus directly reflected by reducing the number of families with unmet childcare needs.

Table 33 showed a pattern of improvement throughout the year. The average number of families who needed a caregiver dropped from 12.7 upon initial program entry to 5.4 in the midyear. By the end of the 12th month, the average family count per program was reduced to 3.9. Based on the changes displayed in Table 33, First 5 Kern's funding has improved childcare for 141 families across 16 programs. With zero family counts in 12th month, childcare needs were met for all families at 10 program sites.

TABLE 33: NUMBER OF FAMILIES WITH UNMET CHILDCARE NEEDS

Program	Initial	6th Month	12th Month
AFRC	1	0	0
BCRC	3	2	0
BCSD	18	14	14
DSR	8	2	0
DVRP	16	4	0
EKFRC	10	2	1
GSR	1	0	0
GCP	5	2	0
IWVFRC	1	1	0
KRVFRC	5	0	0
LHFRC	46	23	23
MFRC	13	7	3
MCFRC	3	2	2
SHS	7	3	0
SENP	37	20	19
WSCRC	29	4	0

Unmet Transportation Needs for Family Members

Transportation needs were not confined within child support. Other family members may need transportation to maintain family functioning. As Waller (2005) observed, "In rural areas, public transportation options are scarce and have limited hours of service" (p. 2). First 5 Kern has designated a result indicator to include transportation support for families with children ages 0-5. As a result, Table 34 shows the number of families with unmet transportation needs decreased across 13 programs in the past year.

TABLE 34: NUMBER OF FAMILIES WITH UNMET TRANSPORTATION NEEDS

Program*	Initial	6th Month	12th Month
AFRC	3	2	1
BCRC	2	1	1
DSR	9	4	3
DVRP	30	5	0
EKFRC	29	11	5
GSR	5	4	1
GCP	4	1	1
IWVFRC	8	3	0
MFRC	10	10	4
RSNC	6	5	1
SHS	6	2	1
SENP	23	10	7
WSCRC	29	4	0

*Program acronyms are listed in Appendix A.

In Table 34, the average number of families dropped from 12.6 upon program entry, to 4.8 in the midyear, and to 1.9 by end of the year. The aggregated number of families with strengthened transportation support has reached 139 among 13 programs. Like food and childcare services, transportation is considered a fundamental need for families with young children, particularly those in rural areas (U.S. Department of Education, 2004). Therefore, First 5 Kern's support is especially important in Kern County with a large portion of its population in agricultural industry across rural communities.

Availability of Convenient Childcare

Beyond the basic needs of food, childcare, and transportation, the impact of First 5 Kern was reflected on the increased availability of *convenient* childcare providers. Table 35 shows alleviation of service provider shortage for families with needs for convenient childcare. The average number of families was initially 18 per program. By the midyear and 12th month, the number dropped to 7.6 and 5.1, respectively. The overall improvement across 14 programs benefited 181 families this year.

TABLE 35: NUMBER OF FAMILIES LACKING CONVENIENT CHILDCARE PROVIDERS

Program*	Initial	6th Month	12th Month
AFRC	3	0	0
BCRC	4	1	1
BCSD	28	23	16
DSR	11	3	1
DVRP	15	7	0
EKFRC	27	5	2
GSR	5	2	0
GCP	10	2	0
KRVFRC	10	5	4
LHFRC	46	23	23
MFRC	13	7	3
SHS	10	5	1
SENP	40	20	20
WSCRC	30	4	0

*Program acronyms are listed in Appendix A.

Job Security

Maslow's (1954) hierarchy stressed the importance of security beyond the basic needs. Nonetheless, security considerations were inseparable from those basic needs at lower levels. In particular, family members could miss work or school due to lack of childcare, which inevitably reduced job security. Table 36 shows the number of families with members missing work or school due to childcare at multiple time points. On average, incidents of *missing work or school* occurred in 15.9 families per program upon initial entry. The number dropped to 6.9 and 4.7 by the 6th and 12th month, respectively. Across the 14 programs, the improvement of childcare services impacted job security for a total of 157 families in FY 2012-13 (see Table 36).

TABLE 36: NUMBER OF FAMILIES MISSED WORK/SCHOOL DUE TO CHILDCARE

Program	Initial	6th Month	12th Month
AFRC	1	0	0
BCRC	4	2	0
BCSD	20	15	14
DSR	10	4	1
DVRP	16	3	0
EKFRC	10	6	2
GSR	2	1	0
GCP	15	4	1
KRVFRC	7	2	1
LHFRC	46	23	23
MFRC	14	8	3
SHS	9	5	1
SENP	42	20	19
WSCRC	27	4	1

In examining barriers of family functioning, Schroeder and Stefanich (2001) cited transportation as one of the primary reasons for family members missing work or school. Although children ages 0-5 were too young to have *work* or *school*

commitments, the impact on job security for older family members could indirectly influence a child's well-being through family functioning.

Based on the zero count in Table 37, the transportation issue was solved for families at seven program sites by the 12th month. On average, 12 families per program were identified as having transportation difficulties to *go to work or school* upon initial entry. The number was subsequently reduced to 4.2 and 2 by the midyear and 12th month, respectively. With ongoing support from First 5 Kern, 148 families have gained access to transportation across 15 programs.

TABLE 37: NUMBER OF FAMILIES MISSING WORK/SCHOOL DUE TO TRANSPORTATION

Program*	Initial	6th Month	12th Month
BCRC	3	3	0
BCSD	15	15	9
DSR	10	4	3
DVRP	33	6	0
EKFRC	22	6	0
GSR	5	2	0
GCP	5	0	0
KRVFRC	5	0	0
LHFRC	3	1	1
MFRC	11	7	4
MCFRC	3	1	1
RSNC	6	4	3
SHS	5	2	1
SENP	23	10	8
WSCRC	29	4	0

*Program acronyms are listed in Appendix A.

In the 2013 report card of Kern County Network for Children (KCNC), Golich acknowledged, "Kern County's average annual unemployment rate declined slightly in 2012, however, remains in the double digits. Housing affordability in Kern County is increasingly more difficult and more families are accessing safety net food programs" (p. i). Food supply, childcare, and transportation hinge on job security to provide the monetary resources. FSR results in this section demonstrated improvement of family functioning across these levels of Maslow's (1954) hierarchy. When these findings are aggregated across FSR indicators, First 5 Kern's support has benefited a total of 860 families with children ages 0-5 across Kern County.

Improvement of Child Well-being Between Adjacent Years

As was indicated by KCNC (2013), "Working collaboratively is vitally important and is something Kern does well" (p. i). In addition to tracking enhancement of family functioning, First 5 Kern gathered CDE data to monitor child well-being in FY 2012-13. Important birth indicators, such as prenatal care, full-term pregnancy, and birth weight, do not change for each person across time. However, the child population changes annually due to the age requirement of Proposition 10. Therefore, child well-being can be compared between adjacent years to assess improvement of key CDE indicators across programs.

In addition to supporting value-added assessment on those birth variables, CDE data contained information on the enhancement of child development and protection. Indicators of child development covered breastfeeding, home reading, and preschool attendance. Child protection was indicated by the data on health checkup, dental care, immunization, and smoke prevention. Improvements of early childhood services are summarized across those indicators to document the impacts of First 5 Kern across time.

Prenatal Care

Bells (2009) pointed out, "The promotion of healthy development is essential to the overall health and wellbeing of America's young children. Encouraging wellness involves prevention and intervention efforts in the lives of young children and their families" (p. 1). Although Proposition 10 funding was designed to serve children ages 0-5, prenatal care represented a preventative effort to ensure healthy birth. A recent review of research literature adopted a broad conceptualization of early childhood health to include prenatal health (Chen, 2012). More specifically, medical doctors reported that "prenatal care that started in the first trimester was associated with better pregnancy outcome" (Showstack, Budetti, & Minkler, 1984, p. 1003).

In Kern County, Wasson and Goon (2013) reported that "For a variety of reasons, high-risk mothers may delay or avoid prenatal care" (p. 28). First 5 Kern funded programs to jointly support prenatal care through parent education and healthcare services. The starting dates of prenatal visits have been tracked by programs and compared to the baseline records from last year. Table 38 shows an increase in the percent of mothers receiving prenatal care during the first trimester across 16 programs.

TABLE 38: INCREASE OF TIMELY PRENATAL CARE BETWEEN TWO ADJACENT YEARS

Program*	FY 2011-12		FY 2012-13	
	n	Prenatal care @ 1st trimester (%)	n	Prenatal care @ 1st trimester (%)
AFRC	90	91	83	94
BCDC	24	79	24	83
BCRC	48	90	41	95
EKFRC	67	85	119	86
KRVFRC	48	79	45	91
GSR	128	86	106	96
LVSRP	93	86	113	87
LHFRC	31	97	46	98
MFRC	80	89	84	90
MCFRC	33	82	34	97
NFP	26	81	41	93
RSNC	67	84	49	88
SHS	55	93	56	98
SFP	28	86	25	88
SSEC	13	54	20	65
WSN	39	74	64	88

*Program acronyms are listed in Appendix A.

Kern County has been ranked among the top five counties across California with the highest birth rate. In 2011, the rate reached 83.1 per 1,000 women while the state average was 63.5. Despite the population growth, Table 38 showed that the percent of mothers with timely prenatal care has surpassed Kern County's average of 76.9%[17]. The impact of consistent improvement has benefited 950 newborns in Kern County this year.

The U.S. Department of Health and Human Services set a target that 77.9% of pregnant women receive prenatal care beginning in the first trimester by 2020[18]. Last year, only two programs did not meet the national target. This year, only one program, Special Start for Exceptional Children (SSEC), remained in that category. Therefore, Table 38 indicated an ongoing improvement of prenatal care services in Kern County according to the criterion-referenced assessment.

Full-Term Pregnancy

Similar to the results in Table 38, Table 39 showed a lower percentage of full-term pregnancy in SSEC, but progress has been made over last year. SSEC served children with disabilities and other special needs, and thus, the rate was understandably lower in Tables 38 and 39. With this exception, Table 39 showed that full-term pregnancy rates across all programs have reached a level above 75%. As Wasson and Goon (2013) observed, "The average first-year medical costs are about 10 times greater for pre-term infants than full-term infants" (p. 28). The resource saving from full-term pregnancies was much needed as state revenue from tobacco tax dwindled down over time.

TABLE 39: INCREASE OF FULL-TERM PREGNANCY BETWEEN TWO ADJACENT YEARS

Program*	FY 2011-12		FY 2012-13	
	n	Full-term pregnancy (%)	n	Full-term pregnancy (%)
BCDC	24	83	24	92
DSR	90	88	85	93
EKFRC	67	84	119	85
HLP	63	87	88	88
KRVFRC	50	86	45	87
RSNC	67	75	49	76
SHS	55	87	56	89
SSCDC	40	88	35	91
SSEC	13	54	20	65
WSCRC	107	85	97	89
WIW	22	86	23	91

*Program acronyms are listed in Appendix A.

Results in Table 39 confirmed improvement of full-term pregnancy rate across 11 program sites. On average, the rate increased from 82.1% in last year to 86.0% this year. A total of 641 children were served by these programs in FY 2012-13.

[17] http://www.kidsdata.org
[18] http://healthypeople.gov/2020

Low Birth Weight

In the 2013 report cards of Kern County Network for Children, Golich acknowledged that "More babies were born at low birth weight" (p. i). Low birth weight was often linked to premature birth and Levere (2012) rated it as one of the most serious health issues in early childhood development. Beyond child health, low birth weight has also been linked to a lower average educational attainment and a higher prevalence of socio-emotional and behavioral problems (Chen, 2012).

The issue of low birth weight is further confounded with other medical problems. Ponzio et al. (2013) reported that "low-birth-weight children with current obesity are more likely to have higher systolic blood pressure levels and impaired β-cell function" (p. 1678). Concurrently, Kern County was ranked at sixth and eighth positions across the state for the issues of low birth weight and obesity[19], respectively. More general findings have been revealed by scientists in the journal *Brain Research* to further understand the link between low birth weights and obesity later in life[20]. In a study released in 2011, researchers found that "nutritionally deprived newborns are 'programmed' to eat more because they develop less neurons in the region of the brain that controls food intake"[21]. Therefore, reducing the rate of low birth weight has a long-term influence on the well-being of the next generation.

First 5 Kern supported systems of care that offered a combination of education, prevention, and treatment services for medically vulnerable children with low birth weight. Medically Vulnerable Care Coordination Project (MVCCP) recruited 25 programs as partners beyond the level of Co-Existence. Fourteen programs reciprocally recognized MVCCP in their partnership building. With the extensive support network, 10 programs in Table 40 showed reduction in the rate of low birth weight that impacted a total of 648 children in FY 2012-13. Three of the programs have reduced the rate to zero this year (see Table 40).

TABLE 40: DECREASE IN THE PROPORTION OF CHILDREN WITH LOW BIRTH WEIGHT

Program*	FY 2011-12		FY 2012-13	
	n	Low birth weight (%)	n	Low birth weight (%)
BIH	81	13	50	12
DSR	90	16	85	9
HLP	63	25	88	13
LVSRP	93	12	113	10
MCFRC	33	6	113	0
RSNC	67	19	49	14
SFP	28	7	25	0
SSCDC	40	10	35	9
WSCRC	109	12	97	11
WIW	22	9	23	0

*Program acronyms are listed in Appendix A.

[19] http://www.kidsdata.org
[20] http://www.sciencedaily.com/releases/2011/03/110310070311.htm
[21] http://www.sciencedaily.com/releases/2011/03/110310070311.htm

Breastfeeding

Breast milk has the most complete form of nutrition for infants (American Academy of Pediatrics, 2012). The positive impact of breastfeeding is extended beyond child health and "The majority of studies observe improved cognitive ability or academic performance among breastfed children" (Smith et al., 2003, p. 1075). Anderson, Johnstone, and Remley (1999) conducted a meta-analysis and found an even stronger association between breastfeeding and cognitive outcomes among infants with low birth weight. First 5 Kern has designated breastfeeding as a result indicator for the Nurse Family Partnership (NFP) program. In FY 2012-13, 21 programs recognized NFP as a partner beyond the level of co-existence. Sixteen of the programs gathered CDE data and showed an improvement in breastfeeding rates since last year (Table 41).

In 2011, the federal government sponsored the development of a national objective to have at least 46% of children breastfed through three months old. All programs in Table 41 have surpassed the national objective this year. The positive results impacted a total of 1,150 children in Kern County.

TABLE 41: INCREASE IN BREASTFEEDING RATE BETWEEN TWO ADJACENT YEARS

Program*	FY 2011-12		FY 2012-13	
	n	Breastfeeding (%)	n	Breastfeeding (%)
BIH	81	56	50	70
DSR	90	69	85	71
EKFRC	67	45	119	65
GSR	123	73	106	77
KRVFRC	50	56	45	76
MCFRC	33	52	34	76
NOR	283	68	194	75
NFP	26	85	41	95
RSNC	67	57	49	71
SENP	161	53	132	60
SHS	55	73	56	79
SSCDC	40	63	35	69
SSEC	13	69	20	75
WSCRC	107	60	97	61
WIW	22	59	23	83
WSN	37	59	64	64

*Program acronyms are listed in Appendix A.

Home Reading

Armbruster, Lehr, and Osborn (2006) pointed out, "Learning to read and write can start at home, long before children go to school" (p. 1). First 5 Kern's (2012) strategic plan has designated the "Number and percentage of families who report reading or telling stories regularly to their children" as an indicator (p. 12). Table 42 shows the percent of children participating in two or more home-reading activities per week. On average, the percent increased from 68.8% in last year to 78.5% this year. This progress occurred in FY 2012-13 and has impacted 1,611 children at 19 program sites funded by First 5 Kern.

TABLE 42: PERCENT OF CHILDREN WITH READING ACTIVITIES PER WEEK

Program*	FY 2011-12		FY 2012-13	
	n	Two or more reading activities per week (%)	n	Two or more reading activities per week (%)
AFRC	105	78	116	88
BCDC	25	36	29	45
BIH	86	40	59	59
DDLCCC	38	63	32	71
DSR	91	68	86	71
EIP	48	81	61	92
EKFRC	72	72	146	76
GSR	177	77	139	81
LVSRP	122	73	148	82
LHFRC	29	45	57	75
MFRC	81	69	121	76
MVIP	86	40	98	50
NOR	272	89	250	90
RSNC	75	64	66	85
SHS	56	79	59	81
SFP	29	93	30	100
SSCDC	46	67	38	87
SSEC	29	83	39	87
WIW	33	91	37	95

*Program acronyms are listed in Appendix A.

Preschool Attendance

Beyond the family setting, First 5 Kern funded preschool services to prepare children ready for kindergarten. According to the State Commission, "Preschool attendance is correlated with improved kindergarten readiness and kindergarten readiness is associated with long-term achievement" (First 5 California, 2013, p. 17). Table 43 shows the percent of children taking part in preschool activities on a regular basis since the 3rd birthday. The average percent increased from 37.3% in last year to 44.9% this year. This positive change benefited 1,120 children across 12 programs since the last fiscal year.

TABLE 43: INCREASED SUPPORT FOR CHILDREN TO ATTEND PRESCHOOL

Program*	FY 2011-12		FY 2012-13	
	n	Attending Activities (%)	n	Attending Activities (%)
AFRC	92	34	116	35
BCRC	52	40	51	59
DDLCCC	40	35	32	41
DSR	91	15	86	28
EIP	48	75	61	79
EKFRC	73	11	146	21
GSR	157	11	139	15
IWVFRC	75	29	109	36
RSNC	116	87	66	91
SENP	196	12	217	16
WIW	32	81	37	88
WSN	36	17	60	30

*Program acronyms are listed in Appendix A.

Well-Child Checkup

Children under the age of 2 are expected to have 10 well-child checkups to monitor the pattern of early growth and detect issues for medical intervention (Integral Quality Care, 2013a). Beyond age 2, well-child checkups need to be performed once a year (Integral Quality Care, 2013b). Table 44 shows the percent of children without annual health checkups in 16 programs. The percent dropped from an average of 9.6% in last year to 4.5% this year. Through check-up visits, the improvement in healthcare protection has impacted 1,192 children this year.

TABLE 44: PERCENT OF CHILDREN WITHOUT ANNUAL HEALTH CHECKUP

Program*	FY 2011-12		FY 2012-13	
	n	No Health Checkup (%)	N	No Health Checkup (%)
AFRC	92	7	116	4
BCRC	52	4	51	2
DSR	91	3	86	1
EIP	48	6	61	2
GSR	157	6	139	2
HLP	72	8	104	4
KRVFRC	78	8	69	4
LVSRP	121	8	148	2
LHFRC	29	0	57	0
MVIP	83	31	98	29
SHS	56	11	59	8
SSCDC	46	15	38	3
SFP	29	3	30	0
SSEC	29	0	39	0
WIW	33	9	37	3
WSN	37	35	60	8

*Program acronyms are listed in Appendix A.

Dental Care

According to American Academy of Pediatric Dentistry[22], the first dental visit should occur by a child's first birthday. "Because dental caries are one of the most frequent as well as debilitating and untreated chronic health conditions in children, access to dental care is an important indicator of access to health care" (Inkelas et al., 2003, p. x). First 5 Kern funded Kern County Children's Dental Health Network to deliver dental care services across Kern County. As Montoya (2013) recapped,

> Since its inception in 1999, the network has traveled to 2,025 pre-schools and 285 elementary schools in 15 Kern County communities, where hygiene clinicians have provided oral health assessments to more than 30,000 children, administered 29,600 cleanings and fluoride treatments, and place over 15,000 sealants on first time molars (p. 41).

Table 45 shows the percent of children *without dental checkups* each year. On average, the percent has declined from 36.1% in last year to 26.5% this year across 17 program sites. A total of 1,314 children benefited from the improvement in dental care access in FY 2012-13.

TABLE 45: PERCENT OF CHILDREN WITH NO DENTAL VISIT

Program*	FY 2011-12		FY 2012-13	
	n	No Dental Care (%)	n	No Dental Care (%)
AFRC	105	15	116	9
BCDC	25	92	29	79
BCRC	74	30	51	20
BIH	87	29	59	10
DSR	91	29	86	22
EIP	48	27	61	23
GSR	178	30	139	19
HLP	72	18	104	15
IWVFRC	75	55	109	41
KRVFRC	78	64	69	51
MFRC	81	19	121	8
MVIP	86	76	98	60
NFP	47	21	71	17
RSNC	75	15	66	14
SHS	56	23	59	8
SSEC	26	58	39	46
WIW	32	13	37	8

*Program acronyms are listed in Appendix A.

Immunization

Centers for Disease Control and Prevention (2010) indicated that immunization can protect children against 15 vaccine-preventable diseases[23]. First 5 Kern funded Children's Mobile Immunization Program of San Joaquin Community Hospital to deliver

[22] http://www.aapd.org/assets/2/7/GetItDoneInYearOne.pdf
[23] http://www.immunize.org/catg.d/p4019.pdf

immunization services throughout Kern County. Table 46 lists percent of children with all immunizations across 14 programs. The average percent per program increased from 88.3% in last year to 91.8% this year. This improvement impacted a total of 959 children in Kern County since the last fiscal year.

TABLE 46: PERCENT OF CHILDREN WITH ALL IMMUNIZATION SHOTS

Program*	FY 2011-12		FY 2012-13	
	n	All Immunization (%)	n	All Immunization (%)
AFRC	92	95	116	98
BIH	87	40	59	46
BCRC	74	100	51	100
DDLCCC	40	90	32	91
GSR	157	95	139	96
HLP	82	95	104	97
LHFRC	29	97	57	98
MVIP	86	84	98	87
NFP	55	91	71	99
RSNC	116	98	66	100
SFP	29	97	30	100
SSEC	26	96	39	100
WIW	33	94	37	95
WSN	36	64	60	78

*Program acronyms are listed in Appendix A.

Smoking Reduction

During ages 0-5, children can be exposed to the danger of smoking during prenatal care and after birth. According to Proposition 10, parents should be educated "on the dangers caused by smoking and other tobacco use by pregnant women to themselves and to infants and young children" (p. 3). As a result of the anti-smoking campaign, the percent of mothers smoking during pregnancy dropped from an average of 11.5% in last year to 8.1% this year across 13 program locations (Table 47).

TABLE 47: PERCENT OF MOTHERS SMOKING DURING PREGNANCY

Program*	FY 2011-12		FY 2012-13	
	n	Smoke while pregnant (%)	n	Smoke while pregnant (%)
BCRC	48	6	41	5
BCSD	261	4	275	3
DSR	92	0	85	0
IWVFRC	26	23	47	9
KRVFRC	48	27	45	24
MCFRC	33	12	34	9
NFP	26	12	41	10
NOR	283	7	194	5
RSNC	67	3	49	2
SHS	55	7	56	2
SSCDC	38	13	35	11
SFP	28	18	25	12
WIW	22	18	23	13

*Program acronyms are listed in Appendix A.

The State Commission pointed out, "Parental smoking and secondhand smoke exposure have been linked to a range of ailments in babies and young children including, asthma, ear infections, pneumonia, bronchitis, and Sudden Infant Death Syndrome (SIDS)" (First 5 California, 2013, p. 30). Tables 47 and 48 showed reduction of parental smoking and secondhand smoke exposure, respectively. These results suggest that smoking cessations have improved the quality of home environment for a total of 1,907 children in Kern County this year.

Meanwhile, Proposition 10 further cautioned against "the dangers of secondhand smoke to all children" (p. 3). As Robles, Vargas, Perry, and Feild (2009) reported, "exposure of children to environmental tobacco smoke (ETS) has been associated with multiple health problems. These problems, including asthma, are particularly critical for children younger than 5 years" (p. 8-9). Programs funded by First 5 Kern maintained a "focus on anti-tobacco education programs" (Armstrong, 2012, p. 21). Across the 12 program locations in Table 48, the percent of children exposed to smoking in home settings decreased from 9.1% per program in last year to 5.0% per program this year.

TABLE 48: REDUCTION OF SMOKE EXPOSURE RATE BETWEEN ADJACENT YEARS

Program*	FY 2011-12		FY 2012-13	
	n	Exposed to smoke (%)	n	Exposed to smoke (%)
AFRC	92	2	116	1
BCSD	226	2	253	1
BIH	86	26	59	14
BCRC	52	4	51	0
KRVFRC	78	27	69	17
LHFRC	29	0	57	0
MCFRC	57	2	53	1
NFP	47	8	71	6
SHS	56	4	59	2
SFP	37	5	30	3
WSCRC	111	17	102	15
WIW	32	12	37	0

*Program acronyms are listed in Appendix A.

In summary, CDE and FSR data were analyzed in this chapter to examine the improvement of service outcomes through results tracking. The positive impact of First 5 Kern funding has been revealed on 17 fronts:

1. More mothers received **prenatal care** in the first trimester, impacting 950 children in 16 programs;
2. An increase in **full-term pregnancy** occurred for 641 children in 11 programs;
3. The rate of **low birth weight** dropped for 648 children in 10 programs;
4. The percent of children without annual **health checkups** dropped in 16 programs for a total of 1,192 children;
5. Dental service access improved for 1,314 children in 17 programs;
6. Fourteen programs maintained an increase in the percent of children receiving all **immunizations**;
7. The percent of mothers **smoking during pregnancy** dropped in 13 programs;
8. The number of families with **unmet food needs** dropped from 122 to 28 across nine programs;

9. The number of families with **unmet childcare needs** plunged from 203 to 62 throughout 16 programs;
10. The number of families with **unmet transportation needs** declined from 164 to 25 in 13 programs;
11. The number of families **lacking convenient childcare** providers decreased from 252 to 71 among 14 programs;
12. The number of families with members who **missed work or school due to childcare** reduced from 223 to 66 across 14 programs;
13. The number of families with members who **missed work or school due to transportation** dropped from 178 to 30 in 15 programs;
14. The rate of **smoke exposure in home settings** decreased across 12 programs;
15. **Breastfeeding** rates increased in 16 programs over the last year across Kern County;
16. Nineteen programs showed an increase in the number of parents maintaining two or more reading activities per week for 1,611 children;
17. Twelve programs demonstrated an increase in **child development activities** for 1,120 children.

As First 5 Kern approached its 15th anniversary in FY 2012-13, Proposition 10 revenue for Kern County dropped from about $15 million in the early 2000s to $10.4 million this year (Henderson, 2013). Although the funding stability has been maintained at the program level because of First 5 Kern's decision to extend the current funding cycle, the same amount of money cannot automatically sustain the quality service for local children under the *joint pressure of inflation* and *population growth*. Therefore, the accomplishments represented the *turning the curve* effects of First 5 Kern to support well-rounded progress across the state-designated focus areas of *Child Health* (Points 1-7), *Family Functioning* (Points 8-14), and *Child Development* (Points 15-17).

Chapter 5: Conclusions and Future Directions

The State Commission stipulated that "county commissions are required to report annual expenditure and service data on their programs to First 5 California. … Counties report program service data under four result areas: Family Functioning, Child Development, Child Health and Systems of Care" (First 5 California, 2013, p. 33). In this report, program service data in the first three focus areas were summarized in Chapter 2 and outcome measures of *Systems of Care* were described in Chapter 3 using the 4C taxonomy. In support of the *turning the curve* process, Chapter 4 incorporated examinations of program effectiveness across time at both family and child levels. The results showed multilevel service deliveries for children ages 0-5 and their families (see Chapter 2). The program capacities have been integrated into sustainable and mutual-supporting systems for ongoing improvement (see Chapters 3 & 4). Altogether, these chapters provided clear, convincing, and sufficient evidence to support *results-based accountability* and *program improvement* in FY 2012-13.

While extensive data have been gathered to address the state requirements for annual reporting, Hayes (2002) indicated that one additional step beyond *turning the curve* is to tell the *"story behind the curve"* (p. 15). More specifically, county commissions are expected to describe three programs and elaborate their stories of service delivery in *Child Health*, *Family Functioning*, and *Child Development*. This year First 5 Kern chose Kern County Children's Dental Health Network (KC_Dental), Ready to Start (R2S), and West Side Community Resource Center (WSCRC) to illustrate effectiveness of local programs in those result areas. This chapter begins with a description of those exemplary programs to highlight the stories of success in Kern County. In addition, past recommendations are reviewed to assess ongoing progresses this year, and new recommendations are suggested at end of this chapter to sustain the future process.

Recap of the Story Telling in Local Settings

According to the IRB protocol, WSCRC gathered individually-identifiable data for value-added assessments under a pretest and posttest setting. R2S and KC_Dental submitted aggregated data to First 5 Kern to summarize the impact of program outcomes. To support the data collection, three protective measures were adopted by First 5 Kern: (1) Consent forms were administered in each program that involved in individual data collection; (2) Confidentiality trainings were offered multiple times every quarter for staff members prior to data access; (3) A checklist was created to monitor potentially adverse effects on eight fronts. The checklist was reviewed and revised this year to enhance its feasibility (see Appendix D). Built on this systematic approach, compelling evidence has been gathered to assess service outcomes in KC_Dental, WSCRC, and R2S programs.

Kern County Children's Dental Health Network

Tooth decay is a preventable disease that affects young children in California more than any other chronic, infectious disease. With support from First 5 Kern, Kern County Children's Dental Health Network organized students from the Taft College Dental Hygiene (TCDH) program to visit preschools and provide sealants, prophylactic

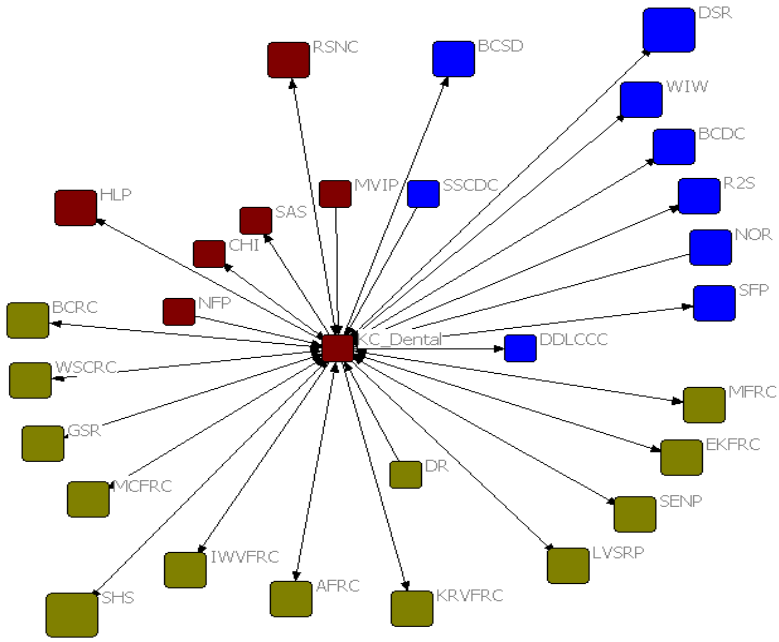
cleanings, fluoride treatments, as well as oral health screenings and education[24]. According to Montoya (2013),

> Baseline 1999 data indicated 57 percent of the children 5 years of age and younger, who were screened has decayed teeth. More recent data revealed the decay rate had decreased to 31 percent. In addition, 75 percent of the children who were orally assessed had seen a dentist before entering kindergarten, compared to only 25 percent in 1999. (p. 41)

Since its inception in 1999, Kern County Children's Dental Health Network coordinated with 2,025 preschools and 285 elementary schools in 15 communities across Kern County to provide oral health assessments for more than 35,000 children, administered 30,000 cleanings and fluoride treatments, and placed over 15,000 sealants on first-time molars.

To sustain the trend of improvement, Mattheus (2013) noted that "Children rely on parents and caregivers to protect them and provide for their most basic needs, including their oral health care needs" (p. ii). Montoya (2013) further cited "Reduced missed school days" as an outcome indicator of the dental support. Therefore, Kern County Children's Dental Health Network has expanded its partnerships with various programs in parent education and child development. Among the 40 programs sponsored by First 5 Kern, any single program can establish at most 39 partnerships with the other programs. Figure 25 shows 28 partners beyond the *Co-Existing* level for Kern County Children's Dental Health Network. The network density has reached 0.72, far above the average of 0.39 across all programs.

Figure 25: Network Capacity for KC_Dental



Notes: Brown color indicates *Child Health* programs, blue color represents *Child Development* programs, and olive color specifies *Family Functioning* programs.

[24] http://issuu.com/kernbusiness/docs/april_kern_biz./41

In addition to the extensive scope of network across focus areas, three node sizes in Figure 25 differentiated the level of partnerships at the *Cooperation* (the small nodes), *Coordination* (the midsize nodes), and *Creation* (the large nodes) levels. Figure 25 showed that 75% of the partnerships have reached a level *at* or *above* multilateral *coordination*. As a result of the network support, Kern County Children's Dental Health Network provided mobile dental services across Kern County for 3,896 children ages 0-5 this year. Because the program served children ages 0-7, post-stratification methods were employed to obtain the delimited results for ages 0-5 according to the Proposition 10 requirement.

West Side Community Resource Center

One of the partners in Figure 25 was West Side Community Resource Center (WSCRC). Located in the same city with less than one-mile distance from TCDH, WSCRC not only maintained a strong partnership with health and dental service programs at Taft College, but also extended extensive support in parent education and child development. According to its Scope of Work–Evaluation Plan (SOW-EP), WSCRC addresses six Results Indicators (RI) of First 5 Kern's strategic plan (Table 49).

TABLE 49: RESULTS INDICATORS OF WSCRC

RI	Description	Domain
2	Number and percentage of children who have health insurance that provides medical, dental, vision, and mental health services	Child Health
19	Number and percentage of parents engaged in parent education programs, demonstrating an increase in knowledge	Family Functioning
21	Number and percentage of case-managed families demonstrating improvement as indicated by the Family Stability Rubric grading scale	Family Functioning
24	Number and percentage of children entering kindergarten ready for school as determined by assessments completed by teachers and parents that indicate the child is ready in the areas of cognitive, social, emotional, language, approaches to learning, and health/physical development	Child Development
31	Number and percentage of funded programs that participate in joint planning with other social service agencies and providers	Program Planning
36	Number and percentage of funded programs that provide services in community-based locations (e.g., schools)	Community Outreach

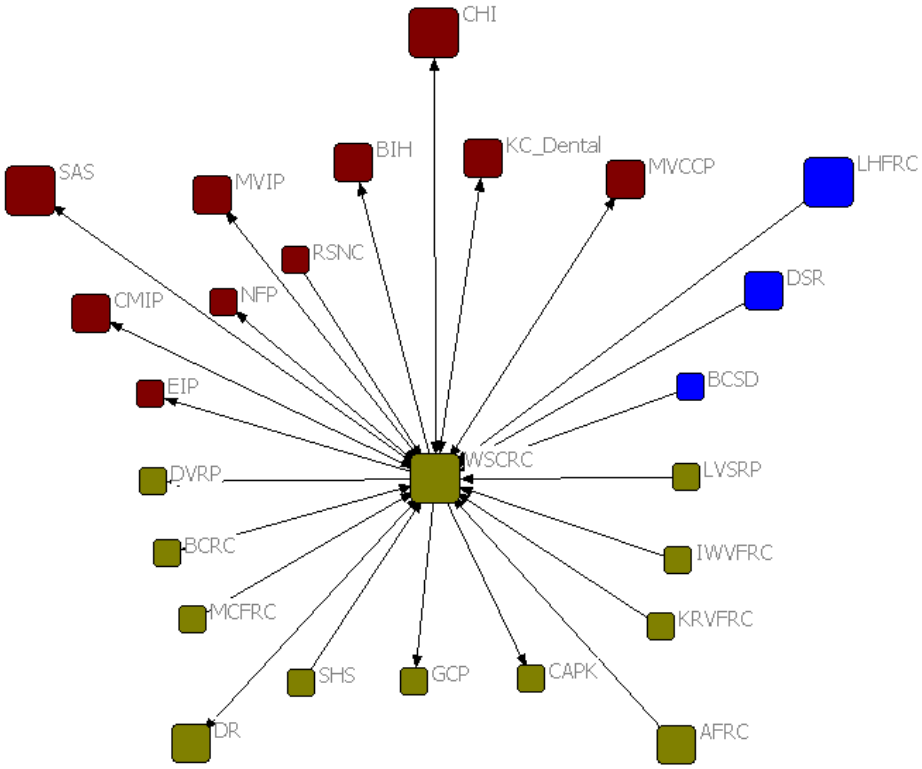
In FY 2012-13, WSCRC provided health insurance assistance to 29 families and offered multiple education forums for a total of 311 parents. Significant improvements of nurturing parenting knowledge and application were found on the Nurturing Skills Competency Scale in pretest and posttest (see Table 10). WSCRC also delivered home-based education services to 20 families. Because of the emphasis in its SOW-EP and service outcomes, WSCRC was classified in the focus area of *Family Functioning*. The WSCRC services have saved family resources and reduced the number of families with unmet needs of transportation, food, and childcare this fiscal year (see Tables 32-36). As indicated by the Core Data Element (CDE) survey, WSCRC also reduced the smoking rate of local parents since last year (see Table 48).

In *Child Development*, WSCRC was a service provider that participated in a state-cosponsored School Readiness Initiative (SRI). Following the Request for Funding (RFF)

guidelines (2008) from the State Commission, Child Assessment-Summer Bridge (CASB) was developed to evaluate improvements of kindergarten readiness among preschool children. The Summer Bridge program at WSCRC has significantly improved children's *Cognitive* [t(41)=43.14, p<.0001], *Communication* [t(41)=5.55, p<.0001], *Motor* [t(41)=6.62, p<.0001], *Self-Help* [t(41)=5.40, p<.0001], and *Social Emotional* [t(41)=7.40, p<.0001] skills according to the CASB assessment.

It was declared as a mission statement of WSCRC that "The West Side Community Resource Center provides comprehensive, integrated family support services that build and sustain a health community by strengthening families and enriching the lives of children"[25]. Due to its well-rounded services in Child Health, Family Functioning, and *Child Development*, WSCRC has been actively engaged in joint program planning and community outreach activities (RI 31 & 36). As a result, 24 partners have been identified from First 5 Kern-funded service providers (Figure 26). Through the network building, WSCRC made 523 referrals to support the system of care for children ages 0-5 and their families this year.

Figure 26: Network Capacity for WSCRC



[25] http://issuu.com/jessicaskidgel/docs/wscrc_all

Ready to Start

In contrast to the school readiness program of WSCRC, Ready to Start (R2S) was a locally developed Summer Bridge (SB) program that served four-year-old children without prior preschool experience. This intensive five-week curriculum was designed to develop pre-reading, math, and social skills for pre-kindergarteners in five school districts. Despite the lack of preschool training, R2S was able to help "students enter kindergarten on equal footing and keep pace with their peers through third grade"[26]. In FY 2012-13, R2S offered the SB program for 838 children, more than doubling the total number of participants in all SRI programs across Kern County. As an outcome indicator, "95% of kindergarten teachers say [that] R2S students are better prepared for kindergarten in both social and academic areas"[27].

R2S is administered through the Ready to Start Foundation, a public/private partnership involving sponsorships from nine organizations. To address results-based accountability, a follow-up study tracked 509 R2S participants from 2008. As those students reached 3rd grade in Academic Year 2011-12, they outperformed non-R2S participants in both the math and English-language sections of the 2011-12 California Standards Test[28]. The R2S outcomes were presented by Mr. Henderson at the 2012 First 5 Association Summit. Among 58 counties across the state, First 5 Kern was one of less than a dozen commissions making a Summit presentation.

Reneé Webster-Hawkins (2013), the Interim Executive Director of First 5 California, pointed out, "Recognizing the inextricable connection between healthy young minds and bodies, the State and local commissions invest heavily in developmental screenings and services, as well as nutrition and child developmental education" (p. 3). R2S exemplified the combination of services in both child screenings and developmental education. While the educational accomplishment has been examined through value-added assessments (see Tables 20 & 21), R2S also provided health screenings for 722 children and dental screenings for 211 children this year.

In summary, an important component of the RBA model is to recap "a summary of news stories where outcomes approaches have been highlighted in the media" (Friedman, 2011, p. 1). Web links have been cited in footnotes of this section to support the story summary for KC_Dental, WSCRC, and R2S in the focus areas of *Child Health*, *Family Functioning*, and *Child Development*, respectively. The evidence gathering was guided by the Statewide Evaluation Framework to triangulate information from three aspects, (1) descriptive data of service counts at the program level, (2) assessment data of the service impacts at the individual level, and (3) trend data to sustain ongoing progresses on the time dimension (First 5 California, 2005).

Based on the consistent results from previous chapters and program illustrations in this section, compelling evidence has been established to conclude that First 5 Kern worked effectively with its service providers and community partners to serve children ages 0-5 throughout Kern County.

[26] http://www.uwkern.org/ready-start
[27] http://www.uwkern.org/ready-start
[28] http://wwwstatic.kern.org/gems/first5kern/First5NewsletterSummerweb.pdf

Past Recommendations Revisited

In the last annual report, the following recommendations were made to maintain the momentum of First 5 Kern's progress this year:

(1) Take a systematic approach to coordinate local curriculum development through planning, implementation, and completion stages;

(2) Establish an integrated platform for information sharing;

(3) Align the current strategic plan with the new funding cycle.

The first recommendation was based on the fact that First 5 Kern has funded programs that employed curriculum-based outcomes to address results-based accountability. In *Family Functioning*, the Nurturing Skills Competency Scale (NSCS) was adopted by 18 programs in three focus areas to assess effectiveness of parent education according to the Nurturing Parenting Curriculum (NPC). However, variations among the local curricula inadvertently created inconsistencies in service outcomes according to the NPC-based NSCS indicators. Similarly, WSCRC and R2S have demonstrated effectiveness of their Summer Bridge programs. R2S adopted a curriculum-based assessment, but the other school-readiness programs did not. This recommendation was designed to enhance the utility of assessment outcomes and use them to help close the loops in curriculum development. In its annual report to the State Commission, First 5 Kern (2013b) indicated that "First 5 staff created a focus group to begin discussing and planning the characteristics that make Ready to Start successful and implementing them in a similar like curriculum" (p. 62). Therefore, the first recommendation has been addressed on the track of Summer Bridge programs.

The second recommendation encouraged coordination of information gatherings by Program Officers, Finance Officers, and Internal Evaluators during different site visits. Changes have been implemented in First 5 Kern this year, and "From all departments (Program, Evaluation, and Finance) a Year End Summary report has been developed to incorporate all information and will be shared and reviewed with programs" (First 5 Kern, 2013b, p. 62). Thus, the second recommendation has been completely put into effect in FY 2012-13.

Proposition 10 requires "that the county commission conduct at least one public hearing on its proposed county strategic plan before the plan is adopted" (p. 10). While First 5 Kern's funding cycle has been extended to five years, the third recommendation was to suggest a review of the First 5 Kern strategic plan according to the funding cycle adjustment. First 5 Kern recognized the importance of aligning the current strategic plan with the new funding cycle. As a result, "The commission reviewed and verified that the needs and priorities identified in the three-year Strategic Plan continue to address the needs of Kern County's children for the two additional years" (First 5 Kern, 2013b, p. 62). Hence, First 5 Kern has taken a timely action to fully address the third recommendation.

In summary, the second and third recommendations were fulfilled by adequate actions at the Commission level, while the first recommendation was handled through

collaborative efforts between First 5 Kern and its service providers. Altogether, First 5 Kern has addressed all three recommendations from last year.

New Recommendations

To sustain improvement of First 5 Kern services, key barriers to progress have been monitored through the Core Data Elements (CDE) survey in FY 2012-13. Table 50 shows a consistent pattern of improvements on nine dimensions.

TABLE 50: NUMBER OF CDE RESPONDENTS WITH SERVICE BARRIERS IN FY 2012-13

Barrier	Initial	6th Month	12th Month
Availability of Appropriate Doctor	25	2	0
Availability of Healthcare Provider	10	4	1
Childcare Support	17	11	8
Copayment	24	3	1
Doctor for Medi-Cal	45	11	9
Health Insurance	43	5	5
Immigration Status	4	1	0
Language	45	18	7
Transportation	257	56	30

As First 5 Kern prepares for program review in next year, persistent barriers should be addressed by the Results Indicators (RIs) to support service access. While 47 RIs were listed the current strategic plan (First 5 Kern, 2013a), not all the barriers were monitored by the CDE data. Likewise, the SOW-EP documents for 40 programs only covered 29 RIs, and thus, not all RIs in the strategic plan have been completely addressed by the existing service providers. It becomes clear that there is a strong need to differentiate three tiers of RIs, i.e., **expected RIs** in the strategic plan, **implemented RIs** from service providers, and **achieved RIs** with data support. Therefore, **the first recommendation is to enhance the alignment among the different levels of RIs in the new Request for Proposal (RFP) process**. Implementation of this recommendation is expected to strengthen results-based accountability in the next funding cycle.

Proposition 10 stipulates that the funding from county commissions "shall be expended only for the purposes authorized by this act and in accordance with the county strategic plan approved by each county commission" (p. 6). Hence, it is important to eliminate any structure gaps between Proposition 10 and First 5 Kern's strategic plan. In particular, Proposition 10 specified key components of the strategic plan:

> The county strategic plan shall, at a minimum, include the following: a description of the *goals and objectives* proposed to be attained; a description of the programs, services, and projects proposed to be provided, sponsored, or facilitated; and a description of how measurable outcomes of such programs, services, and projects will be determined by the county commission using appropriate reliable indicators. (p. 10)

In the current strategic plan, First 5 Kern (2013a) listed "goals" once under Objective 4.2 to clarify outreach strategies. According to the Results-Based Accountability model, "The word 'objective' is often paired with the word 'goal' to specify a series of 'sub-

goals'" (Friedman, 2005, p. 154). Hence, **the second recommendation is to revise the hierarchy between goals and objectives in the strategic plan**. This change will strengthen alignment of those key components according to the statute of Proposition 10.

In 2013, the State Commission elaborated a guiding principle from Proposition 10, i.e., to "Incorporate the highest quality, evidence-based standards when assessing program effectiveness" (First 5 California, 2013, p. 24). NSCS was an assessment instrument employed by nearly half of the First 5 Kern-funded programs. The same instrument was employed by at least six other county commissions over the past eight years. In those counties, three days of training were offered to help local service providers understand the Nurturing Parenting curriculum before adopting this curriculum-based assessment. To enhance validity of the assessment outcomes in Kern County, **the third recommendation is to offer Nurturing Parenting curriculum training for the 18 service providers that employed NSCS outcomes to assess their program effectiveness**. Implementation of this recommendation is anticipated to strengthen the quality of program assessment in parent education.

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Appendix A
Index of Program Acronyms

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Appendix B
Technical Advisory Committee served in FY 2012-13 and Current

Mimi Audelo (Chair and Commissioner)
Director of Special Events, San Joaquin Community Hospital

Tammy Burns
Coordinator, Early Childhood Council of Kern - Kern County Superintendent of Schools

Deanna Cloud
Children's System of Care Administrator, Kern County Mental Health System of Care

Tom Corson
Executive Director, Kern County Network for Children

Jesus Cordova
Coordinator, Shafter Healthy Start - Richland School District

Irene Cook
Childcare Director, Small Steps Child Development Center - Alliance Against Family Violence and Sexual Assault

Karen Goh (Commissioner)
Executive Director, Garden Pathways

Jan Hefner
Director, Children's Health Initiative of Kern County - Mercy Foundation - Bakersfield

Sandy Koenig
Coordinator, West Side Community Resource Center - Taft City School District

Bill Phelps
Chief of Programs, Clinica Sierra Vista

Nancy Puckett (Commissioner)
Program Coordinator, Kern River Valley Family Resource Center Great Beginnings Program - Kernville Union School District

Larry J. Rhoades (Commissioner)
Retired Kern County Administrator

Al Sandrini
Retired School District Superintendent

Emily Silva (Commissioner)
Director of Provider Relations, Kern Health Systems

Meserat Springer, PHN
Public Health Nurse, County of Kern Public Health Services Department

Lucinda Wasson, R.N.
Director, Public Health Nursing, County of Kern Public Health Services Department

Debbie Wood
Coordinator, Supporting Parents & Children for School Readiness - Bakersfield City School District

Appendix C
Interview Protocol for ISQ Data Collection

Hello, this is (state name) from First 5 Kern. I am calling in regard to the 2012-2013 ISQ Phone Interview. Over the next 10 minutes, I will be going over each First 5 Kern-funded partner and asking about the interaction you have had with them. Please respond by using the 4C Model responses sent via email. (Give coordinator a moment to find email).

Ok, let's get started.

[Part I]
We will begin with Focus Area 1: Child Health

How do you perceive your interaction with (go through each FA1 partner)
See Excel spreadsheet for funded-partners:
R:\Assessments\2010-2015 Assessments\ISQ\2012-2013\2012-2013 ISQ Phone Interview.xlsx

Do you have a primary partner(s) in the above list?
(write down the name if the primary partner is identified)

Thank you.

Next we will move onto Focus Area 2: Family Functioning

How do you perceive your interaction with (go through each FA2 partner)
See Excel spreadsheet for funded-partners:
R:\Assessments\2010-2015 Assessments\ISQ\2012-2013\2012-2013 ISQ Phone Interview.xlsx

Do you have a primary partner(s) in the above list?
(write down the name if the primary partner is identified)

Thank you.

Lastly, we will complete Focus Area 3: Child Development

How do you perceive your interaction with (go through each FA3 partner)
See Excel spreadsheet for funded-partners:
R:\Assessments\2010-2015 Assessments\ISQ\2012-2013\2012-2013 ISQ Phone Interview.xlsx

Do you have a primary partner(s) in the above list?
(write down the name if the primary partner is identified)

[Part II]

Do you have a primary partner outside of the previously listed First 5 Kern funded-partners? (Yes/No)
If yes:

2a) What is the name of the primary partner?
2b) How do you perceive your interaction with the primary partner?

[Part III]

And finally, between 1 and 5 (with 1 being strongly disagree and 5 being strongly agree) how do perceive your interaction with First 5 Kern in terms of:

3a) Increasing program networking and collaboration.
3b) Leveraging additional funding.
3c) Increasing program awareness within your local community.

If there are no questions, this completes the phone interview. (Answer questions if applicable).

We appreciate your participation. Thank you!

Appendix D
Evaluation Site Visit IRB Monitoring Form

Please tell us which of the following have occurred since the previous site visit.

1) Did any clients report any risks or discomforts as a result of data gathering, processing, and reporting? Yes No

2) Did any First 5 Kern-funded staff members encounter issues with protection of individually identifiable information during results dissemination? Yes No

3) Did any unauthorized persons have access to unscrambled client identification? Yes No

4) Did any First 5 Kern-funded staff members express concerns with the consent form administration required by the IRB protocol? Yes No

5) Did any respondents report concerns as a result of refusing to allow data collection? Yes No

6) Did any First 5 Kern-funded staff members violate privacy protection in the setting for data collection? Yes No

7) Did any First 5 Kern-funded staff members breach confidentiality during the information storage? Yes No

8) Did any First 5 Kern-funded staff members compromise confidentiality features from application of the GEMS data management system? Yes No

For any "yes" answers above, please use the space provided to explain in more detail: