Report of the Early Childhood Research and Evaluation National Advisory Panel: Recommendations to the First Things First Board Regarding a Framework for Evaluating First Things First Strategies

I. EXECUTIVE SUMMARY

To be completed after the recommendations are finalized.

II. INTRODUCTION

First Things First was established to help provide greater opportunities for all children five and under in Arizona to grow up ready to succeed. First Things First was established in November 2006 with the passage of Proposition 203, a citizen's initiative to fund quality early childhood development and health. Designed to create a voluntary system of early care and education, Proposition 203 included the following principles: a) local communities must come together to plan and administer what works best in their community; b) the new system must be flexible enough to accommodate the unique demographics of the state; and c) all initiatives must be transparent and held accountable for outcomes. With its passage, the proposition created a new state-level board known as the Arizona Early Childhood Development and Health Board. The Board subsequently adopted the name First Things First and established an agency to provide greater opportunities for all of Arizona's children to grow up ready to succeed in school, based on the following mission and vision:

> **Mission**: Our purpose is to increase the quality of, and access to, the early childhood development and health system that ensures a child entering school comes healthy and ready to succeed.
>
> **Vision**: Our vision is that by 2018 all Arizona children birth through age five are afforded opportunities to achieve their maximum potential to succeed in school and life.

In the spirit of continuous improvement, innovation, and accountability, the Board supports rigorous and ongoing research and evaluation of First Things First. Thus, in January 2012, First Things First assembled the *First Things First Early Childhood Research and Evaluation National Advisory Panel* (Panel). The Panel was convened to provide recommendations to the First Things First Board on developing a comprehensive statewide and regional research and evaluation framework.

To achieve this, 12 nationally recognized experts in early childhood met three times in the winter and spring of 2012. Panel members' expertise included evaluation design and methodology; Native American early education; placed-based systems-level evaluation; school readiness, including, literacy and language development, cognitive development, and executive functioning; state prekindergarten evaluation; special needs; and health. Additionally, Arizona early education experts participated to

ensure that a unique state-specific perspective was included. Detailed panel member biographies can be found in Attachment 1.

This report explains the Panel's charge, the context and process followed to reach recommendations, and the Panel's recommendations to the First Things First Board on infrastructure needed for evaluation as well as strategy-specific evaluation options. The Panel recommends that the First Things First Board consider this combination of ongoing infrastructure development in conjunction with targeted strategy-specific evaluation studies in order to meet its goals for systems evaluation. The Panel recommends a long-term vision that includes capacity-building, data collection and analysis, and strategy-specific research and evaluation to support ongoing program improvement.

Panel Members

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A. The Charge to the Panel

The Panel was brought together with a very specific focus and anticipated outcomes. The focus of the Panel's work was to:

- Assess the data and analyses First Things First has received to date from the tri-University Consortium and the alignment of these data and analyses with First Things First's overall research and evaluation goals;
- Provide recommendations to the First Things First Board on the best approaches for evaluating system-level outcomes; and
- Guide the specific development of a plan for next steps.

To provide the Panel with further guidance, First Things First articulated five anticipated outcomes:

- Come to understand First Things First's strategies, programs, goals, roles, and outcome indicators;
- Learn about the evaluation activities that provide First Things First with population-level data on its ongoing programs;

- Discuss various strategies for obtaining meaningful system-level evaluative data on the most salient First Things First programs and strategies;
- Debate the pros and cons of alternative ways of conducting the evaluation; and
- Develop clear recommendations to the First Things First Board for conducting its external evaluation.

As this report demonstrates, the Panel addressed every area of focus, and has met every outcome goal.

A. Context for the Evaluation Framework

First Things First Guiding Evaluation Questions

1. *Are the capacity and level of coordination of the early childhood system changing and are changes associated with funding levels?*
2. *Are programs and strategies being implemented fully and in accordance with FTF's standards of practice?*
3. *What services, and combinations of services, are children receiving and how does service receipt relate to identified family and child needs?*
4. *Are the 10 school readiness indicators improving over time?*
5. *What impact is FTF having on children's school readiness indicator 1 – number and percentage of children demonstrating school readiness at kindergarten entry in the developmental domains of social-emotional, language and literacy, cognitive, and motor and physical?*
6. *Is FTF affecting long-term outcomes for children?*
7. *Are there FTF strategies, programs, or models that are particularly effective and how is their effectiveness related to costs?*
8. *Are there relationships among Quality First ratings, improved early childhood programs, and children's kindergarten readiness?*

The recommendations that follow are the product of a thoughtful, deliberative process spanning three Panel meetings. They are presented in the context of First Things First's initiatives and strategies. As noted above, one of the charges to the Panel was to provide recommendations to the First Things First Board on how best to examine and quantify system outcomes for Arizona children. As part of delineating what that would mean, the Panel worked collaboratively with First Things First staff to define an overarching, long-term view of evaluation. To that end, First Things First articulated eight critical questions that it would like evaluation activities to address. Taken together, these questions provided a guide to the Panel's considerations of a First Things First evaluation plan. The questions range from the procedural, such as asking if First Things First programs and strategies are being fully implemented in accordance with First Things First Standards of Practice, to the systemic, including the simple, yet critical question as to whether First Things First is positively affecting long-term outcomes for children.

To fulfill its charge, the Panel worked with First Things First to understand:

- Intended outcomes of programmatic strategies;
- How strategies connect and coordinate; and
- Key decision drivers in program choices.

To facilitate this understanding, the Panel recommended that First Things First create a First Things First logic model (Attachment 2). This series of logic model diagrams clarifies the variety of early childhood programming that is funded by the agency and the linkages among strategies.

The Panel also requested an opportunity to speak with Regional Partnership Council members and gain their perspective on First Things First's evaluation and information needs. In their second meeting, Panel members met by telephone conference calls with Partnership Council members from around the State. Council representatives presented perspectives from rural, urban, and tribal communities.

After establishing its understanding of First Things First evaluation goals through the eight guiding questions, the integration of strategies to support and maximize kindergarten readiness for Arizona's children through the First Things First logic model, and perspectives of Regional Partnership Council members, the Panel laid out its recommendations for a long-term agenda to study the intended outcomes of First Things First. This agenda is detailed in Sections III and IV. Additionally, the Panel recommended that in the shorter term, First Things First focus evaluation efforts in the higher-priority programming areas, as articulated below.

To prioritize key areas for initial evaluation efforts, First Things First and the Panel agreed on a set of criteria. Those criteria included consideration of (1) First Things First's total financial investment, (2) scope and scale of implementation throughout the state, and (3) programmatic importance for improving children's kindergarten readiness. To support the prioritization, First Things First developed a matrix of those strategies whose funding will exceed $2 million in fiscal year 2013 (Attachment 3). Upon examination, it was agreed that the strategies with the largest investments were almost always the interventions with the greatest saturation in regions as well as the interventions identified as immediately relevant to identified child and family needs by both the Board and Regional Partnership Councils. This prioritization enabled the Panel to recommend specific evaluation approaches for key, prioritized strategies.

The Panel understands that the mission of First Things First is to support the development, health, and early education of all Arizona's children birth through age five. First Things First undertakes evaluation and research to ensure that available resources are used for maximum benefit of Arizona's children. Because of this, the Panel recommends an approach that couples long-term capacity building with a series of shorter-term studies to provide feedback in key program areas. The Panel's recommendations go beyond a single-study model to offer a multi-faceted approach to support continuous reflection on timely and accurate data to inform program improvement. Taken as a whole, the infrastructure and strategy-specific study recommendations, Sections III and IV, respectively, present a developmental and feasible approach to timely measurement of the Arizona early childhood system.

The Panel's recommendations follow from these considerations. Recognizing that there is no single approach across First Things First programming, First Things First evaluations should reflect the complexity and flexibility of the program approaches and the state early childhood system. As a result, the Panel recommends an evaluation agenda, or family of studies, as no single study could adequately reflect the diversity of First Things First's goals. Never losing sight of First Things First's overall guiding questions and systems-level approach, as well as the need for an eventual longitudinal study, the first set of recommendations is about First Things First building the infrastructure in which a system of evaluation studies can be conducted, both in the short- and long-term.

The Panel also recognizes that although a long-term focus is needed, a variety of evaluations are important for meeting the needs of First Things First today. Thus, following the recommendations for a supporting infrastructure, this report presents the Panel's recommendations for studies that address the key questions First Things First wants to have answered for its most salient programmatic strategies.

In its recommendations, the Panel underscores the general importance of evaluation for First Things First and the children, families, and communities it serves. Funding for evaluation studies should not be viewed as diverting resources from programming; it can act as a multiplier of program effectiveness. The Panel joins First Things First in the recognition that only through high-quality, coordinated services can Arizona's children achieve their highest potential. Continuous evaluation is a critical element in developing and refining these services.

III. RECOMMENDATIONS FOR ESTABLISHING INFRASTRUCTURE TO SUPPORT FIRST THINGS FIRST EVALUATION ACTIVITIES

First Things First's mission, vision, and logic model illustrate that no one programmatic strategy or approach will meet the needs of all children. First Things First is based on the principles that children learn and develop in a complex context of family, school, and community, and that child development is supported by quality early education, strong families, healthy adults, and robust communities.

In line with this understanding, First Things First funds and supports strategies as diverse as strengthening medical homes, supporting parents to understand the importance of oral health, increasing and improving developmental and sensory screening, promoting children's cognitive and language development by intervening with parents, and improving the quality of early education programming. First Things First intends that these strategies be optimally coordinated among themselves as well as with other programs in place in communities.

The Panel quickly saw that adequate measurement of the implementation and impact of all facets of First Things First's work would require detailed data on children's receipt of diverse services over time and, further, that service data would need to be linked to data on children's kindergarten readiness, school-aged achievement, and life-long success. The Panel does not recommend that all aspects of First Things First programming and its impact over time be studied in a single research effort. Rather, the

Panel recommends that First Things First put into place an infrastructure to support the development of evaluation capacity and ongoing use of data for program improvement over time. The outcome of this approach will be timely data that can be used for strategic planning at the local and statewide levels and to assess the impact of First Things First's efforts on young children over time. This infrastructure recommendation involves eight main components: (1) focusing on program implementation; (2) ensuring that data analysis and evaluation approaches are meaningful for Regional Partnership Councils; (3) working with Tribal Governments to ensure that they are full participants in setting evaluation priorities and conducting evaluation studies; (4) establishing a comprehensive, longitudinal, integrated early childhood database; (5) creating a focus on continuous improvement; (6) collaborating on the implementation of a kindergarten developmental inventory for all Arizona children; (7) building the groundwork for appropriate oversight and review of evaluation plans; and (8) integrating existing Consortium data into the early childhood database.

Recommendation IN-1: Create a strong focus on program implementation.

Arizona's children are best served by high-quality, well-implemented programs. The Panel recognizes that First Things First does not, in most cases, directly provide services for children and families. First Things First is an implementer of programs and uses grant and contracting mechanisms to support and improve already existing services in communities and to expand needed services into new areas. It is critical that evaluation efforts be aligned with strong and robust contracting, monitoring, and quality assurance processes. To ensure that strategies and programs reflect the needs of communities, families, and children, as well as best practices, contracts should be built on data-based strategic planning and evidence-based standards of practice. Once programs are implemented, contracts should be effectively and rigorously monitored for timely implementation and adherence to First Things First programmatic standards of practice.

The Panel recommends that a relentless focus on implementation be fundamental to First Things First's evaluation framework. The Panel notes that while funding best practices is important, it is also critical to ensure a high degree of integrity in on-going program implementation. This involves putting mechanisms into place to allow maximally efficient reporting of data and monitoring of results. This approach, in comparison with current practice, would increase First Things First's focus on data collection. The Panel recommends that First Things First should require funded programs to provide individual child and family data with unique identifiers on service participation including entry and exit date, and cumulative attendance or participation rates.

Recommendation IN-2: Ensure that data analysis and evaluation approaches are meaningful for Regional Partnership Councils and meet their needs for strategic planning and program improvement.

Regional Partnership Councils are part of First Things First's governance model that provides local meaning and relevance. They are composed of dedicated volunteers responsible for working with their communities to determine what services children five years old and younger in their area need to

ensure that they arrive at school healthy and ready to succeed. Evaluation planning must reflect the information needs of local communities and build capacity for strategic planning and application of evaluation findings. Program data analysis and use should be organized and conducted in such a way that they can be used in community-based planning at the Council level as well as statewide.

The Panel recommends that First Things First work with Regional Partnership Councils to develop data dashboards that display key information, mapped geographically, on service use, child and family characteristics, and measures of child wellbeing available from existing data sources such as maternal and child health indicators, school readiness and success indicators, and other potential indicators such as environmental and social stress (e.g., air quality, crime) for local use in planning and evaluation.

Recommendation IN-3: Work with Tribal Governments to ensure that they all are full participants in the process of planning, designing, and conducting data collection and evaluation studies, and in interpreting and using evaluation results for continuous improvement.

First Things First values its government to government relationships with Arizona's Tribal Governments. In its mission to serve all Arizona children, First Things First recognizes that Arizona's Tribes and Tribal Nations are sovereign and have complete authority over all research and data collection conducted on their lands; they own all data collected on their lands; and they control the use and dissemination of any of those data. The Advisory Panel recommends that First Things First continue an open dialogue and consultation with Tribal Governments on potential studies on which to collaborate as well as on specific tribal approval processes necessary for data collection. These relationships and a common understanding of purpose and value *prior to any research being conducted* is essential. To the extent possible, it is recommended that First Things First enter into ongoing dialogues with Tribal Governments about data collection and reporting, rather than study-by-study conversations.

The Panel recommends that First Things First work with Tribal regional partnership councils and Tribal Governments to develop data dashboards that display key information they want to use for planning and evaluation. First Things First should continue consultation with Tribal Governments and through this process, identify ways to use data and evaluation findings and increase capacity for interpretation and application.

Recommendation IN-4: Create a comprehensive, longitudinal, integrated database that will enable First Things First to systematically track key data on services provided, children and families, and progress on the 10 School Readiness Indicators at the state and regional levels.

The Panel recommendation for a comprehensive, longitudinal, integrated database is in line with best practices in other states and with the growing understanding that comprehensive data are a necessary foundation for making decisions about allocation of scarce resources and the improvement of program quality and child outcomes. This is a complex, long-term undertaking that the Panel strongly recommends for the Board's consideration. Data that are useful for strategic decision-making must be of

high quality, track individual children over time, and be integrated with data on services received. Having these data facilitates the type of learning community described in Recommendation IN-5. Essential components of an early childhood longitudinal data system include:[1]

- Unique statewide child identifier
- Child-level demographic and program participation information (including dosage, types of services received, etc.)
- Child-level data on key developmental indicators of learning, development, and health, including, for example, the results of health screenings conducted by First Things First, supported programs, and by schools
- Ability to link child-level data with K-12 and other key data systems, including the Arizona Department of Education and Department of Economic Security (see below)
- Unique program site (for example, school, preschool, or child care provider) identifier with the ability to link with children and the ECE workforce
- Program site data on the structure, quality, and work environment
- Unique ECE workforce identifier (teacher identifier) with ability to link with program sites and children
- Individual ECE workforce demographics, including education and professional development information
- Transparent privacy protection and security practices and policies

This data system should build on already existing data warehousing and collection activities in the state. The creation of this integrated, longitudinal data system would involve the collaboration of all Arizona state agencies including the Arizona Department of Education, the Arizona Department of Economic Security, the Arizona Department of Health Services, and the Arizona Health Care Cost Containment System. The data system would support uniform data collection and entry by participating agencies, facilitate exchange of data, and ensure that data are secure and included only with parental approval.

First Things First's data warehouse currently holds extensive, critical information on program implementation, finances, and operations. Current data holdings and reporting can answer questions about funding levels, contract status, and basic information, such as how many families served. Building on the current data warehouse, an integrated, longitudinal data system would enable the joining of child-level data about children served by First Things First and by other agencies. The data system would contain data on the services accessed by children and families over time. This information on services would link to data from a kindergarten developmental inventory to allow the analysis of how early experiences relate to kindergarten readiness and later success (see Recommendation IN-6). This is a complex, long-term undertaking that needs to incorporate best practices for ensuring child and family confidentiality. Despite the obstacles, the development of a longitudinal data system is critical to future

[1] Fundamental components for a longitudinal data system are referenced at: http://www.dataqualitycampaign.org/; and http://www.ecedata.org/

ongoing efforts in system evaluation and data use value. The Panel strongly recommends the investment of the needed resources and time.

The development of this integrated, longitudinal data system would facilitate population impact analysis and data-based planning. Some examples of knowledge gained from analysis of data in a full-fledged data system might include:

- Creation of population risk profiles – key data on potential risk factors such as poverty, low-birth weight, low accessibility of quality early care and education – could be displayed at the community level to create a map of incidence and location of populations who could benefit from targeted services.

- Risk profiles compared with available services – available services can be mapped onto population risk factors. Using risk profiles, already-existing services can be closely examined to identify gaps and/or redundancies.

- Over time, populations that received services can be analyzed for decreases in risk factors or improvements in key outcomes such as insurance enrollment, decrease in child abuse, and/or kindergarten readiness.

Recommendation IN-5: Focus on using program data and evaluation results for continuous program improvement at all organizational levels.

The ultimate goal of data collection and analysis is to enable First Things First to continually improve program performance, understand what leads to successful outcomes, and to maximize the positive impacts of programs on children, families, and communities. To that end, the Panel recommends that First Things First work over time to create a robust community focus on the use of data and evaluation outcomes for continuous program improvement. It is important to note that Regional Partnership Councils, all First Things First staff, and community stakeholders are all critical in the building of a successful learning community.

This recommendation has multiple facets, including (1) ensuring that evaluation results and data are available in a timely manner and user-friendly format for ease of understanding by a lay audience; (2) presenting and/or mapping data at the community and other appropriate levels for decision making; (3) focusing on measuring *changes* in the quantity and quality of community services and on the *growth trajectories* of children across their preschool years and beyond; and (4) facilitating the sharing of promising practices and encouraging coordination.

This focus on data use and continuous improvement depends on the availability of timely, high-quality data. Those data should be available in 21st Century technology platforms that are flexible and can display information in a user-friendly manner and be manipulated and analyzed by a community audience. For example, an integrated data system could provide map-based displays of information on number of children in poverty, overlaid with child care providers, overlaid with Quality First ratings of

child care providers. In this example, data and technology would combine to create a map that allows the community and decision-makers to reflect on whether children with the highest needs are able to access the highest quality early education. Criteria for the success of such an approach are that it provides relevant information and ultimate transparency of decision-making.

A program-based vision for this type of collaborative learning and improvement method would encourage multiple regions or grantees to work together. For example, 10 sites might be implementing a strategy such as mental health consultation in an early care and education setting. Those sites would be linked together so that as they are implementing the intervention they can be receiving appropriate coaching and technical assistance, and at the same time can share lessons learned and results in real time with each other. This learning approach would be supplemented and facilitated by ongoing, rigorous evaluation and monitoring to ensure optimal system performance. This approach to learning and evaluation would produce multiple products and learning outcomes, including an understanding of the viability of a specific intervention and ways of coordinating two different systems, as well as an understanding of what it takes to make a particular program or service center successful and whether or not the level of investment or support is sufficient to ensure the success of the intervention to other sites.

Recommendation IN-6: Collaborate with the State Board of Education and the Arizona Department of Education to create a kindergarten developmental inventory that will annually assess the school readiness and development entering kindergartners across the state in the five readiness domains identified by the National Education Goals Panel.

Research has established the validity and value of a school readiness assessment conducted at the beginning of kindergarten. We recommend that the state administer such an assessment annually. These data could be the basis for measuring First Things First's School Readiness Indicator number 1:

> "the number and percentage of children demonstrating school readiness at kindergarten entry in the developmental domains of social-emotional, language and literacy, cognitive, and motor and physical."

More importantly, these data would be a critical component of the longitudinal data system and enable the systematic review of child development across the five domains of readiness (as identified in indicator one) over time and the relation of children's school readiness to services received before kindergarten entry. It would also serve to improve early childhood service provision by enabling a better understanding of what is most effective for children in their early years and beyond. This assessment could be a helpful tool for early childhood and K-12 teachers as well as a critical tool for understanding the needs of young children and painting a valid and detailed picture of the development and readiness of children.

Recommendation IN-7: Establish the groundwork for appropriate review and oversight of evaluation plans.

The Panel recommends that a key approach to ensuring appropriate oversight and transparency in data and evaluation efforts is the identification and establishment of appropriate internal statewide and regional protocols and procedures for data collection, analysis, reporting, and dissemination. First Things First should also consider establishing an advisory board to regularly review evaluation and research activities. This board could offer technical review and advice on evaluation contracting, programmatic monitoring, development of data systems, and reporting and analysis.

Recommendation IN-8: Continue to use, as appropriate, data collected by the tri-University Consortium

In 2008, First Things First contracted with the External Evaluation University Consortium (also referred to as the tri-University Consortium and comprised of researchers from Arizona State University, the University of Arizona, and Northern Arizona University) to provide a broad-based evaluation of First Things First programs. The Panel reviewed the reports produced by this consortium, including a) *First Things First External Evaluation: Annual Report 2010-2011*; b) *First Things First External Evaluation: Longitudinal Child Study of Arizona, Status of Design, Sampling and Data Collection and Proposals for Analysis,* July 1, 2011; c) *First Things First External Evaluation: Arizona Kindergarten Readiness Study*, July 1, 2011; and d) *First Things First External Evaluation: Family and Community Case Study, 2012 Evaluation Report*. The Panel also examined comments and reviews prepared by First Things First regarding the studies' methodologies, analyses, and currently available data.

The Panel recommends that data collected as part of the Consortium efforts continue to be examined by First Things First for utility and be integrated into the longitudinal data system. The data should be considered as a potential source of population data in areas of children's health, family context, and early experiences. To the extent possible, they should be integrated into First Things First studies – not as an example of a recommended approach to longitudinal analysis, but rather as a potential source of existing data related to early education, children's health, and/or family support.

IV. RECOMMENDATIONS FOR APPROACHES TO EVALUATING KEY FIRST THINGS FIRST PROGRAMMATIC STRATEGIES

This section presents the Panel's recommendations to the First Things First Board for evaluating specific programmatic strategies. The Panel began considerations of its recommendations by reviewing First Things First's eight guiding evaluation questions (see sidebar in Section I, page 2, and Attachment 4). First Things First then presented the Panel with a series of more-targeted questions as the Panel discussions centered on the 12 strategies that represent the greatest investment of First Things First funds (Attachment 3). Panel discussions then focused on how various kinds of evaluation studies could provide First Things First with the information that would answer those questions. Thus, in Section IV,

the Panel lists those questions and frames its recommendations as evaluation approaches to answering them.[2]

The Panel's hope is that this suite of evaluation approaches, taken as a whole, will provide the information First Things First needs to enable it to enhance the quality of its strategies and programs for families with children from birth to kindergarten entry. Nine recommendations emerged from the Panel's discussions. They are grouped in five sections (A-E), each addressing a different First Things First strategy area, with an additional recommendation (Section F) that is not strategy-specific.

A. Recommendations for Learning About Strategies in the Area of Access, Affordability, and Quality

This area, which is First Things First's largest family of strategies, comprises four strategies: Quality First; Quality First Child Care Scholarships; Pre-Kindergarten Scholarships; and Family, Friend, and Neighbor Care.[3] Quality First, Arizona's voluntary Quality Improvement and Rating System, is designed to strengthen the state's regulated early care and education programs by establishing a standard for quality care, helping providers meet that standard, and sharing information on program quality with communities. Activities conducted within Quality First include coaching, incentives, assessment, Child Care Health Consultation, scholarships for children, and scholarships for staff. The intended outcomes of all coaching and supports are an overall increase in program quality and an enhanced ability to meet child and family needs.

The main purpose of evaluation studies addressing questions about First Things First's activities in the area of Access, Affordability, and Quality is to learn about the relationships among Quality First ratings, improved early childhood programs, and children's kindergarten readiness. (See Question 8 in the Section I sidebar, page 2, and in Attachment 4.) The Panel proposes two broad recommendations that consider the three main strategies in this area together.

Recommendation EV-1: Conduct an implementation study or studies that will enable First Things First to answer the following questions:

EV-1a. What is the fidelity of implementation of all components of Quality First, Coaching/Quality Improvement Plan, Child Care Health Consultation (CCHC), incentives, offset of licensing fees, instructional and other supports, scholarships, and T.E.A.C.H.? What are the profiles of the services received by providers, for example, what intensity of each service is received?

[2] For reference, in Attachment 5 we summarize the major types of studies that are referred to in this report.

[3] The Panel makes no recommendations with respect to Family, Friend, and Neighbor Care. Recommended studies focus on regulated or licensed programs and care.

EV-1b. What is the relation between Quality First components (CCHC, Coaching/Quality Improvement Plan, incentives, offset of licensing fees, instructional and other supports, scholarships, T.E.A.C.H.) and Quality First Star levels?

EV-1c. How different are the levels of quality by Star level, as measured by the environmental rating scales (ERS), Classroom Assessment Scoring System (CLASS), and Quality First point scale, and do Quality First cut scores measure meaningful differences between Star levels?

EV-1d. Are the levels of quality by Star level, as measured by the environmental rating scales (ERS), Classroom Assessment Scoring System (CLASS), and Quality First point scale, improving over time, and how do Quality First levels of quality compare with quality of programs that do not participate in Quality First?

Implementation refers to the activities that put a defined program (or a set of practices, or an intervention) into place. Levels of implementation affect the outcomes that programs are able to achieve. Following a conceptual framework (the logic models referred to in Section II and detailed in Attachment 2) describing the intended First Things First activities to be studied, an implementation evaluation creates plans for interviewing program participants, observing activities and interactions among providers and participants, and tabulating service data in participating communities.

In learning details about the extent to which, and how well, the critical elements of Quality First are implemented, First Things First will enable its Board and stakeholders to make informed decisions about future work in this strategy area. The implementation studies should collect data on factors that potentially influence implementation, including community variables, provider characteristics, characteristics of the service itself, the service's delivery system, specific practices and processes, staffing, and the service's support system (such as training and technical assistance). Understanding the implementation process is crucial for effectively replicating the services, programs, and strategies. In addition, when other studies examine child and family outcomes, the implementation studies will allow First Things First to better understand why particular outcomes were observed and provide insights into the steps that could be taken to improve implementation, and, therefore, future outcomes.

As First Things First addresses Question EV-1a, the Panel encourages First Things First to design the studies to learn about how the answers differ for subgroups of participants—including subgroups defined by scholarship status, children's ages, types of provider, attendance (dosage), tribal context, and children's demographics (including household income, special needs status, home language, and child English-language-learner status).

Although Question EV-1d is important for First Things First, the Panel recognizes that it will take time to implement. Therefore the Panel suggests that First Things First set a priority on beginning the planning and collection of relevant baseline data as the integrated database is being developed (see

Recommendation IN-4). Then, when it is appropriate to measure change over time and compare with non-Quality First programs, the necessary data will be available.

Recommendation EV-2: Conduct a study using implementation data obtained in connection with Recommendation EV-1 along with child outcome data to answer the following question:

EV-2a. How do child outcomes vary according to the Quality First Star levels of quality instruction received?

Using geographic and demographic information and appropriate statistical methods, this study could compare the school readiness outcomes of children who have similar demographic characteristics but who enrolled in diverse early care and education programs with different Quality First Star ratings. This study should be planned using rigorous quasi-experimental designs and appropriate data analytic techniques. Statistical power analyses taking into account the magnitude of effects in previous research should guide decisions about sample sizes. The Panel suggests that this study will necessarily come later, when readiness outcomes are available through a kindergarten developmental inventory administered statewide at kindergarten entry (see Recommendation IN-6).

To the extent feasible, the Panel encourages First Things First to design this quasi-experimental study so as to learn about how the answer to Question EV-2a differs for subgroups of participants, including subgroups defined by scholarship status, children's ages, types of provider, attendance (dosage), tribal context, and children's demographics (including household income, special needs status, home language, and child English-language-learner status).

As important as good quasi-experimental studies can be, the most convincing evidence for Quality First Star levels being responsible for child outcomes at kindergarten entry would come from a study that uses an experimental design. The Panel recognizes the logistic and political challenges associated with implementing such a design, but suggests that First Things First consider finding ways, to the extent feasible, to randomly assign children or programs to conditions that result in different Star level quality experiences. This might be possible in circumstances, for example, where not enough program slots are available to meet the community needs, and children could be selected using a lottery.

B. Recommendations for Learning About First Things First's Home Visitation Strategy

Unlike in the strategy area of Quality, Access, and Affordability, the Family Support area comprises three key strategies that can be related but are typically relatively distinct: Home Visitation, Family Resource Centers, and Parent Education Community-Based Training. Therefore, First Things First asked the Panel to recommend evaluation approaches for home visitation separately from the other two strategies.

First Things First-funded home visitation provides voluntary in-home services for infants, children, and their families, focusing on parenting skills, early physical and social development, literacy, health, and

nutrition. Programs also connect families to resources to support their child's health and early learning. Intended outcomes include parents becoming more responsive to the developmental needs of their young child, families developing a literacy-rich home environment, and families experiencing improved stability and the ability to provide a healthy, nurturing, safe home environment for their young children. The intended outcomes for children are that strong, nurturing, and positive relationships with family and peers will improve children's well-being and decrease risk factors. Children will develop age-appropriate cognitive, language, social-emotional and self-regulatory capacities.

First Things First has implemented evidence-based home visitation programs that can follow three national models: Nurse Family Partnership, Healthy Families America, and Parents as Teachers. Because evidence about the efficacy of these programs is available from other sources, the purposes of evaluation studies in the area of home visitation are to learn about the services and combinations of services children are receiving through home visiting and related services and how service receipt is related to identified child and family needs. A final purpose is to investigate which First Things First strategies, programs, or models are particularly effective, and how effectiveness is related to costs.

Recommendation EV-3: Conduct an implementation study or studies of home visitation programs that will enable First Things First to answer the following questions:

EV-3a. Are home visitation programs being implemented with fidelity to the evidence-based models they were designed to follow?

EV-3b. Does each home visitation program reach the intended families and hard-to-reach families?

EV-3c. What intensity of service (number of visits per year, duration of visits) is delivered in each model and is intensity linked to child and family needs?

Studying these home visitation programs requires collecting data on the process and procedures of conducting home visits and on the content, quality, and nature of the visits themselves. Data might include such factors as characteristics (qualifications, demographics) of the home visitors, background (demographics) of the children and families, and frequency and duration of home visits. Evidence-based model developers have created measures (such as checklists) of implementation fidelity, which should be used in accordance with the developers' procedures for documenting each of the three models. Content and procedures of the visits can be measured through reports by home visitors and/or observations by a trained third-party observer.

Recommendation EV-4: Conduct a quasi-experimental study of home visitation programs that will enable First Things First to learn the following:

EV-4a. Is the degree of fidelity of model implementation associated with children's school readiness outcomes?

As with Recommendation EV-2, the Recommendation EV-4 study requires a sample of children enrolled in diverse home visiting programs that have been implemented with varying levels of model fidelity. Statistical approaches are available that would enable First Things First to match children enrolled in programs with different degrees of fidelity and/or to statistically control for different levels of fidelity of implementation. The Panel suggests that this study will necessarily come later, when readiness outcomes are available through a kindergarten developmental inventory and detailed service data are available in the longitudinal data system.

As with Recommendation EV-2, a study addressing Question EV-4a could also, to the extent it is feasible, go beyond reliance on statistical controls and use a lottery to assign children or programs to conditions that result in different degrees of fidelity of implementing home visitation models. This approach is more rigorous and would yield more convincing findings.

C. Recommendation for Learning About First Things First's Family Resource Centers in the Context of Parent Education Community-Based Training and Home Visitation

First Things First-funded Family Resource Centers establish local resource centers and provide families with training, educational opportunities, and resources on how to support healthy child development. Family Resource Centers help families make the best choices for their children, with access to information that educates them about what to look for in quality programs and referrals to services and supports available in their community. Family Resource Centers do not have national evidence-based models to follow as in the case of home visitation; they also are implemented in just nine of the regions. Therefore, the Panel recommends an approach that intentionally selects potentially best or promising practices that may be clustered in diverse communities, documents and learns about the range of those practices, and considers exporting them to other locations to study their replicability.

The intended Family Resource Center outcomes are that families have information and supports on child development and behavior; families read books with their young children daily and incorporate language and literacy activities in their daily routines and interaction; more families experience a greater sense of community connectedness and reduced isolation; and families develop increased capacity to problem-solve and seek out appropriate resources when needed, thus increasing family stability.

Recommendation EV-5: Conduct a study or studies of the implementation of Family Resource Centers that will enable First Things First to address four main questions:

EV-5a. What is implemented in each Family Resource Center (which may be operating in the context of parent education and home visitation programs), what is its intensity, and to what extent is implementation consistent with First Things First standards of practice?

EV-5b. Do the Family Resource Centers reach their intended families, particularly those that are hard to reach and are service provision and referral efforts coordinated among and between home visitation, family resources center, and parent education programs?

EV-5c. Are the family resource services provided to families aligned with the families' needs?

EV-5d. What consistent Family Resource Center approaches, or models, are emerging that reflect best practices?

Studies to address these questions could follow one of two approaches, or both: (1) implementation studies that span many resource centers across all the regions in which this strategy is being implemented, with data collected on the activities of Family Resource Centers (following the conceptual framework in First Things First's logic model), tabulation of variables from the integrated database (see Recommendation IN-4 in Section III) to document services received by whom and when, and, potentially, interviews and/or observations by site visitors; (2) smaller-scale case studies of particular centers selected to reflect diversity of approaches, geographic areas, and populations served.

Answering 12c will involve determining whether families are able to find the services they need. One approach would be to conduct telephone or in-person interviews with parents, but it may be possible to obtain the data from the integrated database.

The Panel notes that First Things First has issued a Request for Proposals for a study in the area of Family Support; First Things First should use its judgment in deciding whether the Panel recommendations in this area require additional research or can be addressed in the context of the contract that will be underway by summer 2012.

D. Recommendation for Learning About Parent Education Community-Based Training

The third key Family Support Strategy, Parent Education Community-Based Training, supports and aligns with Family Resource Centers to provide families with the information, services, and other supports they need to help their children achieve their full potential. First Things First-funded Parent Education Community-Based Training provides classes on parenting, child development, and problem-solving skills. The intended family outcomes are that families have information and supports on child development and behavior; families read books with their young children daily and incorporate language and literacy activities in their daily routines and interaction; more families experience a greater sense of community connectedness and reduced isolation; and families develop increased capacity to problem-solve and seek out appropriate resources when needed, thus increasing family stability.

Because not much is currently known about existing parent education services across the regions where they are implemented, the Panel's recommendation suggests that First Things First focus on learning

what is occurring and whether models of best practices are emerging, as with the Family Resource Centers.

Recommendation EV-6: Conduct a study or studies of Parent Education Community-Based Training that will enable First Things First to address four main questions:

EV-6a. What is implemented by each parent education grantee (which may be operating in the context of Family Resource Centers and home visitation programs), what is its intensity, and to what extent is implementation consistent with First Things First standards of practice?

EV-6b. Do the parent education grantees reach their intended families, particularly those that are hard to reach, and are service provision and referral efforts coordinated among and between home visitation, family resources center, and parent education programs?

EV-6c. Is the parent education that is provided to families aligned with the families' needs?

EV-6d. What consistent parent education approaches, or models, are emerging?

Study approaches that First Things First could follow for addressing this recommendation are similar to those used in learning about Family Resource Centers, namely a multi-region implementation study or a series of case studies of carefully selected parent education providers.

E. Recommendations for Learning About First Things First's Strategies in the Area of Health

The Health area comprises five major strategies: Care Coordination/ Medical Home, Oral Health, Nutrition/ Obesity/ Physical Activity, Mental Health Consultation, and Child Care Health Consultation. Because the Child Care Health Consultation strategy is a required part of First Things First's Quality First model, it is assumed that those services will be studied in the context of Recommendations EV-1 and EV-2.

First Things First is devoting considerable effort (and funds) to strategies in the health area, and clear models of practice are emerging. It is important that First Things First learn more about its work in health; here the panel clusters a number of activities in two recommendations.

Recommendation EV-7: Use the integrated database to obtain information on the types of services First Things First is providing across the regions in the four major health strategies to answer this question:

EV-7a. What services and combinations of health services are children and families receiving?

The first priority for First Things First is to learn what services and combinations of services children and families are receiving, the extent to which service receipt relates to identified child and family needs,

and the cost of the services in these four strategies. Data could come from First Things First's integrated database or from schools, county and tribal agencies, or other geopolitical subdivisions. Such data might include maternal and child health statistics (such as premature births, birth weight, immunizations, results of health screenings, oral health screenings, developmental screenings, and prevalence of identified disabilities). In addition, the Panel recommends that First Things First review national research on effective practices in these areas and prepare research briefs or white papers that would translate nationally recognized practices into local programmatic approaches.

These data can be useful to First Things First in refining its standards of practice in the health area. It is also likely that First Things First could partner with existing systems (including national models or approaches) so as to identify models of practice, whether in connecting families to medical homes, providing more effective mental health consultations, designing programs that improve children's nutrition and physical health with possible obesity reduction, or having a greater impact on children's oral health.

Recommendation EV-8: Use the integrated database and other information as needed to answer the following questions:

EV-8a. To what extent are First Things First health services achieving the goal of connecting families with medical homes and increasing the coordination of care?

EV-8b. What is implemented by each care coordination/medical home grantee, what is its intensity, and to what extent is implementation consistent with First Things First standards of practice?

EV-8c. Do the care coordination/medical home grantees reach their intended families, particularly those that are hard to reach?

EV-8d. What consistent care coordination/medical home approaches, or models, are emerging?

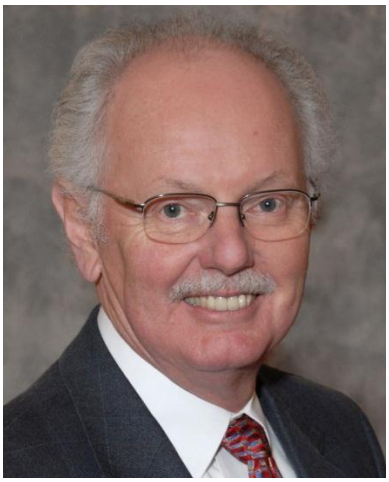
F. Recommendation Related to Issues that Span Strategies or Are Not Strategy-Specific

A number of issues in the early childhood programmatic areas implemented by First Things First are not specific to any particular strategy but rather apply to multiple strategies and programs and are important for First Things First's policy agenda. Prime examples include language acquisition for English-language (or dual-language) learners, professional development and teacher quality, and the need for preservation of native culture and languages in Arizona's tribal communities. In each of these areas, existing models or approaches are being applied both within Arizona and across the U.S., and the Panel suggests that Arizona-specific evaluation studies should not be a high priority for First Things First at this time. Rather, our recommendation is to lay the groundwork for possible studies First Things First could conduct in the future.

Recommendation EV-9: Obtain information on current approaches in language acquisition, professional development, and native language and culture preservation to establish the foundation for future evaluation studies.

In responding to this recommendation, First Things First could examine data in its integrated database (see Recommendation IN-4 in Section III) to learn about the extent and reach of activities and services related to these three topics across the state. In addition, recent (and current) national studies exist that can provide First Things First with guidance as to approaches, models, or standards of practice that could inform program implementation in First Things First regions and statewide. With greater knowledge of the nature and incidence of these activities, and their importance to First Things First stakeholders, specific evaluation studies could be designed in the future. In the area of language acquisition, the Panel suggests that First Things First accumulate information on best practices for working with children whose first language is not English.

Attachment 1: First Things First Early Childhood Research and Evaluation National Advisory Panel Member Biographies



John M. Love, Ph.D., Chair

John Love retired in June 2010 after 18 years with Mathematica Policy Research, where he was a senior fellow and area leader for early childhood research. He now provides consulting in early care and education research, program evaluation, and policy. He has been involved in teaching, research, and evaluation studies of programs for children birth to age 8 and their families since the mid-1960s. He began his program evaluation career in 1972 with a randomized evaluation of the Home Start Demonstration Program for what was then the Office of Child Development in the U.S. Department of Health, Education, and Welfare. He followed this with many multisite studies of Head Start programs (including studies of Project Developmental Continuity and Free to Grow), Early Head Start, child care, and prekindergarten programs. In the 1980s, he addressed issues in early childhood assessment through the Head Start Measures Project and a decade later participated in the planning phase of the Early Childhood Longitudinal Study-Kindergarten cohort. Dr. Love has been a key player in the EHS research and evaluation project, which began in 1995 and has continued through its prekindergarten and fifth-grade follow-up phases. The final report of the EHS study he directed was awarded a DHHS award for excellence in "Program Improvement 2002" because its "soundness of design, methodology, appropriateness of conclusions, and significance and usefulness of findings" created "outstanding potential for use by the larger health and human services community."

Recently, Dr. Love directed studies of the Los Angeles County First 5 Children and Family Commission's (First 5 LA's) universal preschool program, noteworthy for the highly diverse population it serves. He was a principal investigator for Mathematica's evaluation of the Bill & Melinda Gates Foundation's Early Learning Initiative in Washington state, and he directed a multisite experimental study of preschool curricula (PCER) funded by the Institute of Education Sciences in the U.S. Department of Education. He consults with Mathematica on its study of the Harlem Children's Zone early childhood programs and assists First 5 LA with meetings of its Research Advisory Committee. He serves on Secretary Sebelius's Head Start Research and Evaluation Advisory Committee and serves on the Board of ZERO TO THREE.

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W. Steven Barnett, Ph.D.

W. Steven Barnett is a Board of Governors Professor and Director of the National Institute for Early Education Research (NIEER) at Rutgers University. His research includes studies of the economics of early care and education including costs and benefits, the -term effects of preschool programs on children's learning and development, and the distribution of educational opportunities. Dr. Barnett earned his Ph.D. in economics at the University of Michigan. He has authored or co-authored over 160 publications including 16 books. Research interests include the economics of human development and practical policies for translating research findings into effective public investments. His best known works include: reviews of the research on long-term effects; benefit-cost analyses of the Perry Preschool and Abecedarian programs; randomized trials comparing alternative approaches to educating children including length of day, monolingual versus dual-language immersion, and the Tools of the Mind curriculum; and, the series of State Preschool Yearbooks providing annual state-by-state analyses of progress in public pre-K. Recent publications include “Effectiveness of early educational intervention” in the journal Science and “Four reasons the United States should offer every child a preschool education” in The pre-k debates: current controversies and issues from Brookes Publishing, edited by Edward Zigler, Walter Gilliam, & Steven Barnett.

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Clancy Blair, Ph.D.

Clancy Blair is a developmental psychologist who studies self-regulation in young children. His primary interest concerns the development of cognitive abilities referred to as executive functions and the ways in which these aspects of cognition are important for school readiness and early school achievement. He is also interested in the development and evaluation of preschool and elementary school curricula designed to promote executive functions as a means of preventing school failure.

In 2002, Blair and his colleagues at Penn State University and at the University of North Carolina at Chapel Hill received funding from the National Institute of Child Health and Human Development for a longitudinal, population-based study of family ecology and child development beginning at birth. In his part of the project, Blair is examining interaction between early experiential and biological influences on the development of executive functions and related aspects of self-regulation.

Ultimately, Blair and his colleagues plan to follow this sample through the school years and into young adulthood. Prior to coming to NYU, Blair spent ten years as an assistant and then associate professor in the department of Human Development and Family Studies at Penn State. He received his doctorate in developmental psychology and a master's degree in public health from the University of Alabama at Birmingham in 1996.

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Noel A. Card, Ph.D.

Dr. Card's research and teaching is at the interface between developmental science and quantitative methodology. It pursues three broad goals: to improve understanding of child and adolescent social development; to advance methods of quantitative analysis based on the unique research questions relevant to developmental science; and to promote the use of the best quantitative techniques.

Dr. Card's research focus is to advance basic scientific understanding of human development to better inform prevention and intervention efforts. His research specifically promotes understanding of child and adolescent peer relations and aggression. His quantitative research attempts to improve the tools for scientific understanding of human development more generally. His areas of expertise include:

- Child and adolescent aggression and victimization
- Child and adolescent peer relations
- Longitudinal modeling of developmental processes
- Analysis of interdependent (e.g., dyadic, small group) data
- Meta-analysis

Dr. Card's Current Projects include:

- Who aggresses against whom, and how?: Forms and functions of aggressor-victim relationships during early adolescence (PI, National Institutes of Health)

- The emergence of cyberbullying from middle childhood through adolescence: A prospective longitudinal study (co-PI with Sheri Bauman, National Science Foundation).

- Consultant on six additional grants (total funding approximately $9 million).

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Greg Duncan, Ph.D.

Greg Duncan comes to the University of California, Irvine from Northwestern University, where he served as the Edwina S. Tarry Professor in the School of Education and Social Policy and Faculty Affiliate in the Institute for Policy Research. He spent the first 25 years of his career at the University of Michigan working on and ultimately directing the Panel Study of Income Dynamics (PSID) data collection project. He has published extensively on issues of income distribution, child poverty and welfare dependence. He is co-author with Aletha Huston and Tom Weisner of *Higher Ground: New Hope for the Working Poor and Their Children* (2007) and co-editor with Lindsay Chase Lansdale of *For Better and For Worse: Welfare Reform and the Well-Being of Children and Families* (2001). With Jeanne Brooks-Gunn, he co-edited two books on neighborhood poverty and child development: *Consequences of Growing up Poor* (Russell Sage, 1997) and the two-volume *Neighborhood Poverty* (Russell Sage, 1997), which was also co-edited with Lawrence Aber. The focus of his recent research has shifted from these environmental influences to the comparative importance of the skills and behaviors developed during childhood. In particular, he has sought to understand the relative importance of early academic skills, cognitive and emotional self-regulation, and health in promoting children's eventual success in school and the labor market.

Duncan was elected president of the Population Association of America for 2007-08 and president of the Society for Research in Child Development for 2009-2011. He was elected to the American Academy of Arts and Sciences in 2001 and to the National Academy of Sciences in 2010.

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Claude Goldenberg, Ph.D.

Claude Goldenberg's areas of research and professional interest center on promoting academic achievement among language minority children and youth. A native of Argentina, Goldenberg is currently Professor of Education at Stanford University. He was previously at California State University, Long Beach, where he was Professor of Teacher Education, Associate Dean of the College of Education, and Executive Director of the Center for Language Minority Education and Research (CLMER).

Goldenberg received his A.B. in history from Princeton University and M.A. and Ph.D. from Graduate School of Education, UCLA. He has taught junior high school in San Antonio, TX, and first grade in a bilingual elementary school in the Los Angeles area.

Dr. Goldenberg has published extensively; his most recent books include *Promoting Academic Achievement among English Learners: A Guide to the Research*, co-authored with Rhoda Coleman (Corwin, 2010) and *Language and Literacy Development in Bilingual Settings*, co-edited with Aydin Durgunoglu (Guilford, 2010). His other publications have appeared in academic and professional journals, and he has also served on the editorial boards of Language Arts, The Elementary School Journal, Reading Research Quarterly, American Educational Research Journal, and Literacy, Teaching and Learning. His current projects focus on improving literacy achievement among English learners in elementary and middle school, language and literacy development among Mexican children in Mexico, and development of a measure of classroom quality for English learners.

Goldenberg was on the National Research Council's Committee for the Prevention of Early Reading Difficulties in Young Children and on the National Literacy Panel, which synthesized research on literacy development among language-minority children and youth.

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Neal Halfon, MD, MPH

Neal Halfon, MD, MPH is director of the UCLA Center for Healthier Children, Families and Communities. He is also a professor of pediatrics in the David Geffen School of Medicine at UCLA, health services in the UCLA School of Public Health, and policy studies in the UCLA School of Public Affairs. He served as a member of the Board on Children Youth and Families at the Institute of Medicine and National Research Council from 2001-2006. He also served on the IOM Committee on Child Health that produced the 2004 report Children's Health the Nation's Wealth. Dr. Halfon is the Principal Investigator for the Los Angeles and Ventura Study Center for the National Children's Study and serves on the study's steering committee. The Ambulatory Pediatric Association awarded Dr. Halfon its annual Research Award in recognition of his lifetime achievement in the field of pediatric research in 2006.

Dr. Halfon's research has spanned clinical, health services, epidemiologic and health policy domains. This includes studies focused on trends in childhood chronic illness and disability; and range of studies focused on improving and transforming the child health system that address issues of access to health insurance and care; quality of health care and developmental services; and the provisions of preventive services.

For more than a decade, Dr. Halfon has worked with national, state, and local initiatives aimed at improving early childhood systems. This has included policy and program work at the national level (US, Canada, England, and Australia), state and local level. He is currently directing the W.K. Kellogg funded TECCS (Transforming Early Childhood Community Systems) Initiative, a collaborative venture with United Way Worldwide that is facilitating the use of community based improvement systems in cities and countries across the US.

Dr. Halfon has also played a significant role in developing new conceptual frameworks for the study of health and health care, including the Life Course Health Development (LCHD) framework. A major focus of Dr. Halfon's recent policy work has been on national health care reform. He currently directs the "Blue Sky Initiative", focused on changing the US Policy discussion on health reform—from an incremental approach to expanding coverage to medical care to a transformational approach with the goal of re-engineering the health care system to optimize the health of the US Population.

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Dawn M. Mackety, Ph.D.

Dawn M. Mackety is NIEA's Director of Research, Data, and Policy. Dr. Mackety has extensive experience conducting education research, evaluation, program development, and technical assistance in community and educational settings, including Native education settings. Her work at NIEA focuses on furthering NIEA's mission through educational research, data collection and analysis, and national policy advancement. She leads NIEA's efforts to inform a national Native education research agenda, provides research based data to inform national policy recommendations and decisions, and serves as an expert advisor on several national Native research collaborations and projects. She also speaks across the country about Native education issues including tribal education departments, culturally based education, family and community engagement, academic achievement, graduation, and indigenous research designs.

Prior to NIEA, Dr. Mackety was a Principal Researcher at Mid-continent Research for Education and Learning (McREL) where she planned, designed, and managed applied education research and evaluation projects. Her work included a series of studies on Native American education topics for the Central Regional Educational Laboratory at McREL and technical assistance for the North Central Comprehensive Center at McREL. Prior to McREL Dr. Mackety served as the Michigan State University Extension Service's liaison to Native American communities throughout the state facilitating collaborations and conducting research, evaluations, and technical assistance. In this role Dr. Mackety worked with tribal leaders and Extension staff to improve their collective abilities to conduct needs assessments and deliver culturally based educational programs and services to tribes and their youth and adult members. Dr. Mackety is an enrolled member of the Little Traverse Bay Bands of Odawa Indians in Michigan.

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Pamela Powell, Ed.D.

Dr. Powell spent over two decades as an elementary school teacher prior to arriving at Northern Arizona University. Currently, she is dedicated to helping pre-service teachers learn to utilize current, inclusive, and developmentally appropriate practices in their classrooms, which promote better learning for all students.

Dr. Powell received her B.S. from Texas Tech University in Elementary Education with a physical education specialization, her Master's Degree from Arizona State University in Elementary Education, with a specialization in reading, and a doctorate from Northern Arizona University in Curriculum and Instruction, with a focus on Early Childhood Education.

As an Associate Professor of Literacy and Early Childhood in the NAU College of Education, Dr. Powell participates in NAU's Early Childhood Task Force, teaches courses in early childhood education and literacy, and is an active member of the Commission on Disability, Access and Design, and the Commission on the Status of Women.

In addition, she is very involved in the promotion of quality early learning opportunities for all children in the state of Arizona and our nation. She helped develop summer conferences and institutes in the NAU College of Education for early childhood educators across the state, which have provided a venue for continued conversation regarding quality early learning environments. She also is Northern Arizona AEYC's policy chair, AzAEYC Board's member at large, and participates on various early childhood committees and taskforces at NAU, in the Flagstaff community, and the state of Arizona.

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Eva Marie Shivers, J.D., Ph.D.

Eva Marie Shivers, J.D., Ph.D. is the director of the Institute for Child Development Research & Social Change, a non-profit action research firm at the Indigo Cultural Center, which focuses on the developmental niche of child care to explore and understand families' culturally adaptive responses to poverty and social injustice. She has served as Principal Investigator on many child care studies that involve collaborating with community agencies. Dr. Shivers received her Ph.D. from UCLA, Psychological Studies in Education, where she studied with Dr. Carollee Howes. Dr. Shivers also holds a law degree from Howard University School of Law in Washington, D.C.

Prior to relocating to Arizona, Dr. Shivers was a faculty member in the School of Education at the University of Pittsburgh. She received her Ph.D. in Applied Developmental Psychology from UCLA's Department of Education. Dr. Shivers also holds a law degree from Howard University School of Law, and a BA in English Literature from Arizona State University.

Her research interests include: child care workforce issues; provider-child attachment relationships in child care; and other child care issues involving race, culture and family sensitive care.

Dr. Shivers, a Zero to Three Leadership Fellow (Class 2005) also serves as faculty in the Harris Infant and Early Childhood Mental Health Training Institute at Southwest Human Development.

She is currently working on a federally funded grant to study the effect of cultural continuity between home and school on young children's transition to kindergarten. For the past seven years, Dr. Shivers also provides child care policy consultation on Family, Friend and Neighbor child care issues and Culture and Diversity in child care issues to national, state and local government agencies and administrators throughout the country.

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Catherine Elizabeth Snow, Ph.D.

Catherine Snow is the Patricia Albjerg Graham Professor of Education at the Harvard Graduate School of Education. She received her Ph.D. in psychology from McGill and worked for several years in the linguistics department of the University of Amsterdam. Her research interests include children's language development as influenced by interaction with adults in home and preschool settings, literacy development as related to language skills and as influenced by home and school factors, and issues related to the acquisition of English oral and literacy skills by language minority children. She has co-authored books on language development (e.g., *Pragmatic Development* with Anat Ninio) and on literacy development (e.g., *Unfulfilled Expectations: Home and School Influences on Literacy*, with W. Barnes, J. Chandler, I. Goodman & L. Hemphill), and published widely on these topics in referred journals and edited volumes.

Snow's contributions to the field include membership on several journal editorial boards, co-directorship for several years of the Child Language Data Exchange System, and editorship of Applied Psycholinguistics. She served as a board member at the Center for Applied Linguistics and a member of the National Research Council Committee on Establishing a Research Agenda on Schooling for Language Minority Children. She chaired the National Research Council Committee on Preventing Reading Difficulties in Young Children, which produced a report that has been widely adopted as a basis for reform of reading instruction and professional development. She served on the NRC's Council for the Behavioral and Social Sciences and Education, and as president of the American Educational Research Association.
A member of the National Academy of Education, Snow has held visiting appointments at the University of Cambridge, England, Universidad Autonoma in Madrid, and The Institute of Advanced Studies at Hebrew University in Jerusalem, and has guest taught at Universidad Central de Caracas, El Colegio de Mexico, Odense University in Denmark, and several institutions in The Netherlands.

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Eugene W. Thompson, Ed.D.

A son of the Motor City, once recognized as "One of the Top 100 School Executives in America," Dr. Thompson has led school systems everywhere from Alaska to Alabama. Born and raised in Detroit, Dr. Thompson attended the Detroit Public Schools, where he was active in leadership as a high school athlete, Boy Scout and church youth leader.

After graduating from Western Michigan University with a B.A. in elementary education, he began his career in the Detroit suburbs as a fourth grade teacher. Following his graduation with a master's degree from the University of Michigan, he was promoted to elementary school principal. After earning his doctorate from Western Michigan University, he moved to leadership roles including: Director of Curriculum, Director of Research and School District Superintendent in Alaska, Alabama, Indiana and Michigan. He has also served as a university administrator and professor at the University of Alabama at Birmingham, Bowling Green (OH) State University and Western Michigan University.

During his career Thompson was recognized as "One of the Top 100 School Executives in America" by The Executive Educator, for his work leading the quality improvement program of the Manchester (MI) Community Schools.

While serving as a university professor, Thompson formed a consulting company, Saturn International Education Group. He has worked for the United States Department of State and the Southern Association of Colleges and Schools, providing assistance to schools throughout Latin America, Africa and Asia. His work on behalf of American Overseas Schools continues.

Dr. Thompson is serving a 6-year term on the First Things First Board ending on January 21, 2013.

Attachment 2: First Things First Logic Model

Logic Model Guide

A logic model can be defined as a map that graphically displays programmatic planning and impact. A logic model summarizes key program elements; gives the rationale behind activities; clarifies intended outcomes; and acts as a communication tool.[4] According to the W. K. Kellogg Foundation, the five basic components of a logic model are: *Resources* (dedicated to or consumed by the program), *Activities* (what the program does with the inputs to fulfill its mission), *Outputs* (direct products of program activities), *Outcomes* (benefits for participants during and after program activities), and *Goals* (desired long term results of the program).[5]

This packet contains 13 FTF draft logic model documents: this guide, three overarching models, and nine logic sub-models. The *Overall Logic Model* is a graphical depiction of how the logic models described below function together and show impact on kindergarten readiness. The nine sub-models provide additional detail on FTF strategies and are indicated in the *Overall Logic Model* by a "**". The components of the sub-models are: Strategies, Activities, Key Outputs, Short-term Outcomes, Intermediate Outcomes, and Long-term Outcomes.

FTF's Overarching Logic Models (3):

1. *Model of Change* – Presents the most general overview of FTF activities and impacts in the early childhood system in Arizona.
2. *System Processes and Outcomes* – Identifies overall system resources and FTF and early childhood partners' roles in leadership and infrastructure. Components are: resources, assumptions, activities, and system outcomes.
3. *Overall Logic Model* – colored flowchart – Graphical depiction of how the logic sub-models described below function together and show impact on kindergarten readiness.

Key for the ***Overall Logic Model*** (colored flowchart):

- Read model from bottom to top
- Brackets indicate that components below are related to all components immediately above
- Arrows denote logical sequencing
- Double asterisks (**) represent that additional detail can be found in the sub-models

[4] National Network of Libraries of Medicine: http://nnlm.gov/outreach/community/logicmodel.html

[5] *Logic Model Development Guide*, W. K. Kellogg Foundation, October 2000 (1-800-819-9997; item #1209).

- Broken lines (---) indicate a logical relationship across program areas
- Diamonds = School Readiness Indicators 2 through 10
- Blue = Family Support
- Purple = Early Learning
- Light Blue = Child Health
- Green = Child Readiness

Logic Sub-Models (9): FTF's Funded Strategies, Activities, Outputs, and Outcomes:

Key for the *Logic Sub-Models*:

- Read models from left to right
- Arrows denote logical sequencing
- Key Outputs represent the FTF Targeted Service Units (TSUs)
- Single asterisks (*) indicate over 2 million in funding

Early Learning

4. *Early Childhood Education (ECE/Quality Access)* – Includes FTF strategies that expand regulated early care and education, increase quality and regulation in Family Friend and Neighbor, and facilitate the transition to kindergarten.
5. *Early Learning Professional Development (PD)* – FTF strategies that address the continuous professional development and education of caregivers and teachers of young children.
6. *Quality First (QF)* –FTF strategy to increase access to quality early learning opportunities that will help kids arrive at kindergarten ready to succeed. Quality child care settings include: safe, healthy environments; highly educated teachers; classrooms and materials that stimulate kids at different stages of learning; and appropriate staff-to-child ratios so that kids get the attention and support they need.

Family Support Services

7. *Level I Family Support: Universal* – Services provided to, or routinely available to, all children birth to five and their families; designed to support healthy development in children, parents, and families.
8. *Level II Family Support: Intermediary* – Bridging services designed to facilitate strong family relationships, family connectedness within neighborhoods, and access to community-based health and educational services.
9. *Level III Family Support: Intensive* –Services designed to meet the needs of families with acute, complex, or high level needs that would otherwise be at great risk of poor health, developmental, and educational outcomes.

Health

10. *Improving Access to Health Care* – FTF services to improve: the number of children with continuous health services and insurance, access to the health care system, and early identification and appropriate support and care for children with special needs.
11. *Prevention Services* – FTF services to improve: health for all children, use of dental homes, early identification of developmental and adaptive delays.
12. *Health Professional Development* – FTF strategies that address continuous professional development for those who support the health of young children.

<table>
<tr><th>If We:</th><th>We Create:</th><th>Resulting In:</th><th>Achieving:</th></tr>
<tr><td>Develop and fund high quality services for children and families that are necessary but not yet available</td><td rowspan="3">Coordinated, high-quality service system for young children</td><td>Early Learning
All children have access to high quality, culturally responsive early care & education.</td><td rowspan="6">All Arizona’s children are ready to succeed in school and in life.</td></tr>
<tr><td>Strengthen already existing high quality services for children</td><td>Family Support/Literacy
All families have the information, services & supports they need to help children achieve their fullest potential.</td></tr>
<tr><td>Partner to build a system of early childhood services and information for families</td><td>Early Childhood Professional Development
All child care/education & health professionals are well prepared, highly skilled and compensated commensurate with their education & experience.</td></tr>
<tr><td rowspan="3">Lead through the synergy of statewide and local strategic planning

Harness data and technology to build infrastructure and support data-based decision making and accountability

Shift the brand and awareness of early childhood in Arizona</td><td rowspan="3">Leadership capacity and infrastructure to create and sustain the high-quality service system</td><td>Health
All children have access to high quality preventive & continuous health care to promote physical, mental, oral and nutritional health.</td></tr>
<tr><td>Early Childhood System
The early childhood system is high quality, child & family centered, coordinated, integrated & comprehensive.</td></tr>
<tr><td>Public Awareness
All Arizonans understand the importance of the early years & recognize the influence of early childhood development, health & education on Arizona’s economy & quality of life and, as a result, substantially support early childhood development, health, and education both politically and financially.</td></tr>
</table>

First Things First
Logic Model—System Processes and Outcomes

Processes

Outcomes

1. Resources

- Authorizing legislation – voter approved initiative establishing: dedicated funding source, governance structure, and delivery system.
- Additional state, federal, philanthropic, private, and local funding sources enabled for early childhood services and activities.
- Existing partners: Dedicated and committed groups, individuals, and organizations working on behalf of children and families.
- Strong government to government relations with Arizona's tribes.
- Diverse Families committed to the well-being of Arizona's children.
- Accurate and timely data on the needs and assets of children and families in local communities.

2. Assumptions

- Continuous improvement and innovation throughout the early childhood system is necessary to maximize benefits to children and their families.
- Coordination and economies of scale are necessary to optimize use of resources.
- Competitive grant processes based on state and local strategic planning optimize efficiency and effectiveness in service provision.
- Synergy of local and statewide strategic planning is necessary to maximize innovation and flexibility as well as consistency and scope.
- Strategic planners must have high-quality information the needs of children and families to make the best decisions in resource allocation.
- Educational efforts to increase Arizonans' knowledge of the importance of early childhood leads to support for children's issues.
- Educational Efforts to increase policymakers' knowledge of the importance of early childhood leads to support for children's issues and maintenance of FTF funding.

3. Activities

- FTF funds and implements high quality, child and family centered, coordinated, integrated early childhood services.
- FTF convenes partners, provides leadership, and contributes funding for efforts to increase public awareness of and support.
- FTF convenes partners, provides leadership, and contributes funding for the conceptualization and implementation of a high quality, child and family centered, coordinated, integrated, and comprehensive early childhood system.
- FTF provides leadership in the evaluation of the early childhood system and collaborates with partners to utilize the results to foster continuous improvement.
- FTF provides leadership to increase the quality, completeness and availability of data for decision making.
- FTF secures, coordinates, and advocates for resources required to develop and sustain the early childhood system.

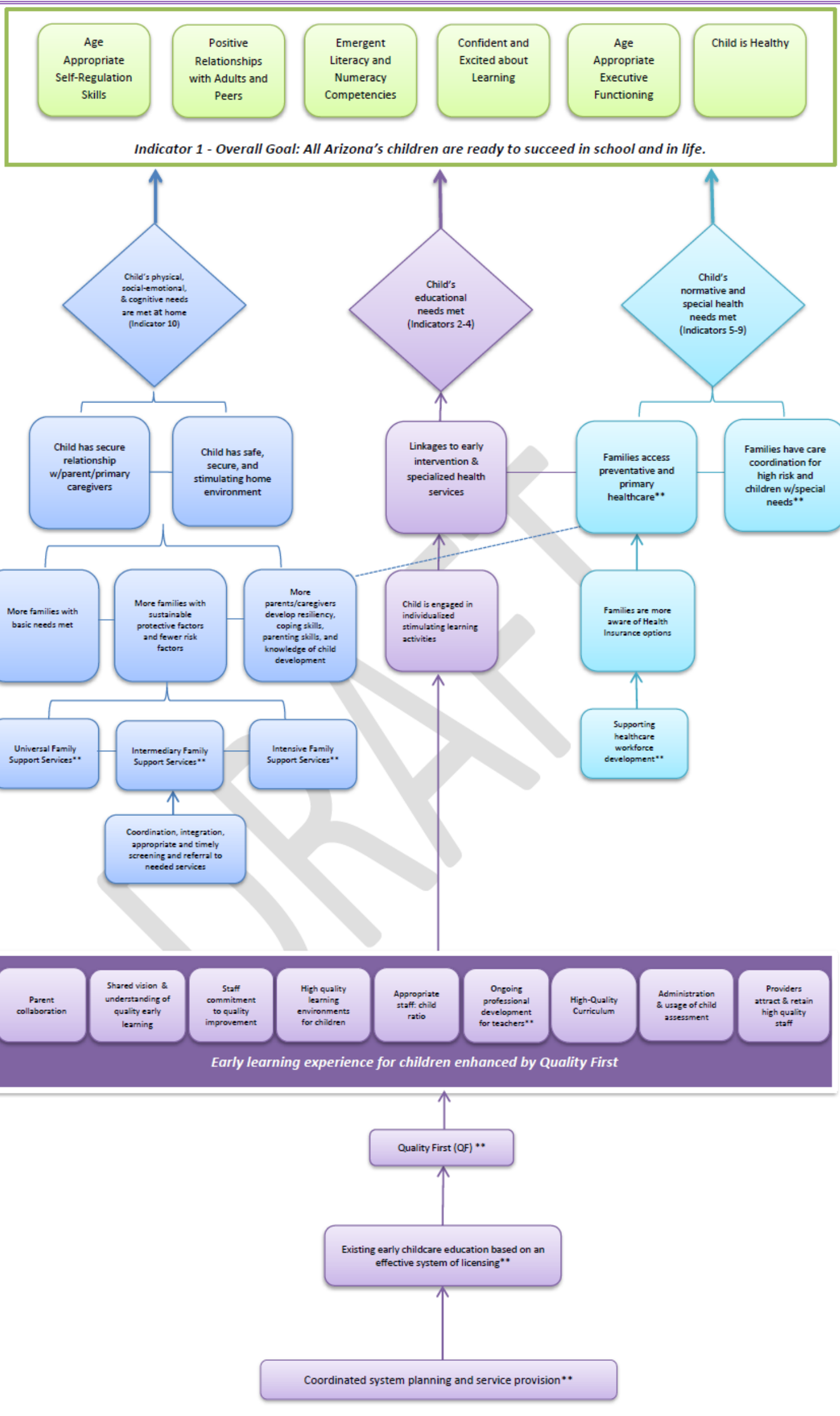
4. System Outcomes

- All children have access to high quality, culturally responsive early care & education.
- All families have the information, services & supports they need to help children achieve their fullest potential.
- All child care/education & health professionals are well prepared, highly skilled and compensated commensurate with their education & experience.
- All children have access to high quality preventive & continuous health care to promote physical, mental, oral and nutritional health.
- The early childhood system is high quality, child & family centered, coordinated, integrated & comprehensive.
- All Arizonans understand the importance of the early years & recognize the influence of early childhood development, health & education on Arizona's economy & quality of life and, as a result, substantially support early childhood development, health, and education both politically and financially.

Overall Assumptions:

1. High quality early care and education contributes to the overall health and economic well-being of society.
2. The early childhood system is vast and complex; FTF has critical roles as a funder, change agent, and collaborator. We are a Partner among partners with agencies and organizations that each has a key role in providing services.

Context: FTF operates within the context of federal and state policies which guide and enable available services for children and families.


Age Appropriate Self-Regulation Skills
Positive Relationships with Adults and Peers
Emergent Literacy and Numeracy Competencies
Confident and Excited about Learning
Age Appropriate Executive Functioning
Child is Healthy
Indicator 1 - Overall Goal: All Arizona's children are ready to succeed in school and in life.
Child's physical, social-emotional, & cognitive needs are met at home (Indicator 10)
Child's educational needs met (Indicators 2-4)
Child's normative and special health needs met (Indicators 5-9)
Child has secure relationship w/parent/primary caregivers
Child has safe, secure, and stimulating home environment
Linkages to early intervention & specialized health services
Families access preventative and primary healthcare**
Families have care coordination for high risk and children w/special needs**
More families with basic needs met
More families with sustainable protective factors and fewer risk factors
More parents/caregivers develop resiliency, coping skills, parenting skills, and knowledge of child development
Child is engaged in individualized stimulating learning activities
Families are more aware of Health Insurance options
Universal Family Support Services**
Intermediary Family Support Services**
Intensive Family Support Services**
Supporting healthcare workforce development**
Coordination, integration, appropriate and timely screening and referral to needed services
Parent collaboration
Shared vision & understanding of quality early learning
Staff commitment to quality improvement
High quality learning environments for children
Appropriate staff: child ratio
Ongoing professional development for teachers**
High-Quality Curriculum
Administration & usage of child assessment
Providers attract & retain high quality staff
Early learning experience for children enhanced by Quality First
Quality First (QF) **
Existing early childcare education based on an effective system of licensing**
Coordinated system planning and service provision**

First Things First
Logic Model: Early Learning – Other ECE Quality/Access

Processes

1. Strategies

1.1 Expansion: Infant-Toddler or Capital Expense

1.2 *Family, Friend & Neighbor Care

1.3 Summer Transition to Kindergarten

2. Activities

2.1 Recruitment of new or existing providers to increase services for children, including financial and other supports for planning, licensing or certification and facility renovation and improvement.

2.2 Supports provided to family, friend and neighbor (FFN) caregivers to improve quality, including training and financial resources.

2.3 First time classroom experiences for children who are about to begin kindergarten and information to their parents.

Outcomes

3. Key Outputs

3.1 Increased number of early care and education and increased slots for children in regulated care.

3.2 Support, training and financial supports given to FFN providers.

3.3 Number of children without preschool experience who are served in summer transition programs.

4. Short-term Outcomes

4.1 Increased supply and quality of early care and education programs which are state/tribal licensed or certified.

4.2 Improved quality of care and education in unregulated early care settings.

4.3 Children without preschool experience are more familiar with classroom routines and families are better informed about the transition to kindergarten.

5. Intermediate-term Outcomes

5.1 Increased supply and quality of early care and education programs which meet the needs of families and children.

5.2 Children receive improved quality of care and education in unregulated early care settings.

5.3 Children without preschool experience are more prepared for kindergarten success, and families are more involved in the transition.

6. Long-term Outcomes: Child

Children demonstrate school readiness at kindergarten entry in the developmental domains of social-emotional, language and literacy, cognitive, and motor and physical.

Assumptions: 1) All early learning strategies must be interwoven in order to produce child outcomes; 2) Quality and access/affordability are inseparable and must be addressed in a quality improvement and rating system such as Quality First; 3) Additional sources of funding beyond FTF will be required to ensure that every early care and education program applying for Quality First can participate; 4) During the next two years as quality ratings are implemented a validation study on the QF Points Scale and Rating Scale will be required; 5) Child outcomes will be shown to be directly linked to domains within the CLASS tool, specifically the instructional support domain.

Context: 1) Other than the small number of nationally accredited programs, Arizona programs have not been assessed or held to quality standards; 2) Quality is being just beginning to be defined through Quality First; 3) FTF has developed linkages among and between all funded quality, access and professional development strategies that form the early childhood system; 4) Arizona currently does not have a measure to determine readiness at kindergarten, though it is under discussion by a consortium of education agencies and leaders.

First Things First
Logic Model: Early Learning Professional Development

Processes

Outcomes

1. Strategies

1.1 Recruitment into the Field

1.2 T.E.A.C.H. Professional Scholarships

1.3 Scholarships: Non-TEACH

1.4 Community Based Professional Development – Early Childhood Education

1.5 Professional REWARD$

2. Activities

2.1 Recruits new early care and education professionals by providing educational opportunities in high school and thereafter.

2.2 Provides scholarships for higher education and credentialing to early care and education staff.

2.3 Provides scholarships for higher education and credentialing to early care and education staff.

2.4 Provides quality continuing education and training in community settings to early care and education staff.

2.5 Improves retention of early care and education professionals through financial incentives linked to increased education and credentials.

3. Key Outputs

3.1 Number of participants recruited and enrolled in coursework.

3.2 Number of professionals receiving T.E.A.C.H. Scholarships.

3.3 Number of early care professionals receiving scholarships.

3.4 Number of participating professionals.

3.5 Number of incentives distributed to professionals.

4. Short-term Outcomes: Professional

4.1 Increased number and quality of candidates entering early childhood preparation programs and workforce.

4.2 Increased number of professionals enrolled in degree granting/ credentialing programs.

4.3. Increased number of professionals enrolled in degree granting/credentialing programs.

4.4 Increased number of professionals participating in community-based, high-quality continuing professional development.

4.5 Increased compensation for early care and education professionals who achieve higher levels of education and credentials.

5. Intermediate-term Outcomes: Professional

5.1 Number and quality of candidates with high-quality early childhood preparation is adequate for workforce needs.

5.2 Increased number of individuals receiving professional degrees and the education and skills these degrees provide.

5.3 Increased number of individuals receiving professional degrees and the education and skills these degrees provide.

5.4 Increased number of individuals enrolled in continuing education and improving their skills for working with young children.

5.5 Increased retention of highly qualified and skilled early care and education professionals.

6. Long-term Outcomes: Child

Through interaction with highly qualified, skilled professionals, children demonstrate school readiness at kindergarten entry in the developmental domains of social-emotional, language and literacy, cognitive, and motor and physical.

Assumptions: 1) Providing access through financing and other supports to raise the educational qualifications of ECE staff will increase the quality of early care and education, eventually producing more positive child outcomes; 2) There must be a unified system of supports to build an educated and skilled early childhood workforce, including accessible, affordable pre-service training, higher education degree programs and continuing community-based professional development; 3) Higher education must be rewarded with commensurate compensation in order to retain highly qualified professionals in early care and education.

Context: 1) The early care and education workforce is not universally viewed as a profession – both internally and externally; 2) Current low numbers of ECE workforce with a credential or degree is low (<30%); 3) Licensing requirements for educational qualifications and ongoing professional development are minimal; 4) July 1, 2012 deadline for public school preschool and kindergarten teachers to become ECE certified is likely to pull highly qualified credentialed preschool teachers into kindergarten classes; 5) There is a lack of a comprehensive ECE PD system in the state – no common core coursework, consistent articulation between higher education degree programs or clear pathways; 6) Arizona has no professional development registry system to keep track of staff qualifications, pre-service education and credentials, and continuing in-service professional development.

First Things First
Logic Model
Early Learning - Quality First

Processes

1. Strategies

* Quality First, Arizona's voluntary Quality Improvement and Rating System, is designed to strengthen our state's regulated early care and education programs by establishing a standard for quality care, helping providers meet that standard, and sharing information with the community.

Using nationally-developed performance criteria, Quality First helps developing programs improve, and provides an important resource for families.

2. Activities

2.1 Coaching

2.2 Incentives

2.3 Assessment

2.4 *Child Care Health Consultation

2.5 *Mental Health Consultation

2.6 Inclusion of Children with Special Needs

2.7 *Scholarships for children – Child Care/PreK

2.8 Scholarships for Staff – T.E.A.C.H.

Outcomes

3. Key Outputs

3.1 Individualized guidance and support through on-site visits with targeted training and technical assistance.

3.2 Financial assistance to QF providers to support purchasing of materials, equipment and professional development.

3.3 Valid and reliable assessment tools for program evaluation that focus on the environment & adult-child interactions.

3.4 On-site and telephone guidance and consultation, offering staff training on health and safety issues.

3.5 Consultation on-site and through telephone support for staff to address children's social-emotional developmental needs.

3.6 Specialized services to support inclusive practices for children with developmental needs.

3.7 Financial assistance through scholarships for children at QF sites based on program size and star rating.

3.8 Financial assistance through scholarships for staff at QF sites pursuing higher education.

4. Short-term Outcomes

4.1 Quality Improvement and Rating plans developed to support improved practice.

4.2 Incentives support overcoming barriers to quality improvement.

4.3 Coaching intensity levels determined to define level of support.

4.4 Supports offered in CCHC consultation models based on needs of the program.

4.5 Support for responsiveness to children's mental health needs.

4.6 Increased staff awareness of and preparedness for including children with identified developmental needs.

4.7 Scholarships are available to families based on program rating.

4.8 Continuing education scholarships offered to program staff.

5. Provider/Professional Outcomes Intermediate-term

5.1 Overall program quality increased, enhancing ability to meet children and family needs.

5.2 Improved supply of equipment and materials to support quality.

5.3 Star rating demonstrates a commitment to quality early care and education.

5.4 Improved health and safety practices.

5.5 Increased teacher sensitivity to and preparedness for the mental health needs of children and improved behavior management.

5.6 Improved inclusion of special needs children in quality, appropriate early education activities.

5.7 Scholarships offset the increased cost of high quality education so that quality care remains accessible for all families.

5.8 Increased education and knowledge of early care and education of staff members.

6. Child Long-term Outcomes

Children demonstrate school readiness at kindergarten entry in the developmental domains of social-emotional, language and literacy, cognitive, and motor and physical.

Assumptions: 1) All early learning strategies must be interwoven in order to produce child outcomes; 2) Quality and access/affordability are inseparable and must be addressed in a quality improvement and rating system such as Quality First; 3) Additional sources of funding beyond FTF will be required to ensure that every early care and education program applying for Quality First can participate; 4) During the next two years as quality ratings are implemented a validation study on the QF Points Scale and Rating Scale will be required; 5) Child outcomes will be shown to be directly linked to domains within the CLASS tool, specifically the instructional support domain.

Context: 1) Other than the small number of nationally accredited programs, Arizona programs have not been assessed or held to quality standards; 2) Quality is being just beginning to be defined through Quality First; 3) FTF has developed linkages among and between all funded quality, access and professional development strategies that form the early childhood system; 4) Arizona currently does not have a measure to determine readiness at kindergarten, though it is under discussion by a consortium of education agencies and leaders.

First Things First
Logic Model
Level I Family Support: Universal

Processes

1. Strategies

1.1 Parent Outreach, Awareness & Media

1.2 Warmline

1.3 Newborn Follow-Up

1.4 Arizona Parent Kit

2. Activities

2.1 Parent outreach and education via workshops and resource distribution; facilitate FTF branding, earned & paid media opportunities and distribution.

2.2 Provide advice and information on child development to families through a free phone line staffed by child development specialists.

2.3 Provide families with one postnatal home visit. Provide screening and referral resources and services.

2.4 Provide families of every newborn leaving the hospital with the Arizona Parent Kit, which includes 6 DVDs about good parenting practices, a resource guide, and a book to encourage daily reading activities.

Outcomes

3. Key Outputs

3.1 Amount of educational and informational materials distributed; number of community awareness activities undertaken; and number of earned and paid media distributed.

3.2 Number of calls received.

3.3 Number of families provided with a newborn follow-up.

3.4 Number of parent kits distributed.

4. Short-term Outcomes

4.1 Families receive high quality, culturally responsive, and relevant information on the importance of the early years, parenting, child development, health, and early education in a variety of formats and from a variety of sources.

4.2 Families have a reliable and readily available source of support which helps them gain greater knowledge of what their child is experiencing developmentally and how parenting and early learning opportunities can result in positive outcomes.

4.3 Families have knowledge of and access to information on the quality and availability of programs and services.

4.4 Families have culturally responsive information on educational resources and community connections that help them support healthy development and school readiness in their children.

5. Intermediate-term Outcomes

Increased public awareness and grassroots support of the importance of early childhood.

Increased percentage of families who have greater awareness of the value of early childhood information and supports.

Increased percentage of parents who believe accessing information and resources is a regular part of raising young children, and who feel comfortable obtaining information and services.

Increased number of parents initiating referrals for developmental screenings & needed services.

Increased number of families appropriately referred to family support programs.

6. Long-term Outcomes

Children participate in early learning opportunities at home and in their communities during the course of everyday interactions and routines.

Assumptions: All families need information and support to raise their children.

Context: Federal/state policies that promote healthy family choices, and broad community-wide outreach efforts to support strong and healthy families.

First Things First
Logic Model
Level II Family Support: Intermediary

Processes

1. Strategies

1.1 Reach Out and Read

1.2 *Family Resource Center

1.3 Native Language Preservation

1.4 *Parent Education Community Based Training

1.5 Family Support Coordination

2. Activities

2.1 Families experience quality interactions with pediatricians during well-child visits that promote everyday early language and literacy activities; provide books for pediatricians to distribute to families with young children.

2.2 Establish local resource centers; provide families with training, educational opportunities, and resources on how to support healthy child development.

2.3 Provide materials, awareness and outreach to promote native language and cultural acquisition for the young children of Tribal families.

2.4 Provide classes on parenting, child development, and problem-solving skills.

2.5 Improve the coordination of, and access to, family support services and programs.

Outcomes

3. Key Outputs

3.1 Number of participating medical practices and number of books distributed.

3.2 Number of families served by family resource centers.

3.3 Number of adults with young children receiving support in native language preservation.

3.4 Number of adults participating in family support trainings.

3.5 Number of families served through family support coordination.

4. Short-term Outcomes

4.1 Children and parents obtain age-appropriate reading materials; parents understand the importance of daily language and literacy activities.

4.2 Families have greater access to information, supports and services to help with parenting.

4.3 Native children use and value native language; are proficient in English & native language.

4.4 Families have information and supports on child development and behavior.

4.5 Families have improved ability to access the right service at the right time. Families know what services are available, eligibility requirements, what to expect from services, and how and when to access services.

5. Intermediate-term Outcomes

Families read books with their young children daily and incorporate language and literacy activities in their daily routines and interactions.

More families experience a greater sense of community connectedness and reduced isolation.

Families develop increased capacity to problem-solve and seek out appropriate resources when needed – increasing family stability.

6. Long-term Outcomes

Young children are supported by strong and stable families who have a good understanding of a child's developmental needs.

Children participate in early learning opportunities at home and in their communities during the course of everyday interactions and routines.

Assumptions: All families need information and support to raise their children.

Context: Federal/state policies that promote healthy family choices, and broad community-wide outreach efforts to support strong and healthy families.

First Things First
Logic Model
Level III Family Support: Intensive

Processes

1. Strategies

1.1 Food Security

1.2 Court Teams

1.3 *Home Visitation

2. Activities

2.1 Distribute food boxes to families in need.

2.2 Assign multidisciplinary teams, led by superior court judges, to monitor case plans and supervise placement when a child 5 or younger is involved with the court system.

2.3 Provides voluntary in-home services for infants, children and their families, focusing on parenting skills, early physical and social development, literacy, health and nutrition - connects families to resources to support their child's health and early learning.

Outcomes

3. Key Outputs

3.1 Number of food boxes distributed.

3.2 Number of children served.

3.3 Number of families served.

4. Short-term Outcomes

4.1 Families have greater ability to meet the basic food needs of their family.

4.2 Improved case plan management for children involved with the court system.

4.3 Mothers receive timely prenatal care.

Parents learn and practice sound parenting strategies and skills to support positive development and early literacy skills in their child.

5. Intermediate-term Outcomes

Families have increased food security.

More timely resolution of problems necessitating court involvement; reduced recurrence of child abuse and neglect.

Positive birth outcomes for child and mother.

Parents are more responsive to the developmental needs of their young child.

Families have a literacy-rich home environment.

Families experience improved stability and ability to provide a healthy, nurturing, safe home environment for their young children.

6. Long-term Outcomes

Improved well-being for children at risk of or experiencing an out-of-home placement.

Children develop age-appropriate language, social emotional and self-regulatory capacities.

Children have strong, nurturing and positive relationships with family and peers.

Assumptions: All families need information and support to raise their children.

Context: Federal/state policies that promote healthy family choices, and broad community-wide outreach efforts to support strong and healthy families.

First Things First
Logic Model
Improving Access to Health Care

Processes

Outcomes

1. Strategies

1.1 *Care Coordination/ Medical Home

1.2 Health Insurance Enrollment

1.3 Oral Health

Shared Strategies

1.4 *Child Care Health Consultation

1.5 *Mental Health Consultation

2. Activities

2.1 Provides children and their families with effective care coordination; connects them to appropriate health care services.

2.2 Families receive assistance with applications for health insurance.

2.3 Pregnant women, children and child care providers receive consistent messages on oral health.

2.4/2.5 Provides qualified health professionals who assist child care providers in achieving high standards related to health, safety and behavioral health & inclusion for the children in their care.

3. Key Outputs

3.1 Number of children receiving care coordination services.

3.2 Number of families receiving health insurance enrollment support.

3.3 Increased awareness on importance of oral health for young children.

3.4 Number of early care providers with access to a child care health consultant.

3.5 Number of early care providers with access to a mental health consultant.

4. Short-term Outcomes

4.1 Parents and caregivers are more aware of health insurance and medical care options; increased hiring and use of care coordinators in hospitals and practices.

4.2 Increased enrollment in health insurance; increased continuous coverage.

4.3 Increased awareness of oral health message.

4.4 Early Care providers access health consultation supports.

4.5 Early Care providers access mental health consultation supports.

5. Intermediate-term Outcomes

5.1 Improved coordination of health care for all children especially at- risk children.

5.2 Improved access to health care for children.

5.3 Improved overall oral health.

5.4 Improved health related practices in child care settings.

5.5 More awareness of child social and emotional adaptation challenges in child care environments; consistent and appropriate screening and referrals for children.

6. Long-term Outcomes

Improvement in the number of children with continuous medical, dental health services & insurance.

Children receive appropriate access to the health care system, especially children with special health/ behavioral needs.

Children with health problems, developmental and behavioral delays are identified earlier and receive appropriate support and care.

Assumptions: 1) Care coordination for at risk families prevents children from falling through the gaps in services; 2) Having health insurance improves access to health and dental care.

Context: The limitations within the health care system to meet all of the needs and the changes that are being proposed within the health care system that will address some of these gaps are considered.

First Things First
Logic Model
Health Prevention Services

Processes

1. Strategies

1.1 *Oral Health

1.2 Prenatal Outreach

1.3 Developmental and Sensory Screening

1.4 Injury Prevention

1.5 Comprehensive Preventative Health Programs

1.6 * Nutrition, Physical Activity and Obesity Prevention

2. Activities

2.1 Screening by dental hygienists or other qualified health professionals; fluoride varnish application; distribution of oral health information to parents; referrals to dentists.

2.2 Provides outreach and education to pregnant women and their families; links pregnant women to sources of prenatal care.

2.3 Provides screening for developmental and sensory delays.

2.4 Provides parents and child care staff education on the importance of health and injury prevention.

2.5 Builds a coalition of health education programs to establish a comprehensive health education system and provide community-based health trainings to young children and their families.

2.6 Provides health education focused on obesity prevention to children, families and early care and education professionals.

Outcomes

3. Key Outputs

3.1 Number of children receiving oral health screening and fluoride varnishes applied; number of participating adults and early care providers receiving training on oral health.

3.2 Number of clients (pregnant/postnatal women) receiving home visitation and community based education

3.3 Number of children screened for developmental delays, vision, and hearing screenings.

3.4 Number of adults and early care providers receiving training on health and injury prevention.

3.5 Number of children and families receiving health prevention education.

3.6 Number of children and families receiving training focused on healthy eating, activity, and obesity prevention.

4. Short-term Outcomes

4.1 Increased numbers of children receiving oral health screening; increased knowledge about dental homes.

4.2 Increased use of prenatal care and needed supports for healthy pregnancy and births.

4.3 Increased rates of appropriate screening and referrals for children.

4.4 Families and early care providers have information and supports on child health and injury prevention.

4.5 Increased access to information and preventative practices to a wider population base.

4.6 Families and early care providers have information and supports on healthy eating, activity, and obesity prevention.

5. Intermediate-term Outcomes

5.1 Increased numbers of children engaged in regular oral health care and receiving timely oral health care from a dental care home.

5.2 Improved birth outcomes.

5.3 Increased rates of appropriate screening and referrals for children.

5.4 Increased safe practices related to injuries and health care prevention.

5.5 Increased knowledge related to the need for prevention services at parent and community level.

5.6 Improved exercise, eating, and wellness activities for young children and families.

6. Long-term Outcomes

6.1 Increased availability and usage of dental homes; decreased dental caries in young children.

6.2 Improved health for all children.

6.3 Children with developmental and adaptive delays are identified earlier and receive appropriate support and care; reduced duplication of services.

6.4 Decreased number of children who are injured – intentionally or un-intentionally.

6.5 Improved health for all children.

6.6 Decrease in childhood obesity, diabetes and other related health issues.

Assumptions: Early, consistent preventive care reduces long term health problems and maximizes health of children.

Context: There are existing health prevention activities occurring within the state, some require specific emphasis to meet the gaps in services for young children.

First Things First
Logic Model
Health Professional Development

Processes

Outcomes

1. Strategies

1.1 Workforce Capacity – Therapist Scholarships

1.2 Physician Education and Outreach

1.3 Recruitment – Stipends/Loan Forgiveness

1.4 Mental Health Education and Credentials

1.5 DHS Health Professional Education and Outreach

2. Activities

2.1 Provides scholarships for master's degrees for speech and language professionals working with children five and younger, with a requirement for post-graduate service in Arizona.

2.2 Provides consultation and facilitates a self-assessment process for physician practices to provide preventive health care for young children.

2.3 Offers professionals financial incentives to work in underserved communities.

2.4 Mental health professionals receive tuition support and stipends for additional education on early childhood.

2.5 Provides specialized training to health professions serving children 5 and younger.

3. Key Outputs

3.1 Number of graduate or post graduate students receiving continuing education or scholarships.

3.2 Increased number of health care practices participating in learning collaboratives.

3.3 Number of mental health, OT, PT or ST therapists receiving loan forgiveness or stipends for further education.

3.4 Number of tuition reimbursements distributed.

3.5 Number of specialized health professionals in the state.

4. Short-term Outcomes

4.1 Increased number of therapists qualified to serve young children in the state.

4.2 Increased participation of practices in continuing education.

4.3 Increased number of therapists qualified to serve young children, especially those focused on under-served communities.

4.4 Increased number of mental health professionals who are prepared to support children 5 and younger.

4.5 Increased number of health professionals who are prepared to support children 0-5.

5. Intermediate-term Outcomes

Increased professional workforce with specialized knowledge of early childhood needs.

Increased use and availability of medical homes by young children and their families.

Increased awareness of the needs of young children for quality and consistent health care services.

6. Long-term Outcomes

Improved health care system that provides quality, collaborative and integration of health care for children.

Specialized post graduate workforce that is capable of working with young children and their families.

Increased number of medical and other health care professionals to provide services to children.

Assumptions: 1) It cannot be assumed that all health care providers share knowledge about the needs of young children; 2) Continuing education and support of education can be targeted to meet the need for change in systems.

Context: Specialized knowledge is always changing and health related providers require ongoing updates to allow them to meet the needs of young children.

Attachment 3: Strategies Funded at $2,000,000 or More in FY 2013[6]

Strategy Area (Total Area Investment)	Strategy	Number of Regions Investing	Strategy Funding Allocation
Quality, Access, Affordability ($75,006,289)	Quality First Child Care Scholarships	27	$33,406,287
Quality, Access, Affordability ($75,006,289)	Quality First	30	$22,276,103
Quality, Access, Affordability ($75,006,289)	Pre-Kindergarten Scholarships	15	$13,630,873
Quality, Access, Affordability ($75,006,289)	Family, Friends, and Neighbors	13	$3,054,000
Family Support ($40,329,370)	Home Visitation	25	$21,873,905
Family Support ($40,329,370)	Family Resource Centers	7	$6,410,000
Family Support ($40,329,370)	Parent Education Community Based Training	19	$5,484,207
Health ($21,675,871)	Mental Health Consultation	13	$4,414,250
Health ($21,675,871)	Oral Health	18	$3,881,972
Health ($21,675,871)	Care Coordination/ Medical Home	6	$3,445,555
Health ($21,675,871)	Child Care Health Consultation	29	$2,698,920
Health ($21,675,871)	Nutrition/Obesity/ Physical Activity	7	$2,037,827
All Areas			$122,613,899

[6] These 12 strategies represent 77 percent of the total FTF allocation for FY 2013.

Attachment 4: Alignment of Infrastructure Recommendations and Specific Evaluation Questions in Each of the Panel Recommendations with First Things First's Eight Guiding Evaluation Questions

First Things First Guiding Evaluation Questions	Panel Recommendations or Questions (Report Sections III and IV)
1. Are the capacity and level of coordination of the early childhood system changing and are changes associated with funding levels?	IN-1: Create a strong focus on program implementation EV-1d. Are the levels of quality by Star level, as measured by the environmental rating scales (ERS), Classroom Assessment Scoring System (CLASS), and Quality First point scale, improving over time, and how do Quality First levels of quality compare with quality of programs that do not participate in Quality First? EV-5b. Do the Family Resource Centers reach their intended families, particularly those that are hard to reach and are service provision and referral efforts coordinated among and between home visitation, family resources center, and parent education programs? EV-6b. Do the parent education grantees reach their intended families, particularly those that are hard to reach, and are service provision and referral efforts coordinated among and between home visitation, family resources center, and parent education programs? EV-8a. To what extent are First Things First health services achieving the goal of connecting families with medical homes and increasing the coordination of care?
2. Are programs and strategies being implemented fully and in accordance with FTF's standards of practice?	IN-1: Create a strong focus on program implementation. EV-1a. What is the fidelity of implementation of all components of Quality First, Coaching/Quality Improvement Plan, Child Care Health Consultation (CCHC), incentives, offset of licensing fees, instructional and other supports, scholarships, and T.E.A.C.H.? What are the profiles of the services received by providers, for example, what intensity of each service is received? EV-1b. What is the relation between Quality First components (CCHC, Coaching/Quality Improvement Plan, incentives, offset of licensing fees, instructional and other supports, scholarships, T.E.A.C.H.) and Quality First Star levels?

First Things First Guiding Evaluation Questions	Panel Recommendations or Questions (Report Sections III and IV)
	EV-1c. How different are the levels of quality by Star level, as measured by the environmental rating scales (ERS), Classroom Assessment Scoring System (CLASS), and Quality First point scale, and do Quality First cut scores measure meaningful differences between Star levels? EV-3a. Are home visitation programs being implemented with fidelity to the evidence-based models they were designed to follow? EV-5a. What is implemented in each Family Resource Center (which may be operating in the context of parent education and home visitation programs), what is its intensity, and to what extent is implementation consistent with First Things First standards of practice? EV-6a. What is implemented by each parent education grantee (which may be operating in the context of Family Resource Centers and home visitation programs), what is its intensity, and to what extent is implementation consistent with First Things First standards of practice? EV-7a. What services and combinations of health services are children and families receiving? EV-8b. What is implemented by each care coordination/medical home grantee, what is its intensity, and to what extent is implementation consistent with First Things First standards of practice?
3. What services, and combinations of services, are children receiving and how does service receipt relate to identified family and child needs?	IN-1. Create a strong focus on program implementation. IN-4. Create a comprehensive, longitudinal, integrated database that will enable First Things First to systematically track key data on services provided, children and families, and progress on the 10 School Readiness Indicators at the state and regional levels. EV-3b. Does each home visitation program reach the intended families and hard-to-reach families? EV-3c. What intensity of service (number of visits per year, duration of visits) is delivered in each [home visiting] model and is intensity linked to child and family needs? EV-5c. Are the family resource services provided to families aligned with the families' needs?

First Things First Guiding Evaluation Questions	Panel Recommendations or Questions (Report Sections III and IV)
	EV-6c. Is the parent education that is provided to families aligned with the families' needs? EV-8c. Do the care coordination/medical home grantees reach their intended families, particularly those that are hard to reach?
4. Are the 10 school readiness indicators improving over time?	IN-4: Create a comprehensive, longitudinal, integrated database that will enable First Things First to systematically track key data on services provided, children and families, and progress on the 10 School Readiness Indicators at the state and regional levels. IN-6: Collaborate with the State Board of Education and the Arizona Department of Education to create a kindergarten developmental inventory that will annually assess the school readiness and development entering kindergartners across the state in the five readiness domains identified by the National Education Goals Panel.
5. What impact is FTF having on children's school readiness indicator 1 – number and percentage of children demonstrating school readiness at kindergarten entry in the developmental domains of social-emotional, language and literacy, cognitive, and motor and physical?	IN-4: Create a comprehensive, longitudinal, integrated database that will enable First Things First to systematically track key data on services provided, children and families, and progress on the 10 School Readiness Indicators at the state and regional levels. IN-6: Collaborate with the State Board of Education and the Arizona Department of Education to create a kindergarten developmental inventory that will annually assess the school readiness and development entering kindergartners across the state in the five readiness domains identified by the National Education Goals Panel. EV-2a. How do child outcomes vary according to the Quality First Star levels of quality instruction received? EV-4a. Is the degree of fidelity of model implementation associated with children's school readiness outcomes?
6. Is FTF affecting long-term outcomes for children?	To be addressed later.

First Things First Guiding Evaluation Questions	Panel Recommendations or Questions (Report Sections III and IV)
7. Are there FTF strategies, programs, or models that are particularly effective and how is their effectiveness related to costs?	EV-5d. What consistent Family Resource Center approaches, or models, are emerging that reflect best practices? EV-6d. What consistent parent education approaches, or models, are emerging? EV-8d. What consistent care coordination/medical home approaches, or models, are emerging?
8. Are there relationships among Quality First ratings, improved early childhood programs, and children's kindergarten readiness?	EV-1d. Are the levels of quality by Star level, as measured by the environmental rating scales (ERS), Classroom Assessment Scoring System (CLASS), and Quality First point scale, improving over time, and how do Quality First levels of quality compare with quality of programs that do not participate in Quality First? EV-2a. How do child outcomes vary according to the Quality First Star levels of quality instruction received?

Attachment 5: Synopsis of Types of Evaluation Studies Referred to in Panel's Report

At various points in this report, reference is made to seven types of studies. This attachment summarizes what the Panel means by each.

1. Family Case Studies

A small number of families are selected to provide insights into the experiences parents and children have with key components of the First Things First early childhood system. Experienced interviewers conduct in-depth interviews and track family experiences with and perceptions of First Things First system components. Well-written case studies provide insights into details of particular situations in personal terms that stakeholders can relate to. They can highlight individual-level benefits families receive as well as any problems they have with the First Things First system. Case studies are useful for illustrating findings as well as generating hypotheses to be examined in other studies. However, usefulness (and interest in the case studies) can depend on the particular experiences of the selected families and how articulate family members are in describing their experiences and perceptions.

2. Large-Scale Implementation/Process Studies

Implementation refers to the particular activities that put a defined program (or a set of practices, or an intervention) into place. Levels of implementation affect the outcomes that programs are able to achieve. Following a conceptual framework (logic model) describing the intended First Things First activities to be studied, investigators create plans for interviewing program participants, observing activities and interactions among providers and participants, and tabulating service data in participating communities. Learning details about the extent and how well the critical elements of First Things First programs and strategies are implemented will enable the First Things First Board and stakeholders to make informed decisions about First Things First programs, models, and strategies. The implementation studies should collect data on factors that potentially influence implementation, including variables associated with community factors, provider characteristics, characteristics of the intervention itself, the intervention's delivery system, specific practices and processes, staffing, and the intervention's support system (e.g., training and technical assistance). Thus, comprehensive implementation studies will allow First Things First to understand why particular child and family outcomes were observed and provide insights into the steps that could be taken to improve implementation (and, therefore, the outcomes). Understanding the implementation process is also crucial for effectively replicating the services, programs, and strategies.

3. Place-Based System-Level Process and Outcome Evaluations

Place-based studies begin with a conceptual framework (grounded in the First Things First logic models) that encompasses (a) experiences of children and families, (b) system outcomes, and (c) costs. Data are collected on all three facets (through surveys or administrative records in the integrated database), which could be the same or overlapping with data collected for the large-scale implementation/ process studies. Mapping software can be used to display variations in the three facets across Arizona counties, Regional Partnership Councils, or other desired geographic boundaries. Progress can be measured using statistical process control methods. These studies can incorporate standard recipient report measures in the database. With an appropriate conceptual framework and strategy for implementing the design, these studies can facilitate the emergence of new ways of doing things, encouraging collaborative learning, improvement, and innovation. They can focus attention not just on what sites are doing but on what it would take to become successful.

4. Descriptive Outcome Studies

Once decisions are made about the sample desired (universal statewide coverage, stratified representative sample, selected geographic or programmatic areas, and so forth), data are collected on the 10 school readiness indicators and other identified key measures at predetermined intervals (e.g., annually). This information can be used descriptively to look at trends over time, differences that occur by such factors as geographic areas, variability in types and intensities of services, and family risk and protective factors.

5. Quasi-Experimental Design Studies

The most common quasi-experimental design is the nonequivalent groups design in which samples of children who are not participating in the intervention serve as a comparison group and evaluators administer pre- and posttest measures to both groups. Investigators use various strategies, including propensity-score matching, to try to match the two groups as closely as possible. Nevertheless, it is unlikely that the two groups will be as comparable as if the children had been randomly assigned. A major concern is selection bias, or the possibility that some factor is associated with group membership and creates a bias so that the two groups are not really equivalent. Another quasi-experimental design being increasingly used in early childhood studies is the regression-discontinuity (RD) design. In RD designs, children are assigned to two groups on the basis of a cut-off score along some continuum, such as age. After some discussion, the Panel did not recommend using this design, though First Things First may want to consider it later, if relatively strong causal inferences are desired in the absence of an experimental design. Another possible design is the proxy pretest design. It is usually implemented after the intervention has taken place when it is too late to administer baseline pretest measures. As a substitute, the investigators could find some index to serve as a proxy for the baseline that could be obtained after the fact, for example, using data from developmental screenings that program staff may already conduct.

6. Planned-Variation Experimental Studies

The basic planned-variation experimental study (PVES) creates at least two conditions in which the settings or sites of half the participants in a particular program or strategy (for example, Quality First settings) receive an enhanced version (the "enhancement") of the program or strategy. The other half continues to receive current First Things First services. Settings or sites are randomly assigned (for example, by using a lottery) to receive the enhancement or "business as usual," creating the condition for strong causal inferences about the impacts of the enhancement on school readiness indicators. Data on the readiness indicators are collected on all children/families enrolled in the study sites. This is the strongest design for answering the question about the impacts of First Things First services on children. It allows causal inferences about the effects of the enhancement without denying the usual First Things First services to participants who are assigned to the control group. It is particularly useful for First Things First to use to test out ideas for enhanced services and collect rigorous evidence on their effectiveness before implementing the enhancements more widely. It is important to include measures of fidelity of implementation so that conclusions about impacts are made only through knowing that the enhancement was actually delivered well. It will be important for First Things First to achieve full "buy-in" from participating programs (or grantees or Councils) to ensure that they are willing to have the control sites wait before implementing the enhancement so as to protect the integrity of the control group.

7. Analysis of Existing Data in the Integrated Database

A number of the Panel's recommendations require no new data collection, but make use of data that will exist in the longitudinal, comprehensive, integrated database that First Things First would create in following Recommendation IN-4 (page 7). While no new data collection may be required, interpretation and use of information from the integrated database will require that data be of high quality and analyses have appropriate methodological controls such as the study designs above.