



FIRST THINGS FIRST

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PUBLIC NOTICE OF MEETING OF THE

ARIZONA EARLY CHILDHOOD DEVELOPMENT AND HEALTH BOARD

POLICY AND PROGRAM COMMITTEE

Pursuant to A.R.S. §38-431.02, notice is hereby given to the members of the First Things First - Arizona Early Childhood Development and Health Board, Policy and Program Committee (Program Committee) and to the general public that the Program Committee will hold a **Regular Meeting open to the public on Thursday, May 19, 2016 beginning at 9:00 a.m. The meeting will be held at the First Things First Board Room, 4000 North Central Avenue #800, Phoenix, Arizona 85012.** Members of the Program Committee may attend in person, or by telephone, video or internet conferencing.

The Program Committee may hear items on the agenda out of order. The Program Committee may discuss, consider, or take action regarding any item on the agenda. The Program Committee may elect to solicit public comment on any of the agenda items.

The agenda for the meeting is as follows:

- | | |
|---|---|
| 1. Welcome and Call to Order | Vivian Juan Saunders, Chair |
| 2. Roll Call | Vivian Juan Saunders, Chair |
| 3. Meeting Minutes, October 15, 2015 (Discussion and Possible Action) (Attachment #1) | Vivian Juan Saunders, Chair |
| 4. Quality First—Presentation and discussion on the Quality First Advisory Sub-Committee Recommendations and Quality First Validation Study (Attachments #2 & #3) | Michelle Katona, Chief Program Officer Katie Romero, Chair, Quality First Advisory Sub-Committee |
| 5. Presentation on Oral Health Report and discussion regarding the Oral Health School Readiness Indicator (Attachment #4) | Michelle Katona, Chief Program Officer Dr. Roopa Iyer, Senior Director, Research and Evaluation |
| 6. Summary of National Advisory Panel for Research and Evaluation April 26 th -27 th 2016 meeting (Attachment #5) | Michelle Katona, Chief Program Officer Dr. Roopa Iyer, Senior Director, Research and Evaluation |
| 7. Status of First Things First Performance Audit (Attachment #6) | Michelle Katona, Chief Program Officer |
| 8. Discussion of the Policy and Program Committee Purpose, Structure and Strategic Direction (Attachment #7) | Vivian Juan Saunders, Chair Michelle Katona, Chief Program Officer |
| 9. Next Meeting June 22, 2016 from 10:00 a.m. -12:00 p.m. | Vivian Juan Saunders, Chair |
| 10. Adjourn | Vivian Juan Saunders, Chair |

Dated this 11th day in May 2016

Arizona Early Childhood Development and Health Board

Policy and Program Committee

Michelle Katona, Chief Program Officer

A person with a disability may request a reasonable accommodation such as a sign language interpreter by contacting Cynthia Chavarria, Executive Staff Assistant, Arizona Early Childhood Development and Health Board, 4000 North Central Avenue, Suite 800, Phoenix, Arizona 85012, telephone (602) 771-5023. Requests should be made as early as possible to allow time to arrange the accommodation.

Attachments listed in the agenda may be obtained from the First Things First website (www.azftf.gov) or by contacting Cynthia Chavarria.



FIRST THINGS FIRST

ARIZONA EARLY CHILDHOOD DEVELOPMENT AND HEALTH BOARD Draft Meeting Minutes

Call to Order, Welcome and Introductions

A Regular Meeting of the First Things First - Arizona Early Childhood Development and Health Board – Policy and Program Committee was held on October 15, 2015 at 10:00 a.m. The meeting was held at First Things First, 4000 North Central Avenue, Suite 800, Phoenix, Arizona 85012.

Chair, Vivian Juan Saunders is on a temporary leave of absence and Mary Ellen Cunningham will act as Interim Chair today.

Chair Cunningham called the meeting to order at approximately 10:02 a.m.

Roll Call

Cynthia Chavarria performed a roll call.

Members Present:

Bill Berk
Mary Ellen Cunningham, Interim Chair
Naomi Karp
Wendy Resnik
Laurie Smith
William Rosenberg
Senator Ruth Solomon (via telephone)
Kim Van Pelt (via telephone)
Ginger Ward
Brad Willis

Members Absent:

Colleen Day Mach
Kevin Earle
Verna Johnson
Vivian Juan Saunders, Chair
Nicol Russell

Staff:

Karen Woodhouse
Dr. Karen Peifer
Cynthia Chavarria

Review and Possible Approval of Meeting Minutes

Chair Cunningham called for a motion to approve the minutes of May 7, 2015. Member Solomon motioned to approve the minutes as presented. Motion seconded by Member Van Pelt. Member Solomon asked for clarification as to why the minutes reflect those who participated by phone. Casey Cullings, FTF General Counsel informed the Committee that it is a recommendation from the Attorney General's office to identify those who participate in a meeting by other means. Chair Cunningham asked for other comment on the minutes and there being none all Members were in favor, none opposed. Chair Cunningham voted aye and motion passed.

Advisory Sub-Committees Update

Quality First (QF) Advisory Sub-Committee: Kameron Bachert, Chair of the Sub-Committee could not be here today. Karen Woodhouse provided a review of the handout and gave an update. This report is a preliminary summary or first draft of the Sub-Committee recommendations. We anticipate the Sub-Committee will make their initial recommendations in the winter or early spring and that their final recommendations will be presented to the Policy and Program Committee at the May 19, 2015 meeting. One of the highlights of the report is that they Sub-Committee is proposing that the QF Program make available Navigators to help providers in their understanding of the QF system and of the tools available for their support. Member Smith asked what was the main reason the Sub-Committee made this recommendation. Karen woodhouse replied that it was mainly due to the funding changes in FTF and to help shift the ownership of the process to the providers in scaling up.

Member Willis asked for more information on the validation study mentioned in the report and what participation the Sub-Committee will have in the new model. Karen replied that FTF awarded the first phase of the study to ChildTrends and they will be working on the QF model and validation study and comparing it on a national level.

ChildTrends will also be looking at the QF data system to see if it's valuable as it is or where we are missing work or needing improvement. They will also be looking at a differentiation in the star rating levels. Phase two of the study has not been awarded yet but it will identify how participants move through the QF system and evaluating if the supports they're receiving are helping. Phase three will be looking at child outcomes through the QF Program. Because this Policy and Program Committee was asked by the FTF Board to look at the QF model and as part of the ChildTrends study, we expect many of the Members will be asked to speak with them and to provide recommendations.

Findings from phase one will be broken down in three areas. The first is to identify changes we can make immediately that will improve QF but won't impact the results or implementation of the study. The second phase may need discussion with the researchers on how to move forward and the third is looking at long term changes. Member Berk asked for the dates of each phase and Karen replied that because the Request for Grant Applications (RGA) for the study was broken down into three phases, and the first phase was awarded to ChildTrends, the other two phases hadn't been awarded yet so there were no official dates she could provide today. The idea to break out the work into three phases came as a recommendation from the FTF National Research Panel. She did share that phase one is currently active and should be completed in the spring of 2017. ChildTrends representatives will be in Arizona sometime in November but is already working with their local partner, LeCroy & Milligan to start the research work. This research will look at national data models and compare to what's available in Arizona and will look for where we're missing a certain piece and then identifying how we can improve. Member Ward knows that the rating system is not a direct science but believes ChildTrends may find ways Arizona can improve and thinks they are a good choice to do the work. Karen agrees and ChildTrends has done good work and we're fortunate to be able to work with them to improve the system in Arizona.

As part of conversations and work of the QF Advisory Sub-Committee, we're working with the Finance Sub-Committee for their recommendations in looking for other ways to fund additional areas of support as the need is identified. Member Solomon couldn't recall the report where it mentioned the splitting of awards for funded slots with other funds being used to make up the split but asked for clarification. Karen Woodhouse replied this was discussed at the last meeting and captured in the meeting minutes and it was talking about QF scholarships which could be split to provide more slots overall say 10 full time slots split to 20 part time slots, with the Families paying the remaining fees. Member Solomon asked if there other funds that can be used to back-fill the fees Families would have to pay on the part time slots. Are there other monies the Sub-Committee is looking at to increase capacity? Karen, at this point there is no additional funding to backfill what we have now. Member Solomon would like to discuss this process further with Karen.

The QF Advisory Sub-committee's role is to look at the QF programmatic model for quality supports and ratings, not QF scholarships and funding. Part of our work with ChildTrends and the study, we're thinking about adding a component to redo the cost of quality study that FTF had commissioned in 2011 and we're working with DES to look at rates of subsidy as well.

Early Identification of Developmental Delays Advisory Sub-Committee: Dr. Karen Peifer reported that the initial work of the Sub-Committee had met with AHCCCS in September to talk about a data request as to screening for developmental delays. We're in the process of refining this request but the Sub-Committee has not met again until this is resolved. AHCCCS has given some data to AzEIP that is related to screening so we're working with them to look at some of that aggregate data. But until talks with AHCCCS are finalized, the Sub-Committee is still waiting to move forward.

FTF Approach to Capacity Building, Coordination and Collaboration

Members reviewed the materials provided in the handouts. First Things First is discussing how to move forward with capacity building and communities of practice work. In 2013 we funded these strategies and they're now coming to an end. We're seeking to learn from the Regional Councils if there is a role or need for FTF to continue work and funding to this area as we know there are other agencies doing work with capacity building on a larger scale. Karen invited K. Vilay to share information on some of the work FTF did in capacity building through an assessment of our grantees. K. shared that from this aggregate data on demographics and characteristics of the participating agencies we found a high level of awareness from the participants on grant opportunities and how to apply for them. We utilized some of this assessment and other data to continue to refine our Request for Grant Application process. We also found that providers experienced an overall increase in general organizational

capacity and had an increased level of awareness of FTF and its mission. As FTF continues looking at what our role should be we're looking to the Program Committee for recommendations as well.

K. described the process for coordination and collaboration and explained it wasn't in the traditional sense like communities of practice, but around broader and not duplicating efforts of what other agencies were doing. Initial networking led to the development of a web portal to share information and the oral health strategy is an example of how this was done. Member Karp shared that there are 16 communities of practice she's responsible for and would like clarification on whether there is anything written out of who the target audiences are and is there a description or model available so there's cohesiveness between the providers related to communities of practices. She would like to see the similarities between programs. In Pima County there are 12 communities of practice, one with the Tohono O'odham Nation, one with Pascua Yaqui, and two in Cochise County. Member Berk holds a leadership role in his communities of practice group and they work on making leaders through their early childhood community and their goal is to take siloed centers not currently in Quality First or other quality rating programs and bringing them together to work on revolving system building and learning collaboratives. The sizes of members varies from 10-12 to 20-30 per group. Member Karp has a map of where each community of practice is located and they also have conceptual frameworks which focus on specific topics of improvement like working with the Arizona Early Learning Standards or the Seven Essential Skills of Mind in the Making or in working with schools to raise their awareness of the importance of early learning. They also have a lot vested in their system thinking portion of Coaching. They provide learning sessions where national Speakers come for three sessions in the fall and spring. One day is just for coordinators, other day is for a particular community of practice and the third brings everyone together who can attend. Over the course of their work, there have been 257 early childhood digress awarded to their participants since 2008. Five students have enrolled for their Master's degrees and we now have two students enrolled in doctoral programs.

Member Van Pelt believes that the communities of practice that were just described and alluded to were closely tied to an overall strategy like Professional Development, and it seems that FTF investments should follow where Regions or the State are investing in these strategies and build capacity where they find weaknesses in implementation of the strategy. For example, if a Region is looking at professional development and finds a weakness in their current capacity to deliver on this area, it would be pertinent to make an investment in capacity building in that region. Rather than generic capacity building, the strategy should be led by the priorities of the Regions or FTF Board. Because there's always a need to invest in general organizational development and capacity building, she encourages FTF to work with consortiums and other funders who support general capacity building. Member Van Pelt doesn't think its FTFs role to work solely on capacity building because there is a whole array of other funders doing this. She referenced a group called Capacity Builders in the state and suggests FTF reach out to them for assistance. And to work with organizations like The Piper Trust Foundation, Southwest Human Development, Alliance for Non-Profits and with the St. Luke's Health Initiative Coordinator. Member Ward recognizes there are a lot of communities of practice around the state and agrees with Member Karp that it would be great to have a list of who they are and what model they use. Believes there is a big gap in this area especially within the early childhood community in that there is a lack of scaling up of capacity and she'd like to see if there is a way to identify where the gaps are. She believes FTFs role is one of convener to organize work with other agencies but not in creating a whole new group within FTF.

Member Solomon referred back to Member Van Pelt's comments about other agencies doing work and providing funding for communities of practice and recognizes that FTF cannot fund everything because we have limited resources. We need to look at the amount of money already being committed to be sure we're not duplicating work and it appears there is a need to identify areas of the state that need the most help and where we can build collaboration efforts. Member Van Pelt agrees and she has seen when collaborations worked well and not so well but what's often best is when there's an opportunity for organizations to meet periodically in an informal setting to network and encourages FTF to be the convener of this type of collaboration and to lead the conversations on open communications and identifying common interests. She noted the great work that came from similar discussions and meetings between the Directors of the Department of Economic Security and the Department of Health Services and believes we could have this level of success again. Member Resnick asked that City municipalities not be forgotten as they are too often overlooked. She thinks those in government get very siloed and only work within certain boundaries. Member Smith agrees and has seen in Graham County, the benefit of bringing together multiple stakeholders like the Community Colleges and early childhood communities, though sadly they could not get kindergarten teachers to attend regularly and this platform of being able to talk about their concerns in a

networking setting was well received. Member Rosenberg identified that this may not work for all communities and noted that Tribal communities don't normally communicate with each other outside of their communities. He believes that if Tribal Regional Council Members were to come together to network, they could find similarities in the needs of their communities and work to collaborate on finding models that will address the unique needs of Tribes. He'd like to see experts brought in to help move along the needs of tribal communities specifically. Karen Woodhouse recognized the need and noted that FTF calls these gatherings "affinity groups" and mentioned that last year they convened the Faith Based RPC Members to collaborate on their strengths and this year FTF will convene School Administrator RPC Members for similar conversations. Chair Cunningham cautioned that when convening these groups, that care was taken to be sure there is diversity within the groups. For instance, when the Faith Based RPC Members met, there was only one denomination at the table.

Member Berk thinks FTF is on a good path and referenced the collaboration with other agencies like DES and DCS in discussing things like subsidies and scholarships with the two agency funding systems. Member Van Pelt agrees and knows the relationships between agencies don't always look at problem solving collectively and that bringing them together can be difficult but believes the effort should be made. Chair Cunningham noted that because of specific agency requirements, finding the flexibility to think outside of each realm can be difficult. Member Van Pelt finds this is where collaboration helps each agency share their goal and you can move to identifying where each pot of money can be leveraged. She doesn't think there's a good understanding right now on those shared goals between agencies.

Member Ward thinks this is part of outreach efforts. Agencies and Regions may not know what activities are being done in their communities by other agencies, not just in relation to what FTF regional work entails but in identifying what's happening in the early childhood community as a whole, we need to see the bigger picture. Member Smith believes it's more difficult to bridge in rural communities but this experience can help move so much within inner city areas. Member Karp specifically would like to meet topically with all professional development people and figure out their common needs, strengths and to collectively apply for federal/national funding. She'd also like to bring in national speakers to stress the fact that we need well educated teachers in the system to provide quality education to the children in our system. This type of work would fall under coordination and collaboration and would need to identify everyone working on early childhood needs and in identifying community level and state level needs. Member Solomon remembers this same conversation from 20 years ago and would like to see the work move forward, not just being discussed again. Member Van Pelt agrees and things this may be the new opportunity for FTF to act as convener of the broad conversations and in helping to move discussions to action and progress.

FY16 Meeting Dates

The next two meetings will be on Thursdays from 10:00 a.m. – 12:00 p.m. on February 11th and May 19th 2016.

Adjournment

Karen Woodhouse announced her retirement from State services in November 2015.

There being no further discussion, the meeting was adjourned at approximately 11:50 a.m.

Telephone Procedures

The Board Room telephone was used for members participating by telephone. Members on the telephone were identified when they spoke for the benefit of those physically present at the meeting.

Respectfully submitted on this 21st Day of October, 2015

Cynthia Chavarria, Executive Staff Assistant



FIRST THINGS FIRST

AGENDA ITEM:

Quality First Implementation and Validation Study

BACKGROUND:

Phase One of the study will: (1) review the conceptual framework and program design of Quality First, and recommend refinements to the current program theory and logic model as needed; (2) review the Quality First data system, and related databases, to determine if the existing data elements and infrastructure support effective management, program evaluation, and quality improvement of the QRIS process; and (3) validate the Quality First Star Rating Scale (1 to 5 stars) to determine whether the five tiers represent differential levels of quality.

Child Trends was awarded the contract to conduct the Phase One of the Validation Study and defined three goals for this initial phase. Goal one will examine the program design of Quality First, how program components work together to form a cohesive system and produce desired outcomes, and learn about strengths and challenges of each component that is part of the Quality First model. The specific research questions include the following:

- What perceptions do Quality First system stakeholders have about Quality First processes and intended outcomes?
- Based on the experiences of system stakeholders and comparisons to ECE system best practices, what adjustments could be proposed to the Quality First model to improve implementation?

Goal two of the study will assess if within the Quality First data system, do the existing data elements and infrastructure support effective program management, program evaluation, and quality improvement. It will identify if and how Quality First data are being collected at a high level of quality using standardized procedures; review the data collected for Quality First to identify if they are appropriate for on-going program administration and improvement purposes; and examine the Quality First data system to identify areas of improvements in data practices.

Goal three will examine how Quality First standards are measured, how they fit together to form a rating, and whether the rating is functioning as expected. It will compare observed quality across programs at different quality rating levels and examine how ratings and observed quality vary across different program types. Collectively this will determine if observed quality differ across the five tiers of the Quality First Rating Scale?

Draft reports for each study goal will provide findings on Quality First's implementation, data system, and preliminary validation findings and recommendations. The final report will be a comprehensive, detailed report on how Quality First is being implemented, recommendations for the model, and final validation findings and recommendations and be submitted May 2017.

First Things First anticipates Phase Two will include examination of the comprehensive array of Quality First program components, fidelity of implementation of program components, the contribution of program components—alone and in combination—to improve quality, and analysis of the cost of the QRIS system related to overall system improvement (cost of quality).

First Things First anticipates Phase Three will study differences in quality between Early Care and Education (ECE) programs at various levels on the Quality First rating scale (or with no rating), and to what extent changes in quality are associated with improved child outcomes.

By the end of Phase Three, this study will help ensure that First Things First has a QRIS that is valid, highly effective, successfully supports improvements and sustainable changes in quality in individual ECE programs, and contributes to building a stronger statewide ECE system.

RECOMMENDATION:

No action required, presented for information purposes for the Committee.



QUALITY FIRST ADVISORY SUBCOMMITTEE FINAL REPORT OF RECOMMENDATIONS

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The Program Committee of the First Things First (FTF) Board established the Quality First Advisory Subcommittee (QFASC) to examine Quality First and develop a set of recommendations regarding the continuous quality improvement of Quality First. First Things First commissioned Advocacy & Communication Solutions, LLC (ACS) to facilitate eight full meetings of the QFASC from January 2015 through April 2016. This report summarizes the QFASC's work during a 15-month process including the following:

1. Background, purpose and membership of the QFASC;
2. Overview of the Quality First Validation Study;
3. Process, structure, and approach for the subcommittee's work;
4. Final recommendations and considerations for implementation; and
5. FTF's approach to implementation and next steps.

Introduction and Background

The development and implementation of Quality Improvement and Rating Systems (QIRS) are part of a larger national conversation around what defines quality for early childhood programs and what the essential building blocks are for achieving high-quality early care and education. The development of QIRS began in the 1990s with states rewarding providers for meeting higher quality standards. As states develop and revise their Quality Improvement and Rating Systems (QIRS)¹, many have focused particular attention and effort on increasing provider participation rates, use of data, cross-sector participation, and specific consideration for children with disabilities and special needs.

Quality First, Arizona's QIRS, was launched in 2010 and was designed to build and strengthen early learning environments that nurture the emotional, social, language and cognitive development of young child and for children to be engaged in activities with responsive, nurturing adults who stimulate development and learning and prepare children to successfully enter school. Quality child care and preschool settings build on basic health and safety standards and include:

- Teachers and caregivers who know how to work with infants, toddlers and preschoolers;
- Positive, nurturing relationships that give young children the individual attention they need;
- Learning environments that encourage creativity and imaginative play;
- Hands-on activities that stimulate and encourage positive brain connections in children; and
- Caregivers who provide regular feedback to parents on the development of their child.

¹ Quality Improvement and Rating Systems (QIRS) are sometimes referred to as Quality Rating and Improvement Systems (QRIS). Quality First is intentionally classified as a Quality Improvement and Rating System (QIRS), emphasizing quality improvement before rating.

Quality First, with its primary activities centered around setting quality standards and providing support and assessments for early care and education programs to meet those standards, is a primary component of a comprehensive early learning system. Having a common set of standards and consistent measurement of those standards ensures that quality means the same thing across the state, that participants know what is expected of them, and that families know what to look for when seeking a quality experience. In addition, Quality First supports and aligns with the health and family support system efforts to advance the overall early childhood system for young children. There are approximately 2,650 licensed and regulated child care programs in Arizona. Approximately 1,000 (38%) of these programs are actively participating in Quality First now.

As a critical component of the overall early childhood system, FTF embarked on a focused effort to determine a long-term strategic direction of Quality First, including identification of refinements to the model to ensure continuous quality improvement, increase integration and coordination with the early childhood system, and establish financial sustainability. In addition, this effort includes a multi-year three-phase validation study. The final recommendations of the QFASC, detailed later in this report, would be considered alongside, and in some places validated through the findings of the validation study.

On a national level, many states are considering revisions or shifts to their Quality Rating Improvement System (QRIS) models. Some trends include moving from a global focus on quality to a specific focus on improving teaching and learning; increasing provider participation and supports needed to improve quality; use of data based systems in implementation and improvement; cross sector participation; and specific criteria and support for children with special needs. Information from the Quality First Implementation and Validation Study being conducted by Child Trends will be used to support revisions and shifts in the Quality First program.

Quality First Validation Study - Overview

The purpose of the Quality First validation study is to evaluate the Quality First model and its' outcomes for children and families in Arizona. The validation study will take place in three phases. The final recommendations of the QFASC, detailed in this report, will be considered alongside the findings, and in some places researched further in the validation study.

Phase One

Phase One of the Quality First Validation study is currently underway and is a two-year study. During the next several months, Child Trends, the vendor conducting the

validation study, will review best practices for QIRS across the nation as well as the current data system for Quality First. During the review of the data system, Child Trends will be collecting data to validate the Quality First Rating Scale (1 to 5 stars) and assess whether the five tiers of the scale represent differential levels of quality. Findings will contribute to improving the QIRS by:

1. Identifying strengths and limitations of the five-tier rating scale;
2. Refining the QIRS star levels and rating level determination as needed; and,
3. Improving the efficiency and effectiveness of the rating process.

The primary questions to be answered include the following:

- What are the internal consistencies of the Quality First Star Rating Scale components?
 - In what ways is the current framework for cut scores for each observational component (ERS and CLASS©) and the structural component (Quality First Point Scale) of the Quality First Star Rating Scale sound or in need of improvement?
 - In what ways does the Quality First Point Scale, the rating scale component developed by First Things First, contribute to or detract from measuring quality?
- Does the Quality First Star Rating Scale assess program quality in expected ways?
 - Is the quality indicated by each star level meaningfully different from the quality indicated by the next star level? In other words, do ECE programs that receive a higher tier rating (e.g., Quality {3 Star}) provide higher quality early education and care contrasted with those that receive a lower tier rating (e.g., Progressing {2 Star})?
 - Does the Quality rating (3 star) accurately reflect that quality standards have been met, or is quality achieved at a lower star rating (e.g., Progressing {2 star}) or at a higher star rating (e.g., Quality Plus {4 star})?
- How does the distribution of Quality First star levels vary by program types; for example, center- versus home-based, rural versus urban, tribal versus non-tribal?
 - Does the Quality First Rating Scale, as designed and implemented in Arizona, yield consistent quality ratings across all types of providers?

Phase Two and Three

Phase Two of the Validation Study, which will take place in the 12-18 months following Phase One, will include examination of the comprehensive array of Quality First program components, fidelity of implementation of program components, the contribution of program components—alone and in combination—to improve quality, and analysis of the cost of the QIRS system related to overall system improvement (cost of quality).

Phase Three, which will launch at the earliest in mid-2019, will look at child-level

outcomes to determine if children who are at the 3-to-5-star levels show higher early learning results than others.

Quality First Advisory Subcommittee – Purpose and Membership

Purpose

The Quality First Advisory Subcommittee (QFASC) was charged with developing a set of recommendations regarding the continuous quality improvement of Quality First. The objectives of the subcommittee was to:

1. Engage in a visioning process and agree on the strategic direction for and expected outcomes of the Quality First Initiative;
2. Utilized data to develop recommendations on how to continuously improve Quality First components, standards, and implementation;
3. Examine overall costs of the Quality First model and program participation;
4. Provide input on how to increase integration and coordination of the Quality First initiative in the comprehensive early childhood system; and
5. Make recommendations for strategy, model, and/or policy changes to enhance participation in Quality First and contribute to the system goal of reaching statewide scale.

Membership

The QFASC membership is representative of the statewide early learning landscape, with members from higher education, school districts, private providers, Headstart, Regional Councils, the Arizona Departments of Economic Security, Health Services, and Education, and health and human service organizations that work within the early childhood sector.

The QFASC's broad membership represented rural, urban, and tribal regions across the state of Arizona. Its 22 members represented the following communities and counties, many with service areas that extend beyond their primary location:

- Coconino
- Gila River Indian Community
- Maricopa
- Navajo Nation
- Pima
- Pinal
- Santa Cruz
- Yavapai

A full membership roster is located in Appendix I on page 22 of this report.

QFASC – Process, Structure, and Approach

In developing recommendations the QFASC was guided through long-term visioning, consideration of each of the components of Quality First and the potential impact of proposed changes on the model as a whole, and consideration of the integration and coordination with system partners. The QFASC was presented with data, information on the current landscape, and historical context to inform their final recommendations.

Between January 2015 and April 2016, the QFASC had eight full subcommittee and several smaller workgroup meetings. The full subcommittee meetings were held on the following dates:

1. February 3, 2015
2. March 31, 2015
3. May 20, 2015
4. September 29, 2015
5. November 10, 2015
6. January 26, 2016
7. March 8, 2016
8. April 7, 2016

A Long-term Vision

QFASC members began with a discussion about their long-term vision for Quality First, and defined a ‘North Star,’ or a 10-year goal for the program, and a set of Guiding Principles or the foundations of what is truly important in order for Quality First to successfully reach the North Star.

The members agreed on the following North Star and Guiding Principles to guide the discussion and be the foundation for the set of recommendations:

North Star

Quality First is the designation of quality in Arizona.

Guiding Principles

1. Quality First would have a replicable and sustainable model for participants.
2. Quality First would demonstrate the ability to reach “scale” through long-term trajectory of holistic quality improvement.
3. Quality First would prioritize closing the learning gap for underserved and high-risk children.
4. Quality First would ensure financial sustainability and continuity to support the whole QIRS system.
5. Quality First would have standards that support all children across diverse economic, cultural, and educational backgrounds.
6. Quality First would facilitate development of the system and participants to

- drive continuous quality improvement, guided by the impact on all children.
7. Quality First would increase and emphasize the accessibility and affordability of quality care.

A Research-based Purposeful Approach

The QFASC spent a significant amount of time considering scale, readiness, and a participant driven approach in Quality First. In examining these pieces, the QFASC reviewed the national trends and best practices, and leveraged the QIRS Compendium² to research successful approaches in other states. The QFASC used Quality First data to review the progression through the quality levels, and identify sustainable approaches to enhance scale, readiness, and motivation to participate.

Scale

In order for Quality First to be the designation of quality, based on the foundation of the guiding principles listed above, the QFASC determined that Quality First must first be available to all providers who wish to participate in the program. The “scale” of Quality First focuses on the number of providers who are able to participate, and the QFASC recommends that in this sense, “scale” is 100% of providers who wish to participate in Quality First. The QFASC’s discussions, and subsequent recommendations, are heavily tied to the notion that all providers can participate in Quality First.

Readiness

During each assessment cycle, only 23% of providers reach quality. The QFASC’s discussions emphasized the importance of providers being ready to move to a higher level of quality before assessment occurs. A shift in the model to elevate readiness was the impetus for the inclusion of orientation, self-assessment, and on-demand technical assistance in the QFASC’s recommendations. Originally, the QFASC discussed self-assessment in the context of formal program assessment, and after reviewing research requested from Child Trends for this specific discussion, the QFASC members decided to include self-assessment at the onset of participation, promoting readiness and a participant-driven approach. The QFASC also discussed the Quality First Points Scale as a potential driver of readiness, and determined the validation study as the appropriate tool to define the elements of the points scale that are critical to quality improvement and the position of this assessment tool within the framework (e.g. self-assessment or program assessment).

Participant-driven Model

To promote the sustainability of the system through expanding access to Quality First to all providers, and ensuring providers are ready to move to a higher level

² <http://qriscompendium.org>, 2014: BUILD Initiative, Early Learning Challenge Collaborative, & Child Trends

of quality before assessment, the QFASC discussed a developmental framework that would shift the philosophy of the model from quality intervention to quality development, driven by participants themselves. The readiness element is intended to ensure participants have a full understanding of the program, process, assessments, and quality improvement before formally entering Quality First. Providers would be able to request specialized technical assistance and supports when they are ready to improve their quality, ultimately driving their own participation and quality improvement along the quality continuum.

Quality First Components

The QFASC discussions on the refinement of the model focused on the three main components of Quality First: Quality Standards; Planning, Monitoring and Accountability; and Financial Support.

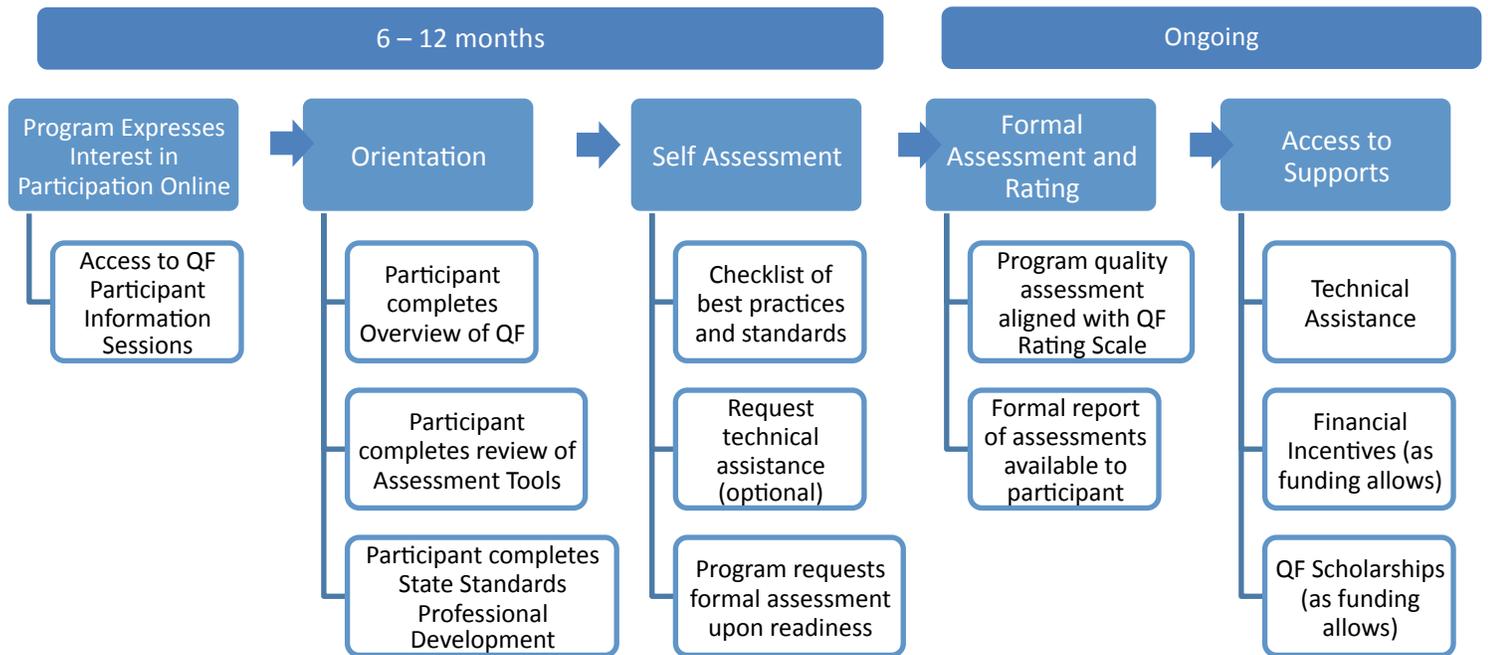
QFASC members worked in smaller workgroups to evaluate data, discuss the current model's impact and effectiveness, and determine a set of recommendations around each of these components. Each workgroup met 3-5 times throughout the process, and presented a set of recommended model improvements relative to their respective program components to the full subcommittee for consideration. The subcommittee discussed and refined each of the workgroup's recommendations when they were presented.

The QFASC's long-term vision, combined with a research-based and informed approach to consider reaching scale, readiness, and a participant-driven model provided the foundation of the QFASC's recommendation for a developmental framework, with the following components:

- Orientation and Self-assessment
- Assessment and Rating
- Technical Assistance
- Incentivizing Quality

This developmental framework, along with a glimpse into the QFASC's recommendations for each portion of the framework is depicted in Figure 1. Further detail, including overarching and specific recommendations for each component are presented in each section below.

Figure 1: Recommended Quality First Participation Process



Once established, the QFASC began to discuss this framework of recommendations as it relates to the model as a whole, and finalized a set of recommendations and considerations for implementation relative to each of the four components listed above. Once complete, the QFASC agreed on a rationale for these recommendations, to ensure they supported the North Star and Guiding Principles established in their long-term visioning process at the very beginning of their convening. Throughout the process of establishing a long-term vision and developing recommendations to improve the model, the QFASC discussed and finalized a set of recommendations around ways the Quality First could leverage and connect other resources within the broader early childhood system to support Quality First participants, and improve the quality of early childhood across the state.

The QFASC Recommendations

The following set of recommendations from the QFASC builds on the current implementation of Quality First and focuses on establishing Quality First as the designation of quality in the early childhood system. The ability to move to an open system in which any early care and education program (licensed/regulated) can participate because of intentional collaboration and leveraging both financial and human capital that currently exists would ensure that Arizona’s young children have access to quality early care and education. The set of recommendations is depicted in

Figure 1, illustrating the Recommended Quality First Participation Process. Further detail, including overarching and specific recommendations for each component are presented in each section below.

Overarching Recommended Shifts in the Quality First Model

Figure 1 above illustrates how any early care and education provider would enter and participate in Quality First from a systemic perspective – from initial engagement to full participation. The major shift in the QFASC’s recommended model change is for Quality First to move beyond a model in which slots are funded, and toward a model that embraces Quality First as a designation of quality statewide. The overarching process and concepts recommended include the following:

1. Any provider can participate in Quality First.
2. By participating in Quality First, providers are demonstrating their commitment to quality and continuous improvement.
3. Upon completing an application, a provider would be considered part of Quality First.
4. Before being formally assessed, Providers engage in the orientation and self-assessment process. During the self-assessment process providers can request technical assistance.
5. Any provider can be formally assessed and there is a method and process to request a formal assessment to receive a rating.
6. After the rating is completed, providers would have access to technical assistance and financial incentives.
7. During each step of the process, First Things First would work to leverage other potential funding and technical assistance partners to ensure more providers have access to the support they need to increase and maintain quality.

Rationale: In order to be able to implement the overarching recommendations, which are fundamental to the long-term success of Quality First, there must be an emphasis on increased accessibility and affordability of quality care. Each recommendation supports a shift in the model toward an improved overall system.

Orientation and Self-assessment

In order to support a participant driven approach and a program’s readiness to drive their own quality improvement process, the QFASC determined providers needed to be fully informed of the program, process, and expectations of Quality First. The recommendation to add an Orientation and Self-Assessment phase to Quality First offers participants the opportunity to engage in a comprehensive orientation that would support their readiness through an understanding of the components of Quality First, including the improvement process and the quality standards, and how participants can assess their readiness for implementing change and be an active partner in the process for improving the quality of their early care and education program. After a provider

completes the informational session they can decide if they want to apply for participation in Quality First Once an application is submitted that provider will officially be a participant in Quality First.

The QFASC members requested and evaluated research from Child Trends to determine that self-assessment would be best suited before a formal assessment, supporting both readiness and the participant-driven approach. Based on recent research conducted by Child Trends evidence (Appendix II on page 25), demonstrates the following:

- Self-Assessment is more likely to serve the role of engaging early childhood programs if it is completed with the support of a coach/consultant.
- Self-Assessment could be included across the quality levels to promote a cycle of a continuous quality improvement process.
- Self-Assessment may function best for participants at a particular level of “readiness” to engage in the process.

This phase allows providers to determine their readiness for formal assessment on their own terms, while simultaneously shifting the program’s model to increase access to all providers who wish to participate in Quality First. When a participant is ready to be an active partner in Quality First, after completing orientation and self-assessment, they would be able to request a formal assessment.

Recommendation

- a) Introduction to the Quality First process through a comprehensive overview of the how Quality First will be experienced from the participant point of view. Informational sessions about Quality First would be available for any provider whether or not they choose to participate in QF. Once a provider chooses to be a part of Quality First (completes the application), they begin orientation and are encouraged to conduct a self-assessment. Steps include the following:
 - Access to orientation resources and tools (in-person, online, and technical assistance).
 - Conduct a voluntary self-assessment.
 - Request to be formally rated and enrolled by FTF after completion of process and meeting determined readiness benchmarks.
- b) Orientation would be held on a regular basis throughout the state through pre-recorded webinars, in-person community-based meetings, and live meetings. Orientation offers a connection to introductory professional development on the Arizona Early Learning Standards (AzELS), Infant Toddler Developmental Guidelines (ITDG) and the Program Guidelines (PG) for High Quality Early Education. All Informational meetings and online professional development materials are available for the public. Comprehensive information on best practices for young children as measured by administrative policies and practices, quality environments, and positive interactions that can be used by

- providers to determine areas for improvement and focus before the rating is provided.
- c) Self-assessment would be conducted independently by the provider and may include:
- Documentation on staff qualifications, lesson planning and curriculum, child assessment procedures, and established ratio and group sizes³
 - Review of quality environmental standards (tool to be used to be determined)
 - Review of positive interaction practices (tool to be used to be determined)
 - Initiation of a self-assessment to determine areas for improvement and focus on going through the Quality First improvement process.
- d) In thinking about the timeline for the orientation and self-assessment, a period of 6 to 12 months was deemed appropriate to move through the components which include the following: programs would begin with an application, proceed through an informational session and overview of professional development, and then move onto a self-assessment process with technical assistance support as requested. It is anticipated that programs will vary in timing for their request for formal assessment anywhere from six months to one year. Programs who already have received national accreditation may be ready for formal assessment earlier than those who are seeking accreditation for the first time through Quality First.

Implementation Considerations

- Orientation is not a tool to create an exclusive process, rather it is intended to offer inclusivity for those wishing to participate in the quality improvement process, and is a tool for attaining quality.
- FTF will consider leveraging existing online resources from similar programs across the country to support webinars and online tools.
- Participants may request technical assistance during the self-assessment process. Any tool to be used in self-assessment to be piloted before implemented.

Rationale

1. Through a comprehensive orientation and self-assessment process, Quality First will have a **replicable and sustainable model for participants (GP 1⁴)** and

³ This particular recommendation may be impacted by the outcome of the recommendation in Program Assessment to use the results in the validation study to Determine how the components of administrative practices are incorporated into the calculation of a Quality First Rating.

⁴ Each rationale indicates the connection to a Guiding Principle, and the Guiding Principle number referenced is indicated by (GP #). A full list of corresponding Guiding Principles and their numbers can be found on page 7 of this report.

- provide information and supports that from the outset can help participants **to close the learning gap for underserved and high-risk children (GP 3)**. Using an informed approach, participants will have the advantage of knowing what the Quality First process entails in advance and identifying areas for improvement being fully engaged in the process from the start. By extending the orientation phase, participants will have the opportunity to determine their pace and extend or increase the timeline in which they are offered.
2. Providing a comprehensive overview of quality standards through established best practices as part of the orientation gives advance knowledge of how programs will be measured and where focused efforts for improvement may occur based on the results of the self-assessment. This supports the ability to sustain quality improvement and reduces the confusion around standards that are being assessed. This also ensures that Quality First will have **standards that support all children across diverse economic, cultural, and educational backgrounds (GP 5)**.
 3. Feedback from Participants, as well as Technical Assistance providers, illustrates that many ECE providers have entered the Quality First process with an unclear understanding of requirements and responsibilities of improvement efforts involved in participation. A thorough Orientation before assessment creates a stronger foundation and awareness for programs entering the process. Based on the finding that self-assessment is more likely to serve the role of engaging ECE programs if it is completed with the support of a coach/consultant from the Child Trends research on self-assessment, access to both generalized and specialized Technical Assistance will be essential to ensuring that Quality First **facilitates the development of the system and participants to drive consistent quality improvement, guided by the impact on all children (GP 6)**.
 4. Supporting the opportunity for collaboration and alignment of standards with state partners will demonstrate the **ability to reach 'scale' through a long-term trajectory of holistic quality improvement (GP 2)**. Various organizations around the state provide professional development on the Arizona Early Learning Standards (AzELS), Infant Toddler Developmental Guidelines (ITDG), and Program Guidelines for High Quality Early Education: Birth through Kindergarten (PG) on a regular basis offering partnership opportunities and alleviating the responsibility of the coach to conduct all of this professional development.

Assessment and Rating

As the QFASC reviewed options for modifying the assessment and rating process, issues were raised about the following:

- a. Frequency of assessments: Should the length of time between assessments be lengthened?;
- b. The tools used during assessment: Should any or all elements of the points scale be included?;
- c. The role of self-assessment: Should self-assessment be a part of the formal

- assessment process?;
- d. Equity and efficiency in the rating process: Should programs be able to pay for assessments, additional assessments and what considerations should be taken into account to ensure equity and that there are not disadvantages to some programs?; and
 - e. Alignment and coordination: What program assessment supports already exist that could be leveraged and with what partners?

The research and review on self-assessment provided by Child Trends was considered when determining refinements to the formal assessment and rating for Quality First. Specifically,

- Self-Assessment is more likely to serve the role of engaging ECE programs in quality improvement if it is completed with the support of a coach/consultant.
- Self-Assessment may function best for participants at a particular level of “readiness” to engage in the process.
- Self-Assessment would be less effective if completed without the support of a coach or consultant to address questions and provide information or to help prioritize action items for the plan.
- Self-Assessment could be included across the quality levels to promote a continuous quality improvement process.

In addition, data trends from Quality First participants who have participated in three cycles of assessment and rating provided additional information to consider when determining refinements to the formal assessment and rating component. This additional data is presented in an Appendix III on page 37, Quality First Assessment and Rating Data Summary (March, 2016).

Recommendation

Reconvene the QFASC after the results of Phase I of the validation study to finalize and/or modify the following recommendations:

- a) Increase the length of the assessment for programs achieving quality.
- b) Allow providers to request and pay for assessment outside of the cycle timeline.
- c) Revise the Rating Scale.
- d) Determine how the components of administrative practices are incorporated into the calculation of a Quality First Rating.

Implementation Considerations

1. Develop a way to ‘check in’ with participants in between assessment cycles to ensure they are still engaging in improvement efforts and understand the impact and equity of Quality First scholarships as they are tied to the rating.
2. Determine an appropriate parameter on timing between assessments (currently

- ten months; parameter needs to exist but could be more or less than ten months) as well as any readiness criteria.
3. Ensure alignment of administrative practices with the Orientation and Self-Assessment component.

Rationale

Using the validation study results to confirm the above recommendations supports the North Star, **Quality First is the designation of quality**, in that the integrity of the assessment and rating component is validated measuring the quality of the environment, teacher-child interactions, and administrative practices that support positive child outcomes.

Technical Assistance

Technical Assistance is one of the primary components in a quality improvement system to facilitate learning and provide supports for participants based on individual need. The QFASC discussed challenges faced with the current model including all participants receiving a standardized number of technical assistance hours regardless of a program's identified needs. They also understood that some Quality First participants have specific areas of focus that may not be addressed by the current technical assistance offered. Research also demonstrates that quality improvement efforts are enhanced through the support of a TA professional. As a result the QFASC discussed designing TA to allow participants to seek individualized supports as determined by their program to support their development along the quality continuum, and allowing TA to be accessed during the self-assessment process and throughout the remainder of their participation in Quality First. They recognized that one outcome of this approach could be the gaining of financial efficiencies by ensuring participants receive what is needed versus what is prescribed.

Recommendation

- a) TA would be provided as requested by participants without a pre-determined set of hours. Each TA generalist is assigned a caseload (TBD) to act as a regular contact for Quality First participants. Participants have access to both specialized TA and a consistent TA professional to link participants with specialized supports.
- b) TA would be provided by professionals with specialized content knowledge based on areas of improvement a program has (i.e. curriculum, early childhood mental health, Child Care Health Consultation (CCHC), inclusion, child assessment, program administration, etc.). Specialized TA supports will be offered on an as-needed basis as available.
- c) Provide opportunities for on-line resources and general early childhood content for professional development rather than always on-site. This would include

- leveraging TA supports from other system partners (ADE, DHS, CCR&R, DES, etc.)
- d) Provide TA opportunities through cohort or community of practice model in regional areas with common areas of need or improvement.

Implementation Considerations

1. Determine appropriate parameters for minimum and maximum TA requested, with respect to what is needed to drive quality and capacity for TA.
2. Consistent relationships between a TA professional and a provider are important in the quality improvement process.
3. Consider leveraging existing online resources from similar programs across the country to support content rather than new content development by FTF.
4. Determine how to handle the access and availability to TA for providers who are not actively working to advance along the Quality First rating scale.

Rationale

1. Supports flexibility for participants and TA professionals to **facilitate the development of the system and participants to drive continuous quality improvement (GP 6)**. In the current model, TA is offered to all participants through a uniform approach whether there is a determined need or not. By offering TA supports as needed, participants have greater flexibility in determining the amount of supports necessary for continuous quality improvement efforts. With a greater emphasis on participant need, TA professionals will have more flexibility in meeting the needs of participants as requested and utilizing their time more effectively.
2. Supports collaboration and system building to **reach 'scale' through a long-term trajectory of holistic quality improvement (GP 2)**. Through the establishment of communities of practice and/or cohort models, a stronger collaboration in the community will be established and networking systems of support built which will create opportunities for sustainable change, ensuring **replicability and sustainability (GP 1)** in the Quality First model.
3. Creates more opportunities for specialized assistance, **which supports all children across diverse economic, cultural, and educational backgrounds (GP 5)**. As participants have the opportunity to seek out specialized assistance based on the unique needs of their program, a greater emphasis on improvement will be targeted.
4. Specialized technical assistance helps Quality First prioritize **close the learning gap for underserved and high-risk children (GP 3)** by ensuring participants have the tools they need to provide the best care to underserved and high-risk children.

Incentivizing Quality

Incentives are a critical driver of quality to support appropriate materials and equipment, professional development of staff, and the costs associated with administrative practices necessary to provide quality services to young children and their families. Currently, twenty-three percent of the Quality First budget is dedicated to incentives. In addition, the incentives provided through Quality First are robust in comparison to other states.

Recommendation

- a) Fund at a level that can offer meaningful support through a flexible menu of options that meets the needs of the individual program.
- b) Incentivize quality attainment for the 1-and 2-star programs.
- c) Support the maintenance of quality and continuous improvement for programs rated at a 3- to 5-star level:
 - Reduce the incentive amount while maintaining a level that is meaningful to support quality improvement (i.e. relevant conferences and professional development for staff);
 - Prioritize access to financial incentives based on a set of criteria from a pool of incentives (need, geography, etc.); and
 - Ensure that incentives reward and incentivize classroom staff who are implementing quality practices.
- d) Determine how Quality First can leverage other resources to support incentives.

Implementation Considerations

1. Consider prioritizing access based on a set of criteria (need, geography, etc.).
2. Incentives do not need to be as robust as they currently are.
3. Allow programs and staff to apply for incentives from a pool of incentives.
4. Make incentives available for all staff, not just classroom teachers.
5. The recommendation does not remove financial incentives from the components of Quality First.
6. Incentives can include non-monetary supports, like Technical Assistance for providers at the 1- and 2-star levels.
7. Consider what incentives should be available to participants at the 3- and 5-star levels to promote continuous quality improvement.

Rationale

1. Diversifying the way in which incentives are offered allows an individualized, **culturally responsive (GP 5)** approach to supporting the quality improvement process, which is different for each program.

2. Targeting incentives to 1- and 2-star programs supports a developmental framework in that those who are in the improvement process receive financial support. This is another step in **the development of the system and participants to drive continuous quality improvement, guided by the impact on all children (GP 6)**.
3. Leveraging other resources supports a **replicable and sustainable model for participants (GP 1)**, and ensuring **financial sustainability and continuity for the whole system (GP 4)**.
4. Teachers require professional preparation and ongoing education to ensure quality services. Incentivizing and rewarding classroom staff supports this aspect of quality improvement. By continuing to support into those professionals, they have ongoing education to continue to sustain quality. This approach will move toward ensuring **Quality First will have a replicable and sustainable model for participants (GP1)**.

Leveraging Other Resources

A large part of the QFASC's purpose was to provide input on how to increase integration and coordination of Quality First in the comprehensive early childhood system. In order for Quality First to reach the QFASC's long-term vision and recommendations, it is essential for Quality First to increase integration with the system through the leveraging and coordination of existing resources. By prioritizing leveraging and partnering with other systems and organizations it will ensure **Quality First has a replicable and sustainable model for participants (GP1)**.

As experts in early childhood and their respective geographical regions and roles within the system, the QFASC members were positioned to discuss what expanded coordination and collaboration of Quality First could look like as one part of a larger system to ensure resources are allocated in a way that maximizes the benefit to providers, families, and children.

The QFASC discussed and finalized the following set of recommendations around ways FTF could leverage and connect other resources within the system to support Quality First participants, and improve the quality of early childhood across the state:

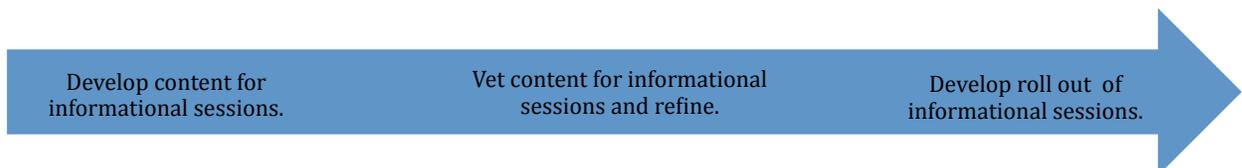
- **Communication:** QFASC recommends that that all state agencies work together to align definitions, processes, and procedures, through internal and external communication.
- **Family Child Care:** QFASC recommends that FTF explore potential partnerships with family child care homes, specifically in rural and tribal regions.
- **Funding:** QFASC identified opportunities for increased access to funding through national organizations, philanthropic organizations, and municipalities.
- **Human Resources:** QFASC identified the opportunity for coordination among state agencies that provide subsidy, food, housing, health care, and basic needs

- support to the Quality First program; specifically:
- aligning current professional development and screening practices within DHS to Quality First;
 - all system partners to support a rate increase for the child care subsidy;
 - Internal Alignment: QFASC recommends that FTF use the North Star, that Quality First is the designation of quality, to align applicable internal (FTF) policies, practices, and procedures.
 - Professional Development: QFASC identified the following opportunities to leverage and coordinate resources for professional development:
 - higher education partnerships to increase access for professionals seeking college credits;
 - Southwest Human Developments Aim for Excellence Program;
 - coordinate professional development for Quality First with ADE’s professional development resources, such as ADE’s Director’s Institute;
 - align professional development support with conference scholarships;
 - leverage the FTF registry as a source for both professional development and industry position openings, and a centralized ‘hub’ or ‘one-stop-shop’ for all programs to access a variety of resources (DES, ADE, DHS, and NAEYC professional development); and
 - higher education support for assessments.
 - Rules: QFASC recommends aligning related to licensing, quality, and child care among state agencies, such as:
 - aligning Quality First standards with the subsidy and licensing requirements.
 - Tribal communities: QFASC recommends that FTF build a connection with Quality First participants in tribal regions with tribal HeadStart programs.

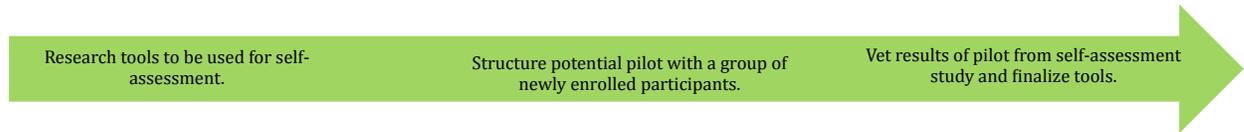
Moving Forward

First Things First identified the following implementation approaches for the QFASC recommendations in the areas of orientation, self-assessment, assessment and rating, technical assistance, and incentivizing quality. While the implementation approaches below specify development and pilot phases, an overarching approach to continue to align, collaborate and leverage resources is imperative to Quality First being the designation of quality for Arizona. With that mind, what is outlined below are key tasks that have been identified as options to move the recommendations forward.

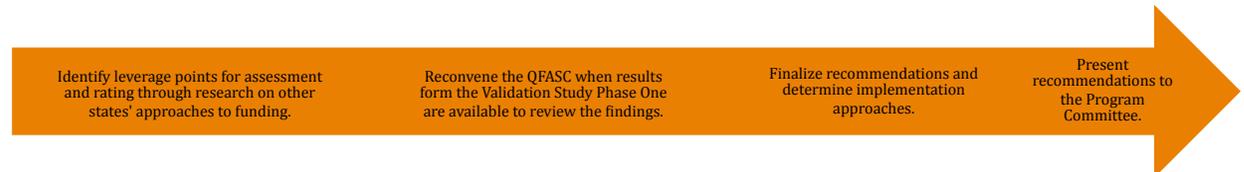
Orientation



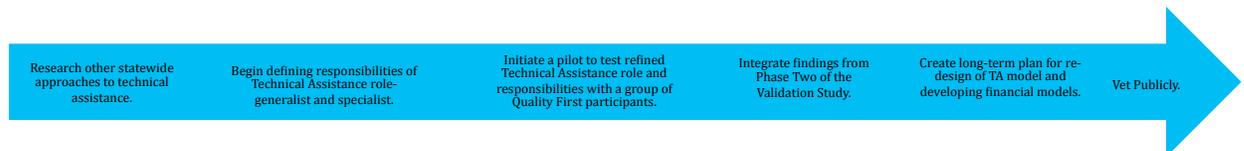
Self-Assessment



Assessment and Rating



Technical Assistance



Incentivizing Quality



Prior to implementation, the recommendations above will be heard by the Program Committee of the FTF Board, the FTF Board, and align with the findings of Phase One and Two of the validation study. Findings from Phase I of the Validation Study will be available June 2017 and it is anticipated that findings from Phase II may be available June 2019. In addition, during the next two to three years some recommendations may need to be piloted, researched further, or publicly vetted.

The QFASC's recommendations are one piece of a broader effort to determine a long-term strategic direction for Quality First, including ensuring continuous quality improvement, increasing integration and coordination with the early childhood system in Arizona, validating the rating scale, and establishing financial sustainability.

Acknowledgements

The work of the Quality First Advisory Subcommittee was intense and energetic during the course of fifteen months. The development of these recommendations could never have been accomplished without the inspiring dedication of the subcommittee members themselves. FTF would like to express gratitude to the members of the Quality First Advisory Subcommittee for their time and the expertise that went into the development of these recommendations.

Appendix I: Quality First Advisory Subcommittee Membership Roster

| | |
|--|----------|
| Jonathon Gonzales Executive Director Arizona Head Start Association | Maricopa |
| Cheryl McDaniel Navajo Nation School District Early Childhood Teacher | Tribal |
| Melissa Madrid Child Care Center Director Gila River Indian Community Early Childhood | Tribal |
| Danielle Alexander Regional Manager Learning Care Group | Urban |
| Linda Pauley Center Director Risen Savior Child Care | Maricopa |
| Alan Taylor SWHD Coaching/Assessment Quality First Coaching | Maricopa |
| Rebecca Cirzan ASCC Quality First Coach | Coconino |
| Virginia Maya ASCC Quality First Assessor | Maricopa |
| Katie Romero Program Manager Quality First Assessor Grantee | Maricopa |
| Marjorie Rasper Licensing Surveyor Team Lead DHS Bureau of Child Care Licensure | Maricopa |
| Rebecca Haskl (replaced Jakob Raskob and Jennifer Setter) CCDF Administrator DES Child Care Administration | Maricopa |
| Kameron Bachert Regional Council Member | Pinal |
| Anne Babinsky Regional Council Member | Yavapai |
| Tina Sykes Early Childhood Specialist Southwest Human Development | Maricopa |

| | |
|--|----------|
| Erin Raden Executive Director ACCA | Maricopa |
| Melissa Busby Central Arizona College Institutes of Higher Education | Pinal |
| Dr. Debbie Pishcke Peoria School District Special Education Educator | Maricopa |
| Diane Fellows Program Manager CCR&R | Pima |
| Kelley Murphy EC Policy Specialist Children's Action Alliance | Maricopa |
| Christine Shraeder Valley of the Sun United Way | Maricopa |
| Martha Munoz Northern Arizona University | Coconino |
| Magdalena Verdugo Chicanos Por La Causa | Pima |

Appendix II: Self-Assessment in Quality Rating and Improvement Systems, April 2016

Self-Assessment in Quality Rating and Improvement Systems

Child Trends

April 2016

Self-assessment is a broad term that refers to the process of an individual or group evaluating themselves or their organization on a set of criteria. Self-assessments are used across a range of disciplines – education, health care, counseling, organizational psychology – and with people in various roles including students, staff, managers and executives. Though self-assessment tools addressing a variety of issues and topics are widely available online, a scan of the literature reveals few published research articles documenting their effectiveness (see the Sources section in this document for a list of articles and abstracts).

Acknowledging the limited empirical literature on the effectiveness of self-assessment, the purpose of this document is (1) to provide general information about self-assessments and their use in state quality rating and improvement systems (QRIS) and (2) to respond to specific questions about self-assessment posed by First Things First.

SELF-ASSESSMENT IN QRIS: GENERAL INFORMATION AND CONSIDERATIONS

Purposes

Self-assessments used in education, health and business address multiple, related purposes that are similar to the reasons for using self-assessment in QRIS.

1. Developing awareness of quality standards or best practices.
2. Reflecting on current practices
3. Identifying areas of practice that need improvement
4. Motivating change through self-diagnosis of needs

Across disciplines, self-assessment is viewed almost exclusively as a professional development activity in which the process of conducting the assessment is more important than the outcome or the scores. We believe this is a key lesson from the limited literature: self-assessment used in a more “high stakes” process – in which the scores would be used to provide rewards or incentives – is not advisable.

Effectiveness

One review of self-assessments in the health domain concluded that:

“...competent practitioners are reasonably accurate in their self-assessment, and it may be possible to improve this accuracy. On the other hand, people who lack competence are less likely to be aware of their deficiencies as evidenced by self-assessment, and to be less responsive to strategies for improving accuracy” (Colthart et al., 2008)

In the QRIS context, the finding that “competence” plays a role in self-assessment effectiveness is important. In early care and education programs, staff at different roles

or with different levels of training and education may vary in their ability to complete a self-assessment with accuracy.

Process

The limited literature suggests that self-assessment is facilitated by the supportive presence of a coach or consultant. In the QRIS context, the coach or consultant may be essential for staff who are engaging in self-assessment with limited knowledge of best practices in early care and education. The coach can answer questions about practices on a self-assessment and encourage greater reflection than might happen otherwise.

SPECIFIC QUESTIONS ABOUT SELF-ASSESSMENT POSED BY FIRST THINGS FIRST

How have other states integrated self-assessment as part of their QIRS?

The QRIS Compendium documents 17 state QRIS that require self-assessment as part of the rating process. Typical processes include:

- Self-assessment is used at low rating levels – typically the first or second – and completion is required as part of a block structure. Paper assessments are common, but some QRIS have moved to online assessments. In Minnesota, an online tool for the Environment Self-Assessment was recently launched and will allow for seamless analysis of trends and patterns of scoring (in contrast to an analysis Child Trends conducted of the ESA which required hand entry of paper tools; we suspect that data limitations are one key reason that very few studies have been complete on self-assessment processes in QRIS). Providers completing the ESA online are also expected to benefit from having previous versions of their assessments available to chart progress.
- In the majority of states with requirements, self-assessment is used to develop a quality improvement plan. Documents from Wisconsin state that the self-assessment can be done with or without the support of a YoungStar technical assistance consultant. The process is similar in Minnesota though a review of coaching data indicates that many programs choose to do the ESA with the support of a coach. The quality improvement plans may be used by the coach throughout the pre-rating process to guide activities and preparation for the rating.
- Pennsylvania includes a provision related to self-assessment using the Environment Rating Scales at Level 2 indicating that the self-assessment process must be completed by the director or a staff member who has taken approved ERS training. At Level 1, programs are expected to complete a “Learning Environment Checklist” that is essentially a simplified version of the Environment Rating Scales.

- Minnesota requires that Quality Coaches complete a six module training course on the Environment Self-Assessment so that they approach the ESA with consistency. In general, providing training and support to coaches on self-assessment tools (and when relevant, ensuring that coaches can complete tools reliably) is considered best practice.

What have been the findings from states using self-assessment as a component of the QRIS?

In our review of state QRIS and use of self-assessment, we found one published report (Child Trends' Year 2 evaluation of Minnesota's QRIS) and one unpublished report (Child Trends' final evaluation of the Getting Ready project in Minnesota) with relevant findings. When possible, we cite these reports (and others with related findings) to answer the specific questions. We also draw upon our general knowledge of QRIS practices but note that they may not be evidence-based.

- **Has self-assessment supported engagement of ECE programs in the process to improve quality?**

To our knowledge, no study has addressed this important question. However, looking across the two evaluation reports that analyzed self-assessment data, we conclude:

- *Self-assessment is more likely to serve the role of engaging ECE programs in quality improvement if it is completed with the support of a coach/consultant.* The Getting Ready project, for example, targeted programs that were underrepresented in Parent Aware, Minnesota's QRIS (including family child care providers who were English Language Learners). The self-assessment checklist was completed during the intake process for Getting Ready and was intended to provide a more supportive introduction to Parent Aware than would have been available otherwise. Each director or family child care provider was led through the process of reviewing each item on the checklist by the Program Coordinator. This facilitated intake process served the dual role of providing an awareness of Parent Aware quality standards and helping the provider reflect on how well s/he met each standard. The implementation team reflected in interviews that the self-assessment could have been intimidating for the providers had the Program Coordinator not walked them through it. Similarly, in the study of the Environment Self-Assessment in Parent Aware, programs completed the tool with varying levels of support from the Quality Coach. It appeared that those who worked more closely with a Coach rated themselves with more variability and perhaps more accurately.

- **Has self-assessment been found to support ECE programs in moving along the continuum of quality?**

We do not know of any research that demonstrates the effectiveness of self-assessment for the purpose of supporting movement along the quality continuum. It is noteworthy however, that self-assessment is almost always included at lower rather than higher levels of a QRIS. Instead, as programs advance to higher levels of the QRIS, it is more likely that third-party/outside assessments are used to document quality. Yet this practice is not aligned with recommendations for building program capacity to engage in continuous quality improvement. Therefore, we offer this consideration:

- *Self-assessment could be included across the quality levels to promote a cycle of plan-do-study-act in a continuous quality improvement process.* A variety of models could be developed that would incorporate self-assessment in the quality improvement process. At lower levels of the QRIS, for example, self-assessment can be used to support awareness of quality standards and development of a quality improvement plan. At higher levels of the QRIS, in coordination with coaches or on their own, programs may identify goals for quality improvement that could be supported by using a particular quality self-assessment tool. A director targeting the work environment for staff could use the Early Childhood Work Environment Survey to assess the organizational climate and to create goals for improvement. Scores on these tools would not be assessed as part of the QRIS rating but instead would be used through the quality improvement process to document change on desired goals. New Mexico is piloting a CQI process through their FOCUS TQRIS, but data are not yet available to document how it is working. Similarly, Pennsylvania includes a CQI process in Keystone STARS, but we do not have research findings on its effectiveness.

Resources on CQI may be helpful to review. We have included links to two BUILD products on CQI:

Wiggins, K. & Mathias, D. (2013). Continuous Quality Improvement: An Overview Report for State QRIS Leaders. BUILD Initiative.

<http://qrisnetwork.org/sites/all/files/session/resources/Continuous%20Quality%20Improvement%2C%20An%20Overview%20Report%20for%20State%20QRIS%20Leaders.pdf>

QRIS National Learning Network. (2015). Continuous Quality Improvement Framework: Supported Resources and Initiatives. BUILD Initiative.

<http://qrisnetwork.org/resource/2015/continuous-quality-improvement-framework-%E2%80%93-supported-resources-and-initiatives>

- How has self-assessment been used as a benefit/effective component?
Though there is limited data on the question of whether self-assessment is a benefit,

we content that it is important to consider providers' motivations for entering a QRIS or quality improvement initiative. Across surveys Child Trends has conducted with providers in Minnesota, New Mexico and Kentucky, the majority of providers report that their primary motivation for entering a QRIS or quality improvement initiative such as accreditation is to engage in quality improvement or to be part of an innovative early care and education system. Thus, for many providers, using tools that document quality standards – particularly when supported by a professional coach or consultant – will be perceived as a benefit of participation. Yet, not all providers will approach self-assessment positively if they perceive the process to be too challenging or overwhelming. It may be important to consider:

- *Self-assessment may function best for programs/providers at a particular level of “readiness” to engage in the process.* In a recent evaluation of a quality improvement initiative in Philadelphia, Child Trends reported that after several years of implementation, the initiative designed a “readiness” cohort to accommodate programs that entered with a lower capacity to engage in the quality improvement activities. Similarly, it may be useful to identify programs/providers that may not be ready to engage fully in a self-assessment process. For example, they may benefit from an orientation training that provides an overview and video examples of high quality practices before they begin assessing their own program.
- When has self-assessment been found to be an ineffective component?
To our knowledge self-assessment in QRIS will be ineffective or less effective under the following conditions:
 - If the intent is to support awareness and understanding of quality standards, self-assessment will be less effective if completed without the support of a coach or consultant to address questions and provide information.
 - If the intent is to support reflection on quality standards, self-assessment will be less effective if it contains vague language and does not offer specific examples of practices. The analysis of the ESA in Minnesota revealed that providers differentiated between “basic” practice items and “enhanced” practice items (with greater variation in responses evident for the enhanced practices). Thus a balance is needed to provide simple statements about practices but with enough detail to support differentiated responses.
 - If the intent is to develop a quality improvement plan, self-assessment will be less effective if completed without the support of a coach or consultant to help prioritize action items for the plan.

- If the intent is to motivate change, self-assessment will be less effective if there are limited rewards for completion. For example, a self-assessment that is not required as part of the rating or is not used to develop action plans and/or budgets for quality improvement funds may be less effective.
- Is self-assessment reliable and cost effective?

Child Trends assessed the question of reliability (not cost effectiveness) and validity in the analysis of the Environment Self-Assessment in Parent Aware. Key findings included:

 - The Family Child Care ESA checklist elicited more variation in responses than the Preschool or Infant/Toddler ESA checklists. It was not clear whether this variation emerged because of relationships with coaches that gave family child care providers more guidance than center-based teachers.
 - Importantly, family child care providers' patterns of scoring the ESA items correlated with the Star rating their program received. "Providers who identified more areas of need in their programs were more likely to be in programs with lower ratings. Provider practice items identified as reflecting a more enhanced set of practices and provider behaviors elicited more variation than did items identified as more standard, basic practices." This same pattern was not evident for the center-based teachers and the Star rating their program received.

From this study, we conclude that a variety of factors play a role in reliability and validity of self-assessment including:

- Program type (family child care, child care center)
- Role of staff member completing the self-assessment (director, family child care provider, teacher)
- Support (or not) received from a coach or consultant
- Type of item/practice (with the possibility that providers may be more likely to endorse "basic" practices that they perceive as easier and less likely to endorse "enhanced" practices that they perceive as harder)

Sources from other disciplines (note that these abstracts and brief descriptions are pulled directly from the articles and were not paraphrased)

Meier, K.J. & O'Toole, L.J. (2013). I think (I am doing well), therefore I am: Assessing the validity of administrators' self-assessments of performance. *International Public Management Journal*, 16(1), 1-27.

Abstract

Several prominent public management data sets rely on administrators' and sometimes bureaucrats' self-assessments of how their programs or organizations are performing. While subjective assessments of performance, particularly by clientele, are valuable, assessments by administrators raise the issue of bias. Even if there is no systematic bias, such assessments may still be problematic statistically. This analysis uses original survey and archive data to systematically compare administrative self-assessments of performance with other performance indicators. The results show that administrators' perceptions of performance are biased in predictable ways, that these biases do not reflect sophisticated assessments of organizational situations, and that the measures can produce spurious results. We caution against using administrators' perceptions of performance without other corresponding performance indicators.

Freund, P.A. & Kasten, N. (2012). How smart do you think you are? A meta-analysis on the validity of self-estimates of cognitive ability. *Psychological Bulletin*, 138 (2), 296-321.

Abstract

Individuals' perceptions of their own level of cognitive ability are expressed through self-estimates. They play an important role in a person's self-concept because they facilitate an understanding of how one's own abilities relate to those of others. People evaluate their own and other persons' abilities all the time, but self-estimates are also used in formal settings, such as, for instance, career counseling. We examine the relationship between self-estimated and psychometrically measured cognitive ability by conducting a random-effects, multilevel meta-analysis including a total of 154 effect sizes reported in 41 published studies. Moderator variables are specified in a mixed-effects model both at the level of the individual effect size and at the study level. The overall relationship is estimated at $r = .33$. There is significant heterogeneity at both levels (i.e., the true effect sizes vary within and between studies), and the results of the moderator analysis show that the validity of self-estimates is especially enhanced when relative scales with clearly specified comparison groups are used and when numerical ability is assessed rather than general cognitive ability. The assessment of less frequently considered dimensions of cognitive ability (e.g., reasoning speed) significantly decreases the magnitude of the relationship. From a theoretical perspective, Festinger's (1954) theory of social comparison and Lecky's (1945) theory of self-consistency receive empirical support. For practitioners, the assessment of self-estimates appears to provide diagnostic information about a person's self-concept that goes beyond a simple "test-and-tell" approach. This information is potentially relevant for career counselors, personnel recruiters, and teachers.

Conway, J.M. & Huffcutt, A. I. (1997). Psychometric properties of multisource performance ratings: A meta-analysis of subordinate, supervisor, peer, and self-ratings. *Human Performance*, 10(4), 331-360.

Abstract

The purpose of this investigation was to examine the psychometric properties (interrater reliabilities within source and correlations between sources) of subordinate, supervisor, peer, and self-ratings of job performance. Different job types and dimension types were compared. Using meta-analytic methodology, we found that subordinates showed the lowest mean reliability (.30) and supervisors showed the highest (.50), with peers in between (.37). Mean correlations between sources were low for subordinate ratings (.22 with supervisor, .22 with peer, and .14 with self-ratings) and for self-ratings (.22 with supervisor and .19 with peer ratings). The mean supervisor-peer correlation was higher at .34. Both reliabilities and correlations between sources tended to be higher for non-managerial and lower complexity jobs. Comparisons of between-source correlations with within-source reliabilities indicated that, with some qualifications, the different sources had somewhat different perspectives on performance. Dimension reliabilities differed somewhat for interpersonal and cognitive dimensions.

Fleenor, J.W., McCauley, C.D., Brutus, S. (1996). Self-other rating agreement and leader effectiveness. *The Leadership Quarterly*, 7(4), 487-506.

Abstract

This study examined relationships between two models of self-other rating agreement and leader effectiveness. Using differences between self- and subordinate ratings, managers ($N = 2,056$) were first categorized into four groups: over-estimators (who rated themselves higher than others rated them); under-estimators (who rated themselves lower than others rated them); in-agreement/good raters (whose self-ratings were favorable and similar to the ratings of others); and, in-agreement/poor raters (whose self-ratings were unfavorable and similar to the ratings of others) (Atwater & Yammarino, in press). Then, managers were classified using a six group model (Brutus, Fleenor, & Taylor, 1996), which introduced a further distinction—over-estimators/good, and under-estimators/poor. With the four group model, superiors appeared to rate in-agreement/good raters and under-estimators as more effective than over-estimators. However, with the six group model, in-agreement/good raters and under-estimator/good raters were not seen as more effective than over-estimator/good raters. The results suggested that six groups are necessary to fairly compare agreement groups.

Mabe, P.A. & West, S.G. (1982). Validity of self-evaluation of ability: A review and meta-analysis. *Journal of Applied Psychology*, 67(3), 280-296.

Abstract

Reviews 55 studies in which self-evaluations of ability were compared with measures of performance to show a low mean validity coefficient (mean $r = .29$) with high variability ($SD = .25$). A meta-analysis by the procedures of J. E. Hunter et al (1982) calculated sample-size weighted estimates of r and SDr and estimated the appropriate adjustments of these values for sampling error and unreliability. Among person variables, high intelligence, high achievement status, and internal locus of

control were associated with more accurate evaluations. Much of the variability in the validity coefficients ($R = .64$) could be accounted for by 9 specific conditions of measurement, notably (a) the rater's expectation that the self-evaluation would be compared with criterion measures, (b) the rater's previous experience with self-evaluation, (c) instructions guaranteeing anonymity of the self-evaluation, and (d) self-evaluation instructions emphasizing comparison with others. It is hypothesized that conditions increasing self-awareness would increase the validity of self-evaluation. (84 ref) (PsycINFO Database Record (c) 2012 APA, all rights reserved)

Asadoorian, J., & Batty, H. P. (2005). An evidence-based model of effective self-assessment for directing professional learning. *Journal of dental education*, 69(12), 1315-1323.

<http://www.jdentaled.org/content/69/12/1315.long>

- “An innovative model for conducting meaningful self-assessments (SA) is presented to help oral health care professionals efficiently determine what to learn with the goal of remaining competent.
- A review and analysis of the literature drawing from several databases was conducted to develop the model.
 - Defined SA as an active process of developing an awareness of a personal learning exigency, meaning a pressing need, within one’s professional activities to guide the initiation of appropriate learning activities. Rationale behind SA primarily to provide direction, efficiency, and motivation to enhance one’s professional learning and implement changes to augment or improve performance.
- **Through the literature review process, we identified four key categories: prerequisite competencies, process, applications, and tools that are suggested to occur within a supportive environment to carry out valid self-assessments and to positively influence learning choices and practice improvements.**
- **It is essential that practitioners are well motivated to apply newly acquired knowledge and skills into practice. SA can provide motivation for learning and undertaking the subsequent change required to improve practice.** Knowles suggests self-diagnosed learning needs are more motivating than those externally diagnosed, and Grant describes motivation as an outcome of resolving personal practice problems.”

Colthart, I., Bagnall, G., Evans, A., Allbutt, H., Haig, A., Illing, J., & McKinstry, B. (2008). The effectiveness of self-assessment on the identification of learner needs, learner activity, and impact on clinical practice: BEME Guide no. 10. *Medical teacher*, 30(2), 124-145.

<http://www.ncbi.nlm.nih.gov/pubmed/18464136>

- “Health professionals are increasingly expected to identify their own learning needs through a process of ongoing self-assessment. Self-assessment is integral to many appraisal systems and has been espoused as an important aspect of personal professional behaviour by several regulatory bodies and those developing learning outcomes for clinical students.
- In this review we considered the evidence base on self-assessment since Gordon's comprehensive review in 1991. **The overall aim of the present review was to determine whether specific methods of self-assessment lead to change in learning behaviour or clinical practice. Specific objectives sought evidence for effectiveness of self-assessment interventions to: a. improve perception of learning needs; b. promote change in learning activity; c. improve clinical practice; d. improve patient outcomes.**
- **Although a large number of papers resulted from our original search only a small proportion of these were of sufficient academic rigor to be included in our review. Thus our review was largely unable to answer the specific research questions and provide a solid evidence base for effective self-assessment.**
- The findings from this studies examined broadly support the idea that competent practitioners are reasonably accurate in their self-assessment, and it may be possible to improve this accuracy. On the other hand, people who lack competence are less likely to be aware of their deficiencies as evidenced by self-assessment, and to be less responsive to strategies for improving accuracy.
- An interesting conclusion across a number of studies was that individuals are far more able to accurately assess their peers' ability than their own. Peer assessments also appear to be more in line with faculty assessments of performance than self-assessments.
- There is some evidence from our review that practical skills may be better self-assessed than knowledge. As noted in the results section, this could perhaps be explained by the fact that the outcomes of practical skills are harder to dispute and so the potential for self-deception about one's own abilities is less. Observable performance also lends the opportunity for direct feedback. The importance of feedback and benchmarking has been identified in a small number of studies in our

review as increasing the accuracy of self-assessment by increasing the learner's awareness of the standard to be achieved."

McDonald, B., & Boud, D. (2003). The impact of self-assessment on achievement: the effects of self-assessment training on performance in external examinations. *Assessment in Education: Principles, Policy & Practice*, 10(2), 209-220.

<http://www.tandfonline.com/doi/abs/10.1080/0969594032000121289>

- **"Can the quality of students' work be improved through training in self-assessment practices? This paper considers the impact of training high school students on their performance in external examinations.**
- Teachers were selected from a sample of high schools and trained in how to develop students' self-assessment skills. Ten high schools representative of the top, middle and bottom levels of academic achievement in national examinations were chosen and students trained in self-assessment by their normal class teachers as part of their final year curriculum.
- An experimental group comprising 256 participants received formal training in self-assessment skills for the entire three terms of the academic year. A control group was selected from matched classes not receiving such training.
- **A significant difference favouring those trained in self-assessment was found overall and in each curriculum area. While it is demonstrated that self-assessment training can have an impact on student performance the paper considers the circumstances of the study and whether similar outcomes might be possible in less favourable conditions."**

Tait-McCutcheon, S., & Sherley, B. (2006). In the hands of the learner: The impact of self-assessment on teacher education.

1. <http://www.merga.net.au/documents/RP392006.pdf>

- "Research shows that the ability to self-assess the quality of one's own work is a characteristic of top performing professionals and that frequent self-assessment is highly efficacious in enhancing achievement.
- The focus of the New Zealand Numeracy Development Project (NDP) is to improve student performance in mathematics through improving the professional capability (content and pedagogy) of teachers.
- Our challenge was to create a self-assessment tool that was for learning, a part of learning, and an intrinsic on-going judgement on the improvement of learning. The rubric format was selected because it is a

non-static scoring guide that requires an act of judgement in relation to the learners' own learning by distinguishing and describing levels of quality.

- This research was conducted with 66 teachers in their first year of NDP professional development. Included are 1621 students in Year 0–8 and aged 5–13. During the eight workshops that form the NDP professional development teachers were asked to self- assess themselves against criteria related to each of Guskeys' critical levels of thinking.
- **The authors agreed that by under-taking the formative self-assessment systematically throughout the year the teachers were scaffolded in their learning and able to govern their own learning in smaller manageable chunks. We believe this led to an improved attitude toward this professional development and that this resulted in a greater willingness to challenge and change their beliefs and practices.”**

Appendix III: Quality First Assessment and Data Rating Summary, March 2016



Quality First Assessment and Rating Data Summary

Sample: QUALITY FIRST participants with multiple (3) assessment cycles, N = 705 (~2011 – 2015)

From Assessment Cycle 1 to 2 (T1 to T2):

- Overall, the vast majority of programs (78%) maintained their ratings, 20% improved their ratings and 2% went to a lower rating level.
- The most common trend was for 2 star programs to remain a 2 star from T1 to T2 (87.5%), or increase to a 3 star or a 4 star rating (8.4% and 3.4%, respectively).
- From T1 to T2 majority of the 1 star programs increased to a 2 star (71%) and a smaller percentage to a 3 star (15%). However, 14 % remained at a 1 star level.

Programs that showcased decrease in rating from T1 to T2 (N =15, 2%):

The programs mainly showed declines on emotional support, $t(14) = -3.57$, $p = .023$, and classroom organization, $t(14) = -2.63$, $p = 0.06$.

- **4** dropped from a 2 to 1 star; **8** from a 3 to 2 star; and **3** from a 4 to 3 star.

From Assessment Cycle 2 to 3 (T2 to T3):

- Overall, about half of the programs either maintained their star rating (46.4%) or improved their rating (48.4%), while 5.2% showcased sliding back to a lower rating level.
- Half of the programs (51%) rated 2 star in T2 increased to 3-5 star in T3, another half (49%) stayed at a 2 star level in T3.
- Similarly, half of the programs (46%) rated 3 star in T2 increased to a 4-5 star in T3, another half (46%) stayed at a 3 star level in T3.

Programs that showcased decrease in rating from T2 to T3 (N =37, 5.2%):

The programs showed declines in ERS, $t(31) = 3.58$, $p < .001$, Classroom organization, $t(16) = 2.61$, $p = .02$, and instructional support, $t(16) = 2.27$, $p = 0.04$

- **20** dropped from a 3 to a 2 star, **3** from a 2 to 1 star; **11** from a 4 to either a 2 (N=4) or a 3 (N=11); **3** from a 5 to either a 4(N=2) or a 2 (N=1).

NOTE: No program steadily decreased in rating over 3 assessment cycles.

Info on Environmental Rating Scale (ERS) Scores

For 3-star rated programs:

- Between T1 and T2, 5% decreased, 50% maintained, and 46% increased.
- Between T2 and T3, 22% decreased, 64% maintained, and 15% increased.

Interpretation: While it does seem like the majority of the programs maintain their ERS scores from T1 to T2, more 3-star rated programs decrease in their ERS scores between T2 and T3.

Programs that could have been at a 3-5 Star level: N = 875, uses each program's current cycle data

| 1 | 2 | 3-5 Star | Total |
|---|-----|----------|-------|
| 9 | 357 | 509 | 875 |

170 (48%) out of 357 programs who were at a 2 star actually met the ERS score criteria for 3-5 star levels, however they dropped back to a 2 star mainly because they didn't meet the criteria for CLASS assessments . Majority of the programs out of the 170, didn't meet the Instructional Support domain (N = 115, 68%), and another comparatively smaller set didn't meet Classroom Organization (N = 18, 11%) and Emotional Support Climate (N = 5, 3%).

Additionally, out of the 357 programs who were at a 2 star actually met the ERS score criteria for 3-5 star levels, 40 programs didn't meet the criteria for the QUALITY FIRSTPoint Scale criteria. Curriculum and Assessment = 18, Administrative Practices = 6, and Staff Qualification = 16.

Accredited/Head Start Program (N = 145, Started with a CLASS assessment) (~2011-2015)

- 65 programs (45%) out of the 145 programs who were accredited or Head Start who started with a CLASS assessment didn't meet the 3-5 Star requirements and needed an ERS follow up.
- Additionally, ~7% of them even on their follow up assessment cycle (most had within 1 year and few others within 2 years) started with a CLASS and without meeting CLASS criteria for 3-5 star needed ERS follow up.

| Maintained or Improved Star Rating from T1 to T2 | | | | | | |
|--|----|-----|----|----|---|-------|
| | T2 | | | | | Total |
| T1 | 1 | 2 | 3 | 4 | 5 | |
| 1 | 10 | 51 | 11 | 0 | 0 | 72 |
| 2 | 0 | 534 | 51 | 21 | 4 | 610 |
| 3 | 0 | 0 | 4 | 1 | 1 | 6 |
| 4 | 0 | 0 | 0 | 0 | 2 | 2 |
| Total | 10 | 585 | 66 | 22 | 7 | 690 |

| | | | | | | |
|---|----|-----|-----|----|----|--|
| % | 1% | 85% | 10% | 3% | 1% | |
|---|----|-----|-----|----|----|--|

| T1 to T2 | Decline | Stayed Same | Improved |
|----------|---------|-------------|-----------|
| N | 15 (2%) | 548 (78%) | 142 (22%) |
| Diff | 690 | 157 | 563 |
| TOTAL | 705 | 705 | 705 |

| Maintained or Improved Star Rating from T2 to T3 | | | | | | |
|--|-----|-----|-----|-----|----|-------|
| T2 | T3 | | | | | Total |
| | 1 | 2 | 3 | 4 | 5 | |
| 1 | 3 | 9 | 1 | 1 | 0 | 14 |
| 2 | 0 | 290 | 220 | 69 | 14 | 593 |
| 3 | 0 | 0 | 21 | 20 | 5 | 46 |
| 4 | 0 | 0 | 0 | 9 | 2 | 11 |
| 5 | 0 | 0 | 0 | 0 | 4 | 4 |
| Total | 3 | 299 | 242 | 99 | 25 | 668 |
| % | ~0% | 45% | 36% | 15% | 4% | |

| T2 to T3 | Decline | Stayed Same | Improved |
|----------|-----------|-------------|-------------|
| N | 37 (5.2%) | 327 (46.4%) | 341 (48.4%) |
| Diff | 668 | 378 | 364 |
| Total | 705 | 705 | 705 |

TAKING A BITE OUT OF SCHOOL ABSENCES

Dental issues are leading cause of missed school days

For many Arizona kindergarteners, one of the threats to academic success may not be a lack of knowledge, but a lack of good oral health.

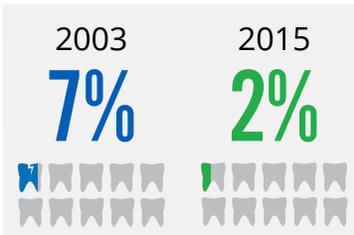
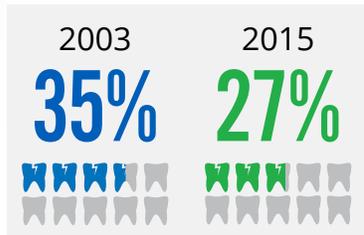
Tooth decay — the single most common chronic childhood disease — can cause lasting harm to a child's health and impact their cognitive and social development. As a child enters school, it can lead to missed school days, inability to focus, anxiety and other factors that affect academic success.

First Things First partnered with the Arizona Department of Health Services to coordinate a statewide oral health study including dental screenings of 3,630 kindergarten children attending Arizona's public schools and a survey of their caregivers. The study shows that the prevention efforts of FTF and early childhood system partners are paying off.

SOMETHING TO SMILE ABOUT

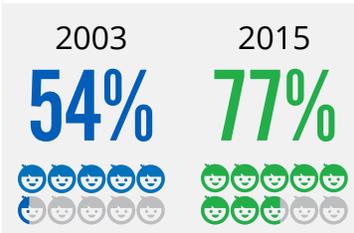
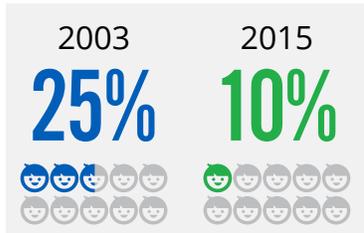
Fewer AZ kindergarteners have untreated tooth decay.

Fewer AZ kindergarteners have dental pain or infection.



Fewer AZ kindergarteners have never been to a dentist.

More AZ kindergarteners visited a dentist in the last year.



MAKING AN IMPACT

FIRST THINGS FIRST

As part of Arizona's early childhood system, First Things First has made strategic investments in efforts to prevent early childhood tooth decay and promote positive oral health for Arizona children birth to age 5 and their families.

From 2010 to 2015



CHALLENGES REMAIN

Too many young children in AZ experience tooth decay.

AZ kindergarteners

US 5-year-olds



2015



2010

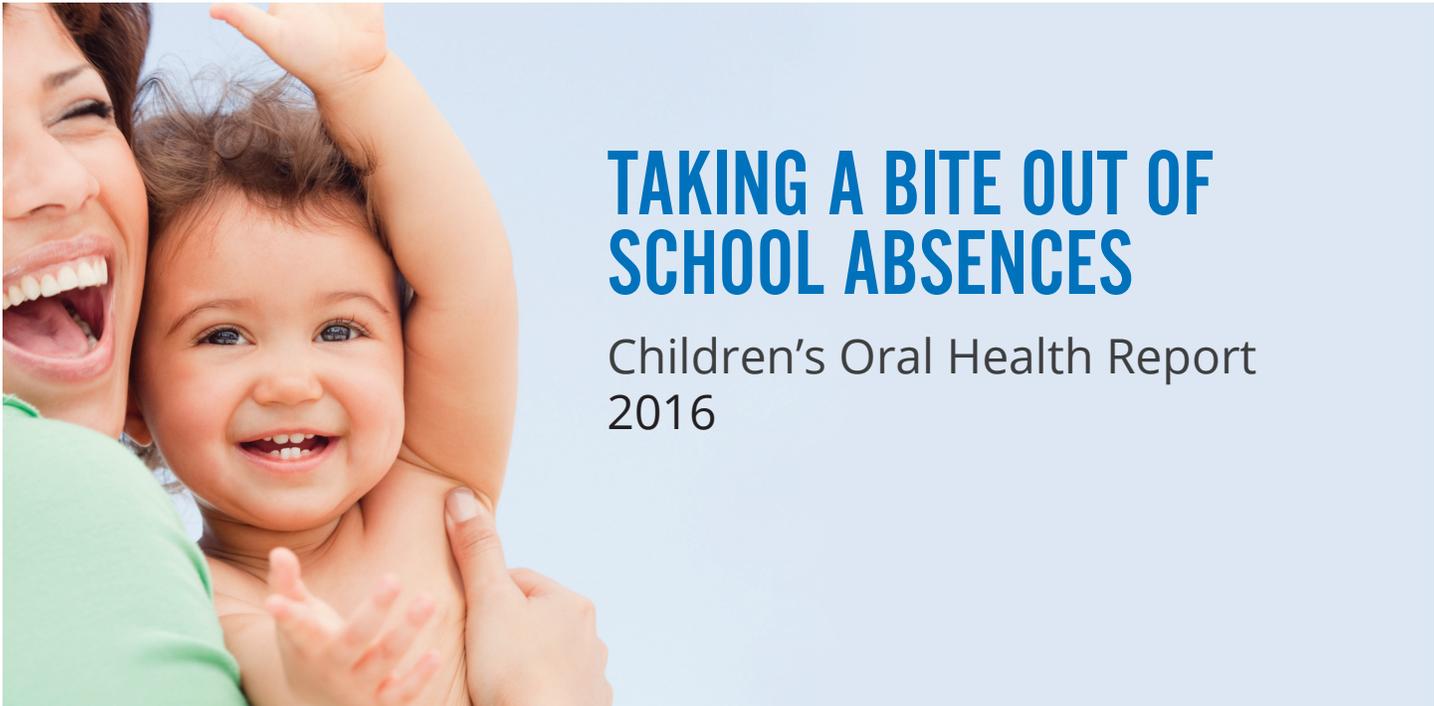


Children from low-income households and some racial and ethnic groups have higher levels of dental disease.



22% Many AZ parents do not know that their child's AHCCCS (Medicaid) coverage includes dental care benefits.

FIRST THINGS FIRST



TAKING A BITE OUT OF SCHOOL ABSENCES

Children's Oral Health Report
2016



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EXECUTIVE SUMMARY

School readiness means more than knowing your ABCs; it means that a child is academically, physically, emotionally, and socially prepared to enter kindergarten and succeed in school. For many children in Arizona, one of the threats to their academic success may not be a lack of knowledge, but a lack of good oral health.

Now the most common disease faced by young children, early childhood caries (a rapid form of tooth decay) can cause lasting harm to a child's oral and general health, as well as impact their intellectual and social development. Early childhood caries (ECC), can lead to:

- pain,
- damaged permanent teeth,
- increased vulnerability to infections;
- impaired speech development,
- failure to thrive, and
- reduced self-esteem.

As the child enters school, these issues in turn can lead to:

- distraction from play and learning;
- inability to focus on school work;
- anxiety;
- depression/withdrawal from activities;
- decreased completion of school work,
- and, increased absenteeism

In fact, one study estimates oral disease nationally causes kids to **miss 51 million school hours per year**. There are additional costs of tooth decay for families and society. **Treatment of severe ECC can initially cost \$6,000 to \$12,000**, especially if children need to be hospitalized and treated under general anesthesia. On the other hand, the cost of a **preventive dental visit is less than \$200**.

Given the link among early oral health, child well-being, school readiness, and academic performance, First Things First and early childhood stakeholders statewide set a collective goal of reducing the percentage of children age 5 with untreated tooth decay to 32% by 2020.

Since fiscal year 2010, First Things First has invested more than \$23 million in efforts to prevent ECC and promote positive oral health practices in families and communities. This includes providing a total of 177,950 oral health screenings and 162,240 fluoride varnishes to children birth to 5 years old through fiscal year 2015.

As an early childhood system partner, First Things First also must ensure that its investments contribute toward systemic progress in young children's oral health. To that end, First Things First partnered with the Arizona Department of Health Services in 2014 to coordinate a statewide oral health survey. A total of 3,630 kindergarten children received a dental screening at 84 schools during the 2014-2015¹ school year.

¹ Since the survey concluded in 2015, this is the year that will be referenced in the remainder of the report.

Something to Smile About

As noted below, the study shows that First Thing First and its early childhood system partners' **prevention efforts are paying off**. The *Healthy Smiles Healthy Bodies* survey showed:

- Since 2003, the percentage of Arizona's kindergarteners with untreated decay has decreased from 35% to 27%.
- Since 2003, the percentage of kindergarten children sitting in a classroom with dental pain has decreased from 7% to less than 2%.
- The percentage of Arizona's kindergarten children with a dental visit in the last year increased from 54% to 77%. In addition, the percentage of young children who had never been to a dentist was cut by more than half, dropping from 25% to 10%.
- The percentage of kindergarteners needing urgent dental care because of pain or infection has decreased since 2003 from 7% to 2%.

Something to Chew On

While these successes are very encouraging, the *Healthy Smiles Healthy Bodies* survey also showed that challenges remain in young children's oral health. Those challenges include:

- Too many children in Arizona experience tooth decay. More than half of Arizona's kindergarten children (52%) have decay experience, a level higher than the national average for 5-year-olds (36%).
- Some groups of young children have very high levels of dental disease. Children from low-income households and some racial and ethnic groups have higher levels of dental disease, suggesting particular vulnerability for certain populations of young children.
- Many parents are unaware that their health insurance coverage includes dental benefits. The Arizona Health Care Cost Containment System (AHCCCS) – the state's Medicaid program – includes dental benefits. Yet, about 1 in 5 (22%) of parents surveyed who reported their child had AHCCCS insurance also said they had no dental coverage.

Strategies to Get Arizona Kids Smiling All the Way to School

This report shows that investing in prevention and early intervention can significantly improve oral health for Arizona's youngest children, thus reducing the likelihood that oral health problems will impact their school attendance or performance. As one of the principle funders of oral health prevention and early intervention for children birth to 5, First Things First's investments in communities statewide clearly have contributed to this marked improvement.

While more children in Arizona are receiving dental services and fewer have untreated tooth decay, more work needs to be done. To reduce the percentage of children with decay experience, Arizona must expand access to preventive dental services and parent/caregiver education, with an emphasis on reaching the youngest and most vulnerable children. To reduce the percentage of children with untreated decay, early childhood system partners must work collectively to increase

access to dental care by educating parents, caregivers, and early care providers on the importance of early dental visits, developing systems that support early screening and referral, and expanding the workforce providing dental care to Arizona's youngest children. The results presented here should form the foundation for on-going community discussion on how early childhood partners leverage successes and resources of individual communities to overcome the on-going challenges that threaten the oral health of Arizona's youngest children.

SMILING ALL THE WAY TO SCHOOL

To get a population level snap shot of the current oral health status of children in Arizona, FTF partnered with the Arizona Department of Health Services to coordinate a statewide oral health survey of kindergarten children attending Arizona's public schools. This survey, known as *Healthy Smiles Healthy Bodies*, collected information on the prevalence and severity of tooth decay in kindergarten children. The purpose of this report is to present the findings of *Healthy Smiles Healthy Bodies*, including comparisons to previous statewide surveys and, where possible, national benchmarks.

The report begins by presenting general information on tooth decay and the impact poor oral health has on a child, the family, and society with special emphasis on the relationship between oral health and academic achievement. Arizona's efforts to improve oral health are also highlighted including, but not limited to, FTF's oral health strategy which uses a comprehensive, evidence-informed approach to meet the needs of the diverse communities across Arizona.

The report also provides detailed information on survey methods and results. The results are presented by domain, including the prevalence of decay experience, untreated tooth decay, dental pain and infection in addition to annual dental visit and insurance coverage.

Lastly, the report presents a set of goals and strategies for improving the oral health of young children in Arizona.

THE IMPORTANCE OF GOOD ORAL HEALTH

What is Tooth Decay?

Tooth decay (dental caries) is a bacterial disease process affecting both children and adults. When exposed to sugars and other carbohydrates, oral bacteria produce acids that dissolve the minerals in the outer layer of the tooth. If left unchecked, the acid dissolution can advance to form a cavity. Cavities that extend to the pulp tissue, the central portion of the tooth rich in nerves and blood vessels, result in toothaches along with sensitivity to temperature and sweets. If untreated, a large cavity can lead to an abscess, destruction of bone, and spread of the infection via the bloodstream (U.S. Department of Health and Human Services, 2000).

Tooth decay is now the most common chronic early childhood disease in the U.S. (U.S. Department of Health and Human Services, 2000).

Tooth decay can occur at any age after teeth erupt. For most children, teeth begin to erupt at about 6 months of age and by the time they are 3 years old, they will have a full set of 20 primary (baby) teeth. Particularly damaging forms of decay can begin in early childhood, when developing primary teeth are especially vulnerable. This type of decay is called early childhood caries (ECC). ECC is now the most common chronic early childhood disease in the United States; for instance, ECC is five times more common than asthma for children under the age of 6 (U.S. Department of Health and Human Services, 2000). According to the American Academy of Pediatric Dentistry (2014), the issue is not just that children have decay, it is that, for many young children, tooth decay is not being treated and is turning into more serious problems. Due to the aggressive nature of ECC, cavities can develop quickly and, if untreated, can infect the tooth's pulpal tissue. Such infections may result in a medical emergency that could require hospitalization and the extraction of the offending tooth (Sheller, Williams, & Lombardi, 1997). The longer ECC remains untreated, the worse the condition gets, making it more difficult to treat. In other words, as treatment is delayed, the problem becomes more serious and difficult to treat, and access and cost issues multiply (American Academy of Pediatric Dentistry, 2014). Advanced ECC requires complicated dental procedures such as extractions and crowns, often performed using general anesthesia. These complicated procedures are more expensive and must be performed by dentists with specialty training in pediatrics (i.e., pediatric dentists).

Impact of Tooth Decay on Overall Health and Well-Being

Oral health and general health are intertwined and poor oral health can profoundly affect an infant's or child's health and well-being. Many people, however, consider tooth decay to be a minor problem but for many it results in pain, infection, the inability to chew foods well, embarrassment about damaged or discolored teeth and distraction from play and learning. Tooth decay in the primary teeth is of special importance because an unhealthy tooth in a child puts the child at risk of

Poor oral health can lead to decreased school performance, poor social relationships, and less success later in life (Report to Congressional Requestors, U.S. General Accounting Office, 2000).

future oral health problems. For example, abscessed primary teeth can potentially damage permanent teeth (Fung, Wong, Lo, & Chu, 2013) and if baby teeth are lost early, the child's permanent teeth are more likely to erupt out of proper position, leaving them more susceptible to decay and gum disease and subjecting the child to years of twisted teeth or orthodontia (American Academy of Pediatric Dentistry, 2014).

Other short and long term impacts of advanced tooth decay on the overall health of young children include, but are not limited to:

- Increased vulnerability to infections in other parts of the body, such as the ears, sinuses, and the brain (Alaki, Burt, & Garetz, 2008; Moazzam, Rajagopal, Sedghizadeh, Zada, & Habibian, 2015; Simuntis Kubilius, & Vaitkus, 2014)
- Failure to thrive, impaired speech development, and reduced self-esteem (U.S. Department of Health and Human Services, 2000)
- Shyness, unhappiness, feelings of worthlessness, and reduced friendliness (Guarnizo-Herreño & Wehby, 2012)

Impact of Poor Oral Health on School Readiness & Academic Performance

Poor oral health can have a detrimental impact on children's quality of life, their performance at school, and their success in life. In fact, more than 51 million school hours are lost each year to dental-related illness (Gift, Reisine, & Larach, 1992). Young children are often unable to verbalize oral pain, but they may exhibit pain-related behaviors such as difficulty attending to tasks, anxiety, fatigue, irritability, depression, and withdrawal from normal activities. Teachers may be unaware that such pain-related behaviors, which have a significant impact on a child's ability to learn, are due to an oral health problem (Holt & Barzel, 2013).

More than 51 million school hours are lost each year to dental-related illness (Gift, Reisine, & Larach, 1992).

Missing school in order to receive dental care, including both routine preventive care and treatment for dental problems is common. A day of absence to receive preventive care may be appropriate; however, frequent absences may have significant negative societal and economic consequences. In California, an estimated 874,000 school days are missed each year due to dental problems (Pourat & Nicholson, 2009). Children with oral health problems are three times more likely to miss school due to dental pain than children who did not have oral health problems and absences caused by pain are associated with poorer school performance (Jackson, Vann, Kotch, Pahel, & Lee, 2011). In addition, children who lacked excellent or very good oral health were more likely to perform poorly in school than those who did have excellent or very good oral health (Gift et al., 1992).

Given that poor and minority children are particularly vulnerable to untreated tooth decay, these social and quality-of-life repercussions pose yet another barrier to achieving parity. Most importantly, when a child's acute dental problems are treated, learning and school attendance improve (Gift et al., 1992).

Economic Impact of Poor Oral Health

As previously described, tooth decay exacts a toll on children by affecting their development, school performance, and behavior. In addition, tooth decay can have an economic impact for families, schools, and society. Treatment of severe ECC can initially cost \$6,000 to \$12,000, especially if children

For young children, preventive dental visits can be cost-saving when targeted to high-risk users (University of the Pacific, 2013).

need to be hospitalized and treated under general anesthesia (Indian Health Service, 2014). On the other hand, the cost of a preventive dental visit is less than \$200. Add in mostly preventable emergency and restorative interventions and, in the United States alone, it is estimated that more than \$113.5 billion was spent on dental services in 2014 for all ages (Centers for Medicare & Medicaid Services, 2015). Medicaid dental expenditures for diagnostic, preventive, restorative and surgical services are about \$7 billion each year with most services being provided to children 0-20 years of age (Wall, 2012). Restorative and surgical services are the most costly, although information on expenditures by type of service is not publicly available. If tooth decay was prevented, dental expenditures in the United States would be substantially reduced.

While the financial cost of treating tooth decay is substantial, there are also societal costs that must be considered. First, school absences mean missed opportunities for learning and academic advancement. Second, missed school days are likely correlated with missed days of work for parents who have to take children for treatment or care for them at home. Third, missed school days means lost funding for school districts who receive funding based on school attendance. There is little research on the cost of dental disease to schools and school districts but one study in California estimated that the cost to school districts of students' absences due to dental problems is approximately \$30 million per year (Pourat & Nicholson, 2009).

Preventing tooth decay saves money. For example, the Centers for Disease Control and Prevention (CDC) estimates that for communities of more than 20,000 people, every \$1 invested in community water fluoridation saves \$38 in dental treatment costs (Griffin, Jones, & Tomar, 2001). Another example of how preventing tooth decay saves money relates to early dental visits; preschool children who had an early preventive dental visit by age 1 were more likely to use subsequent preventive services and experienced less dentally related costs (Kolstad, Zvaras, & Yoon, 2015).

How Can We Improve the Oral Health of Young Children?

The good news is that most tooth decay is preventable, but efforts must be made to ensure that all children have access to evidence based prevention strategies. To prevent tooth decay, the American Academy of Pediatrics (2015) recommends several strategies for enhancing the oral health of young children including but not limited to: parent/family education on oral health care (particularly on eating healthy nutritious foods, limiting sugars, and brushing teeth with a toothpaste containing fluoride); first preventive visit to a dentist within six months of the first tooth erupting and no later than age 1, with preventive check-ups thereafter; a series of topical fluoride applications to children's teeth; and, fluoridated public water supplies.

ARIZONA'S EFFORTS TO IMPROVE CHILDREN'S ORAL HEALTH

Given the critical role oral health has on a child's overall well-being and education, many partners across Arizona are actively engaged in prevention efforts as part of the larger continuum of care to ensure that children have access to timely and quality oral health care. These stakeholders include, but are not limited to, First Things First (FTF), the Arizona Department of Health Services (ADHS), the Arizona Health Care Cost Containment

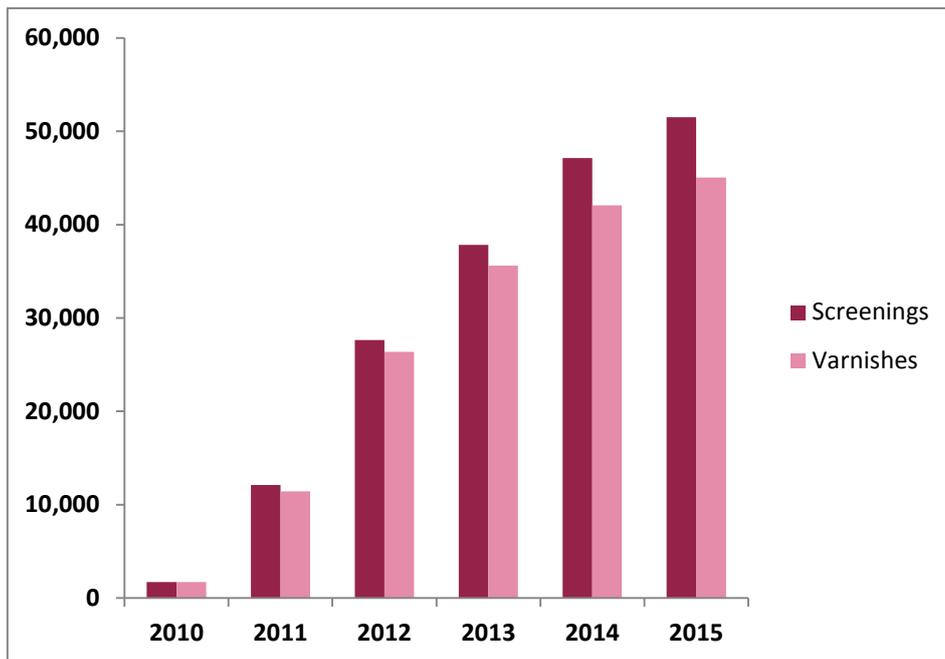
From 2010 to 2015, First Things First grantees completed 177,950 oral health screenings and applied 162,240 fluoride varnishes to the teeth of young children.

System (AHCCCS), health insurance companies, child care centers and early learning providers, schools, and parents/families. While the majority of prevention efforts focus on children in kindergarten through grade 12, FTF has taken a leadership role in providing preventive and community based oral health support focused solely on children birth to age 5.

To be ready for success in kindergarten and beyond, children need to be well-developed physically, emotionally, and socially. Arizona's early childhood system has identified 10 key School Readiness Indicators (see Appendix A) that will be used to determine if, as a whole, the state is making progress in getting more children ready for school and set for life. Developed by a diverse group of stakeholders – including parents, early childhood and health providers, funders, advocates and First Things First Board, regional council members, and staff – these indicators offer a comprehensive view of the support kids need from their families and from their communities to arrive at kindergarten healthy and prepared to succeed. The School Readiness Indicator on dental health sets the following target: a reduction of the number and percentage of children age 5 with untreated tooth decay.

While FTF is not solely responsible for meeting these School Readiness Indicators, the organization is responsible for contributing to the system's overall progress. Since fiscal year (FY) 2010, FTF has invested more than \$23 million in children's oral health efforts through the oral health strategy. Implemented in local communities across Arizona, the strategy seeks to prevent ECC and promote positive oral health practices (see Figure 1). With this investment, FTF has been able to sustain a wide reach, providing a total of 177,950 oral health screenings and 162,240 fluoride varnishes between fiscal year 2010 and 2015. Together, with many system partners, Arizona is providing a strong continuum of preventive services across the state to ensure the oral health care needs of Arizona's youngest children are being met.

Figure 1. Number of FTF Funded Oral Health Screenings and Fluoride Varnish Applications 2010-2015



FTF Oral Health Strategy

The FTF oral health strategy provides a multi-pronged approach to meet the needs of the diverse communities across Arizona and includes the following: screening and referral of expectant mothers and children birth to age 5; application of fluoride varnish two to four times a year; oral health education to children, their parents/caregivers, expectant mothers, and child care and preschool staff; outreach to oral health and medical professionals; and, teledentistry. Taken together, these components represent a comprehensive, integrated and evidence-informed approach to improving oral health outcomes for young children.

Dental Screening

Oral health screenings are a crucial step in not only detecting potential signs of decay and disease but also in monitoring for the presence of risk factors of disease (American Academy of Pediatrics, 2011). In dentistry, a screening for risk factors is referred to as a dental caries risk assessment. The American Academy of Pediatrics recommends that children without a dental home receive an oral health screening and risk assessment by their pediatrician at 6 and 9 months of age with ongoing screenings and risk assessments at 12, 18, 24, 30 months, and at 3- and 6-years old (American Academy of Pediatrics, 2011).

Oral health screenings of infant-mother dyads, coupled with a dental caries risk assessment, provide an opportunity to identify children who are displaying current signs of tooth decay or who may be at high risk for developing future tooth decay, and refer them to a dentist for diagnosis, treatment, and ongoing preventive care (American Academy of Pediatrics, 2003). This approach provides an opportunity to link high risk children to a dental home in order to treat current disease

and prevent further occurrences of tooth decay. Reaching high-risk children early in life is important; partially because the use of dental services early in life can promote use of subsequent preventive dental care (Savage, Lee, Kotch, & Vann, 2004). Furthermore, families whose children received a preventive dental visit prior to their first birthday only spent an average of \$262 on dental services in five years, compared with the \$546 families spent on dental costs if their child received their first dental visit at 4-5 years of age (Savage et al., 2004).

In addition to providing a benefit to children, dental screenings are an important method for identifying expectant mothers with, or at high risk of developing oral diseases. Pregnancy often causes changes in the mouth including gingivitis (Hemalatha, Manigandan, Sarumathi, Aarthi Nisha, & Amudhan, 2013) and can also lead to a worsening of periodontitis – an infection of the gum tissue which can lead to the destruction of the bone supporting the teeth (Hemalatha et al., 2013). Detecting and treating periodontitis in pregnant women is important because research has found that in addition to smoking, alcoholism, previous pre-term birth, high physical and psychological stress, low socio-economic status, poor maternal nutrition, and genitourinary infections, periodontitis and periodontal infections may be a risk factor for adverse pregnancy outcomes (Parihar et al., 2015).

FTF screening practices focus on screening young children as soon as teeth begin to erupt (around 6 months old). With consent from the child's parent/caregiver, FTF grantees provide an oral health screening using the Association of State and Territorial Dental Director's publication (2015) *Basic Screening Surveys: An Approach to Monitoring Community Oral Health*. The screening also includes assessing the child for how soon he or she should visit a dentist for clinical diagnosis and any necessary treatment, as well as a dental caries risk assessment which assesses the risk level of a child to develop caries in the near or distant future. Screening staff discuss the results of the children's screenings and assessments with the parent/caregiver in person (if the parent/caregiver is present) and also send the results and recommendations in writing.

Screenings occur in settings that best meet the needs of children and their families, such as early care and education centers and family resource centers. For example, in Maricopa County, the FTF grantee has forged a strong partnership with the local Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) clinics to provide regular oral health screening days. In the Cochise region, the oral health grantee collaborates with a local library to offer and provide oral health screening and fluoride varnish application to children visiting the library with their families.

During fiscal year 2015, FTF grantees completed 51,506 oral health screenings on young children and 1,504 screenings on expectant mothers. Those screenings resulted in 19,217 referrals of young children to a dental provider and 1,403 referrals of expectant mothers to a dental provider.

Prevention – Fluoride Varnishes

Applying fluoride varnish to the surface of baby teeth is a proven method for preventing tooth decay. It is estimated that fluoride varnish reduces tooth decay by 43% in permanent teeth and 37% in baby teeth (Marinho, Worthington, Walsh, Clarkson, 2013). The American Dental

Association Council on Scientific Affairs recommends fluoride varnish application at least twice per year for caries prevention among children starting at 6 months old (Weyant et al., 2013). Semi-annual fluoride varnish applications are an important component of an early childhood caries prevention program, particularly for high-risk populations. Specifically, Azarpazhooh and Main (2008) suggest that applying fluoride varnish at least two times per year (i.e., at six month intervals) may be *the* most effective approach to preventing dental caries for high risk populations of children, such as those from lower income families. Moreover, applying fluoride varnish every six months was shown to be effective for reducing early childhood caries over the course of two years in a high-risk sample of children with a previous history of tooth decay (Pettersson, Twetman, & Pakhomov, 1998).

FTF grant partners apply fluoride varnish at the same time as the oral health screening, and work to ensure that each child receives this preventive health measure two to four times a year. During FY2015, FTF grant partners applied 45,031 fluoride varnishes on the teeth of children birth to age 5.

Oral Health Education

An additional component of FTF's oral health strategy is oral health education. The goal of the oral health education component is to improve knowledge, which may lead to adoption of favorable oral health behaviors that contribute to better oral health. Education of parents has been shown to improve dietary choices and oral hygiene practices among young children, especially when contemporary education methods such as motivational interviewing are used (Manchanda, Sampath, & De Sarkar, 2014). A recent review of the scientific literature suggests that not only is oral health education effective in improving oral health knowledge, attitudes and practice, but it can also improve oral health outcomes (Nakre & Harikiran, 2013), especially when combined with oral health promotion efforts such as fluoride varnish (Azarpazhooh & Main, 2008).

Moreover, an evaluation of a prenatal dental health program involving screenings, services, and oral health education found that, over the course of three visits during pregnancy, women's oral health problems decreased (e.g., bleeding from gums, plaque, cavity depth) and their oral health knowledge increased (Lin, Harrison, & Aleksejuniene, 2011).

FTF oral health grantees deliver education to children at the time of screening. The curriculum used in communities throughout Arizona is comprehensive and engages the attention of young children. It focuses on bacteria, plaque formation, proper tooth brushing, use of toothpaste and how many times a day children must brush. Grantees also offer oral health education to parents and caregivers (including expectant mothers), either individually or in group settings. The adult curriculum focuses on promoting positive oral health hygiene practices in the home, minimizing saliva-sharing activities (e.g., sharing utensils), beginning tooth brushing during the correct developmental period, the appropriate use and amount of fluoridated toothpaste, and the role of nutrition in oral health. If provided at an early care and education center, staff are encouraged to participate in oral health education, establish tooth brushing schedules, and create sanitary toothbrush stations. In FY2015, 1,006 group education sessions, with an average of six adults each, and approximately 27,572 individualized education sessions were conducted by FTF grantees.

Outreach – Dental and Medical Providers

Efforts towards good oral health for children and expectant mothers must take into consideration the health professionals that provide care and guidance. The oral health strategy in most regions also includes outreach to medical and dental professionals. Outreach efforts include education on the importance of early childhood and prenatal oral health as well as positive early childhood oral health hygiene practices. The grantee also may provide dental and medical providers with supporting print educational materials, as appropriate. In addition, by developing working relationships with dental practices, grant partners are able to engage professionals to provide follow-up care to children or expectant mothers and include those professionals on their referral list for children and expectant mothers who do not have a dental home.

Teledentistry

Telemedicine is a well-accepted practice that has expanded rapidly during the last two decades. Telemedicine in dentistry is referred to as “teledentistry.” Since individuals living in rural and underserved areas often have limited access to dental care, teledentistry is designed to target the issue by providing patients with a virtual connection to a dental home prior to their first appointment. It provides easier access to dental care to patients who live in rural areas with little to no access to care. Teledentistry research to date has primarily focused on evaluating pilot projects and short term studies from education, community, school, and public health settings. There is very little published evidence regarding the effect of teledentistry on clinical outcomes, utilization and costs (Daniel & Kumar, 2014). However, a review of the literature found that telemedicine can be effective in providing care and can also be cost effective (Ekeland, Bowes, & Flottorp, 2010).

The primary purpose of teledentistry is to increase access to preventive care. A dental hygienist completes a screening and application of fluoride varnish. If the hygienist sees signs of disease and infection, X-rays and digital images of the teeth are taken and transmitted to a dentist for a complete diagnosis. The patient is then referred for an in-person follow-up appointment with that dentist. Three rural FTF regions (Navajo Nation, Navajo/Apache, and White Mountain Apache Tribe) have been providing teledentistry within their communities to increase access to oral health services for children and their families. In the Navajo/Apache region, the oral health grantee asked families to complete a survey to assess their satisfaction with teledentistry. One hundred percent of families responded favorably. Parents/caregivers indicated that accessing teledentistry was a positive and helpful experience and would utilize the services again in the future. One family stated that they appreciated how easy it was to access screening and the efficiency of having dental images sent directly to their dentist.

Table 1: FTF Oral Health Strategy Impact At-A-Glance – Fiscal Year 2015

| | |
|---|----------------|
| Number of oral health screenings - children | 51,506 |
| Number of oral health screenings – expectant mothers | 1,504 |
| Number of fluoride varnishes applied – children | 45,031 |
| Number of children referred to a dental provider | 19,217* |
| Number of expectant mothers referred to a dental provider | 1,403* |

*This data may be a duplicate count since a child or expectant mother may receive multiple referrals

System Wide Coordination and Collaboration

First Things First, its early childhood system partners and other stakeholders work collaboratively to build awareness of the importance of early childhood oral health, overcome challenges, maximize resources and improve young children’s oral health outcomes. It is through this collective work that partners arrive at a shared consensus regarding the barriers to optimal oral health for young children, as well as strategies to move Arizona forward when it comes to improving access to preventive oral health care.

State and Community Based Coalitions and Partnerships

In 2012, State Senator Linda Lopez brought together strategic partners in the field of oral health to discuss a public policy agenda to ensure that Arizona residents have ample access to quality oral health care. When Sen. Lopez left the Legislature, the leadership of the coalition was assumed by Senator David Bradley and Representative Regina Cobb. Accomplishments of this collaborative include the passage of the bipartisan supported Senate Bill 1282, “Teledentistry Bill” in 2015 that provided parameters for the use of teledentistry, required AHCCCS reimbursement of teledentistry services for children, and expanded the scope of practice for Affiliated Practice Dental Hygienists. The Affiliated Practice Dental Hygienist model, authorized in 2004 by the Arizona Legislature, allows qualified dental hygienists permitted by Arizona law and regulations, to perform certain procedures in the community and other public health settings without direct supervision from a dentist. This expands preventive oral health care in community settings, reduces barriers, and provides greater access to children and families.

The statewide FTF Oral Health Community of Practice was implemented as a result of feedback from FTF grant partners. Facilitated by FTF, the Community of Practice began meeting in 2014 with all oral health grant partners in attendance with a focus on sharing program practices, research, and news from the field, along with aligning health messaging to strengthen and improve implementation of this strategy across the state.

In addition, several counties have hosted their own regional oral health coalitions with a focus on oral health awareness, disease prevention, sharing best practices, identifying challenges, and generating solutions to oral health-related issues. These regions include La Paz/Mohave, Navajo-Apache-Gila, Northern Arizona (Coconino and Yavapai counties) and Southern Arizona (Pima, Santa Cruz and Cochise counties).

In Arizona, a 2006-2009 federal grant through ADHS allowed teledentistry to be piloted in several areas, including the Hopi reservation; Apache, Navajo, Coconino, and Yavapai counties; and the City of Scottsdale. A 2009-2012 extension of the grant expanded those services to include summer camps, pediatric group practices, and obstetric group practices, partnerships with county health departments, partnership with FTF, and additional school-based sites. The federal grants funded the development of infrastructure including equipment, training and technical assistance, and public and private partnerships that brought teledentistry services to many areas.

In 2010, ADHS implemented the Empower Program to support licensed early care and education facilities in their efforts to encourage young children to grow up strong and healthy. Currently, the Empower Program reaches more than 200,000 children in licensed early care and education settings throughout Arizona. By enrolling in the Empower Program, licensed child care facilities voluntarily agree to develop and implement a written policy for each standard. Any licensed facility that participates receives a 50% reduction in their licensing fees. The licensing fee assistance provided by DHS is supplemented by FTF through Quality First, Arizona's Quality Improvement and Rating System. Child care and preschool programs participating in Quality First receive a variety of supports to enhance the quality of their early learning programs. Quality First participants are required to participate in the Empower program and receive their licensing fee reduction through FTF.

The Empower Program requires providers to adopt 10 health standards, two of which impact children's oral health – 'Fruit Juice' and 'Oral Health'. The Fruit Juice standard requires the development of a program policy that includes the following: ensure that infants 11 months and younger are not served fruit juice; only offer 100% fruit juice without added sugar; and, limit serving fruit juice no more than twice a week with no more than 6 ounces offered. These efforts are welcomed by oral health stakeholders that recognize the link between fruit juice and the oral health of young children. The Oral Health standard also requires the development of a program policy including: monthly oral health education and/or the implementation of a tooth brushing program; educating families on the importance of a dental visit by the child's first birthday; healthy practices with utensils and pacifiers; and never putting children to sleep with a bottle.

It is important to note that ADHS expanded their Empower Program to Home Visiting programs that have similar standards for oral health and the consumption of fruit juice.

ADHS supports two disease prevention programs within the Office of Oral Health – the Arizona School-Based Sealant Program and the Arizona Fluoride Mouthrinse Program. The School-Based Sealant Program provides sealants to high-risk elementary school children in urban and rural communities where there is limited access to care. Dental sealants have been repeatedly shown to

prevent tooth decay in permanent molar teeth (e.g., Ahovuo-Saloranta et al., 2013; Beauchamp et al., 2008). The Fluoride Mouthrinse Program operates in eligible schools in low-income communities that have inadequate levels of fluoride in the community water supply. Fluoride Mouthrinse programs help to reduce the prevalence of tooth decay (Marinho, Higgins, Logan, & Sheiham, 2003).

In the fall of 2015, the ADHS Office of Oral Health through the Maternal Infant and Early Childhood Home Visitation grant implemented oral health training for home visitors. The curriculum is designed to provide home visitors with core skills and competencies in providing best practices for counseling families on the importance of oral health in pregnancy and early childhood. The intent is to increase the knowledge base of the home visiting staff and provide those professionals the skills needed to impart this knowledge directly to families. All home visitors have access to this training as part of the Strong Families Alliance. The Alliance is a consortium of agencies statewide – including DHS, FTF, and the Department of Child Safety – whose work with families includes the funding and implementation of home visitation. The alliance promotes collaboration and the sharing of resources and best practices in Arizona’s home visiting system.

Maximizing Resources

In order to look at the sustainability of prevention efforts, FTF has been involved in exploring the Medicaid reimbursement system (AHCCCS) for the provision of fluoride varnish. In FY2013, the FTF Phoenix South Regional Council initiated a pilot to seek AHCCCS reimbursement, in partnership with the ADHS Office of Oral Health. This pilot explored the process for reimbursement through AHCCCS and created the infrastructure necessary to do so. In FY2016, AHCCCS reimbursement was included as a component of the Maricopa countywide oral health strategy being implemented by the Phoenix and Maricopa regional partnership councils, with the goal of increasing the number of children receiving oral health screenings and fluoride varnish applications.

Furthermore, beginning April 1, 2014, AHCCCS began to reimburse primary care providers for the provision of fluoride varnish applications completed at Early and Periodic Screening, Diagnostic and Treatment (EPSDT) visits for children between the ages of 6 months and 2 years. This measure provides young children access to preventive oral health care with their primary care provider during their well child visits. In addition, primary care providers now have a financial mechanism to conduct an oral health screening and engage in an evidence-based preventive oral health measure.

Stakeholder Collaboration

First Things First has been an active participant in various statewide efforts to advocate for children’s oral health including the following:

- The Arizona Health Improvement Plan (AzHIP) is a collaborative process driven by ADHS to create a unified plan on how to improve the health of Arizonans within a five-year time span. Oral Health is a priority area identified in the AzHIP with an identified focus on children’s oral health including the integration of oral health into primary health care,

improving access to dental coverage, increasing the pediatric dental benefit for the AHCCCS eligible population and increasing the rate of oral health literacy.

- The Arizona State Health Coalition, funded through a DentaQuest Foundation grant to the Arizona Alliance of Community Health Centers, has begun work to identify key policy areas among 40 stakeholders using the Policy Consensus Tool developed by the Children’s Dental Health Project. Notable key policy areas identified by stakeholders for children, families, and individuals include: expansion of AHCCCS reimbursement for services provided by affiliated practice dental hygienists; comprehensive dental coverage for all AHCCCS eligible individuals over the age of 21 (impacting expectant mothers); development of a statewide oral health surveillance system; and requiring oral health screening at the time of kindergarten entry.
- The Arizona American Indian Oral Health Initiative, funded through the DentaQuest Foundation, has hosted several forums with system stakeholders and tribal representatives with the aim of elevating the status of oral health care for children and adults residing in Indian country.

Community

Water fluoridation is a critical community-wide and evidence-based strategy to decrease the prevalence of tooth decay. The consensus among dental experts is that fluoridation is the single most important intervention to reduce tooth decay, partially because water is an essential part of everyone’s diet, regardless of their motivation to maintain oral hygiene or their willingness to attend or pay for dental treatment (World Health Organization, 2001). As previously mentioned, the Centers for Disease Control and Prevention (CDC) estimates that for communities of more than 20,000 people, every \$1 invested in community water fluoridation saves \$38 in dental treatment costs (Griffin et al., 2001). At last count in 2012, the Centers for Disease Control and Prevention indicated that approximately 58% of Arizona’s residents served by a community water system were receiving water with fluoride at the recommended level to prevent tooth decay. With just over half of the state receiving this oral health benefit, there is more work to be done.

Community water fluoridation is a safe, effective, and inexpensive way to prevent tooth decay. It benefits persons in all age groups and all income levels, including those difficult to reach through other public health programs and private dental care. Community water fluoridation is the most cost-effective way to prevent tooth decay among populations living in areas with community water systems. Because of this, the U.S. Public Health Service supports the continuation of community water fluoridation and its adoption in additional U.S. communities as the foundation for a sound caries prevention program. The benefit of combining fluoride modalities (i.e., fluoridated water, application of fluoride varnishes) is additive. This means that the percent reduction in the prevalence or severity of tooth decay from a combination of these efforts is higher than the percent reduction from each modality by itself. For this reason, the U.S. Public Health Service indicates that fluoride varnish plays an important role in preventing and controlling tooth decay in children living in non-fluoridated areas and high-risk children living in fluoridated communities (Centers for Disease Control and Prevention, 2001).

SURVEY METHODS

This survey, referred to as *Healthy Smiles Healthy Bodies*, was designed to obtain information on the prevalence and severity of tooth decay among Arizona's kindergarten children.² In addition, the survey collected information on behavioral and demographic characteristics associated with this condition. *Healthy Smiles Healthy Bodies* included the following primary components – (1) a dental screening and (2) an optional parent/caregiver questionnaire. During the 2014-2015 school year, *Healthy Smiles Healthy Bodies* collected information from children at 84 non-reservation district and charter schools throughout Arizona.³ A total of 3,630 kindergarten children received a dental screening and 1,583 (44%) returned the parent/caregiver questionnaire.

To evaluate trends in the oral health of Arizona's children, results from *Healthy Smiles Healthy Bodies* are compared to the results of a similar survey completed by ADHS in 1999-2003⁴ as part of the state's ongoing oral health surveillance system. Additionally, to allow for within state comparisons, data were collected across all Arizona counties.

Sampling

Healthy Smiles Healthy Bodies sampled children in kindergarten and third grade. District and charter elementary schools with at least 20 children in kindergarten and/or third grade were included in the sampling frame. The following were excluded from the sampling frame: (1) alternative, detention, and state schools for the deaf and the blind plus (2) schools located in tribal communities (based on the Arizona Department of Health Services list of tribal communities). To ensure a representative sample from every county and FTF region, the sampling frame was initially stratified by county. Where a county included more than one FTF region (Maricopa and Pima), the sampling frame was further stratified by FTF region. This resulted in 21 sampling strata; 13 county-level strata, 2 FTF strata within Pima County, and 6 FTF strata within Maricopa County. Within each stratum, schools were ordered by their National School Lunch Program (NSLP) participation rate. A systematic probability proportional to size sampling scheme was used to select a sample of five schools per stratum.⁵ Three counties (Apache, Greenlee, and La Paz) had fewer than five schools in the sampling frame. For these counties, all schools in the sampling frame were asked to participate. If a selected school did not have kindergarten or third grade, the appropriate feeder school was added to the sample. A systematic sampling scheme was used to select 99 schools. Of these, five did not have kindergarten or third grade so five feeder schools were added to the sample resulting in 104 schools representing 99 sampling intervals, of which 84 agreed to participate.

² Using another funding source, ADHS expanded data collection to include 3rd grade children but that information is not included in this report.

³ Schools serving children with special needs and schools located in tribal communities were excluded.

⁴ From 1999-2003, ADHS conducted a survey to investigate the oral health status of Arizona's kindergarten children. Since the survey concluded in 2003, this is the year that will be referenced when discussing this survey in the remainder of the report.

⁵ Probability proportional to size sampling: a sampling technique where the probability that a particular school will be chosen in the sample is proportional to the enrollment size of the school

Parental Consent

A combination of positive and passive consent was used; 11 schools used positive consent and 73 used passive consent. For schools using passive consent, a letter explaining the survey was sent home with children in the target grades and all children received a dental screening unless a parent declined. For schools using positive consent, a letter explaining the survey was sent home with children in the target grades, but only those children whose parents/caregivers returned a positive consent form were screened.

Dental Screening

Trained dental professionals completed the screenings using gloves, penlights, and disposable mouth mirrors. The diagnostic criteria outlined in the Association of State and Territorial Dental Directors' (2015) publication *Basic Screening Surveys: An Approach to Monitoring Community Oral Health* were used. The information collected through the dental screening included presence of untreated decay, number of teeth with untreated decay, presence of treated decay, number of teeth with treated decay, presence of dental sealants, need for dental sealants, and urgency of need for dental care (see Appendix B).

Parent/Caregiver Questionnaire

In addition to the letter explaining the purpose of the survey, parents/guardians were sent a one page questionnaire to obtain information on race, ethnicity, presence of asthma, tooth brushing frequency, time since last dental visit, reasons for never visiting a dentist, receipt of a dental screening or fluoride varnish at non-dental locations, type of health/medical insurance, dental insurance, and parent education (see Appendix C). Completing the parent/caregiver questionnaire was not required for participation in the dental screening. Overall, parent/caregiver questionnaires were available for 44% of the children screened. In all schools, the parent/caregiver questionnaire was combined with the consent form. For schools that used positive consent, the questionnaire/consent form had to be returned for the child to participate. For this reason, the questionnaire response rate was substantially higher in schools that used positive consent compared to schools that used passive consent (96% and 38%, respectively).

Participation in the National School Lunch Program

Healthy Smiles Healthy Bodies did not collect child level information on family income. To estimate the impact of income on the survey's outcome measures, school level participation in the National School Lunch Program (NSLP) was used as a surrogate measure of socioeconomic status. To be eligible for the NSLP program during the 2014-2015 school year, annual income for a family of four could not exceed \$44,123 (Child Nutrition Programs- Income Eligibility Guidelines, 2014). For each participating school, the Arizona Department of Education provided information on the percentage of students in that school eligible for NSLP. When assessing the association between income and the outcome measures, stratification by the proportion of children in each school eligible for NSLP (<25%, 25-49%, 50-75%, and \geq 75%) was used.

Data Analysis and Presentation of Results

All statistical analyses were performed using the SAS software complex survey procedures (Version 9.3; SAS Institute Inc., Cary, NC). Sample weights were used to produce population estimates based on selection probabilities and indicating the number of children in the sampling interval each screened child represents.

Although *Healthy Smiles Healthy Bodies* collected information on a wide variety of potential determinants and risk factors, only those risk factors and determinants that were shown to be significantly associated with the primary outcome variables are discussed in this report. There was no association between oral health and gender, urbanicity, presence of asthma, frequency of tooth brushing, and receipt of a screening or fluoride varnish at a non-dental setting.

Survey Limitations

Although the original sample was representative of the state, not all schools participated, which may bias the results. The percentage of children eligible for the NSLP was 58% for schools in the sampling frame but was 72% for schools that participated, suggesting that lower income schools were more likely to participate. Given that lower income children have more disease; this survey may overestimate the prevalence of disease in the non-tribal communities in the state. Another limitation was the exclusion of tribal communities resulting in small sample sizes for the American Indian/Alaska Native population.

The parent/caregiver questionnaire was optional and was returned for only 44% (N=1,583) of the children screened (see Appendices D & E). Because of this, information obtained from the questionnaire may not be representative of the state. In addition, the information was self-reported and may be affected by both recall and social desirability bias. Because of small sample sizes, caution should be taken when interpreting results at the regional and county level.

Presentation of Results

The following pages will present the results of *Healthy Smiles Healthy Bodies*. The results section of this report has been structured to highlight several important domains, which include three key health outcomes and two risk factors associated with better oral health. The health outcomes include the prevalence of decay experience, untreated tooth decay, plus dental pain and infection. The two risk factors are annual dental visit and insurance coverage.

For each domain of the results section, a short summary is provided on why the topic is important, especially for young children. National benchmarks are also included, when available, with comparable national data. This is followed by Arizona specific data along with the risk factors for each domain. The prevalence of the outcome or risk factor is also presented by FTF region and county.

At the end of this report, a series of FTF regional profiles focusing on decay experience and untreated tooth decay are included that summarize the oral health findings for the School Readiness Indicator on dental health for the 18 FTF regions.

PREVALENCE OF TOOTH DECAY EXPERIENCE

Why It Matters

Tooth decay experience means that a child has had tooth decay in the primary (baby) and/or permanent (adult) teeth in his/her lifetime. Children can have *past decay experience* (fillings, crowns, or teeth that have been extracted because of decay), or *present decay experience* (untreated tooth decay or cavities). Although largely preventable, tooth decay remains the most common chronic disease among preschool children. Tooth decay experience in children 0-5 years of age is of special importance because unhealthy teeth in a young child can lead to pain, infection, and can put a child at risk of future oral health problems. In addition, the inability of very young children to cooperate during dental procedures may require that dental care be provided in an operating room or clinic setting using general anesthesia. Treatment under general anesthesia for extensive dental repair is a costly and a potentially risky consequence of tooth decay. In the United States, it is estimated that tens of thousands of young children undergo restoration and extraction of teeth under general anesthesia annually (Casamassimo, Thikkurissy, Edelstein, & Mariorini, 2009).

Medical, dental and health professionals must focus dental disease prevention efforts on children less than 2 years of age because 2 is too late.

Early prevention efforts are critical to eradicate tooth decay in Arizona's children. Medical, dental and public health professionals must focus dental disease prevention efforts on children less than 2 years of age because ***two is too late***. The American Dental Association, the American Academy of Pediatric Dentistry, and the American Association of Pediatricians all recommend preventive dental care and parent education by age 1. Preventive dental care such as fluoride varnish can be provided in medical and dental offices but it can also be provided in community settings that provide services to high risk children such as preschools and WIC programs. By providing preventive services at community-based settings, children that may not access medical/dental clinics can receive the benefits of preventive dental care.

The American Academy of Pediatrics (2015) recommends that:

- All infants receive oral health risk assessments during well-child visits starting at 6 months of age and periodic fluoride varnish application from the time the first tooth erupts through 5 years of age. The American Dental Association recommends that fluoride varnish be applied at least twice per year, more often for higher risk children (Weyant et al., 2013).
- All children should be referred to a dentist as early as 6 months of age to establish a dental home.
- All children in their early toddler years should have a thorough initial dental examination and regular dental care whenever possible. Most children should have a dental examination at least once a year; some high risk children may need more frequent screenings and examinations.

- Parents should limit food and drink exposure over the course of the day to three meals and two snacks (with healthy food choices and limited juice). More frequent exposure to sugars in foods and drinks makes it more likely that children will develop decay. The World Health Organization strongly recommends that a child’s intake of free sugars be less than 10% of total energy intake (World Health Organization, 2015).
- Parents should brush their children's teeth with fluoride toothpaste twice a day as soon as they can see the first tooth coming in (erupting).

Benchmarks and National Data

Developed under the leadership of the Federal Interagency Workgroup (FIW), the Healthy People 2020 (HP 2020) framework is the product of a collaborative process among the U.S. Department of Health and Human Services (HHS) and other federal agencies, public stakeholders, and the advisory committee. Healthy People provides 10-year national objectives for improving the overall health of Americans.

Note: Throughout this document, information from several authoritative national sources is used to illustrate national goals or status in various areas of young children’s oral health.

Understanding where Arizona’s children fall compared to national benchmarks and data can help highlight areas of strength and those areas in need of improvement in relation to young children’s health.

However, caution should be used when comparing the results of *Healthy Smiles Healthy Bodies* to the national information, since there may be differences in the populations surveyed or in the methods of data collection. These differences are highlighted in each section of this report.

The Healthy People 2020 objectives for tooth decay experience are:

- Reduce the proportion of 3- to 5-year-olds with decay experience in their primary teeth to 30%
- Reduce the proportion of 6- to 9-year-olds with decay experience in their primary and permanent teeth to 49%

It should be noted that Arizona’s *Healthy Smiles Healthy Bodies* survey screened kindergarten children (5- to 6-year-olds) and captured information on the prevalence of decay experience in both primary and permanent teeth.

The National Health and Nutrition Examination Survey (NHANES) is conducted by the National Center for Health Statistics to assess the health and nutritional status of adults and children in the United States. Findings from the survey are used to determine the prevalence of major diseases and risk factors for diseases. The following is based on data from NHANES 2005-2010:

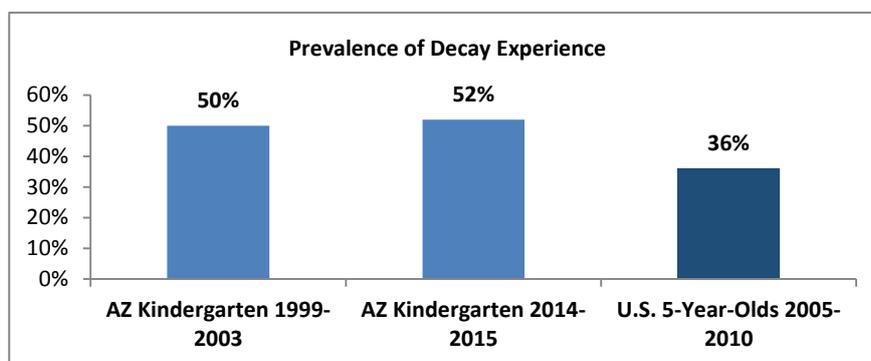
- In the United States, the prevalence of tooth decay experience among 5-year-olds is 36%

How Arizona's Young Children are Faring

The good news – many children in Arizona only have 1 or 2 teeth with decay experience. Although the prevalence of decay experience is higher in Arizona than the nation as a whole, many children with decay experience (30%) only have 1 or 2 teeth affected by the disease. For those children with decay experience, the number of affected teeth ranged from 1 to 19 with an average of 4.9 teeth.

Ongoing Challenges – too many children in Arizona experience tooth decay.

More than half of Arizona's kindergarten children (52%) have decay experience, a level higher than the national average for 5-year-olds (36%) and the HP 2020 objectives for 3- to 5-year-olds (30%) and 6- to 9-year-olds (49%).



Arizona Department of Health Services, Office of Oral Health (2005). "The Oral Health of Arizona's Children: Current status, Trends and Disparities." Arizona Department of Health Services and First Things First (2015). *The Oral Health of Arizona's Kindergarten Children: Healthy Smile Healthy Bodies Survey 2015*. National Health and Nutrition Examination Survey (NHANES), 2005-2010.

The longer a tooth is in the mouth, the more likely it is to become decayed. For this reason, the prevalence of tooth decay increases with age. Results from the Arizona survey mirrors national data; the percentage of Arizona's children with decay experience increases from 52% for kindergarten to 65% for third grade children. Unfortunately, the percentage of kindergarten children with decay experience has not changed since 2003 (50%). This may be partially explained by an increase in the percentage of children with an annual dental visit from 2003 to 2015, which corresponds with an increase in the percentage of children receiving restorative dental care. For example, the increase in the prevalence of decay experience in children under 6 between two national surveys conducted in 1988-1994 and 1999-2004 was attributed to the fact that children received more restorative treatment during 1999-2004 compared with 1988-1994 (Dye, Tan, & Smith 2007).

Risk Factors for Decay Experience

The findings from the Arizona survey are similar to national data that indicates that lower-income children and Hispanic children are more likely to have a higher prevalence of decay experience than their higher-income and non-Hispanic white counterparts (Dye, Li, & Thornton-Evans, 2012), along with children whose parents have a lower educational attainment (Vargas, Crall, & Schneider, 1998).

Data from *Healthy Smiles Healthy Bodies* shows that the prevalence of decay experience is higher among children from low-income households, some racial and ethnic groups, children with AHCCCS (Medicaid) or no health insurance, and children whose parents have less than a college education, suggesting particular vulnerability for certain populations of young children (see Table 2). For example, among children whose parents did not attend college, 60% have decay experience

compared to only 40% among children whose parents attended college. In lower income schools, defined as schools with at least 75% of children eligible for the National School Lunch Program (NSLP), 62% have decay experience compared to 29% in higher income schools (<25% NSLP).⁶ Among American Indian and Alaska Native children, 76% have decay experience compared to 56% and 34% among Hispanic and white children, respectively. Of children with AHCCCS (Medicaid) health insurance, 62% have decay experience compared to 34% of those with employer or privately purchased insurance. Having dental insurance coverage was not associated with decay experience. In most cases, the FTF regional and county level risk factors are similar to those found at the state-level.

The higher prevalence of decay experience among certain population groups underscores the need to strengthen existing programs and explore additional policy and programmatic interventions designed to increase access to preventive dental services among Arizona’s most vulnerable children.

Table 2. Prevalence of Decay Experience by Selected Characteristics

| | N | Weighted % |
|-------------------------------------|--------------|------------|
| Arizona | 3,630 | 52% |
| School participation in NSLP | | |
| < 25% of children in school | 150 | 29% |
| 25-49% of children in school | 787 | 41% |
| 50-74% of children in school | 839 | 48% |
| ≥ 75% of children in school | 1,854 | 62% |
| Race/Ethnicity | | |
| Non-Hispanic White | 436 | 34% |
| Non-Hispanic AI/AN | 117 | 76% |
| Non-Hispanic Other Race* | 93 | 48% |
| Hispanic - any race | 800 | 56% |
| Type of health insurance | | |
| Employer or private purchase | 567 | 34% |
| AHCCCS (Medicaid) | 703 | 62% |
| None | 98 | 52% |
| Dental insurance coverage | | |
| No | 335 | 52% |
| Yes | 1,059 | 47% |
| Parent Education | | |
| High school graduate or less | 562 | 60% |
| Some college | 831 | 40% |

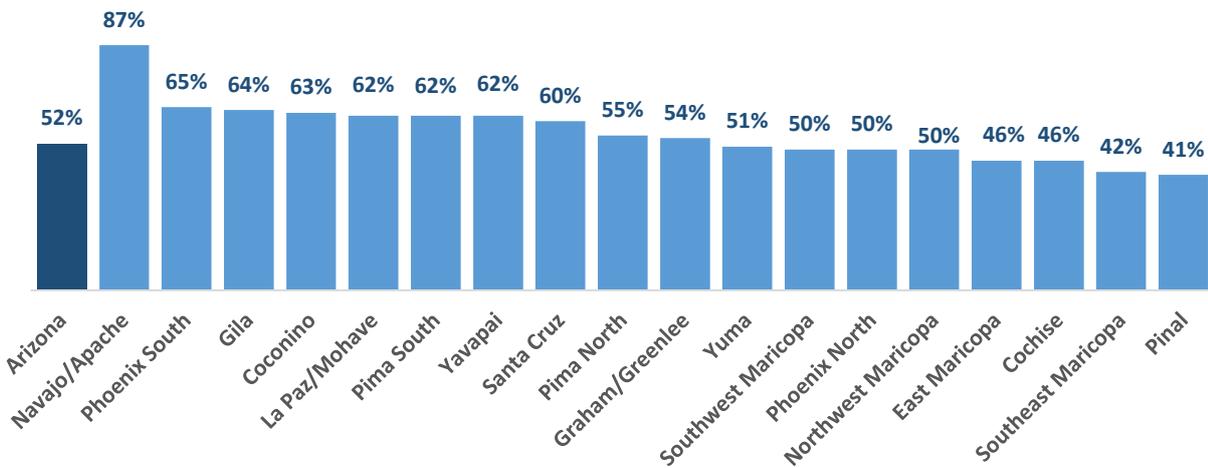
***Non-Hispanic Other Race: Includes African American/Black, Asian, and Pacific Islander/Native Hawaiian**

⁶ To be eligible for the NSLP program during the 2014-2015 school year, annual income for a family of four could not exceed \$44,123 (Child Nutrition Programs- Income Eligibility Guidelines, 2014)

Regional Highlights

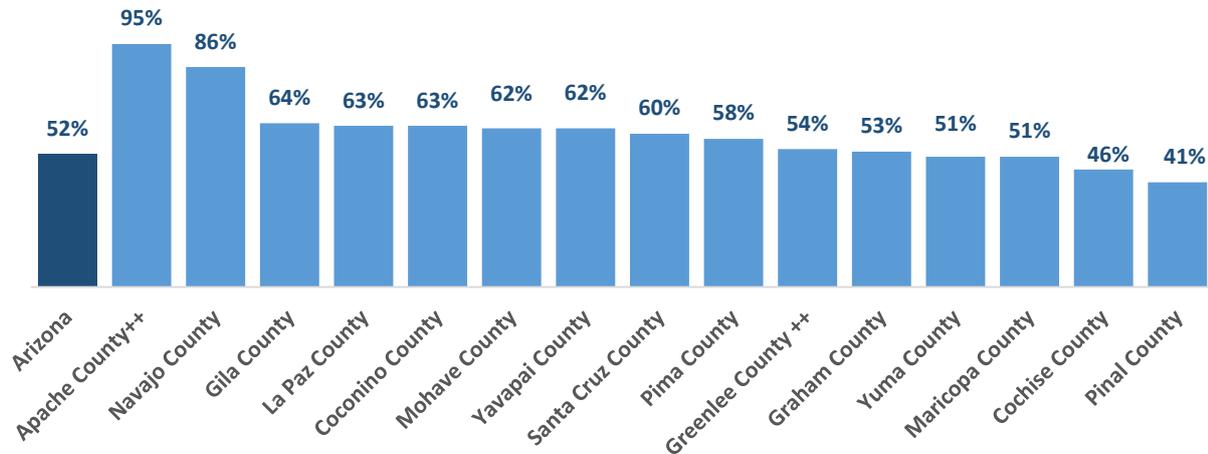
The percentage of children with decay experience varies greatly by region. The Navajo/Apache region has a particularly high percentage of kindergarten children with decay experience (87%) followed by Phoenix South (65%), Gila (64%), Coconino (63%), LaPaz/Mohave (62%), Pima South (62%), Yavapai (62%), and Santa Cruz (60%). Conversely, Pinal had the lowest percentage (41%), which falls far below the state rate of 52% (see Figure 2). For more information on region specific findings please refer to the regional profiles at the end of this report. Because of small sample sizes, caution should be taken when interpreting results at the regional and county level.

Figure 2. Prevalence of Decay Experience by Region



County Highlights

Figure 3. Prevalence of Decay Experience by County



++ Only 1 school was screened.

PREVALENCE OF UNTREATED DECAY

Why It Matters

Having untreated decay means that a child has at least one tooth with a cavity that has not received appropriate treatment. Tooth decay in infants and children destroys more than just a smile. Untreated decay compromises the child's ability to eat well, sleep well, and function well at home and at school. In addition, the unaesthetic nature of untreated decay can compromise a child's self-esteem and social development. Untreated tooth decay in children is painful and without appropriate treatment, can lead to infection of the teeth and gums. Although rare, infections due to untreated tooth decay can lead to severe morbidity and even death (Casamassimo et al., 2009).

Benchmarks and National Data

Healthy People 2020 provides 10-year national objectives for improving the overall health of Americans. The Healthy People 2020 objectives for untreated decay are:

- Reduce the proportion of 3- to 5-year-olds with untreated decay in their primary teeth to 21%
- Reduce the proportion of 6- to 9-year-olds with untreated decay in their primary and permanent teeth to 26%

It should be noted that Arizona's *Healthy Smiles Healthy Bodies* survey screened kindergarten children (5- to 6-year-olds) and captured information on the prevalence of untreated decay in both primary and permanent teeth.⁷

FTF, in coordination with statewide partners, provides a state level objective for improving the oral health of Arizona's young children. Arizona's objective for untreated decay is to:

- Reduce the number and percentage of children age 5 with untreated tooth decay to 32%

The National Health and Nutrition Examination Survey (NHANES) assesses the health and nutritional status of adults and children in the United States. The following is based on data from NHANES 2005-2010:

- In the United States, the prevalence of untreated decay among 5-year-olds is 21%

How Arizona's Young Children Are Faring

The good news – fewer children have untreated tooth decay. In recent years many different organizations in Arizona, including FTF and ADHS, have worked on improving access to dental care for children. The efforts are paying off – compared to 2003,

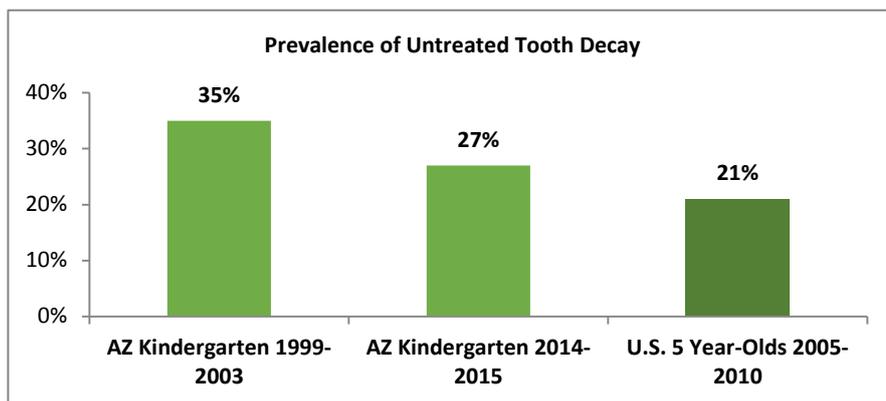
Compared to 10 years ago, significantly fewer children have untreated tooth decay.

⁷ Please see Page 22 for the cautionary note regarding comparisons of the *Healthy Smiles Healthy Bodies Survey* against national goals or data points presented.

significantly fewer children had untreated decay in 2015. Overall, 27% of Arizona’s kindergarten children were found to have untreated decay, a decrease from 35% in 2003. This means that Arizona has surpassed by 5 percentage points the statewide 2020 Oral Health School Readiness Indicator benchmark of 32% set in 2013 by FTF’s State Board.

Arizona’s kindergarten children, however, continue to have more disease than the national average for 5-year-old children (21%). For those children with untreated decay, the number of decayed teeth ranged from 1 to 16 with an average of 2.7 teeth. Most of the children with untreated decay (65%) had either 1 or 2 teeth with decay.

Children who had not been to the dentist in the past year were twice as likely to have untreated decay (see Table 3) and the decrease in untreated decay may be partially explained by an increase in the percentage of children with an annual dental visit. In 2003, only 54% of kindergarten children had been to a dentist in the past year compared to 77% in 2015.



Arizona Department of Health Services, Office of Oral Health (2005). "The Oral Health of Arizona's Children: Current status, Trends and Disparities." Arizona Department of Health Services and First Things First (2015). The Oral Health of Arizona's Kindergarten Children: Healthy Smile Healthy Bodies Survey 2015. National Health and Nutrition Examination Survey (NHANES), 2005-2010.

The percentage that had never been to a dentist was cut by more than half, dropping from 25% to 10%. A similar trend in increasing dental utilization can also be found in Arizona’s AHCCCS (Medicaid) data. In 2003, 33% of Arizona’s children ages 3-5 years and 44% of children 6-9 years covered by AHCCCS (Medicaid) received dental services compared to 55% and 64% respectively in 2014 (Medicaid, 2016). As a comparison, the percentage of Medicaid children 3-5 years of age receiving dental services at the national level in 2014 was 54% for children 3-5 years of age and 61% for children 6-9 years of age (Medicaid, 2016).

Risk Factors for Untreated Decay

Ongoing Challenges – some sub-populations still have high levels of untreated decay. While more children are receiving dental services and fewer have untreated tooth decay, more work needs to be done. Data from *Healthy Smiles Healthy Bodies* shows that the prevalence of untreated tooth decay is higher among children from low-income households, some racial and ethnic groups, and children that have not been to the dentist in the last year, suggesting particular vulnerability for certain populations of young children (see Table 3). For example, in schools where 75% or more of the children are eligible for the National School Lunch Program (NSLP), 32% have untreated decay

compared to only 11% in schools where less than 25% of children are eligible for NSLP.⁸ The percentage with untreated decay is highest for American Indian and Alaska Native children (48%) followed by Hispanic (28%) and white (15%) children. If a child has not been to the dentist for a year or more, they are more likely to have untreated decay. In most cases, the FTF regional and county level risk factors are similar to those found at the state level. There are also differences in the prevalence of untreated decay by geographic area, which may, in some cases, be associated with a scarcity of dental providers able to provide care to the most vulnerable children (refer to Regional and County Highlights).

It should be noted that *Healthy Smiles Healthy Bodies* was not designed to determine why some sub-populations have more disease. The scientific literature, however, suggests that social determinants play a significant role in a child’s oral health stemming from the consequences of poverty, limited access to dental care, lack of dental insurance, poor cultural and linguistic competency of care providers, and the health literacy and beliefs of parents (Garcia, Cadoret, & Henshaw, 2008).

Arizona’s results mirror those of the National Health and Nutrition Examination Survey (NHANES), which found that low-income and minority children have higher rates of untreated tooth decay compared to their higher-income and non-Hispanic white peers (Dye et al., 2012). In this survey, the associations between untreated decay and gender, urbanicity, frequency of tooth brushing, type of health insurance, dental insurance, and parent education were not statistically significant.

Table 3. Prevalence of Untreated Tooth Decay by Selected Characteristics

| | N | Weighted % |
|-------------------------------------|-------|------------|
| Arizona | 3,630 | 27% |
| School participation in NSLP | | |
| < 25% of children in school | 150 | 11% |
| 25-49% of children in school | 787 | 24% |
| 50-74% of children in school | 839 | 29% |
| ≥ 75% of children in school | 1,854 | 32% |
| Race/Ethnicity | | |
| Non-Hispanic White | 436 | 15% |
| Non-Hispanic AI/AN | 117 | 48% |
| Non-Hispanic Other Race* | 93 | 33% |
| Hispanic - any race | 800 | 28% |
| Time since last dental visit | | |
| Within past year | 1,066 | 20% |
| More than 1 year ago or never been | 352 | 38% |

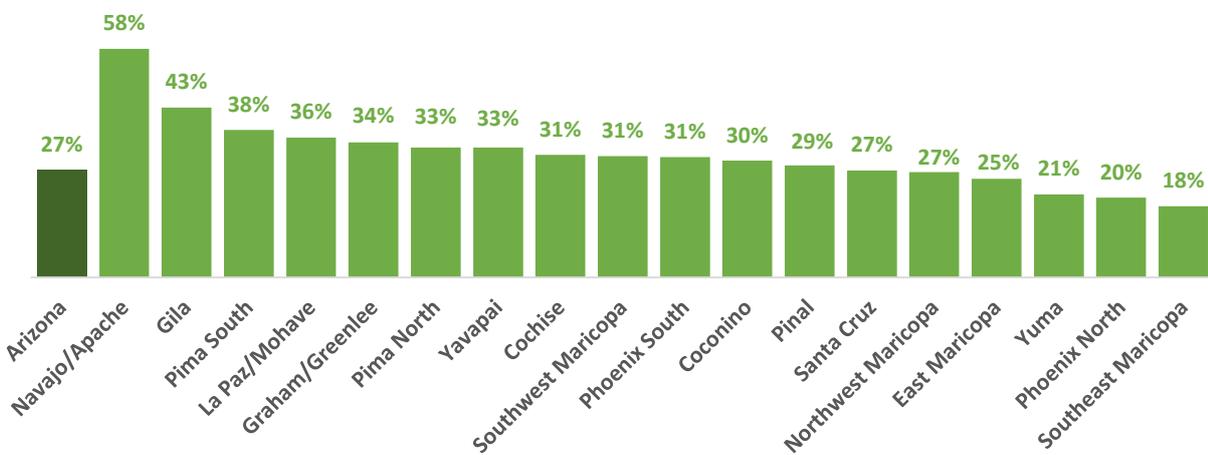
***Non-Hispanic Other Race: Includes African American/Black, Asian, and Pacific Islander/Native Hawaiian**

⁸ To be eligible for the NSLP program during the 2014-2015 school year, annual income for a family of four could not exceed \$44,123 (Child Nutrition Programs- Income Eligibility Guidelines, 2014)

Regional Highlights

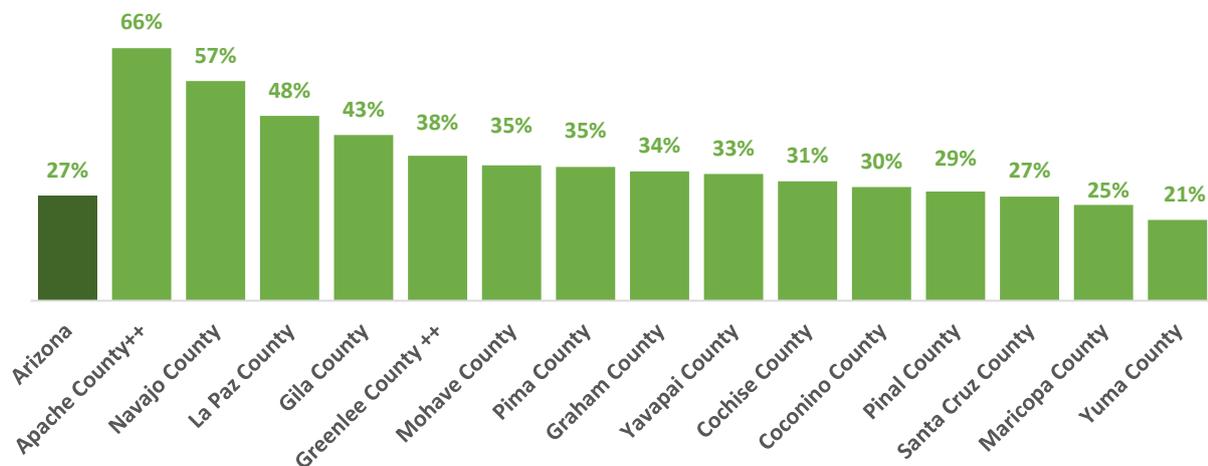
The percentage of children with untreated decay varies greatly by region. The Navajo/Apache region has a particularly high percentage of kindergarten children with untreated decay (58%) followed by Gila (43%), Pima South (38%), LaPaz/Mohave (36%), Graham/Greenlee (34%), Pima North (33%), Yavapai (33%), and Cochise (31%). Conversely, Southeast Maricopa had the lowest percentage (18%), which falls far below the state rate of 27% (see Figure 4). For more information on region specific findings please refer to the regional profiles at the end of this report. Because of small sample sizes, caution should be taken when interpreting results at the regional and county level.

Figure 4. Prevalence of Untreated Tooth Decay by Region



County Highlights

Figure 5. Prevalence of Untreated Tooth Decay by County



++ Only 1 school was screened.

PREVALENCE OF DENTAL PAIN AND INFECTION

Why It Matters

Having dental pain or infection means that a child has tooth decay severe enough that they have a toothache or visible signs of an oral infection such as a dental abscess. Dental pain impacts a child's ability to concentrate and learn. A child with pain may have difficulty attending to tasks or may demonstrate other effects of pain such as anxiety, fatigue, irritability, depression, and withdrawal from normal activities (Holt & Barzel, 2013). An oral infection can increase a child's vulnerability to infections in other parts of the body, such as the ears, sinuses and the brain (Alaki et al., 2008; Moazzam et al., 2015; Simuntis et al., 2014). Although rare, infections due to untreated tooth decay can lead to severe morbidity and even death (Casamassimo et al., 2009).

Benchmarks and National Data

Healthy People 2020 provides 10-year national objectives for improving the overall health of Americans. Healthy People 2020 does not have an objective or national benchmark for the prevalence of dental pain or infection.

The National Health and Nutrition Examination Survey (NHANES) assesses the health and nutritional status of adults and children in the United States. The following is based on data from NHANES 2011-2012:

- In the United States, less than 1% of children ages 4-6 years of age need dental care within the next two weeks⁹

How Arizona's Young Children Are Faring

The good news – fewer children have dental pain or infection. In 2003, 7% of the kindergarten children screened had tooth decay severe enough that they had a toothache or an abscessed tooth on the day of the screening. This percentage decreased to less than 2% in 2015. Arizona's kindergarten enrollment was about 70,900 in 2002-2003 and 83,100 in 2015. If the percentage with dental pain or infection is applied to these enrollment figures, approximately 4,960 children had dental pain in 2002-2003 compared to 1,660 in 2015. This means that 3,300 ***fewer*** kindergarten children are sitting in a classroom with dental pain. As previously mentioned, children with dental problems are more likely to miss school, have problems at school, and perform poorly at school, all of which negatively impact a child's ability to learn (Gift et al., 1992; Jackson et al., 2011). By decreasing the number of children attending school with dental pain, the hope is that this will improve a child's chance of achieving educational success. As with untreated decay, children from low-income households, some racial and ethnic groups, and children without a dental visit in the past year are more likely to have dental pain or infection (see Table 4). For example, in schools where 75% or more of the children are eligible for the National School Lunch Program (NSLP), 1.7%

⁹ Please see Page 22 for the cautionary note regarding comparisons of the *Healthy Smiles Healthy Bodies Survey* against national goals or data points presented.

have dental pain or infection compared to no children in schools where less than 25% of children are eligible for NSLP.¹⁰ The percentage with dental pain or infection is highest among American Indian and Alaska Native children (6%) followed by Hispanic (2%) and white (1%) children. If a child has not been to the dentist for a year or more, they are more likely to have untreated decay. In most cases, the FTF regional and county-level risk factors are similar to those found at the state-level.

Table 4. Number and Percent of Arizona’s Kindergarten Children Needing Urgent Dental Care as a Result of Pain or Infection by Selected Characteristics

| | N | Weighted % |
|-------------------------------------|-------|------------|
| Arizona | 3,630 | 1.6% |
| School participation in NSLP | | |
| < 25% of children in school | 150 | 0% |
| 25-49% of children in school | 787 | 1.8% |
| 50-74% of children in school | 839 | 1.9% |
| ≥ 75% of children in school | 1,854 | 1.7% |
| Race/Ethnicity | | |
| Non-Hispanic White | 436 | 0.7% |
| Non-Hispanic AI/AN | 117 | 5.7% |
| Non-Hispanic Other Race* | 93 | 1.1% |
| Hispanic - Any Race | 800 | 1.7% |
| Time since last dental visit | | |
| Within past year | 1,066 | 0.7% |
| More than 1 year ago or never been | 352 | 3.5% |

* **Non-Hispanic Other Race: Includes African American/Black, Asian, and Pacific Islander/Native Hawaiian**

As previously mentioned, the percentage of children with dental pain or infection has decreased since 2003. Given that children who had not been to the dentist in the past year were more than four times more likely to have dental pain or infection than those with a dental visit (see Table 4), the decrease in children with pain or infection may be partially explained by an increase in the percentage of children with an annual dental visit. In 2003, only 54% of kindergarten children had been to a dentist in the last year compared to 77% in 2015; while the percent that had never been to a dentist was cut in half, dropping from 25% to 10%. A similar trend in increasing dental utilization can also be found in Arizona’s AHCCCS (Medicaid) data. In 2003, 33% of Arizona’s children ages 3-5 years and 44% of children ages 6-9 years covered by Medicaid received dental services, compared to 55% and 64% respectively in 2014 (Medicaid, 2016). As a comparison, the percent of Medicaid children 3-5 years of age receiving dental services at the national level in 2014 was 54% for children 3-5 years of age and 61% for children 6-9 years of age (Medicaid, 2016). The

¹⁰ To be eligible for the NSLP program during the 2014-2015 school year, annual income for a family of four could not exceed \$44,123 (Child Nutrition Programs- Income Eligibility Guidelines, 2014)

increase in the percent of Arizona’s kindergarten children with a dental visit may be associated with the fact that nationwide more children had dental benefits in 2015 than in 2001 (Vujcic, Goodell, & Nasseh, 2013), along with an increased awareness among parents of the importance of regular dental visits. The increase in the number of children with dental benefits since 2001 was primarily due to Medicaid expansions and the Affordable Care Act’s pediatric dental benefit.

Ongoing Challenges – too many children have dental pain or infection. Even though the percent of kindergarten children with dental pain or infection has decreased during the last 10 years, 1.6% still need urgent dental care because of pain or infection. During the 2014-2015 school year, there were about 83,100 kindergarten children in Arizona. If almost 2% need urgent dental care, this means that about 1,660 kindergarten children are in the classroom while in pain or with an oral infection, which can affect their ability to concentrate and learn.

Children generally have pain or infection because they have not received regular restorative dental care or have not been to the dentist for a period of time. Reasons for not going to the dentist are complex but a recent national survey suggests that adults do not seek dental care because of cost, low perceived need, lack of time, difficulty traveling to a dentist, anxiety, and difficulty finding a dentist that accepts Medicaid (Yarbrough, Nasseh, & Vujcic, 2014). Although not geared toward young children, the reasons why some adults do not seek dental care are likely similar to why some adults do not take their children to a dentist.

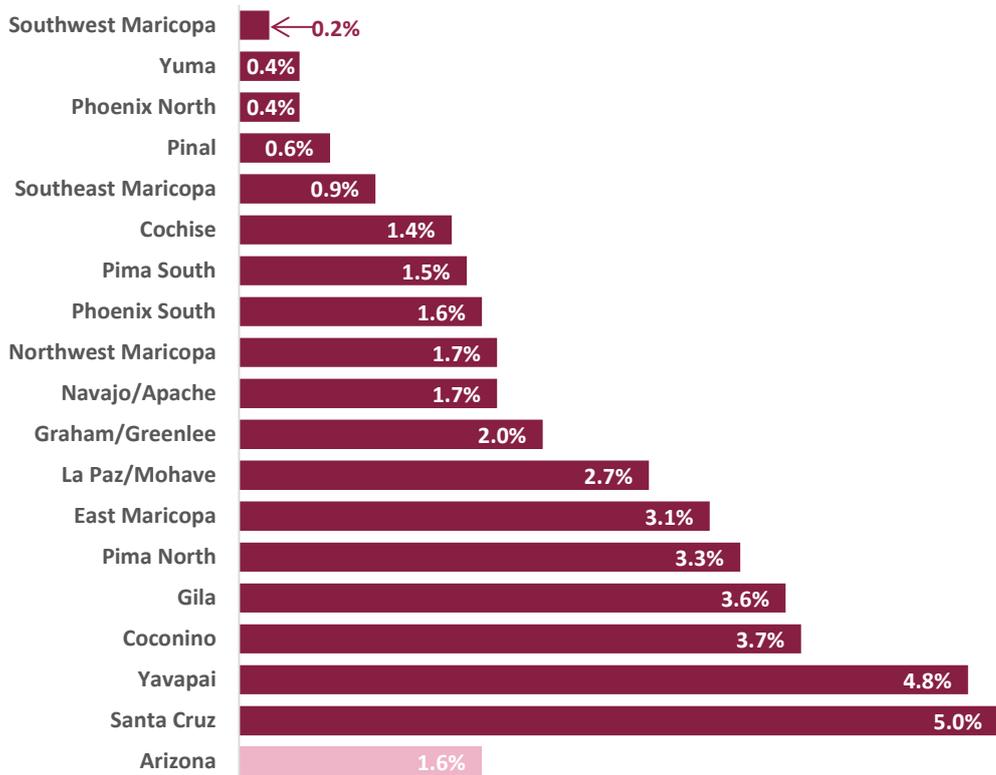
Risk Factors for Dental Pain or Infection

Ongoing Challenges – some sub-populations still have high levels of dental pain or infection. While more children are receiving dental services and fewer have pain or infection, more work needs to be done. Data from *Healthy Smiles Healthy Bodies* shows that the prevalence of dental pain or infection is higher among children from low-income households, some racial and ethnic groups, and children that have not been to the dentist in the last year or more, suggesting particular vulnerability for certain populations of young children (see Table 4). For example, if a child had not been to the dentist in the last year, 4% had dental pain compared to <1% among those that had been to the dentist in the last year. In most cases, the FTF regional and county level risk factors are similar to those found at the state-level. There are also differences in the prevalence of dental pain or infection by geographic area which may, in some cases, be associated with a scarcity of dental providers who are able to provide care to the most vulnerable children (refer to Regional and County Highlights).

Regional Highlights

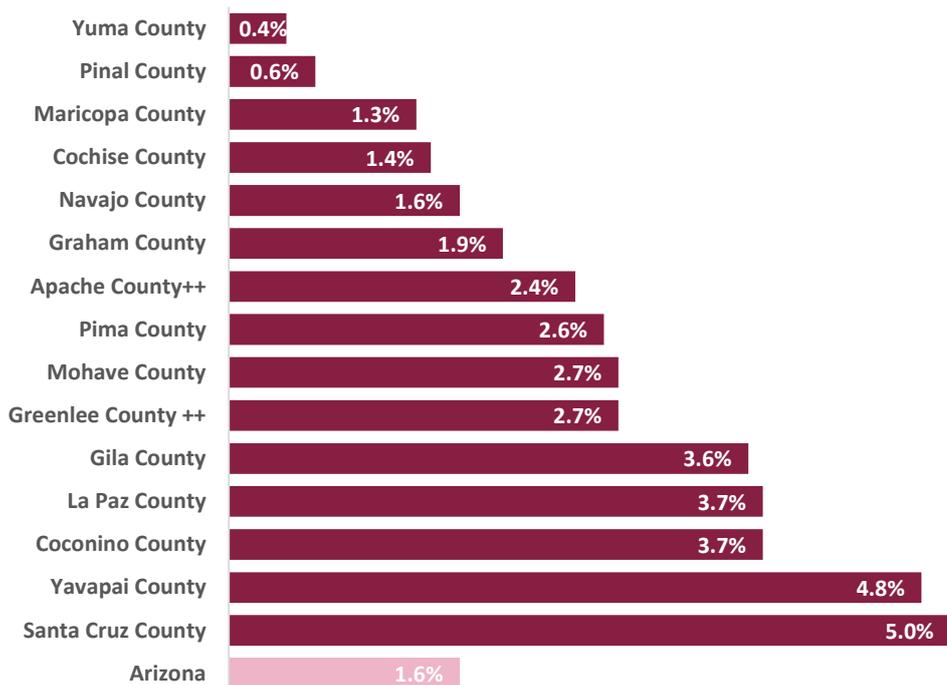
The percentage of children with dental pain or infection varies by region. The Santa Cruz and Yavapai regions have the highest percentage of kindergarten children with pain or infection (5.0% and 4.8%, respectively). Conversely, Southwest Maricopa had the lowest percentage (< 1%), which falls below the state rate of 1.6% (see Figure 6). For more information on region specific findings please refer to the regional profiles at the end of this report. Because of small sample sizes, caution should be taken when interpreting results at the regional and county level.

Figure 6. Percent of Children with Dental Pain or Infection by Region



County Highlights

Figure 7. Percent of Children with Dental Pain or Infection by County



++ Only 1 school was screened.

ANNUAL DENTAL VISIT

Why It Matters

Regular visits to the dentist provide access to early diagnosis and treatment, as well as preventive services and education on how to prevent problems. Data from both Arizona and the nation show that children who visited a dentist in the last year are less likely to have untreated tooth decay and dental pain. The American Academy of Pediatrics recommends that children have a first dental visit within six months of the eruption of the first primary tooth and no later than 12 months of age.

Children should have their first dental visit within six months of the eruption of the first tooth and no later than 12 months of age (American Academy of Pediatrics, 2015).

Having a dental visit on at least an annual basis is recommended, with more frequent visits for those at high risk of tooth decay. The Association of State and Territorial Dental Directors (2012) strongly encourages early childhood tooth decay prevention programs to be interdisciplinary with medical, dental, social service, and early childhood educators working together to facilitate the first dental visit by age 1. This includes arranging for a tooth decay risk assessment, providing anticipatory guidance and making timely referrals for the establishment of a dental home.

Benchmarks and National Data

Healthy People 2020 provides 10-year national objectives for improving the overall health of Americans. The Healthy People 2020 objective for dental visits is:

- Increase the proportion of children, adolescents, and adults who used the oral health care system in the past year to 49%

Having an annual dental visit is so important that it is classified as a Healthy People 2020 Leading Health Indicator. The Leading Health Indicators are a select subset of 26 Healthy People 2020 objectives chosen to communicate high-priority health issues.

The Medical Expenditure Panel Survey (MEPS) is a set of large-scale surveys of families and individuals, their medical providers, and employers across the United States. MEPS is the most complete source of data on the cost and use of health care and health insurance coverage. The following is based on data from MEPS 2011:

- In the United States, the percentage of persons aged 2 years and older who had a dental visit in the past 12 months is 42%

The National Survey of Children's Health (NSCH), led by the National Center for Health Statistics at the Centers for Disease Control and Prevention, provides rich data on multiple, intersecting aspects of children's lives including physical and mental health, access to quality health care, and the child's family, neighborhood, school, and social context. The following is based on data from NSCH 2011-2012:

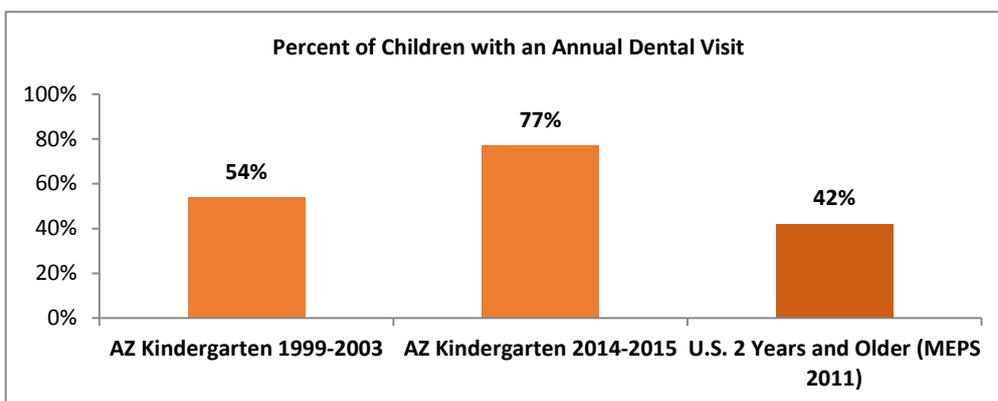
- For children 1-5 years of age, 55% had a dental visit in the last year while 88% of those 6-11 years had a dental visit in the last year

It should be noted that Arizona’s *Healthy Smiles Healthy Bodies* surveyed the parents of kindergarten children (5-6 year olds) and the dental visit data was collected using an optional questionnaire.¹¹

How Arizona’s Young Children are Faring

The good news – more children are visiting the dentist annually.

In 2003, only 54% of kindergarten children had been to a dentist in the last year compared to 77% in 2015.



Arizona Department of Health Services, Office of Oral Health (2005). "The Oral Health of Arizona's Children: Current status, Trends and Disparities." Arizona Department of Health Services and First Things First (2015). The Oral Health of Arizona's Kindergarten Children: Healthy Smile Healthy Bodies Survey 2015. US Department of Health and Human Services (2011). The Percentage of Persons Aged 2 Years and Older who had a Dental Visit in the Past 12 Months. Medical Expenditure Panel Survey 2011.

The percent that had never been to a dentist was

cut by more than half, dropping from 25% to 10%. A similar trend in increasing dental utilization can also be found in Arizona’s AHCCCS (Medicaid) data. In 2003, 33% of Arizona’s children ages 3-5 years and 44% of children 6-9 years covered by Medicaid received dental services compared to 55% and 64% respectively in 2014 (Medicaid, 2016). As a comparison, the percent of Medicaid children receiving dental services at the national level in 2014 was 54% for children 3-5 years of age and 61% for children 6-9 years of age (Medicaid, 2016).

Compared to those that had been to the dentist in the last year, children who had not been to the dentist were significantly more likely to have untreated decay (20% vs. 38%) and dental pain or infection (4% vs. 1%). Children with a dental visit in the last year had an average of 0.5 teeth with untreated decay while those without a dental visit had an average of 1.3 teeth with untreated decay.

Risk Factors for Not Having an Annual Dental Visit

Ongoing Challenges – some sub-populations are less likely to visit the dentist each year. While more children are visiting the dentist and receiving dental services, more work needs to be done. Data from *Healthy Smiles Healthy Bodies* shows that lower income children, children whose parents

¹¹ Please see Page 22 for the cautionary note regarding comparisons of the *Healthy Smiles Healthy Bodies Survey* against national goals or data points presented.

have not attended college, and children with no health insurance are less likely to have had a dental visit in the last year (see Table 5). For example, in schools where 75% or more of the children are eligible for the National School Lunch Program (NSLP), 72% had a dental visit compared to 85% in schools where less than 25% of children are eligible for NSLP¹². About 78% of children with employer or private health insurance had a dental visit compared to only 49% of those with no health insurance. If a parent reported that a child had dental insurance, 80% had visited the dentist while only 67% of those without dental insurance had visited the dentist. In most cases, the FTF regional and county level risk factors are similar to those found at the state-level. There are also differences in the percentage of children with a dental visit by geographic area which may, in some cases, be associated with a scarcity of dental professionals who are able to provide care to the most vulnerable children (refer to Regional and County Highlights).

Table 5. Percent of Children with a Dental Visit in the Last Year by Selected Characteristics

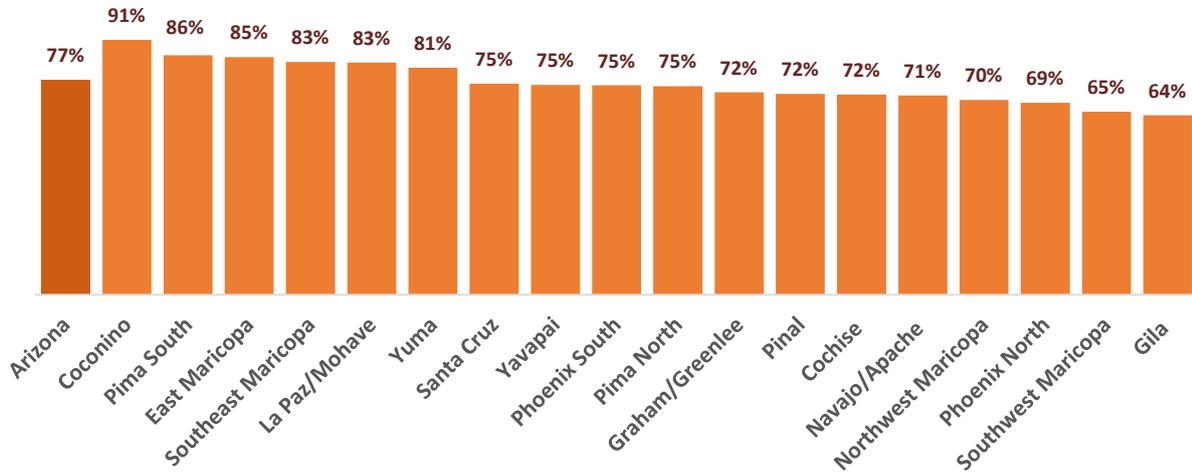
| | N | Weighted % |
|-------------------------------------|-------|------------|
| Arizona | 1,066 | 77% |
| School participation in NSLP | | |
| < 25% of children in school | 68 | 85% |
| 25-49% of children in school | 249 | 77% |
| 50-74% of children in school | 294 | 81% |
| ≥ 75% of children in school | 455 | 72% |
| Type of health insurance | | |
| Employer or private purchase | 421 | 78% |
| AHCCCS (Medicaid) | 545 | 80% |
| None | 47 | 49% |
| Dental Insurance | | |
| Yes | 829 | 80% |
| No | 207 | 67% |
| Parent education | | |
| High school graduate or less | 397 | 72% |
| Some college | 638 | 80% |

Regional Highlights

The percentage of children with an annual dental visit varies by region. The Coconino region has the highest percentage of kindergarten children with a dental visit (91%) followed by Pima South (86%), East Maricopa (85%), Southeast Maricopa (83%), La Paz/Mohave (83%) and Yuma (81%). Conversely, Gila had the lowest percentage (64%), which falls far below the state rate of 77% (see Figure 8). For more information on region specific findings please refer to the regional profiles at the end of this report. Because of small sample sizes, caution should be taken when interpreting results at the regional and county level.

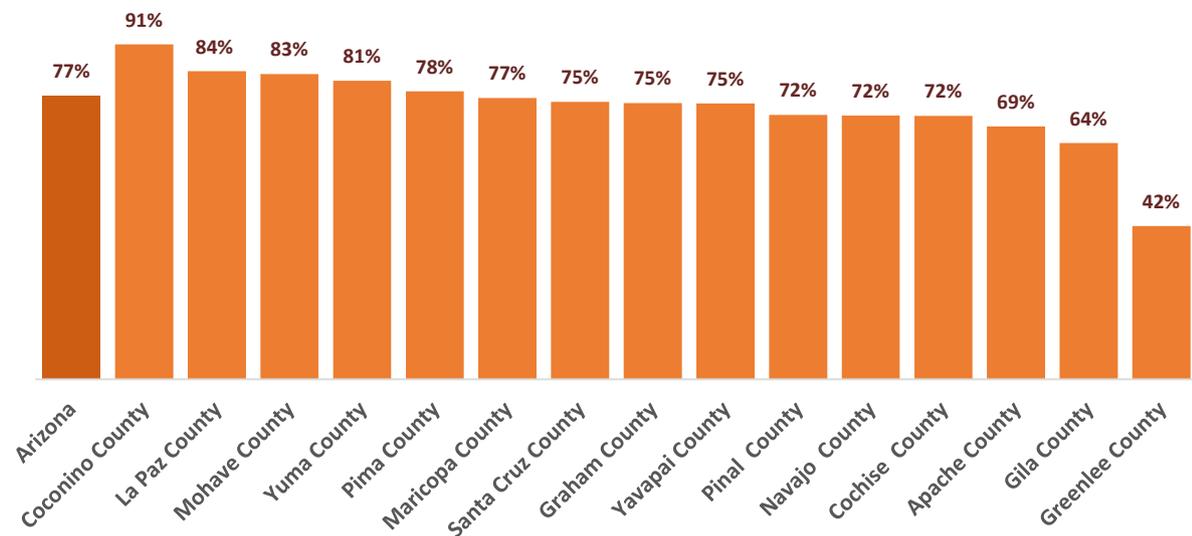
¹² To be eligible for the NSLP program during the 2014-2015 school year, annual income for a family of four could not exceed \$44,123 (Child Nutrition Programs- Income Eligibility Guidelines, 2014)

Figure 8. Percent of Children with an Annual Dental Visit by Region



County Highlights

Figure 9. Percent of Children with an Annual Dental Visit by County



INSURANCE COVERAGE

Why It Matters

Dental benefits are a crucial factor enabling access to dental care. People with private dental benefits are more than twice as likely to have an annual dental exam compared to those without any benefits (Manski & Brown, 2007). Expanded Medicaid dental benefits also increase dental care use (Choi, 2011). Utilization of dental care among children has been increasing, driven primarily by gains among low-income children resulting from the expansion of Medicaid (Vujcic & Nasseh, 2014).

Benchmarks and National Data

Healthy People 2020 provides 10-year national objectives for improving the overall health of Americans. Healthy People 2020 does not have an objective or national benchmark for dental insurance coverage.

The Medical Expenditure Panel Survey (MEPS) is the most complete source of data on the cost and use of health care and health insurance coverage. The following is based on data from MEPS 2012:

- In the United States, the percentage of children 2-18 years of age with private dental benefits is 50%, 37% have public benefits, and 13% are uninsured (Nasseh & Vujcic, 2014)

It should be noted that Arizona's *Healthy Smiles Healthy Bodies* surveyed the parents of kindergarten children (5-6 year olds) and the dental insurance data was collected using an optional questionnaire.¹³

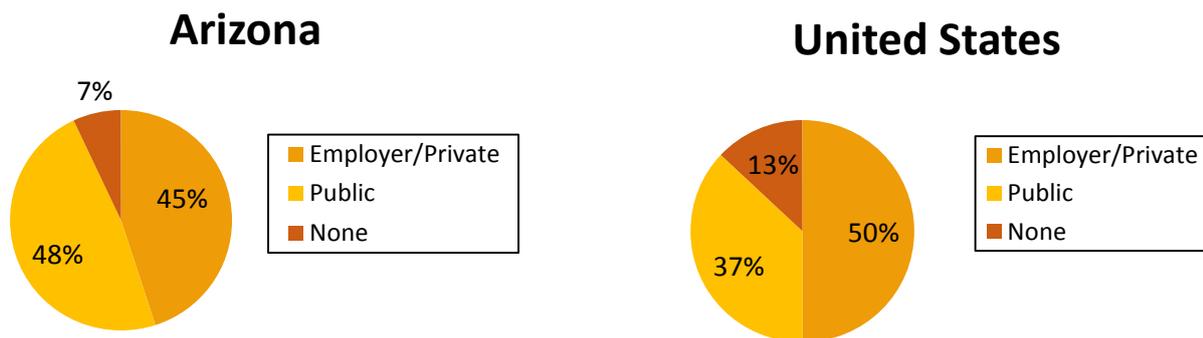
How Arizona's Young Children are Faring

The *Healthy Smiles Healthy Bodies* survey asked two questions about insurance coverage. These questions obtained information on type of medical/health insurance and whether or not the child has insurance that pays for dental care.

The good news – most children have health insurance coverage. Of the children whose parents completed the optional questionnaire, 93% reported having health insurance. About 45% reported having private insurance, 46% had AHCCCS (Medicaid) and 2% had another type of insurance such as Indian Health Service or military benefits. Compared to children ages 2-18 in the United States, Arizona's kindergarteners are less likely to be uninsured (13% versus 7%, respectively) (see Figure 10).

¹³ Please see Page 22 for the cautionary note regarding comparisons of the *Healthy Smiles Healthy Bodies Survey* against the national goals or data points presented.

Figure 10. Types of Insurance Coverage for Children in Arizona versus the United States.



Insurance Coverage in Arizona for Kindergarten Children. Arizona Department of Health Services and First Things First (2015). The Oral Health of Arizona’s Kindergarten Children: Healthy Smile Healthy Bodies Survey 2015.

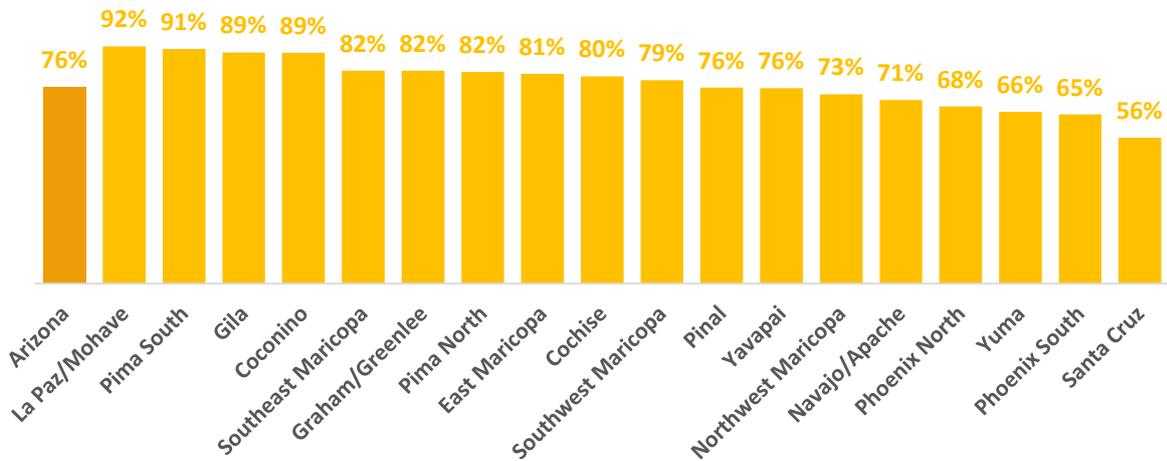
Insurance Coverage in the United States for Children 2-18 Years of Age. US Department of Health and Human Services (2012). Medical Expenditure Panel Survey 2012.

Ongoing Challenges – many parents do not know that AHCCCS (Medicaid) health insurance coverage includes dental care benefits. If a child has AHCCCS (Medicaid) health insurance, they also have coverage for dental care. The results of the survey, however, suggest that many parents are unaware of these dental benefits. Of the parents reporting that their child has AHCCCS (Medicaid) health/medical insurance, 22% reported that their child does not have insurance that pays for dental care. This result suggests that additional efforts must be made to educate parents of the dental care benefits available through AHCCCS (Medicaid).

Regional Highlights

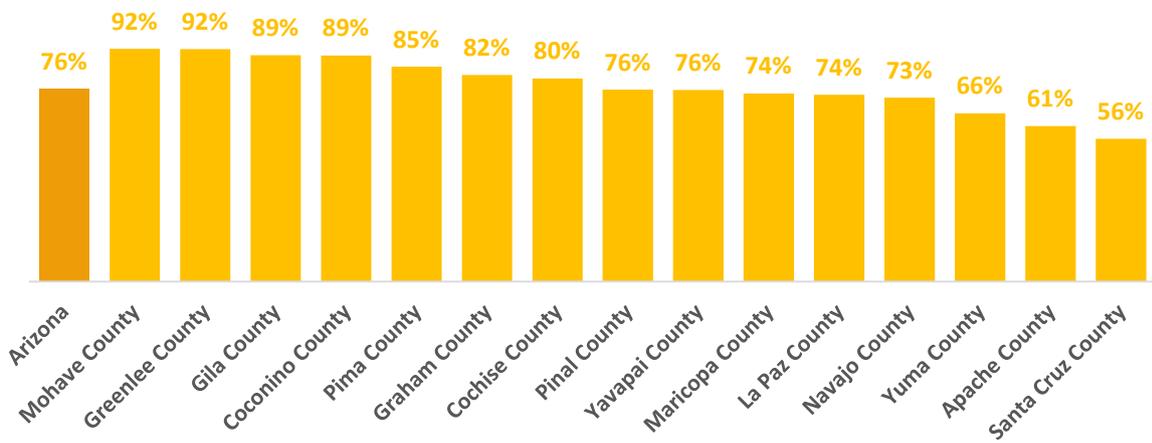
The percentage of children with dental insurance coverage varies greatly by region. The La Paz/Mohave region has the highest percentage of kindergarten children with dental insurance (92%) followed by Pima South (91%), Gila (89%), and Coconino (89%). Conversely, Santa Cruz had the lowest percentage (56%), which falls far below the state rate of 76% (see Figure 11). Because of small sample sizes, caution should be taken when interpreting results at the regional and county level.

Figure 11. Percent of Children with Dental Insurance by Region



County Highlights

Figure 12. Percent of Children with Dental Insurance by County



CONCLUSION

The results of *Healthy Smiles Healthy Bodies* highlight an important fact – the oral health of Arizona’s young children has, in some cases, improved. Compared to a decade ago, more children are visiting a dentist each year, fewer children have untreated decay and fewer children have dental pain or infection. Unfortunately, the percent of children with decay experience has not changed and substantial oral health disparities still exist with low-income and racial/ethnic minorities suffering disproportionately from tooth decay. To put it differently, while the oral health of Arizona’s young children is improving, more work needs to be done.

To reduce the percent of children with decay experience, access to preventive dental services and parent/caregiver education must be expanded with an emphasis on reaching the youngest and most vulnerable children. To reduce the percent of children with untreated decay, there must be an increase of access to dental care by educating parents on the importance of early dental visits, developing systems that support early screening, referral and case management, and expanding the workforce providing dental care to Arizona’s youngest children.

The following goals have been identified to improve the oral health of young children in Arizona. Attainment of these goals requires an increase in private and public sector participation in mobilizing resources and developing policies that support the identified strategies to be implemented and sustained.

FUTURE STRATEGIES

Increase parent and caregiver awareness of the importance of oral health starting in pregnancy and birth

- Ensure the continued focus on the promotion of oral health within the public health arena, including using health and social service settings to increase parents' knowledge on easy and positive oral health hygiene practices.
- Develop an ongoing campaign to promote oral health as part of general health and well-being.
- Promote annual dental exams, particularly for high-risk children, by 1 year of age.
- Teach parents how to use their dental health care benefits and advocate for oral health for themselves and their children.

Increase access to oral health prevention and early intervention

- In communities at high risk of dental disease, target preschools and community-based settings for the expansion of oral health screening, fluoride varnish application and parent/caregiver education.
- Sustain/increase grant funding for innovative practices – such as teledentistry – in rural and other underserved areas.
- Increase access to dental insurance for high risk children and their parents/caregivers. This includes supporting efforts to reinstate KidsCare/CHIP in Arizona that includes a pediatric dental benefit.
- Reinstate the Arizona Medicaid dental benefits for adults so that expectant mothers and parents can access needed dental care and become models for positive oral health hygiene practices.
- Provide oral health screenings at the beginning of kindergarten to provide data on the ongoing oral health status and needs of young children. This data will inform the provision of services and the development of public policy on children's oral health.
- Increase the proportion of Arizona communities with fluoridated water supplies.

Increase the number and capacity of professionals who can provide oral health care for children birth to age 5 and can promote good oral health practices for young children

- Build capacity in dental public health at the state and local levels, including the number of dental providers in under-served areas.
- Increase the number of dentists participating in AHCCCS (Medicaid).
- Create a network of champion pediatric dentists that can act as leaders within their profession and provide mentoring to general dentists to increase their skill set and comfort in providing dental care to young children birth to age 5.
- Increase the number of mid-level dental providers – such as qualified dental hygienists (i.e., Affiliated Practice Dental Hygienists) permitted by Arizona law and regulations - to provide services in the rural areas and give families more options for dental care to mitigate barriers to access.
- Expand AHCCCS (Medicaid) and private insurance reimbursement of: screening and fluoride varnish application and the provision of oral health education by dental and primary care professionals.
- Educate non-dental health care providers about the relationship between oral health and general health and their role in oral health education, screening and prevention.

**REGIONAL PROFILES ON YOUNG CHILDREN'S TOOTH DECAY EXPERIENCE
& UNTREATED TOOTH DECAY**

THE STATE OF ORAL HEALTH IN COCHISE

Why is Good Oral Health Important?

Many people consider tooth decay to be a minor problem but for many it results in pain, infection, the inability to chew foods well, embarrassment about damaged or discolored teeth and distraction from play and learning. Tooth decay in the primary teeth is of special importance because an unhealthy tooth in a child puts the child at risk of future oral health problems. The longer early childhood tooth decay remains untreated, the worse the condition gets, making it more difficult to treat. These more complicated procedures are expensive, performed by a smaller number of clinicians and may need to be performed in an operating room or clinic setting using general anesthesia. In other words, as treatment is delayed, the problem becomes more serious and difficult to treat. As a result, access and cost issues multiply.

Definitions

Untreated decay means that a child has at least one tooth with a cavity that has not received appropriate treatment. Untreated decay compromises a child's ability to eat well, sleep well, and function well at home and at school.

Tooth decay experience means that a child has had tooth decay in the primary (baby) and/or permanent (adult) teeth in his/her lifetime. Children can have *past decay experience* (fillings, crowns, or teeth that have been extracted because of decay), or *present decay experience* (untreated tooth decay or cavities).

Dental pain or infection means that a child has tooth decay severe enough that they have a toothache or visible signs of an oral infection such as a dental abscess. Dental pain impacts a child's ability to concentrate and learn. An oral infection can increase a child's vulnerability to infections in other parts of the body, such as the ears, sinuses and the brain.

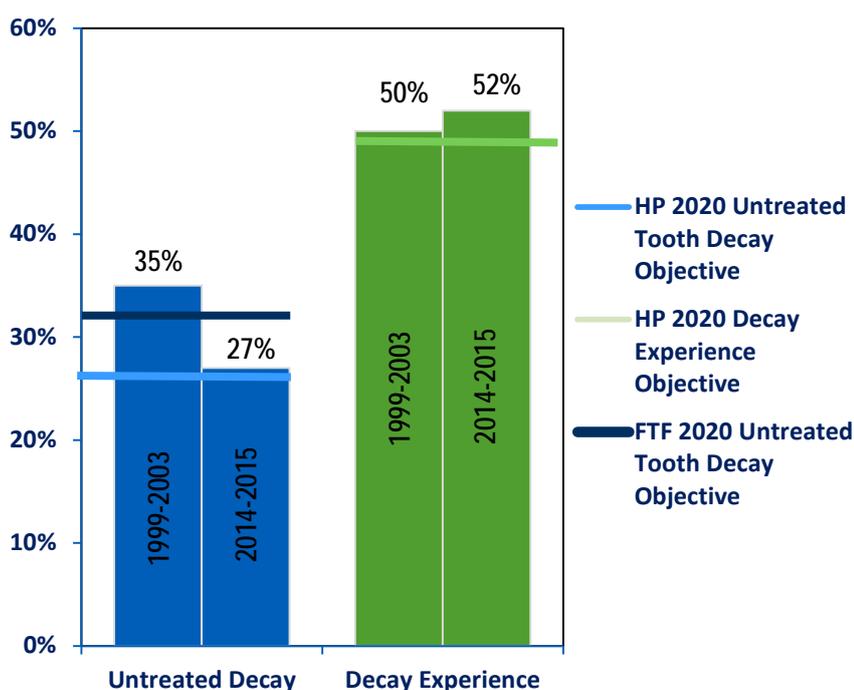
The State of Oral Health in Arizona

In recent years many different organizations in Arizona, including FTF and ADHS, have worked to improve oral health outcomes for young children. The good news is these efforts are paying off.

The number of kindergarteners in

Arizona with untreated tooth decay has fallen from 35% to 27% since the early 2000s.

Figure 1. Kindergarten Children's Oral Health Status

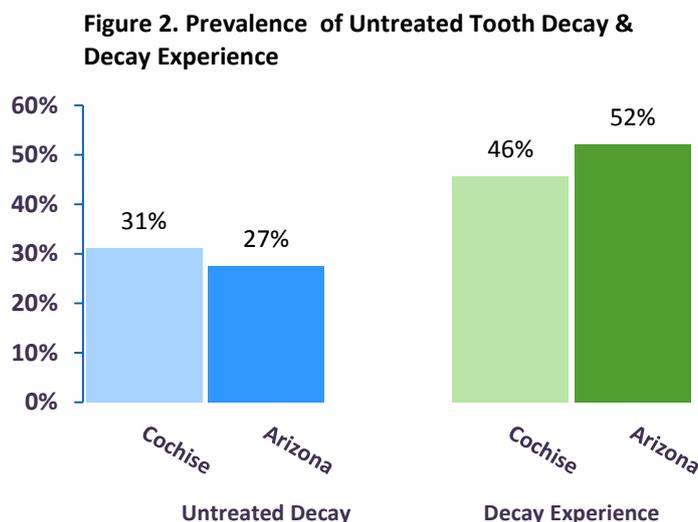


Additionally, the results of this survey show that Arizona has met its 2020 benchmark of 32% and is well on track to meet Healthy People’s 2020 target of 26%. The bad news is that there has been no significant change in the percent of children with decay experience suggesting that we need to continue focusing efforts on primary prevention.

The State of Oral Health in the Cochise Region

Results show that (see Figure 2) around one third of kindergarteners (31%) in the First Things First Cochise region have untreated decay and are in need of dental care. Untreated decay findings for the region are slightly higher than for Arizona (27%).

When looking at overall decay experience, a lower percentage of kindergarteners in the region had decay experience (46%) compared to Arizona (52%). The trend for dental pain and infection in the Cochise region (1%) was similar to Arizona (2%).



Determinants and Risk Factors for Untreated Decay and Decay Experience

Arizona: The prevalence of **untreated tooth decay** in Arizona is higher among children from low-income households, some racial and ethnic groups, and children that have not been to the dentist in the last year.

The state level risk factors for **decay experience** are income, race/ethnicity, type of health insurance coverage and parental education, with the prevalence of decay experience being higher among children from low-income households, some racial and ethnic groups, children with Medicaid or no health insurance, and children whose parents have less than a college education.

Cochise: In the Cochise region, 165 children were screened and 86 parents/caregivers answered at least one question on the optional questionnaire. Due to the optional nature of the parent/caregiver questionnaire, risk factors at the regional level should be viewed with caution because of small sample sizes and/or small numbers within sub-categories. The demographic characteristics in Table 1, including race, insurance, dental visits, and parent education, were reported by parents/caregivers in the optional questionnaire. The percent of children eligible for the National School Lunch Program (NSLP) in that child’s school was recorded for all children who received an oral health screening; this information can also be found in Table 1. In the Cochise region, children with a dental visit in the last year, children attending higher income schools and children whose parents attended college were less likely to have untreated decay.

Table 1. Prevalence of Untreated Tooth Decay & Decay Experience by Selected Demographic Characteristics

| | Number of Children with Data | Untreated Decay (%) | Decay Experience (%) |
|-------------------------------------|------------------------------|---------------------|----------------------|
| Cochise Region¹⁴ | | | |
| School participation in NSLP | | | |
| < 25% Eligible for NSLP | 0 | . | . |
| 25-49% Eligible for NSLP | 105 | 27% | 45% |
| 50-74% Eligible for NSLP | 36 | 39% | 44% |
| > 75% Eligible for NSLP | 24 | 33% | 50% |
| Race/Ethnicity | | | |
| Non-Hispanic White | 28 | 29% | 47% |
| Non-Hispanic Black | 4 | 53% | 100% |
| Hispanic (any race) | 45 | 31% | 49% |
| Non-Hispanic American Indian | 0 | . | . |
| Type of health insurance | | | |
| Employer/Private | 27 | 45% | 52% |
| AHCCCS (Medicaid) | 42 | 25% | 48% |
| None | 5 | 19% | 42% |
| Time since last dental visit | | | |
| Within the last year | 60 | 30% | 53% |
| > 1 year or never | 24 | 40% | 44% |
| Parent education | | | |
| Some College | 52 | 28% | 47% |
| High School or Less | 32 | 36% | 52% |

Note: Race/ethnicity, time since last dental visit, insurance coverage, and parent education were obtained from the optional parent/caregiver questionnaire and will not add up to the children screened. Also, **weighted percentages** are displayed. The weighted percent is the percent of children that accounts for the complex cluster sampling scheme. Calculating percent directly from the number of children will not yield the weighted percent.

¹⁴ Only FTF regional information is displayed as the FTF region and the Arizona County encompass the same area.

THE STATE OF ORAL HEALTH IN COCONINO

Why is Good Oral Health Important?

Many people consider tooth decay to be a minor problem but for many it results in pain, infection, the inability to chew foods well, embarrassment about damaged or discolored teeth and distraction from play and learning. Tooth decay in the primary teeth is of special importance because an unhealthy tooth in a child puts the child at risk of future oral health problems. The longer early childhood tooth decay remains untreated, the worse the condition gets, making it more difficult to treat. These more complicated procedures are expensive, performed by a smaller number of clinicians and may need to be performed in an operating room or clinic setting using general anesthesia. In other words, as treatment is delayed, the problem becomes more serious and difficult to treat. As a result, access and cost issues multiply.

Definitions

Untreated decay means that a child has at least one tooth with a cavity that has not received appropriate treatment. Untreated decay compromises a child's ability to eat well, sleep well, and function well at home and at school.

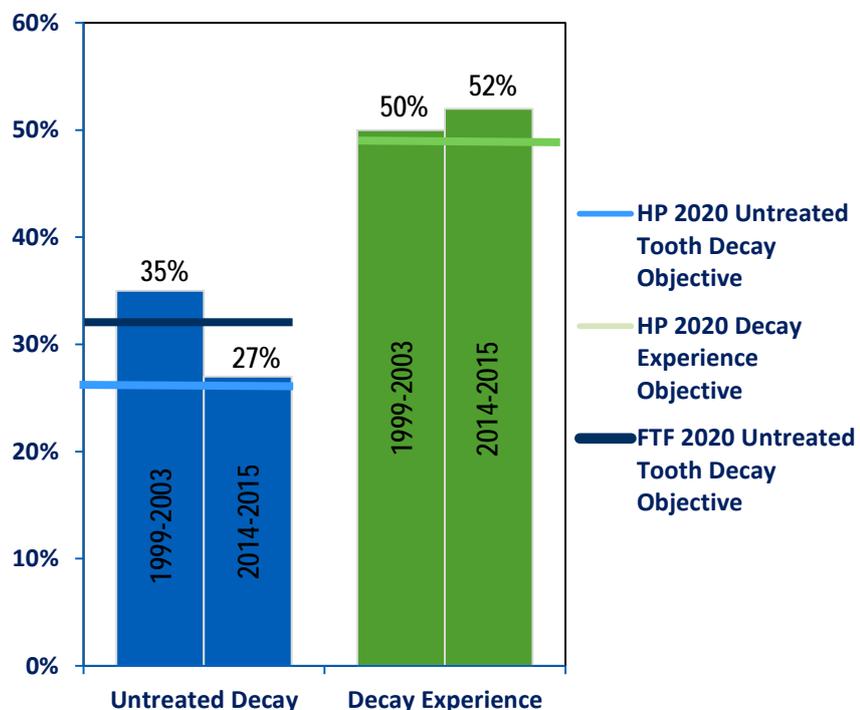
Tooth decay experience means that a child has had tooth decay in the primary (baby) and/or permanent (adult) teeth in his/her lifetime. Children can have *past decay experience* (fillings, crowns, or teeth that have been extracted because of decay), or *present decay experience* (untreated tooth decay or cavities).

Dental pain or infection means that a child has tooth decay severe enough that they have a toothache or visible signs of an oral infection such as a dental abscess. Dental pain impacts a child's ability to concentrate and learn. An oral infection can increase a child's vulnerability to infections in other parts of the body, such as the ears, sinuses and the brain.

The State of Oral Health in Arizona

In recent years many different organizations in Arizona, including FTF and ADHS, have worked to improve oral health outcomes for young children. The good news is these efforts are paying off. **The number of kindergarteners in Arizona with untreated tooth decay has fallen from 35% to 27% since the early**

Figure 1. Kindergarten Children's Oral Health Status

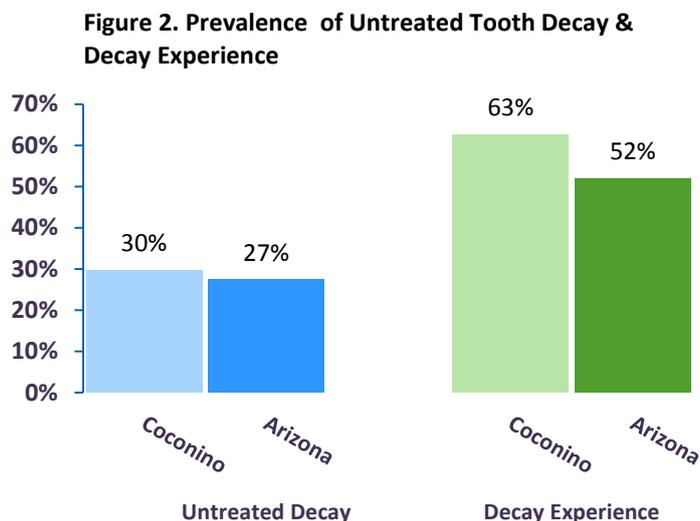


2000s. Additionally, the results of this survey show that Arizona has met its 2020 benchmark of 32% and is well on track to meet Healthy People’s 2020 target of 26%. The bad news is that there has been no significant change in the percent of children with decay experience suggesting that we need to continue focusing efforts on primary prevention.

The State of Oral Health in the Coconino Region

Results show that (see Figure 2) around one third of kindergarteners (30%) in the First Things First Coconino region have untreated decay and are in need of dental care. Untreated decay findings for the region are slightly higher than for Arizona (27%).

When looking at overall decay experience, a higher percentage of kindergarteners in the region had decay experience (63%) compared to Arizona (52%). The trend for dental pain and infection in the Coconino region (4%) was slightly higher than for Arizona (2%).



Determinants and Risk Factors for Untreated Decay and Decay Experience

Arizona: The prevalence of **untreated tooth decay** in Arizona is higher among children from low-income households, some racial and ethnic groups, and children that have not been to the dentist in the last year.

The state level risk factors for **decay experience** are income, race/ethnicity, type of health insurance coverage and parental education, with the prevalence of decay experience being higher among children from low-income households, some racial and ethnic groups, children with Medicaid or no health insurance, and children whose parents have less than a college education.

Coconino: In the Coconino region, 204 children were screened and 152 parents/caregivers answered at least one question on the optional questionnaire. Due to the optional nature of the parent/caregiver questionnaire, risk factors at the regional level should be viewed with caution because of small sample sizes and/or small numbers within sub-categories. The demographic characteristics in Table 1, including race, insurance, dental visits, and parent education, were reported by parents/caregivers in the optional questionnaire. The percent of children eligible for the National School Lunch Program (NSLP) in that child’s school was recorded for all children who received an oral health screening; this information can also be found in Table 1. In the Coconino region, children with a dental visit in the last year, children attending higher income schools, and children whose parents attended college were less likely to have untreated decay.

Table 1. Prevalence of Untreated Tooth Decay & Decay Experience by Selected Demographic Characteristics

| | Number of Children with Data | Untreated Decay (%) | Decay Experience (%) |
|-------------------------------------|------------------------------|---------------------|----------------------|
| Coconino Region¹⁵ | | | |
| School participation in NSLP | | | |
| < 25% Eligible for NSLP | 0 | . | . |
| 25-49% Eligible for NSLP | 90 | 26% | 48% |
| 50-74% Eligible for NSLP | 75 | 29% | 63% |
| > 75% Eligible for NSLP | 39 | 36% | 79% |
| Race/Ethnicity | | | |
| Non-Hispanic White | 34 | 23% | 46% |
| Non-Hispanic Black | 0 | . | . |
| Hispanic (any race) | 25 | 30% | 76% |
| Non-Hispanic American Indian | 8 | 33% | 83% |
| Type of health insurance | | | |
| Employer/Private | 46 | 25% | 43% |
| AHCCCS (Medicaid) | 21 | 35% | 87% |
| None | 2 | 0% | 44% |
| Time since last dental visit | | | |
| Within the last year | 64 | 25% | 59% |
| > 1 year or never | 7 | 39% | 59% |
| Parent education | | | |
| Some College | 56 | 27% | 55% |
| High School or Less | 12 | 34% | 75% |

Note: Race/ethnicity, time since last dental visit, insurance coverage, and parent education were obtained from the optional parent/caregiver questionnaire and will not add up to the children screened. Also, **weighted percentages** are displayed. The weighted percent is the percent of children that accounts for the complex cluster sampling scheme. Calculating percent directly from the number of children will not yield the weighted percent.

¹⁵ Only FTF regional information is displayed as the FTF region and the Arizona County encompass the same area.

THE STATE OF ORAL HEALTH IN EAST MARICOPA

Why is Good Oral Health Important?

Many people consider tooth decay to be a minor problem but for many it results in pain, infection, the inability to chew foods well, embarrassment about damaged or discolored teeth and distraction from play and learning. Tooth decay in the primary teeth is of special importance because an unhealthy tooth in a child puts the child at risk of future oral health problems. The longer early childhood tooth decay remains untreated, the worse the condition gets, making it more difficult to treat. These more complicated procedures are expensive, performed by a smaller number of clinicians and may need to be performed in an operating room or clinic setting using general anesthesia. In other words, as treatment is delayed, the problem becomes more serious and difficult to treat. As a result, access and cost issues multiply.

Definitions

Untreated decay means that a child has at least one tooth with a cavity that has not received appropriate treatment. Untreated decay compromises a child's ability to eat well, sleep well, and function well at home and at school.

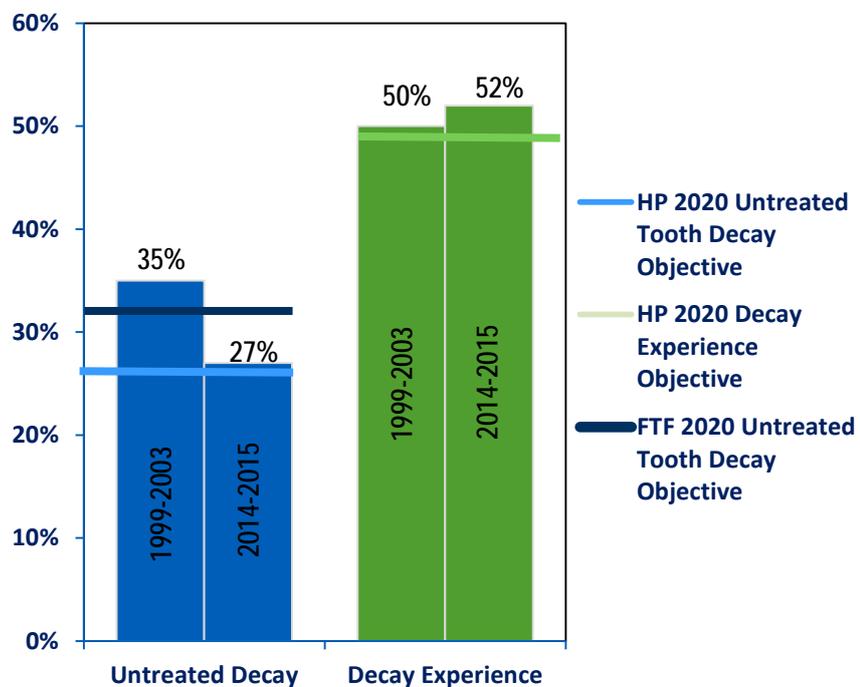
Tooth decay experience means that a child has had tooth decay in the primary (baby) and/or permanent (adult) teeth in his/her lifetime. Children can have *past decay experience* (fillings, crowns, or teeth that have been extracted because of decay), or *present decay experience* (untreated tooth decay or cavities).

Dental pain or infection means that a child has tooth decay severe enough that they have a toothache or visible signs of an oral infection such as a dental abscess. Dental pain impacts a child's ability to concentrate and learn. An oral infection can increase a child's vulnerability to infections in other parts of the body, such as the ears, sinuses and the brain.

The State of Oral Health in Arizona

In recent years many different organizations in Arizona, including FTF and ADHS, have worked to improve oral health outcomes for young children. The good news is these efforts are paying off. **The number of kindergarteners in Arizona with untreated tooth decay has fallen from 35% to 27% since the early 2000s.** Additionally, the results of this survey show that

Figure 1. Kindergarten Children's Oral Health Status



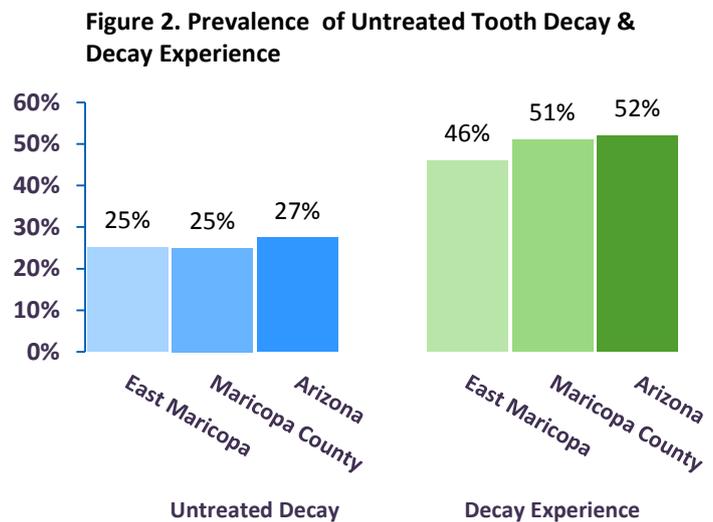
Arizona has met its 2020 benchmark of 32% and is well on track to meet Healthy People’s 2020 target of 26%. The bad news is that there has been no significant change in the percent of children with decay experience suggesting that we need to continue focusing efforts on primary prevention.

The State of Oral Health in the East Maricopa Region

Results show that (see Figure 2) around one quarter of kindergarteners (25%) in the First Things First East Maricopa region have untreated decay and are in need of dental care.

Untreated decay findings for the region are similar to Maricopa County (25%) and Arizona (27%).

When looking at overall decay experience, a lower percentage of kindergarteners in the region had decay experience (46%) in comparison to Maricopa County (51%) or Arizona (52%). The trend for dental pain and infection in the East Maricopa region (3%) was slightly higher than for Maricopa County (1%) and Arizona (2%).



Determinants and Risk Factors for Untreated Decay and Decay Experience

Arizona: The prevalence of **untreated tooth decay** in Arizona is higher among children from low-income households, some racial and ethnic groups, and children that have not been to the dentist in the last year.

The state level risk factors for **decay experience** are income, race/ethnicity, type of health insurance coverage and parental education, with the prevalence of decay experience being higher among children from low-income households, some racial and ethnic groups, children with Medicaid or no health insurance, and children whose parents have less than a college education.

East Maricopa: In the East Maricopa region, 119 children were screened and 35 parents/caregivers answered at least one question on the optional questionnaire. Due to the optional nature of the parent/caregiver questionnaire, risk factors at the regional level should be viewed with caution because of small sample sizes and/or small numbers within sub-categories. The demographic characteristics in Table 1, including race, insurance, dental visits, and parent education, were reported by parents/caregivers in the optional questionnaire. The percent of children eligible for the National School Lunch Program (NSLP) in that child’s school was recorded for all children who received an oral health screening; this information can also be found in Table 1. In the East Maricopa region, children with a dental visit in the last year were less likely to have untreated decay.

Table 1. Prevalence of Untreated Tooth Decay & Decay Experience by Selected Demographic Characteristics

| | Number of Children with Data | Untreated Decay (%) | Decay Experience (%) |
|-------------------------------------|------------------------------|---------------------|----------------------|
| East Maricopa Region | | | |
| School participation in NSLP | | | |
| < 25% Eligible for NSLP | 29 | 7% | 17% |
| 25-49% Eligible for NSLP | 0 | . | . |
| 50-74% Eligible for NSLP | 0 | . | . |
| > 75% Eligible for NSLP | 90 | 33% | 58% |
| Race/Ethnicity | | | |
| Non-Hispanic White | 16 | 0% | 13% |
| Non-Hispanic Black | 2 | 0% | 0% |
| Hispanic (any race) | 15 | 7% | 24% |
| Non-Hispanic American Indian | 2 | 100% | 100% |
| Type of health insurance | | | |
| Employer/Private | 26 | 0% | 11% |
| AHCCCS (Medicaid) | 7 | 31% | 58% |
| None | 1 | 0% | 0% |
| Time since last dental visit | | | |
| Within the last year | 29 | 3% | 16% |
| > 1 year or never | 6 | 36% | 49% |
| Parent education | | | |
| Some College | 26 | 4% | 12% |
| High School or Less | 8 | 27% | 50% |
| Maricopa County | | | |
| School participation in NSLP | | | |
| < 25% Eligible for NSLP | 150 | 11% | 29% |
| 25-49% Eligible for NSLP | 194 | 23% | 41% |
| 50-74% Eligible for NSLP | 120 | 28% | 43% |
| > 75% Eligible for NSLP | 884 | 29% | 62% |
| Race/Ethnicity | | | |
| Non-Hispanic White | 135 | 10% | 31% |
| Non-Hispanic Black | 28 | 22% | 31% |
| Hispanic (any race) | 284 | 28% | 58% |
| Non-Hispanic American Indian | 9 | 57% | 100% |
| Type of health insurance | | | |
| Employer/Private | 190 | 17% | 31% |
| AHCCCS (Medicaid) | 206 | 21% | 63% |
| None | 43 | 36% | 52% |
| Time since last dental visit | | | |
| Within the last year | 338 | 17% | 46% |

| | Number of Children with Data | Untreated Decay (%) | Decay Experience (%) |
|-------------------------|-------------------------------------|----------------------------|-----------------------------|
| > 1 year or never | 108 | 36% | 48% |
| Parent education | | | |
| Some College | 253 | 18% | 36% |
| High School or Less | 189 | 26% | 62% |

Note: Race/ethnicity, time since last dental visit, insurance coverage, and parent education were obtained from the optional parent/caregiver questionnaire and will not add up to the children screened. Also, **weighted percentages** are displayed. The weighted percent is the percent of children that accounts for the complex cluster sampling scheme. Calculating percent directly from the number of children will not yield the weighted percent.

THE STATE OF ORAL HEALTH IN GILA

Why is Good Oral Health Important?

Many people consider tooth decay to be a minor problem but for many it results in pain, infection, the inability to chew foods well, embarrassment about damaged or discolored teeth and distraction from play and learning. Tooth decay in the primary teeth is of special importance because an unhealthy tooth in a child puts the child at risk of future oral health problems. The longer early childhood tooth decay remains untreated, the worse the condition gets, making it more difficult to treat. These more complicated procedures are expensive, performed by a smaller number of clinicians and may need to be performed in an operating room or clinic setting using general anesthesia. In other words, as treatment is delayed, the problem becomes more serious and difficult to treat. As a result, access and cost issues multiply.

Definitions

Untreated decay means that a child has at least one tooth with a cavity that has not received appropriate treatment. Untreated decay compromises a child's ability to eat well, sleep well, and function well at home and at school.

Tooth decay experience means that a child has had tooth decay in the primary (baby) and/or permanent (adult) teeth in his/her lifetime. Children can have *past decay experience* (fillings, crowns, or teeth that have been extracted because of decay), or *present decay experience* (untreated tooth decay or cavities).

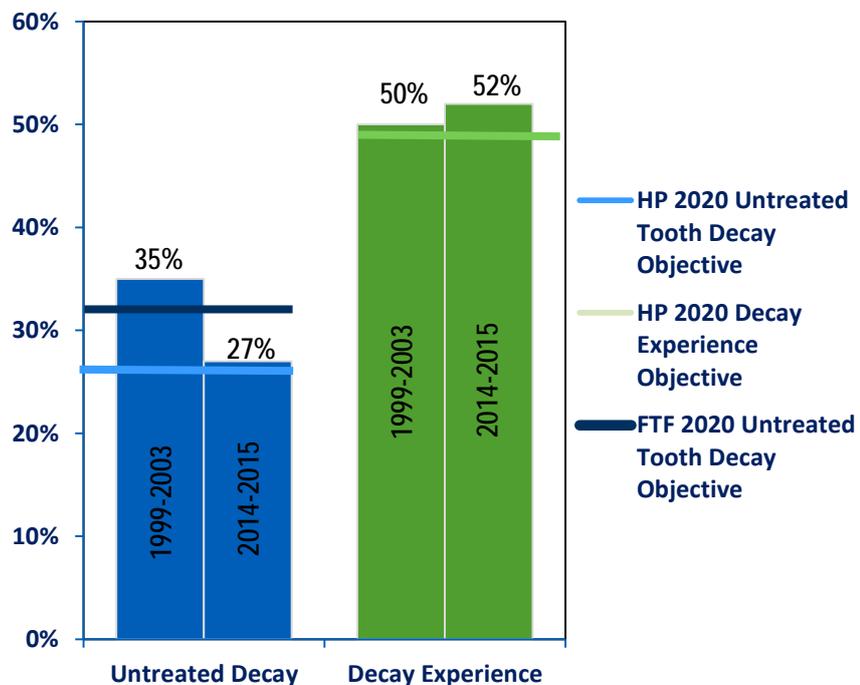
Dental pain or infection means that a child has tooth decay severe enough that they have a toothache or visible signs of an oral infection such as a dental abscess. Dental pain impacts a child's ability to concentrate and learn. An oral infection can increase a child's vulnerability to infections in other parts of the body, such as the ears, sinuses and the brain.

The State of Oral Health in Arizona

In recent years many different organizations in Arizona, including FTF and ADHS, have worked to improve oral health outcomes for young children. The good news is these efforts are paying off.

The number of kindergarteners in Arizona with untreated tooth decay has fallen from 35% to 27% since the early 2000s. Additionally, the results of this survey show that Arizona has met its 2020

Figure 1. Kindergarten Children's Oral Health Status



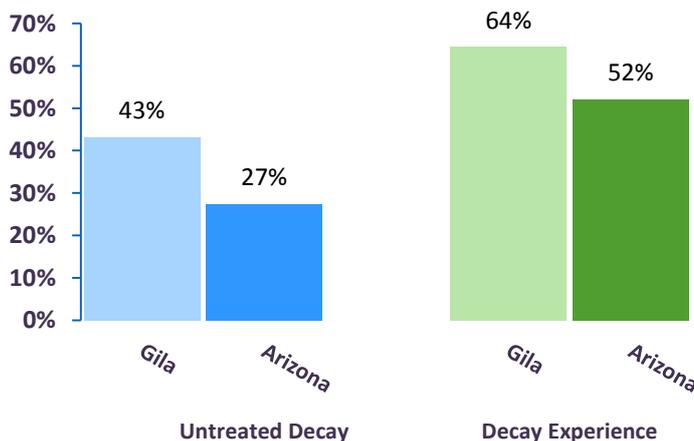
benchmark of 32% and is well on track to meet Healthy People’s 2020 target of 26%. The bad news is that there has been no significant change in the percent of children with decay experience suggesting that we need to continue focusing efforts on primary prevention.

The State of Oral Health in the Gila Region

Results show that (see Figure 2) four out of every ten kindergarteners (43%) in the First Things First Gila region have untreated decay and are in need of dental care. Untreated decay findings for the region are substantially higher than for Arizona (27%).

When looking at overall decay experience, a higher percentage of kindergarteners in the region had decay experience (64%) in comparison to Arizona (52%). The trend for dental pain and infection in the Gila region (4%) was higher than for Arizona (2%).

Figure 2. Prevalence of Untreated Tooth Decay & Decay Experience



Determinants and Risk Factors for Untreated Decay and Decay Experience

Arizona: The prevalence of **untreated tooth decay** in Arizona is higher among children from low-income households, some racial and ethnic groups, and children that have not been to the dentist in the last year.

The state level risk factors for **decay experience** are income, race/ethnicity, type of health insurance coverage and parental education, with the prevalence of decay experience being higher among children from low-income households, some racial and ethnic groups, children with Medicaid or no health insurance, and children whose parents have less than a college education.

Gila: In the Gila region, 173 children were screened and 55 parents/caregivers answered at least one question on the optional questionnaire. Due to the optional nature of the parent/caregiver questionnaire, risk factors at the regional level should be viewed with caution because of small sample sizes and/or small numbers within sub-categories. The demographic characteristics in Table 1, including race, insurance, dental visits, and parent education, were reported by parents/caregivers in the optional questionnaire. The percent of children eligible for the National School Lunch Program (NSLP) in that child’s school was recorded for all children who received an oral health screening; this information can also be found in Table 1. In the Gila region, children with a dental visit in the last year were less likely to have untreated decay.

Table 1. Prevalence of Untreated Tooth Decay & Decay Experience by Selected Demographic Characteristics

| | Number of Children with Data | Untreated Decay (%) | Decay Experience (%) |
|-------------------------------------|------------------------------|---------------------|----------------------|
| Gila Region¹⁶ | | | |
| School participation in NSLP | | | |
| < 25% Eligible for NSLP | 0 | . | . |
| 25-49% Eligible for NSLP | 78 | 42% | 68% |
| 50-74% Eligible for NSLP | 78 | 33% | 59% |
| > 75% Eligible for NSLP | 17 | 65% | 71% |
| Race/Ethnicity | | | |
| Non-Hispanic White | 25 | 35% | 58% |
| Non-Hispanic Black | 0 | . | . |
| Hispanic (any race) | 20 | 24% | 47% |
| Non-Hispanic American Indian | 7 | 71% | 100% |
| Type of health insurance | | | |
| Employer/Private | 27 | 26% | 48% |
| AHCCCS (Medicaid) | 25 | 34% | 61% |
| None | 2 | 100% | 100% |
| Time since last dental visit | | | |
| Within the last year | 33 | 28% | 51% |
| > 1 year or never | 22 | 44% | 66% |
| Parent education | | | |
| Some College | 30 | 32% | 46% |
| High School or Less | 23 | 36% | 71% |

Note: Race/ethnicity, time since last dental visit, insurance coverage, and parent education were obtained from the optional parent/caregiver questionnaire and will not add up to the children screened. Also, **weighted percentages** are displayed. The weighted percent is the percent of children that accounts for the complex cluster sampling scheme. Calculating percent directly from the number of children will not yield the weighted percent.

¹⁶ Only FTF regional information is displayed as the FTF region and the Arizona County encompass the same area.

THE STATE OF ORAL HEALTH IN GRAHAM/GREENLEE

Why is Good Oral Health Important?

Many people consider tooth decay to be a minor problem but for many it results in pain, infection, the inability to chew foods well, embarrassment about damaged or discolored teeth and distraction from play and learning. Tooth decay in the primary teeth is of special importance because an unhealthy tooth in a child puts the child at risk of future oral health problems. The longer early childhood tooth decay remains untreated, the worse the condition gets, making it more difficult to treat. These more complicated procedures are expensive, performed by a smaller number of clinicians and may need to be performed in an operating room or clinic setting using general anesthesia. In other words, as treatment is delayed, the problem becomes more serious and difficult to treat. As a result, access and cost issues multiply.

Definitions

Untreated decay means that a child has at least one tooth with a cavity that has not received appropriate treatment. Untreated decay compromises a child's ability to eat well, sleep well, and function well at home and at school.

Tooth decay experience means that a child has had tooth decay in the primary (baby) and/or permanent (adult) teeth in his/her lifetime. Children can have *past decay experience* (fillings, crowns, or teeth that have been extracted because of decay), or *present decay experience* (untreated tooth decay or cavities).

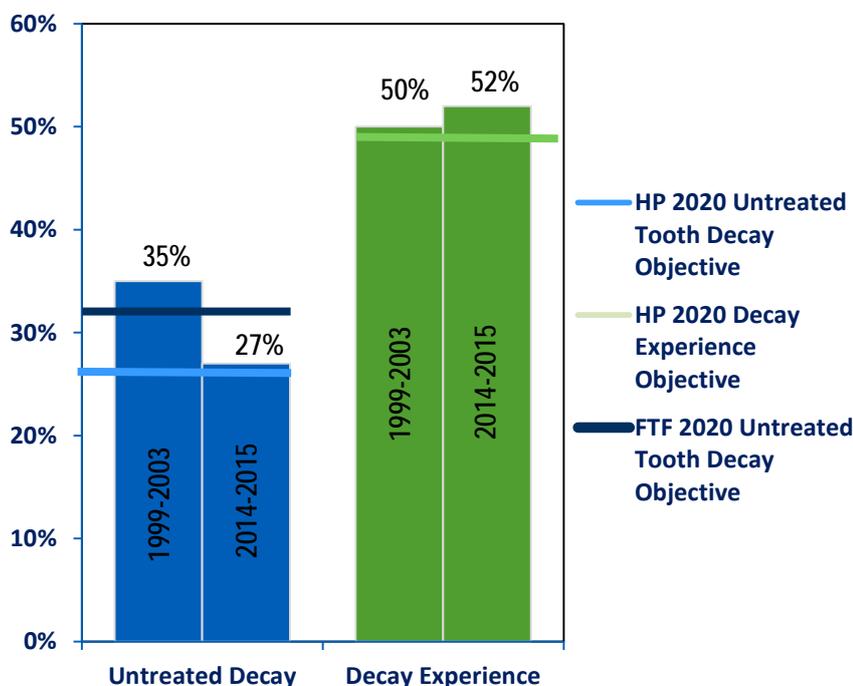
Dental pain or infection means that a child has tooth decay severe enough that they have a toothache or visible signs of an oral infection such as a dental abscess. Dental pain impacts a child's ability to concentrate and learn. An oral infection can increase a child's vulnerability to infections in other parts of the body, such as the ears, sinuses and the brain.

The State of Oral Health in Arizona

In recent years many different organizations in Arizona, including FTF and ADHS, have worked to improve oral health outcomes for young children. The good news is these efforts are paying off.

The number of kindergarteners in Arizona with untreated tooth decay has fallen from 35% to 27% since the early 2000s. Additionally, the results of this survey show that Arizona has met its 2020

Figure 1. Kindergarten Children's Oral Health Status



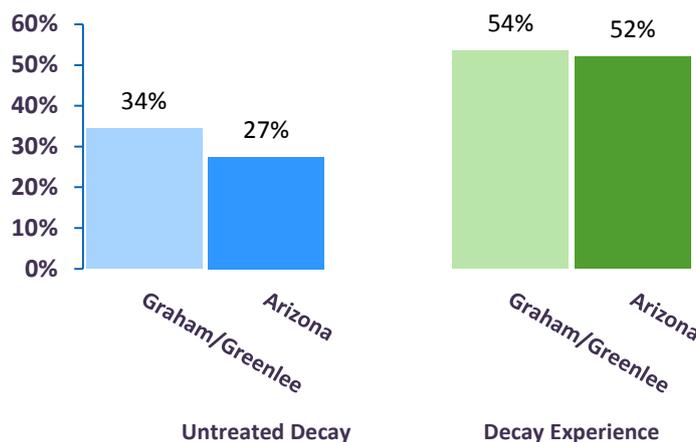
benchmark of 32% and is well on track to meet Healthy People’s 2020 target of 26%. The bad news is that there has been no significant change in the percent of children with decay experience suggesting that we need to continue focusing efforts on primary prevention.

The State of Oral Health in the Graham/Greenlee Region

Results show that (see Figure 2) around one third of kindergarteners (34%) in the First Things First Graham/Greenlee region have untreated decay and are in need of dental care. Untreated decay findings for the region are similar to Graham County (34%) and Greenlee County (38%) but higher than the percentage for Arizona (27%).

When looking at overall decay experience, a similar percentage of kindergarteners in the region had decay experience (54%) in comparison to Graham County (53%), Greenlee County (54%) and Arizona (52%). The trend for dental pain and infection in the Graham/Greenlee region (2%) was similar to Graham County (2%), Greenlee County (3%) and Arizona (2%).

Figure 2. Prevalence of Untreated Tooth Decay & Decay Experience



Determinants and Risk Factors for Untreated Decay and Decay Experience

Arizona: The prevalence of **untreated tooth decay** in Arizona is higher among children from low-income households, some racial and ethnic groups, and children that have not been to the dentist in the last year.

The state level risk factors for **decay experience** are income, race/ethnicity, type of health insurance coverage and parental education, with the prevalence of decay experience being higher among children from low-income households, some racial and ethnic groups, children with Medicaid or no health insurance, and children whose parents have less than a college education.

Graham/Greenlee: In the Graham/Greenlee region, 174 children were screened and 115 parents/caregivers answered at least one question on the optional questionnaire. Due to the optional nature of the parent/caregiver questionnaire, risk factors at the regional level should be viewed with caution because of small sample sizes and/or small numbers within sub-categories. The demographic characteristics in Table 1, including race, insurance, dental visits, and parent education, were reported by parents/caregivers in the optional questionnaire. The percent of children eligible for the National School Lunch Program (NSLP) in that child’s school was recorded for all children who received an oral health screening; this information can also be found in Table 1. In the Graham/Greenlee region, children attending higher income schools and children with employer/private insurance were less likely to have untreated decay.

Table 1. Prevalence of Untreated Tooth Decay & Decay Experience by Selected Demographic Characteristics

| | Number of Children with Data | Untreated Decay (%) | Decay Experience (%) |
|-------------------------------------|------------------------------|---------------------|----------------------|
| Graham/Greenlee Region | | | |
| School participation in NSLP | | | |
| < 25% Eligible for NSLP | 96 | 29% | 46% |
| 25-49% Eligible for NSLP | 78 | 39% | 61% |
| 50-74% Eligible for NSLP | 0 | . | . |
| > 75% Eligible for NSLP | 0 | . | . |
| Race/Ethnicity | | | |
| Non-Hispanic White | 45 | 29% | 46% |
| Non-Hispanic Black | 2 | 0% | 0% |
| Hispanic (any race) | 63 | 41% | 64% |
| Non-Hispanic American Indian | 1 | 100% | 100% |
| Type of health insurance | | | |
| Employer/Private | 65 | 28% | 44% |
| AHCCCS (Medicaid) | 46 | 42% | 69% |
| None | 3 | 34% | 67% |
| Time since last dental visit | | | |
| Within the last year | 79 | 34% | 61% |
| > 1 year or never | 35 | 37% | 45% |
| Parent education | | | |
| Some College | 77 | 34% | 52% |
| High School or Less | 38 | 36% | 66% |
| Graham County | | | |
| School participation in NSLP | | | |
| < 25% Eligible for NSLP | 59 | 24% | 41% |
| 25-49% Eligible for NSLP | 78 | 39% | 61% |
| 50-74% Eligible for NSLP | 0 | . | . |
| > 75% Eligible for NSLP | 0 | . | . |
| Race/Ethnicity | | | |
| Non-Hispanic White | 43 | 28% | 46% |
| Non-Hispanic Black | 2 | 0% | 0% |
| Hispanic (any race) | 55 | 42% | 66% |
| Non-Hispanic American Indian | 1 | 100% | 100% |
| Type of health insurance | | | |
| Employer/Private | 54 | 30% | 46% |
| AHCCCS (Medicaid) | 45 | 41% | 69% |
| None | 3 | 34% | 67% |
| Time since last dental visit | | | |
| Within the last year | 74 | 35% | 62% |

| | Number of Children with Data | Untreated Decay (%) | Decay Experience (%) |
|-------------------------------------|------------------------------|---------------------|----------------------|
| > 1 year or never | 28 | 38% | 45% |
| Parent education | | | |
| Some College | 71 | 34% | 53% |
| High School or Less | 32 | 39% | 68% |
| Greenlee County | | | |
| School participation in NSLP | | | |
| < 25% Eligible for NSLP | 37 | 38% | 54% |
| 25-49% Eligible for NSLP | 0 | . | . |
| 50-74% Eligible for NSLP | 0 | . | . |
| > 75% Eligible for NSLP | 0 | . | . |
| Race/Ethnicity | | | |
| Non-Hispanic White | 2 | 50% | 50% |
| Non-Hispanic Black | 0 | . | . |
| Hispanic (any race) | 8 | 25% | 38% |
| Non-Hispanic American Indian | 0 | . | . |
| Type of health insurance | | | |
| Employer/Private | 11 | 18% | 36% |
| AHCCCS (Medicaid) | 1 | 100% | 100% |
| None | 0 | . | . |
| Time since last dental visit | | | |
| Within the last year | 5 | 20% | 40% |
| > 1 year or never | 7 | 29% | 43% |
| Parent education | | | |
| Some College | 6 | 33% | 33% |
| High School or Less | 6 | 17% | 50% |

Note: Race/ethnicity, time since last dental visit, insurance coverage, and parent education were obtained from the optional parent/caregiver questionnaire and will not add up to the children screened. Also, **weighted percentages** are displayed. The weighted percent is the percent of children that accounts for the complex cluster sampling scheme. Calculating percent directly from the number of children will not yield the weighted percent.

THE STATE OF ORAL HEALTH IN LA PAZ/MOHAVE

Why is Good Oral Health Important?

Many people consider tooth decay to be a minor problem but for many it results in pain, infection, the inability to chew foods well, embarrassment about damaged or discolored teeth and distraction from play and learning. Tooth decay in the primary teeth is of special importance because an unhealthy tooth in a child puts the child at risk of future oral health problems. The longer early childhood tooth decay remains untreated, the worse the condition gets, making it more difficult to treat. These more complicated procedures are expensive, performed by a smaller number of clinicians and may need to be performed in an operating room or clinic setting using general anesthesia. In other words, as treatment is delayed, the problem becomes more serious and difficult to treat. As a result, access and cost issues multiply.

Definitions

Untreated decay means that a child has at least one tooth with a cavity that has not received appropriate treatment. Untreated decay compromises a child's ability to eat well, sleep well, and function well at home and at school.

Tooth decay experience means that a child has had tooth decay in the primary (baby) and/or permanent (adult) teeth in his/her lifetime. Children can have *past decay experience* (fillings, crowns, or teeth that have been extracted because of decay), or *present decay experience* (untreated tooth decay or cavities).

Dental pain or infection means that a child has tooth decay severe enough that they have a toothache or visible signs of an oral infection such as a dental abscess. Dental pain impacts a child's ability to concentrate and learn. An oral infection can increase a child's vulnerability to infections in other parts of the body, such as the ears, sinuses and the brain.

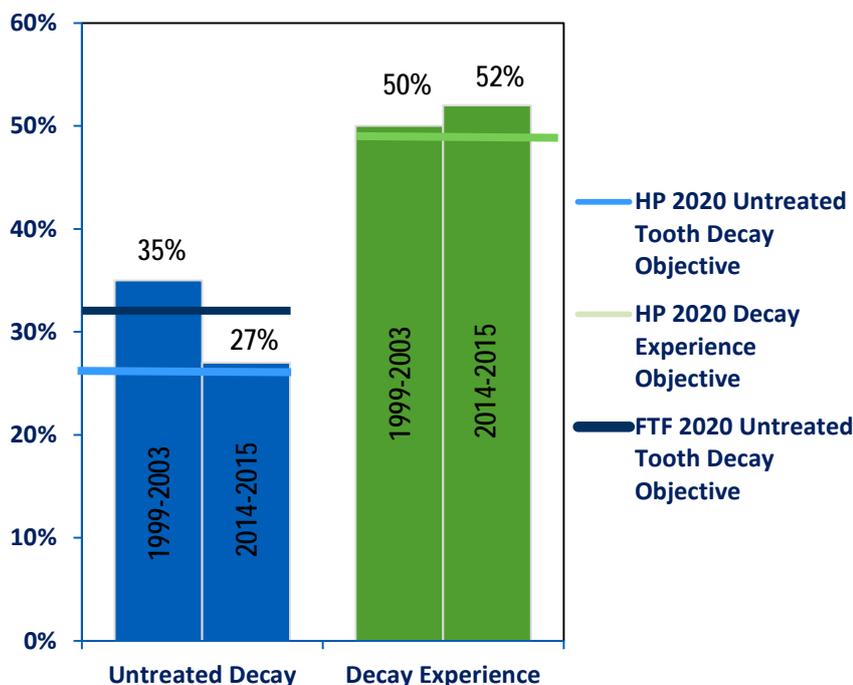
The State of Oral Health in Arizona

In recent years many different organizations in Arizona, including FTF and ADHS, have worked to improve oral health outcomes for young children. The good news is these efforts are paying off.

The number of kindergarteners in

Arizona with untreated tooth decay has fallen from 35% to 27% since the early 2000s.

Figure 1. Kindergarten Children's Oral Health Status



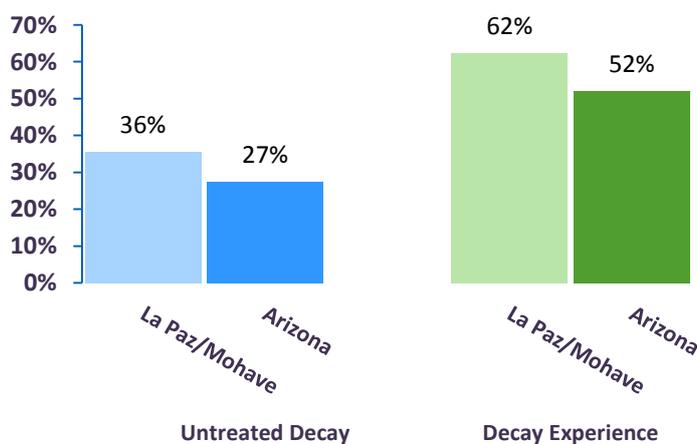
Additionally, the results of this survey show that Arizona has met its 2020 benchmark of 32% and is well on track to meet Healthy People’s 2020 target of 26%. The bad news is that there has been no significant change in the percent of children with decay experience suggesting that we need to continue focusing efforts on primary prevention.

The State of Oral Health in the La Paz/Mohave Region

Results show that (see Figure 2) around one third of kindergarteners (36%) in the First Things First La Paz/Mohave region have untreated decay and are in need of dental care. Untreated decay findings for the region are lower than for La Paz County (48%), similar to Mohave County (35%) and higher than for Arizona (27%).

When looking at overall decay experience, a similar percentage of kindergarteners in the region had decay experience (62%) in comparison to La Paz County (63%) and Mohave County (62%) but the percentage was higher than for Arizona (52%). The trend for dental pain and infection in the La Paz/Mohave region (3%) was similar to La Paz County (4%), Mohave County (3%), and Arizona (2%).

Figure 2. Prevalence of Untreated Tooth Decay & Decay Experience



Determinants and Risk Factors for Untreated Decay and Decay Experience

Arizona: The prevalence of **untreated tooth decay** in Arizona is higher among children from low-income households, some racial and ethnic groups, and children that have not been to the dentist in the last year.

The state level risk factors for **decay experience** are income, race/ethnicity, type of health insurance coverage and parental education, with the prevalence of decay experience being higher among children from low-income households, some racial and ethnic groups, children with Medicaid or no health insurance, and children whose parents have less than a college education.

La Paz/Mohave: In the La Paz/Mohave region, 158 children were screened and 84 parents/caregivers answered at least one question on the optional questionnaire. Due to the optional nature of the parent/caregiver questionnaire, risk factors at the regional level should be viewed with caution because of small sample sizes and/or small numbers within sub-categories. The demographic characteristics in Table 1, including race, insurance, dental visits, and parent education, were reported by parents/caregivers in the optional questionnaire. The percent of children eligible for the National School Lunch Program (NSLP) in that child’s school was recorded for all children who received an oral health screening; this information can also be found in Table 1. In the La Paz/Mohave region, children with a dental visit in the last year, children with

employer/private insurance, children attending higher income schools, and children whose parents attended college were less likely to have untreated decay.

Table 1. Prevalence of Untreated Tooth Decay & Decay Experience by Selected Demographic Characteristics

| | Number of Children with Data | Untreated Decay (%) | Decay Experience (%) |
|-------------------------------------|------------------------------|---------------------|----------------------|
| La Paz/Mohave Region | | | |
| School participation in NSLP | | | |
| < 25% Eligible for NSLP | 0 | . | . |
| 25-49% Eligible for NSLP | 0 | . | . |
| 50-74% Eligible for NSLP | 52 | 21% | 58% |
| > 75% Eligible for NSLP | 106 | 41% | 64% |
| Race/Ethnicity | | | |
| Non-Hispanic White | 42 | 30% | 53% |
| Non-Hispanic Black | 2 | 0% | 95% |
| Hispanic (any race) | 31 | 50% | 69% |
| Non-Hispanic American Indian | 2 | 0% | 100% |
| Type of health insurance | | | |
| Employer/Private | 23 | 20% | 56% |
| AHCCCS (Medicaid) | 55 | 36% | 61% |
| None | 4 | 98% | 98% |
| Time since last dental visit | | | |
| Within the last year | 70 | 36% | 67% |
| > 1 year or never | 14 | 46% | 46% |
| Parent education | | | |
| Some College | 47 | 21% | 55% |
| High School or Less | 33 | 49% | 68% |
| La Paz County | | | |
| School participation in NSLP | | | |
| < 25% Eligible for NSLP | 0 | . | . |
| 25-49% Eligible for NSLP | 0 | . | . |
| 50-74% Eligible for NSLP | 14 | 29% | 50% |
| > 75% Eligible for NSLP | 18 | 62% | 72% |
| Race/Ethnicity | | | |
| Non-Hispanic White | 2 | 45% | 45% |
| Non-Hispanic Black | 1 | 0% | 0% |
| Hispanic (any race) | 7 | 29% | 71% |
| Non-Hispanic American Indian | 0 | . | . |
| Type of health insurance | | | |
| Employer/Private | 2 | 0% | 0% |
| AHCCCS (Medicaid) | 8 | 40% | 76% |

| | Number of Children with Data | Untreated Decay (%) | Decay Experience (%) |
|-------------------------------------|------------------------------|---------------------|----------------------|
| None | 1 | 0% | 0% |
| Time since last dental visit | | | |
| Within the last year | 10 | 31% | 59% |
| > 1 year or never | 2 | 51% | 51% |
| Parent education | | | |
| Some College | 4 | 28% | 50% |
| High School or Less | 7 | 29% | 57% |
| Mohave County | | | |
| School participation in NSLP | | | |
| < 25% Eligible for NSLP | 0 | . | . |
| 25-49% Eligible for NSLP | 0 | . | . |
| 50-74% Eligible for NSLP | 38 | 21% | 58% |
| > 75% Eligible for NSLP | 88 | 40% | 64% |
| Race/Ethnicity | | | |
| Non-Hispanic White | 40 | 30% | 54% |
| Non-Hispanic Black | 1 | 0% | 100% |
| Hispanic (any race) | 24 | 50% | 69% |
| Non-Hispanic American Indian | 2 | 0% | 100% |
| Type of health insurance | | | |
| Employer/Private | 21 | 20% | 56% |
| AHCCCS (Medicaid) | 47 | 36% | 61% |
| None | 3 | 100% | 100% |
| Time since last dental visit | | | |
| Within the last year | 60 | 36% | 67% |
| > 1 year or never | 12 | 46% | 46% |
| Parent education | | | |
| Some College | 43 | 21% | 55% |
| High School or Less | 26 | 49% | 68% |

Note: Race/ethnicity, time since last dental visit, insurance coverage, and parent education were obtained from the optional parent/caregiver questionnaire and will not add up to the children screened. Also, **weighted percentages** are displayed. The weighted percent is the percent of children that accounts for the complex cluster sampling scheme. Calculating percent directly from the number of children will not yield the weighted percent.

THE STATE OF ORAL HEALTH IN NAVAJO/APACHE

Why is Good Oral Health Important?

Many people consider tooth decay to be a minor problem but for many it results in pain, infection, the inability to chew foods well, embarrassment about damaged or discolored teeth and distraction from play and learning. Tooth decay in the primary teeth is of special importance because an unhealthy tooth in a child puts the child at risk of future oral health problems. The longer early childhood tooth decay remains untreated, the worse the condition gets, making it more difficult to treat. These more complicated procedures are expensive, performed by a smaller number of clinicians and may need to be performed in an operating room or clinic setting using general anesthesia. In other words, as treatment is delayed, the problem becomes more serious and difficult to treat. As a result, access and cost issues multiply.

Definitions

Untreated decay means that a child has at least one tooth with a cavity that has not received appropriate treatment. Untreated decay compromises a child's ability to eat well, sleep well, and function well at home and at school.

Tooth decay experience means that a child has had tooth decay in the primary (baby) and/or permanent (adult) teeth in his/her lifetime. Children can have *past decay experience* (fillings, crowns, or teeth that have been extracted because of decay), or *present decay experience* (untreated tooth decay or cavities).

Dental pain or infection means that a child has tooth decay severe enough that they have a toothache or visible signs of an oral infection such as a dental abscess. Dental pain impacts a child's ability to concentrate and learn. An oral infection can increase a child's vulnerability to infections in other parts of the body, such as the ears, sinuses and the brain.

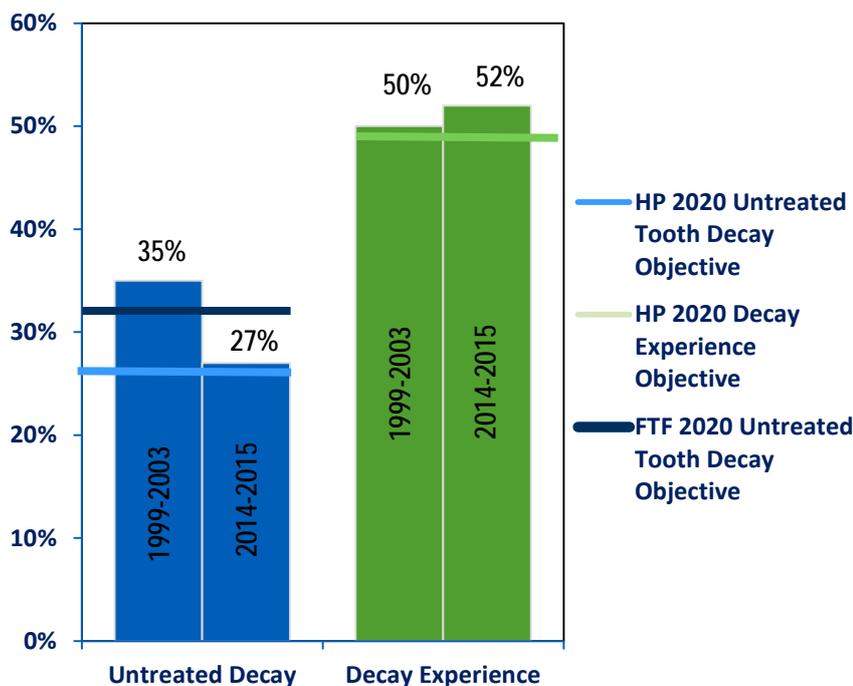
The State of Oral Health in Arizona

In recent years many different organizations in Arizona, including FTF and ADHS, have worked to improve oral health outcomes for young children. The good news is these efforts are paying off.

The number of kindergarteners in

Arizona with untreated tooth decay has fallen from 35% to 27% since the early 2000s.

Figure 1. Kindergarten Children's Oral Health Status

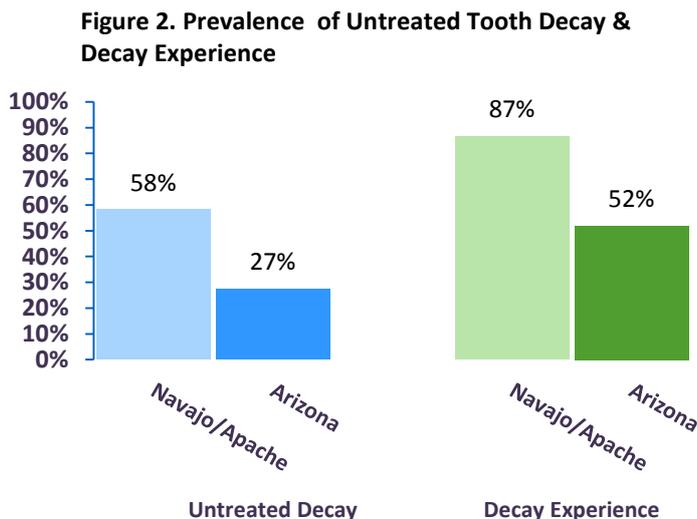


Additionally, the results of this survey show that Arizona has met its 2020 benchmark of 32% and is well on track to meet Healthy People’s 2020 target of 26%. The bad news is that there has been no significant change in the percent of children with decay experience suggesting that we need to continue focusing efforts on primary prevention.

The State of Oral Health in the Navajo/Apache Region

Results show that (see Figure 2) more than half of the kindergarteners (58%) in the First Things First Navajo/Apache region have untreated decay and are in need of dental care. Untreated decay findings for the region are lower than in Apache County (66%), similar to Navajo County (57%), and substantially higher than for Arizona (27%).

When looking at overall decay experience, a higher percentage of kindergarteners in the region had decay experience (87%) in comparison to Arizona (52%). The region percentage was similar to Navajo County (86%) and lower than Apache County (95%). The trend for dental pain and infection in the Navajo/Apache region (2%) was similar to Apache County (2%), Navajo County (2%), and Arizona (2%).



Determinants and Risk Factors for Untreated Decay and Decay Experience

Arizona: The prevalence of **untreated tooth decay** in Arizona is higher among children from low-income households, some racial and ethnic groups, and children that have not been to the dentist in the last year.

The state level risk factors for **decay experience** are income, race/ethnicity, type of health insurance coverage and parental education, with the prevalence of decay experience being higher among children from low-income households, some racial and ethnic groups, children with Medicaid or no health insurance, and children whose parents have less than a college education.

Navajo/Apache: In the Navajo/Apache region, 209 children were screened and 141 parents/caregivers answered at least one question on the optional questionnaire. Due to the optional nature of the parent/caregiver questionnaire, risk factors at the regional level should be viewed with caution because of small sample sizes and/or small numbers within sub-categories. The demographic characteristics in Table 1, including race, insurance, dental visits, and parent education, were reported by parents/caregivers in the optional questionnaire. The percent of children eligible for the National School Lunch Program (NSLP) in that child’s school was recorded for all children who received an oral health screening; this information can also be found in Table 1.

In the Navajo/Apache region, children with employer/private insurance and children attending higher income schools were less likely to have untreated decay.

Table 1. Prevalence of Untreated Tooth Decay & Decay Experience by Selected Demographic Characteristics

| | Number of Children with Data | Untreated Decay (%) | Decay Experience (%) |
|-------------------------------------|------------------------------|---------------------|----------------------|
| Navajo/Apache Region | | | |
| School participation in NSLP | | | |
| < 25% Eligible for NSLP | 0 | . | . |
| 25-49% Eligible for NSLP | 0 | . | . |
| 50-74% Eligible for NSLP | 85 | 51% | 80% |
| > 75% Eligible for NSLP | 124 | 62% | 90% |
| Race/Ethnicity | | | |
| Non-Hispanic White | 20 | 31% | 45% |
| Non-Hispanic Black | 0 | . | . |
| Hispanic (any race) | 38 | 45% | 86% |
| Non-Hispanic American Indian | 77 | 71% | 95% |
| Type of health insurance | | | |
| Employer/Private | 29 | 38% | 56% |
| AHCCCS (Medicaid) | 90 | 64% | 94% |
| None | 4 | 85% | 100% |
| Time since last dental visit | | | |
| Within the last year | 94 | 58% | 88% |
| > 1 year or never | 39 | 56% | 80% |
| Parent education | | | |
| Some College | 61 | 60% | 79% |
| High School or Less | 71 | 56% | 92% |
| Apache County | | | |
| School participation in NSLP | | | |
| < 25% Eligible for NSLP | 0 | . | . |
| 25-49% Eligible for NSLP | 0 | . | . |
| 50-74% Eligible for NSLP | 0 | . | . |
| > 75% Eligible for NSLP | 41 | 66% | 95% |
| Race/Ethnicity | | | |
| Non-Hispanic White | 1 | 0% | 0% |
| Non-Hispanic Black | 0 | . | . |
| Hispanic (any race) | 4 | 50% | 100% |
| Non-Hispanic American Indian | 25 | 64% | 100% |
| Type of health insurance | | | |
| Employer/Private | 4 | 75% | 100% |
| AHCCCS (Medicaid) | 26 | 62% | 96% |
| None | 1 | 0% | 100% |

| | Number of Children with Data | Untreated Decay (%) | Decay Experience (%) |
|-------------------------------------|------------------------------|---------------------|----------------------|
| Time since last dental visit | | | |
| Within the last year | 22 | 64% | 95% |
| > 1 year or never | 10 | 60% | 100% |
| Parent education | | | |
| Some College | 13 | 69% | 100% |
| High School or Less | 18 | 61% | 100% |
| Navajo County | | | |
| School participation in NSLP | | | |
| < 25% Eligible for NSLP | 0 | . | . |
| 25-49% Eligible for NSLP | 0 | . | . |
| 50-74% Eligible for NSLP | 85 | 51% | 80% |
| > 75% Eligible for NSLP | 83 | 61% | 89% |
| Race/Ethnicity | | | |
| Non-Hispanic White | 19 | 32% | 46% |
| Non-Hispanic Black | 0 | . | . |
| Hispanic (any race) | 34 | 45% | 85% |
| Non-Hispanic American Indian | 52 | 73% | 94% |
| Type of health insurance | | | |
| Employer/Private | 25 | 34% | 52% |
| AHCCCS (Medicaid) | 64 | 64% | 93% |
| None | 3 | 100% | 100% |
| Time since last dental visit | | | |
| Within the last year | 72 | 57% | 87% |
| > 1 year or never | 29 | 55% | 76% |
| Parent education | | | |
| Some College | 48 | 59% | 76% |
| High School or Less | 53 | 55% | 91% |

Note: Race/ethnicity, time since last dental visit, insurance coverage, and parent education were obtained from the optional parent/caregiver questionnaire and will not add up to the children screened. Also, **weighted percentages** are displayed. The weighted percent is the percent of children that accounts for the complex cluster sampling scheme. Calculating percent directly from the number of children will not yield the weighted percent.

THE STATE OF ORAL HEALTH IN NORTHWEST MARICOPA

Why is Good Oral Health Important?

Many people consider tooth decay to be a minor problem but for many it results in pain, infection, the inability to chew foods well, embarrassment about damaged or discolored teeth and distraction from play and learning. Tooth decay in the primary teeth is of special importance because an unhealthy tooth in a child puts the child at risk of future oral health problems. The longer early childhood tooth decay remains untreated, the worse the condition gets, making it more difficult to treat. These more complicated procedures are expensive, performed by a smaller number of clinicians and may need to be performed in an operating room or clinic setting using general anesthesia. In other words, as treatment is delayed, the problem becomes more serious and difficult to treat. As a result, access and cost issues multiply.

Definitions

Untreated decay means that a child has at least one tooth with a cavity that has not received appropriate treatment. Untreated decay compromises a child's ability to eat well, sleep well, and function well at home and at school.

Tooth decay experience means that a child has had tooth decay in the primary (baby) and/or permanent (adult) teeth in his/her lifetime. Children can have *past decay experience* (fillings, crowns, or teeth that have been extracted because of decay), or *present decay experience* (untreated tooth decay or cavities).

Dental pain or infection means that a child has tooth decay severe enough that they have a toothache or visible signs of an oral infection such as a dental abscess. Dental pain impacts a child's ability to concentrate and learn. An oral infection can increase a child's vulnerability to infections in other parts of the body, such as the ears, sinuses and the brain.

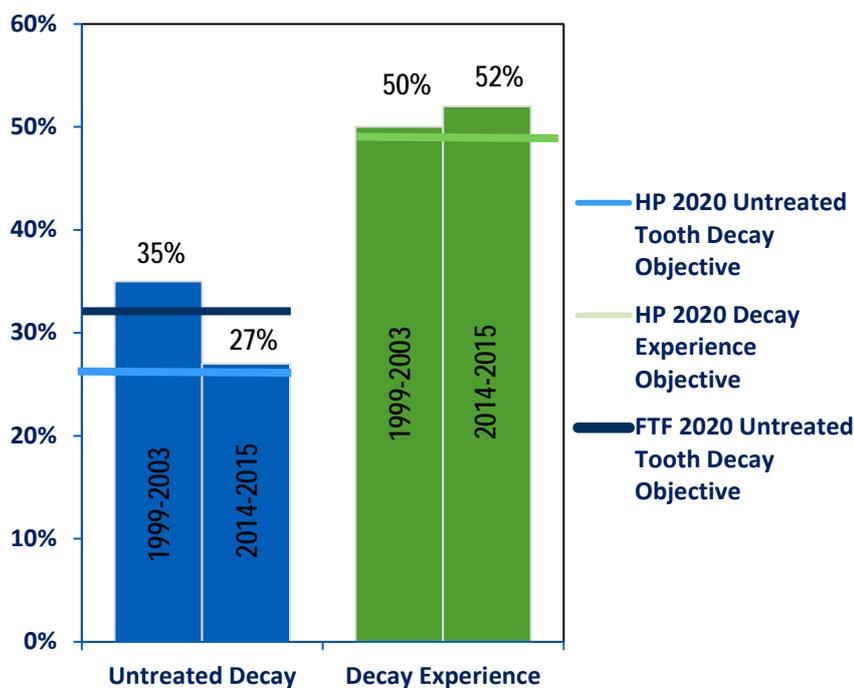
The State of Oral Health in Arizona

In recent years many different organizations in Arizona, including FTF and ADHS, have worked to improve oral health outcomes for young children. The good news is these efforts are paying off.

The number of kindergarteners in

Arizona with untreated tooth decay has fallen from 35% to 27% since the early 2000s.

Figure 1. Kindergarten Children's Oral Health Status

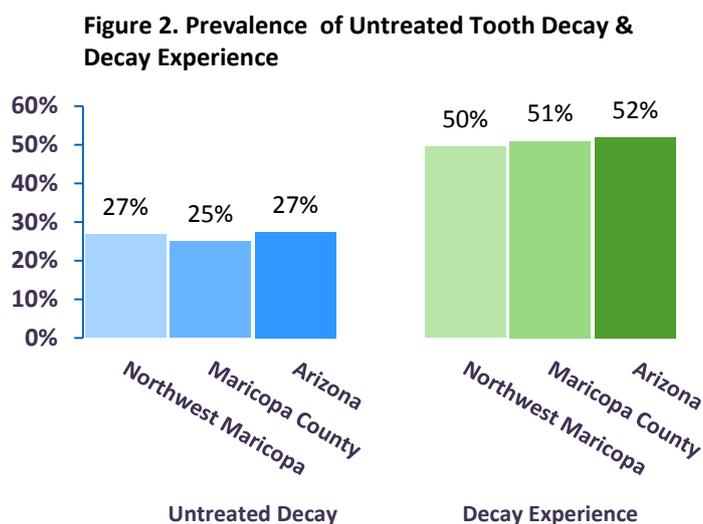


Additionally, the results of this survey show that Arizona has met its 2020 benchmark of 32% and is well on track to meet Healthy People’s 2020 target of 26%. The bad news is that there has been no significant change in the percent of children with decay experience suggesting that we need to continue focusing efforts on primary prevention.

The State of Oral Health in the Northwest Maricopa Region

Results show that (see Figure 2) around one quarter of kindergarteners (27%) in the First Things First Northwest Maricopa region have untreated decay and are in need of dental care. Untreated decay findings for the region are similar to Maricopa County (25%) and Arizona (27%).

When looking at overall decay experience, a similar percentage of kindergarteners in the region had decay experience (50%) in comparison to Maricopa County (51%) or Arizona (52%). The trend for dental pain and infection in the Northwest Maricopa region (2%) was similar to Maricopa County (1%) and Arizona (2%).



Determinants and Risk Factors for Untreated Decay and Decay Experience

Arizona: The prevalence of **untreated tooth decay** in Arizona is higher among children from low-income households, some racial and ethnic groups, and children that have not been to the dentist in the last year.

The state level risk factors for **decay experience** are income, race/ethnicity, type of health insurance coverage and parental education, with the prevalence of decay experience being higher among children from low-income households, some racial and ethnic groups, children with Medicaid or no health insurance, and children whose parents have less than a college education.

Northwest Maricopa: In the Northwest Maricopa region, 292 children were screened and 56 parents/caregivers answered at least one question on the optional questionnaire. Due to the optional nature of the parent/caregiver questionnaire, risk factors at the regional level should be viewed with caution because of small sample sizes and/or small numbers within sub-categories. The demographic characteristics in Table 1, including race, insurance, dental visits, and parent education, were reported by parents/caregivers in the optional questionnaire. The percent of children eligible for the National School Lunch Program (NSLP) in that child’s school was recorded for all children who received an oral health screening; this information can also be found in Table 1. In the Northwest Maricopa region, children with a dental visit in the last year were less likely to have untreated decay.

Table 1. Prevalence of Untreated Tooth Decay & Decay Experience by Selected Demographic Characteristics

| | Number of Children with Data | Untreated Decay (%) | Decay Experience (%) |
|-------------------------------------|------------------------------|---------------------|----------------------|
| Northwest Maricopa Region | | | |
| School participation in NSLP | | | |
| < 25% Eligible for NSLP | 37 | 14% | 38% |
| 25-49% Eligible for NSLP | 31 | 58% | 61% |
| 50-74% Eligible for NSLP | 43 | 26% | 44% |
| > 75% Eligible for NSLP | 181 | 20% | 54% |
| Race/Ethnicity | | | |
| Non-Hispanic White | 15 | 23% | 40% |
| Non-Hispanic Black | 5 | 7% | 7% |
| Hispanic (any race) | 28 | 25% | 65% |
| Non-Hispanic American Indian | 3 | 41% | 100% |
| Type of health insurance | | | |
| Employer/Private | 20 | 38% | 49% |
| AHCCCS (Medicaid) | 27 | 15% | 73% |
| None | 3 | 30% | 30% |
| Time since last dental visit | | | |
| Within the last year | 37 | 22% | 52% |
| > 1 year or never | 15 | 49% | 63% |
| Parent education | | | |
| Some College | 31 | 32% | 52% |
| High School or Less | 24 | 21% | 62% |
| Maricopa County | | | |
| School participation in NSLP | | | |
| < 25% Eligible for NSLP | 150 | 11% | 29% |
| 25-49% Eligible for NSLP | 194 | 23% | 41% |
| 50-74% Eligible for NSLP | 120 | 28% | 43% |
| > 75% Eligible for NSLP | 884 | 29% | 62% |
| Race/Ethnicity | | | |
| Non-Hispanic White | 135 | 10% | 31% |
| Non-Hispanic Black | 28 | 22% | 31% |
| Hispanic (any race) | 284 | 28% | 58% |
| Non-Hispanic American Indian | 9 | 57% | 100% |
| Type of health insurance | | | |
| Employer/Private | 190 | 17% | 31% |
| AHCCCS (Medicaid) | 206 | 21% | 63% |
| None | 43 | 36% | 52% |
| Time since last dental visit | | | |
| Within the last year | 338 | 17% | 46% |

| | Number of Children with Data | Untreated Decay (%) | Decay Experience (%) |
|-------------------------|-------------------------------------|----------------------------|-----------------------------|
| > 1 year or never | 108 | 36% | 48% |
| Parent education | | | |
| Some College | 253 | 18% | 36% |
| High School or Less | 189 | 26% | 62% |

Note: Race/ethnicity, time since last dental visit, insurance coverage, and parent education were obtained from the optional parent/caregiver questionnaire and will not add up to the children screened. Also, **weighted percentages** are displayed. The weighted percent is the percent of children that accounts for the complex cluster sampling scheme. Calculating percent directly from the number of children will not yield the weighted percent.

THE STATE OF ORAL HEALTH IN PHOENIX NORTH

Why is Good Oral Health Important?

Many people consider tooth decay to be a minor problem but for many it results in pain, infection, the inability to chew foods well, embarrassment about damaged or discolored teeth and distraction from play and learning. Tooth decay in the primary teeth is of special importance because an unhealthy tooth in a child puts the child at risk of future oral health problems. The longer early childhood tooth decay remains untreated, the worse the condition gets, making it more difficult to treat. These more complicated procedures are expensive, performed by a smaller number of clinicians and may need to be performed in an operating room or clinic setting using general anesthesia. In other words, as treatment is delayed, the problem becomes more serious and difficult to treat. As a result, access and cost issues multiply.

Definitions

Untreated decay means that a child has at least one tooth with a cavity that has not received appropriate treatment. Untreated decay compromises a child's ability to eat well, sleep well, and function well at home and at school.

Tooth decay experience means that a child has had tooth decay in the primary (baby) and/or permanent (adult) teeth in his/her lifetime. Children can have *past decay experience* (fillings, crowns, or teeth that have been extracted because of decay), or *present decay experience* (untreated tooth decay or cavities).

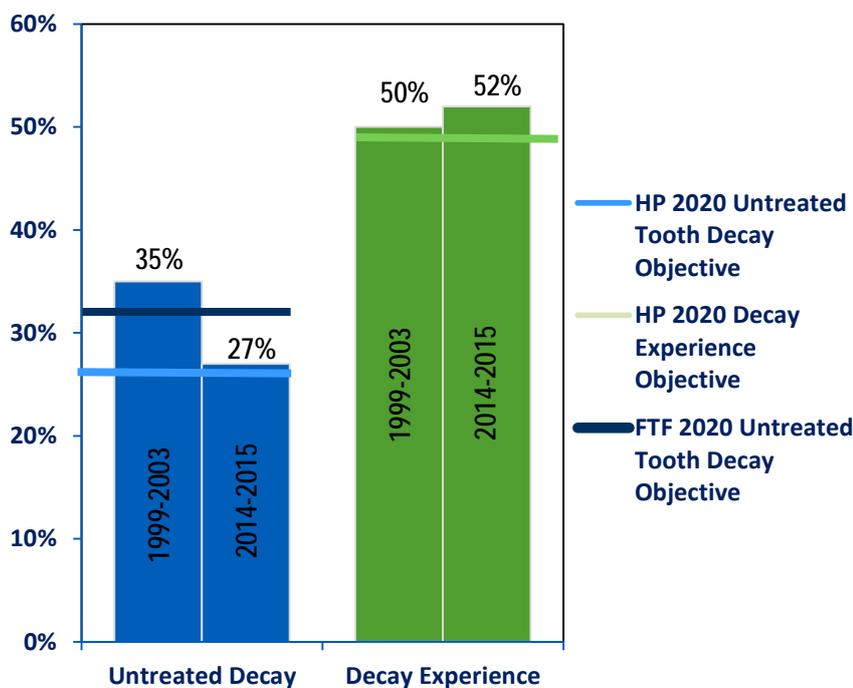
Dental pain or infection means that a child has tooth decay severe enough that they have a toothache or visible signs of an oral infection such as a dental abscess. Dental pain impacts a child's ability to concentrate and learn. An oral infection can increase a child's vulnerability to infections in other parts of the body, such as the ears, sinuses and the brain.

The State of Oral Health in Arizona

In recent years many different organizations in Arizona, including FTF and ADHS, have worked to improve oral health outcomes for young children. The good news is these efforts are paying off.

The number of kindergarteners in Arizona with untreated tooth decay has fallen from 35% to 27% since the early 2000s. Additionally, the results of this survey show that Arizona has met its 2020

Figure 1. Kindergarten Children's Oral Health Status

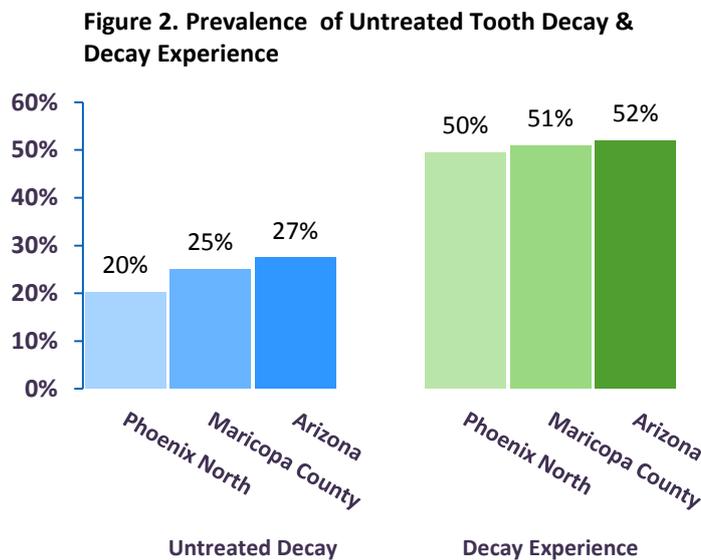


benchmark of 32% and is well on track to meet Healthy People’s 2020 target of 26%. The bad news is that there has been no significant change in the percent of children with decay experience suggesting that we need to continue focusing efforts on primary prevention.

The State of Oral Health in the Phoenix North Region

Results show that (see Figure 2) around one fifth of kindergarteners (20%) in the First Things First Phoenix North region have untreated decay and are in need of dental care. Untreated decay findings for the region are lower than in Maricopa County (25%) or Arizona (27%).

When looking at overall decay experience, a similar percentage of kindergarteners in the region had decay experience (50%) in comparison to Maricopa County (51%) or Arizona (52%). The trend for dental pain and infection in the Phoenix North region (< 1%) was lower than Maricopa County (1%) and Arizona (2%).



Determinants and Risk Factors for Untreated Decay and Decay Experience

Arizona: The prevalence of **untreated tooth decay** in Arizona is higher among children from low-income households, some racial and ethnic groups, and children that have not been to the dentist in the last year.

The state level risk factors for **decay experience** are income, race/ethnicity, type of health insurance coverage and parental education, with the prevalence of decay experience being higher among children from low-income households, some racial and ethnic groups, children with Medicaid or no health insurance, and children whose parents have less than a college education.

Phoenix North: In the Phoenix North region, 177 children were screened and 62 parents/caregivers answered at least one question on the optional questionnaire. Due to the optional nature of the parent/caregiver questionnaire, risk factors at the regional level should be viewed with caution because of small sample sizes and/or small numbers within sub-categories. The demographic characteristics in Table 1, including race, insurance, dental visits, and parent education, were reported by parents/caregivers in the optional questionnaire. The percent of children eligible for the National School Lunch Program (NSLP) in that child’s school was recorded for all children who received an oral health screening; this information can also be found in Table 1. In the Phoenix North region, children attending higher income schools (< 25% on NSLP) were less likely to have decay experience and untreated decay.

Table 1. Prevalence of Untreated Tooth Decay & Decay Experience by Selected Demographic Characteristics

| | Number of Children with Data | Untreated Decay (%) | Decay Experience (%) |
|-------------------------------------|------------------------------|---------------------|----------------------|
| Phoenix North Region | | | |
| School participation in NSLP | | | |
| < 25% Eligible for NSLP | 40 | 18% | 33% |
| 25-49% Eligible for NSLP | 0 | . | . |
| 50-74% Eligible for NSLP | 0 | . | . |
| > 75% Eligible for NSLP | 137 | 22% | 57% |
| Race/Ethnicity | | | |
| Non-Hispanic White | 19 | 22% | 38% |
| Non-Hispanic Black | 6 | 11% | 23% |
| Hispanic (any race) | 30 | 33% | 58% |
| Non-Hispanic American Indian | 0 | . | . |
| Type of health insurance | | | |
| Employer/Private | 21 | 24% | 38% |
| AHCCCS (Medicaid) | 27 | 22% | 57% |
| None | 8 | 38% | 63% |
| Time since last dental visit | | | |
| Within the last year | 43 | 26% | 52% |
| > 1 year or never | 17 | 24% | 36% |
| Parent education | | | |
| Some College | 28 | 26% | 45% |
| High School or Less | 30 | 25% | 54% |
| Maricopa County | | | |
| School participation in NSLP | | | |
| < 25% Eligible for NSLP | 150 | 11% | 29% |
| 25-49% Eligible for NSLP | 194 | 23% | 41% |
| 50-74% Eligible for NSLP | 120 | 28% | 43% |
| > 75% Eligible for NSLP | 884 | 29% | 62% |
| Race/Ethnicity | | | |
| Non-Hispanic White | 135 | 10% | 31% |
| Non-Hispanic Black | 28 | 22% | 31% |
| Hispanic (any race) | 284 | 28% | 58% |
| Non-Hispanic American Indian | 9 | 57% | 100% |
| Type of health insurance | | | |
| Employer/Private | 190 | 17% | 31% |
| AHCCCS (Medicaid) | 206 | 21% | 63% |
| None | 43 | 36% | 52% |
| Time since last dental visit | | | |
| Within the last year | 338 | 17% | 46% |

| | | | |
|-------------------------|-----|-----|-----|
| > 1 year or never | 108 | 36% | 48% |
| Parent education | | | |
| Some College | 253 | 18% | 36% |
| High School or Less | 189 | 26% | 62% |

Note: Race/ethnicity, time since last dental visit, insurance coverage, and parent education were obtained from the optional parent/caregiver questionnaire and will not add up to the children screened. Also, **weighted percentages** are displayed. The weighted percent is the percent of children that accounts for the complex cluster sampling scheme. Calculating percent directly from the number of children will not yield the weighted percent.

THE STATE OF ORAL HEALTH IN PHOENIX SOUTH

Why is Good Oral Health Important?

Many people consider tooth decay to be a minor problem but for many it results in pain, infection, the inability to chew foods well, embarrassment about damaged or discolored teeth and distraction from play and learning. Tooth decay in the primary teeth is of special importance because an unhealthy tooth in a child puts the child at risk of future oral health problems. The longer early childhood tooth decay remains untreated, the worse the condition gets, making it more difficult to treat. These more complicated procedures are expensive, performed by a smaller number of clinicians and may need to be performed in an operating room or clinic setting using general anesthesia. In other words, as treatment is delayed, the problem becomes more serious and difficult to treat. As a result, access and cost issues multiply.

Definitions

Untreated decay means that a child has at least one tooth with a cavity that has not received appropriate treatment. Untreated decay compromises a child's ability to eat well, sleep well, and function well at home and at school.

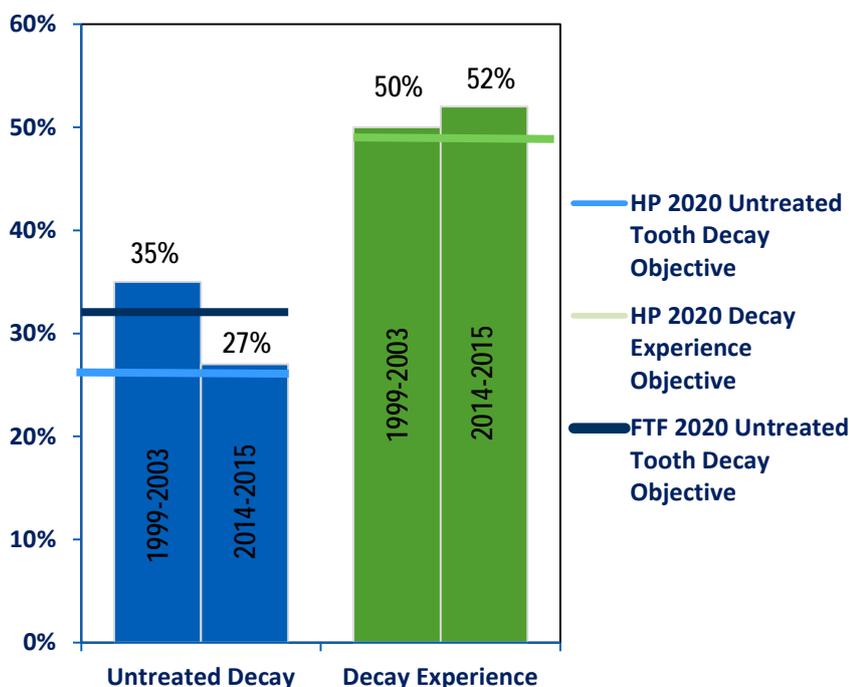
Tooth decay experience means that a child has had tooth decay in the primary (baby) and/or permanent (adult) teeth in his/her lifetime. Children can have *past decay experience* (fillings, crowns, or teeth that have been extracted because of decay), or *present decay experience* (untreated tooth decay or cavities).

Dental pain or infection means that a child has tooth decay severe enough that they have a toothache or visible signs of an oral infection such as a dental abscess. Dental pain impacts a child's ability to concentrate and learn. An oral infection can increase a child's vulnerability to infections in other parts of the body, such as the ears, sinuses and the brain.

The State of Oral Health in Arizona

In recent years many different organizations in Arizona, including FTF and ADHS, have worked to improve oral health outcomes for young children. The good news is these efforts are paying off. **The number of kindergarteners in Arizona with untreated**

Figure 1. Kindergarten Children's Oral Health Status

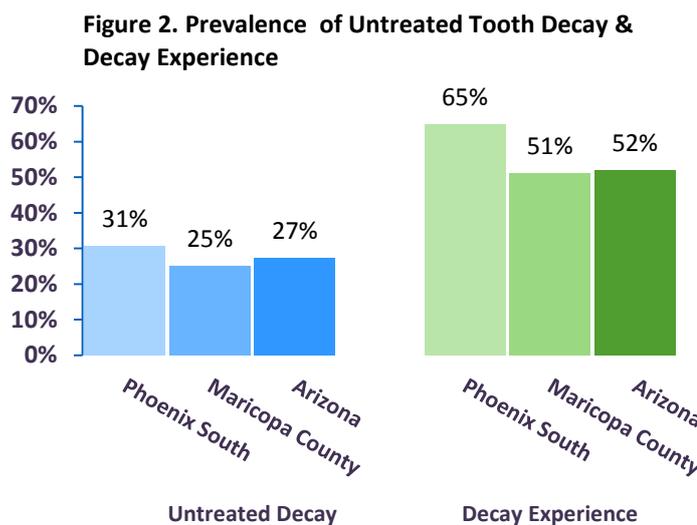


tooth decay has fallen from 35% to 27% since the early 2000s. Additionally, the results of this survey show that Arizona has met its 2020 benchmark of 32% and is well on track to meet Healthy People’s 2020 target of 26%. The bad news is that there has been no significant change in the percent of children with decay experience suggesting that we need to continue focusing efforts on primary prevention.

The State of Oral Health in the Phoenix South Region

Results show that (see Figure 2) around one third of kindergarteners (31%) in the First Things First Phoenix South region have untreated decay and are in need of dental care. Untreated decay findings for the region are slightly higher than in Maricopa County (25%) or Arizona (27%).

When looking at overall decay experience, a higher percentage of kindergarteners in the region had decay experience (65%) in comparison to Maricopa County (51%) or Arizona (52%). The trend for dental pain and infection in the Phoenix South region (2%) was similar to Maricopa County (1%) and Arizona (2%).



Determinants and Risk Factors for Untreated Decay and Decay Experience

Arizona: The prevalence of **untreated tooth decay** in Arizona is higher among children from low-income households, some racial and ethnic groups, and children that have not been to the dentist in the last year.

The state level risk factors for **decay experience** are income, race/ethnicity, type of health insurance coverage and parental education, with the prevalence of decay experience being higher among children from low-income households, some racial and ethnic groups, children with Medicaid or no health insurance, and children whose parents have less than a college education.

Phoenix South: In the Phoenix South region, 266 children were screened and 184 parents/caregivers answered at least one question on the optional questionnaire. Due to the optional nature of the parent/caregiver questionnaire, risk factors at the regional level should be viewed with caution because of small sample sizes and/or small numbers within sub-categories. The demographic characteristics in Table 1, including race, insurance, dental visits, and parent education, were reported by parents/caregivers in the optional questionnaire. The percent of children eligible for the National School Lunch Program (NSLP) in that child’s school was recorded for all children who received an oral health screening; this information can also be found in Table 1.

In the Phoenix South region, children with a dental visit in the last year were less likely to have untreated decay.

Table 1. Prevalence of Untreated Tooth Decay & Decay Experience by Selected Demographic Characteristics

| | Number of Children with Data | Untreated Decay (%) | Decay Experience (%) |
|-------------------------------------|------------------------------|---------------------|----------------------|
| Phoenix South Region | | | |
| School participation in NSLP | | | |
| < 25% Eligible for NSLP | 0 | . | . |
| 25-49% Eligible for NSLP | 0 | . | . |
| 50-74% Eligible for NSLP | 0 | . | . |
| > 75% Eligible for NSLP | 266 | 31% | 65% |
| Race/Ethnicity | | | |
| Non-Hispanic White | 2 | 57% | 100% |
| Non-Hispanic Black | 6 | 71% | 71% |
| Hispanic (any race) | 145 | 31% | 66% |
| Non-Hispanic American Indian | 2 | 41% | 100% |
| Type of health insurance | | | |
| Employer/Private | 20 | 41% | 73% |
| AHCCCS (Medicaid) | 96 | 23% | 63% |
| None | 9 | 84% | 92% |
| Time since last dental visit | | | |
| Within the last year | 94 | 26% | 69% |
| > 1 year or never | 32 | 40% | 61% |
| Parent education | | | |
| Some College | 35 | 41% | 69% |
| High School or Less | 89 | 26% | 66% |
| Maricopa County | | | |
| School participation in NSLP | | | |
| < 25% Eligible for NSLP | 150 | 11% | 29% |
| 25-49% Eligible for NSLP | 194 | 23% | 41% |
| 50-74% Eligible for NSLP | 120 | 28% | 43% |
| > 75% Eligible for NSLP | 884 | 29% | 62% |
| Race/Ethnicity | | | |
| Non-Hispanic White | 135 | 10% | 31% |
| Non-Hispanic Black | 28 | 22% | 31% |
| Hispanic (any race) | 284 | 28% | 58% |
| Non-Hispanic American Indian | 9 | 57% | 100% |
| Type of health insurance | | | |
| Employer/Private | 190 | 17% | 31% |
| AHCCCS (Medicaid) | 206 | 21% | 63% |
| None | 43 | 36% | 52% |

| | Number of Children with Data | Untreated Decay (%) | Decay Experience (%) |
|-------------------------------------|------------------------------|---------------------|----------------------|
| Time since last dental visit | | | |
| Within the last year | 338 | 17% | 46% |
| > 1 year or never | 108 | 36% | 48% |
| Parent education | | | |
| Some College | 253 | 18% | 36% |
| High School or Less | 189 | 26% | 62% |

Note: Race/ethnicity, time since last dental visit, insurance coverage, and parent education were obtained from the optional parent/caregiver questionnaire and will not add up to the children screened. Also, **weighted percentages** are displayed. The weighted percent is the percent of children that accounts for the complex cluster sampling scheme. Calculating percent directly from the number of children will not yield the weighted percent.

THE STATE OF ORAL HEALTH IN PIMA NORTH

Why is Good Oral Health Important?

Many people consider tooth decay to be a minor problem but for many it results in pain, infection, the inability to chew foods well, embarrassment about damaged or discolored teeth and distraction from play and learning. Tooth decay in the primary teeth is of special importance because an unhealthy tooth in a child puts the child at risk of future oral health problems. The longer early childhood tooth decay remains untreated, the worse the condition gets, making it more difficult to treat. These more complicated procedures are expensive, performed by a smaller number of clinicians and may need to be performed in an operating room or clinic setting using general anesthesia. In other words, as treatment is delayed, the problem becomes more serious and difficult to treat. As a result, access and cost issues multiply.

Definitions

Untreated decay means that a child has at least one tooth with a cavity that has not received appropriate treatment. Untreated decay compromises a child's ability to eat well, sleep well, and function well at home and at school.

Tooth decay experience means that a child has had tooth decay in the primary (baby) and/or permanent (adult) teeth in his/her lifetime. Children can have *past decay experience* (fillings, crowns, or teeth that have been extracted because of decay), or *present decay experience* (untreated tooth decay or cavities).

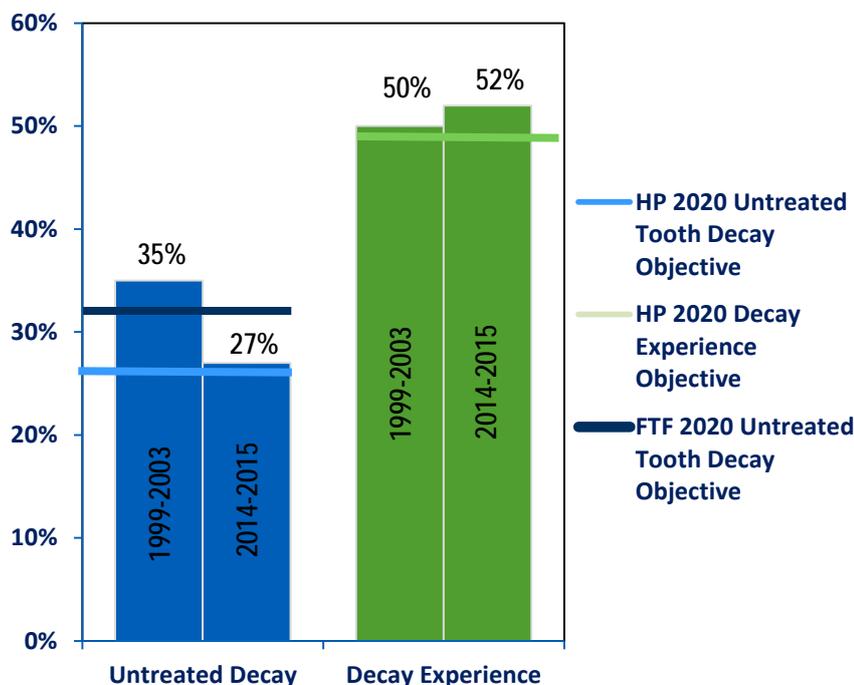
Dental pain or infection means that a child has tooth decay severe enough that they have a toothache or visible signs of an oral infection such as a dental abscess. Dental pain impacts a child's ability to concentrate and learn. An oral infection can increase a child's vulnerability to infections in other parts of the body, such as the ears, sinuses and the brain.

The State of Oral Health in Arizona

In recent years many different organizations in Arizona, including FTF and ADHS, have worked to improve oral health outcomes for young children. The good news is these efforts are paying off.

The number of kindergarteners in Arizona with untreated tooth decay has fallen from 35% to 27% since the early 2000s. Additionally, the results of this survey show that Arizona has met its 2020

Figure 1. Kindergarten Children's Oral Health Status



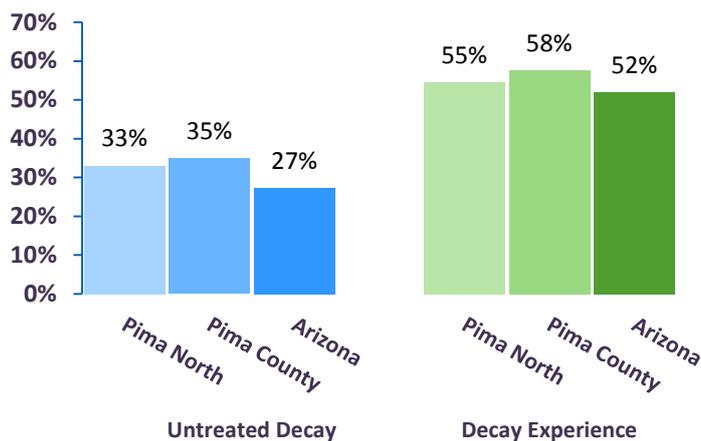
benchmark of 32% and is well on track to meet Healthy People’s 2020 target of 26%. The bad news is that there has been no significant change in the percent of children with decay experience suggesting that we need to continue focusing efforts on primary prevention.

The State of Oral Health in the Pima North Region

Results show that (see Figure 2) around one third of kindergarteners (33%) in the First Things First Pima North region have untreated decay and are in need of dental care. Untreated decay findings for the region are similar to the overall rate for Pima County (35%) but higher than the rate for Arizona (27%).

When looking at overall decay experience, a slightly lower percentage of kindergarteners in the region had decay experience (55%) in comparison to Pima County (58%) but a slightly higher percentage compared to Arizona (52%). The trend for dental pain and infection in the Pima North region (3%) was similar to Pima County (3%) and Arizona (2%).

Figure 2. Prevalence of Untreated Tooth Decay & Decay Experience



Determinants and Risk Factors for Untreated Decay and Decay Experience

Arizona: The prevalence of **untreated tooth decay** in Arizona is higher among children from low-income households, some racial and ethnic groups, and children that have not been to the dentist in the last year.

The state level risk factors for **decay experience** are income, race/ethnicity, type of health insurance coverage and parental education, with the prevalence of decay experience being higher among children from low-income households, some racial and ethnic groups, children with Medicaid or no health insurance, and children whose parents have less than a college education.

Pima North: In the Pima North region, 289 children were screened and 93 parents/caregivers answered at least one question on the optional questionnaire. Due to the optional nature of the parent/caregiver questionnaire, risk factors at the regional level should be viewed with caution because of small sample sizes and/or small numbers within sub-categories. The demographic characteristics in Table 1, including race, insurance, dental visits, and parent education, were reported by parents/caregivers in the optional questionnaire. The percent of children eligible for the National School Lunch Program (NSLP) in that child’s school was recorded for all children who received an oral health screening; this information can also be found in Table 1. In the Pima North region, children with a dental visit in the last year and children attending higher income schools were less likely to have untreated decay.

Table 1. Prevalence of Untreated Tooth Decay & Decay Experience by Selected Demographic Characteristics

| | Number of Children with Data | Untreated Decay (%) | Decay Experience (%) |
|-------------------------------------|------------------------------|---------------------|----------------------|
| Pima North Region | | | |
| School participation in NSLP | | | |
| < 25% Eligible for NSLP | 0 | . | . |
| 25-49% Eligible for NSLP | 109 | 28% | 42% |
| 50-74% Eligible for NSLP | 53 | 26% | 49% |
| > 75% Eligible for NSLP | 127 | 40% | 66% |
| Race/Ethnicity | | | |
| Non-Hispanic White | 32 | 28% | 51% |
| Non-Hispanic Black | 3 | 82% | 82% |
| Hispanic (any race) | 21 | 35% | 64% |
| Non-Hispanic American Indian | 5 | 30% | 30% |
| Type of health insurance | | | |
| Employer/Private | 34 | 32% | 40% |
| AHCCCS (Medicaid) | 27 | 39% | 71% |
| None | 1 | 100% | 100% |
| Time since last dental visit | | | |
| Within the last year | 48 | 33% | 57% |
| > 1 year or never | 15 | 42% | 53% |
| Parent education | | | |
| Some College | 38 | 32% | 48% |
| High School or Less | 20 | 34% | 58% |
| Pima County | | | |
| School participation in NSLP | | | |
| < 25% Eligible for NSLP | 0 | . | . |
| 25-49% Eligible for NSLP | 171 | 26% | 43% |
| 50-74% Eligible for NSLP | 93 | 32% | 55% |
| > 75% Eligible for NSLP | 337 | 40% | 66% |
| Race/Ethnicity | | | |
| Non-Hispanic White | 44 | 25% | 47% |
| Non-Hispanic Black | 4 | 73% | 73% |
| Hispanic (any race) | 82 | 33% | 60% |
| Non-Hispanic American Indian | 5 | 30% | 30% |
| Type of health insurance | | | |
| Employer/Private | 71 | 31% | 42% |
| AHCCCS (Medicaid) | 62 | 35% | 68% |
| None | 4 | 40% | 40% |
| Time since last dental visit | | | |
| Within the last year | 111 | 29% | 55% |

| | Number of Children with Data | Untreated Decay (%) | Decay Experience (%) |
|-------------------------|------------------------------|---------------------|----------------------|
| > 1 year or never | 27 | 45% | 56% |
| Parent education | | | |
| Some College | 92 | 30% | 47% |
| High School or Less | 42 | 32% | 59% |

Note: Race/ethnicity, time since last dental visit, insurance coverage, and parent education were obtained from the optional parent/caregiver questionnaire and will not add up to the children screened. Also, **weighted percentages** are displayed. The weighted percent is the percent of children that accounts for the complex cluster sampling scheme. Calculating percent directly from the number of children will not yield the weighted percent.

THE STATE OF ORAL HEALTH IN PIMA SOUTH

Why is Good Oral Health Important?

Many people consider tooth decay to be a minor problem but for many it results in pain, infection, the inability to chew foods well, embarrassment about damaged or discolored teeth and distraction from play and learning. Tooth decay in the primary teeth is of special importance because an unhealthy tooth in a child puts the child at risk of future oral health problems. The longer early childhood tooth decay remains untreated, the worse the condition gets, making it more difficult to treat. These more complicated procedures are expensive, performed by a smaller number of clinicians and may need to be performed in an operating room or clinic setting using general anesthesia. In other words, as treatment is delayed, the problem becomes more serious and difficult to treat. As a result, access and cost issues multiply.

Definitions

Untreated decay means that a child has at least one tooth with a cavity that has not received appropriate treatment. Untreated decay compromises a child's ability to eat well, sleep well, and function well at home and at school.

Tooth decay experience means that a child has had tooth decay in the primary (baby) and/or permanent (adult) teeth in his/her lifetime. Children can have *past decay experience* (fillings, crowns, or teeth that have been extracted because of decay), or *present decay experience* (untreated tooth decay or cavities).

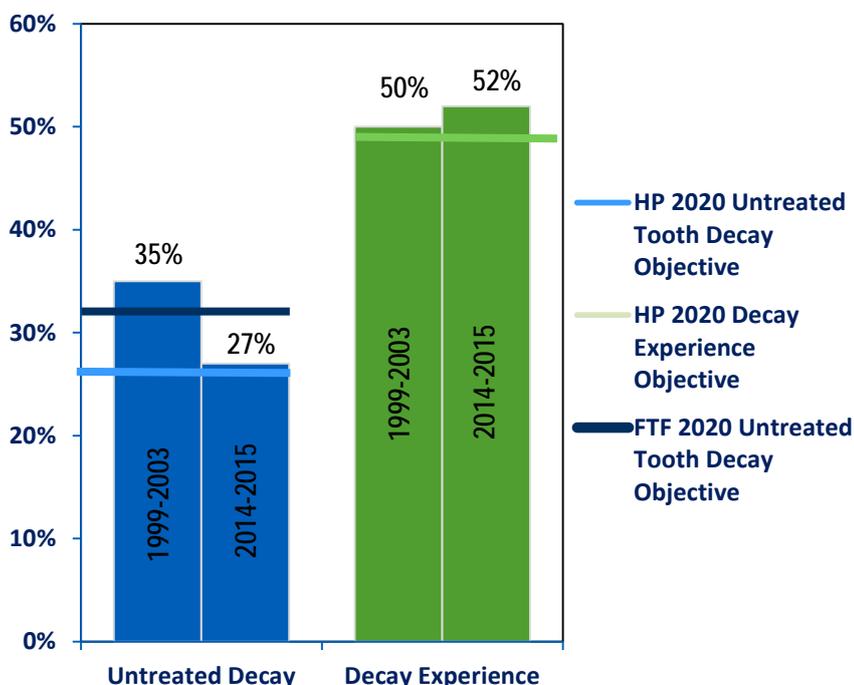
Dental pain or infection means that a child has tooth decay severe enough that they have a toothache or visible signs of an oral infection such as a dental abscess. Dental pain impacts a child's ability to concentrate and learn. An oral infection can increase a child's vulnerability to infections in other parts of the body, such as the ears, sinuses and the brain.

The State of Oral Health in Arizona

In recent years many different organizations in Arizona, including FTF and ADHS, have worked to improve oral health outcomes for young children.

The good news is these efforts are paying off. **The number of kindergarteners in Arizona with untreated tooth decay has fallen from 35% to 27% since the early**

Figure 1. Kindergarten Children's Oral Health Status

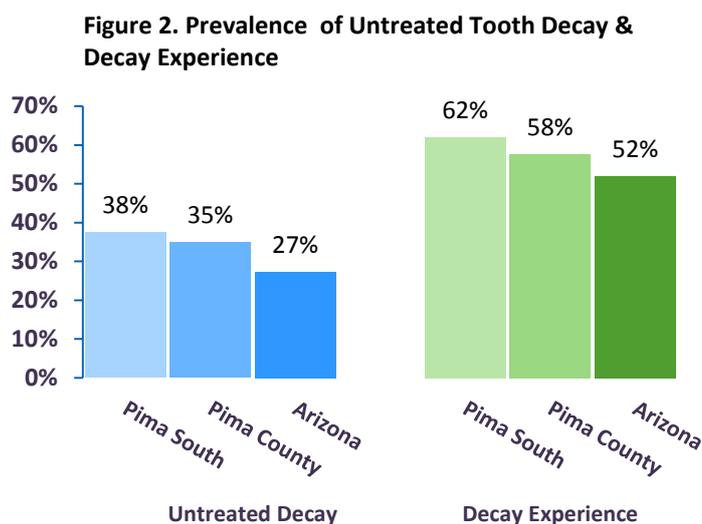


2000s. Additionally, the results of this survey show that Arizona has met its 2020 benchmark of 32% and is well on track to meet Healthy People’s 2020 target of 26%. The bad news is that there has been no significant change in the percent of children with decay experience suggesting that we need to continue focusing efforts on primary prevention.

The State of Oral Health in the Pima South Region

Results show that (see Figure 2) more than one third of kindergarteners (38%) in the First Things First Pima South region have untreated decay and are in need of dental care. Untreated decay findings for the region are higher than in Pima County (35%) or Arizona (27%).

When looking at overall decay experience, a higher percentage of kindergarteners in the region had decay experience (62%) in comparison to Pima County (58%) or Arizona (52%). The trend for dental pain and infection in the Pima South region (2%) was similar to Pima County (3%) and Arizona (2%).



Determinants and Risk Factors for Untreated Decay and Decay Experience

Arizona: The prevalence of **untreated tooth decay** in Arizona is higher among children from low-income households, some racial and ethnic groups, and children that have not been to the dentist in the last year.

The state level risk factors for **decay experience** are income, race/ethnicity, type of health insurance coverage and parental education, with the prevalence of decay experience being higher among children from low-income households, some racial and ethnic groups, children with Medicaid or no health insurance, and children whose parents have less than a college education.

Pima South: In the Pima South region, 312 children were screened and 77 parents/caregivers answered at least one question on the optional questionnaire. Due to the optional nature of the parent/caregiver questionnaire, risk factors at the regional level should be viewed with caution because of small sample sizes and/or small numbers within sub-categories. The demographic characteristics in Table 1, including race, insurance, dental visits, and parent education, were reported by parents/caregivers in the optional questionnaire. The percent of children eligible for the National School Lunch Program (NSLP) in that child’s school was recorded for all children who received an oral health screening; this information can also be found in Table 1. In the Pima South region, children with a dental visit in the last year and children attending higher income schools were less likely to have untreated decay.

Table 1. Prevalence of Untreated Tooth Decay & Decay Experience by Selected Demographic Characteristics

| | Number of Children with Data | Untreated Decay (%) | Decay Experience (%) |
|-------------------------------------|------------------------------|---------------------|----------------------|
| Pima South Region | | | |
| School participation in NSLP | | | |
| < 25% Eligible for NSLP | 0 | . | . |
| 25-49% Eligible for NSLP | 62 | 21% | 44% |
| 50-74% Eligible for NSLP | 40 | 43% | 65% |
| > 75% Eligible for NSLP | 210 | 8% | 25% |
| Race/Ethnicity | | | |
| Non-Hispanic White | 12 | 8% | 25% |
| Non-Hispanic Black | 1 | . | . |
| Hispanic (any race) | 61 | 31% | 57% |
| Non-Hispanic American Indian | 0 | . | . |
| Type of health insurance | | | |
| Employer/Private | 37 | 31% | 47% |
| AHCCCS (Medicaid) | 35 | 25% | 61% |
| None | 3 | 17% | 17% |
| Time since last dental visit | | | |
| Within the last year | 63 | 22% | 51% |
| > 1 year or never | 12 | 59% | 64% |
| Parent education | | | |
| Some College | 54 | 28% | 47% |
| High School or Less | 22 | 26% | 63% |
| Pima County | | | |
| School participation in NSLP | | | |
| < 25% Eligible for NSLP | 0 | . | . |
| 25-49% Eligible for NSLP | 171 | 26% | 43% |
| 50-74% Eligible for NSLP | 93 | 32% | 55% |
| > 75% Eligible for NSLP | 337 | 40% | 66% |
| Race/Ethnicity | | | |
| Non-Hispanic White | 44 | 25% | 47% |
| Non-Hispanic Black | 4 | 73% | 73% |
| Hispanic (any race) | 82 | 33% | 60% |
| Non-Hispanic American Indian | 5 | 30% | 30% |
| Type of health insurance | | | |
| Employer/Private | 71 | 31% | 42% |
| AHCCCS (Medicaid) | 62 | 35% | 68% |
| None | 4 | 40% | 40% |
| Time since last dental visit | | | |
| Within the last year | 111 | 29% | 55% |

| | Number of Children with Data | Untreated Decay (%) | Decay Experience (%) |
|-------------------------|-------------------------------------|----------------------------|-----------------------------|
| > 1 year or never | 27 | 45% | 56% |
| Parent education | | | |
| Some College | 92 | 30% | 47% |
| High School or Less | 42 | 32% | 59% |

Note: Race/ethnicity, time since last dental visit, insurance coverage, and parent education were obtained from the optional parent/caregiver questionnaire and will not add up to the children screened. Also, **weighted percentages** are displayed. The weighted percent is the percent of children that accounts for the complex cluster sampling scheme. Calculating percent directly from the number of children will not yield the weighted percent.

THE STATE OF ORAL HEALTH IN PINAL

Why is Good Oral Health Important?

Many people consider tooth decay to be a minor problem but for many it results in pain, infection, the inability to chew foods well, embarrassment about damaged or discolored teeth and distraction from play and learning. Tooth decay in the primary teeth is of special importance because an unhealthy tooth in a child puts the child at risk of future oral health problems. The longer early childhood tooth decay remains untreated, the worse the condition gets, making it more difficult to treat. These more complicated procedures are expensive, performed by a smaller number of clinicians and may need to be performed in an operating room or clinic setting using general anesthesia. In other words, as treatment is delayed, the problem becomes more serious and difficult to treat. As a result, access and cost issues multiply.

Definitions

Untreated decay means that a child has at least one tooth with a cavity that has not received appropriate treatment. Untreated decay compromises a child's ability to eat well, sleep well, and function well at home and at school.

Tooth decay experience means that a child has had tooth decay in the primary (baby) and/or permanent (adult) teeth in his/her lifetime. Children can have *past decay experience* (fillings, crowns, or teeth that have been extracted because of decay), or *present decay experience* (untreated tooth decay or cavities).

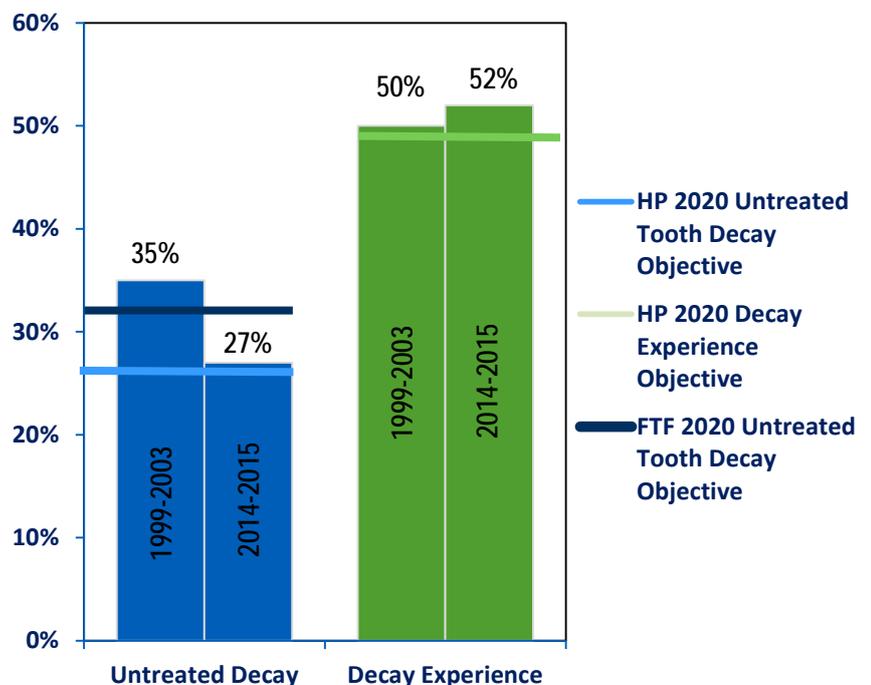
Dental pain or infection means that a child has tooth decay severe enough that they have a toothache or visible signs of an oral infection such as a dental abscess. Dental pain impacts a child's ability to concentrate and learn. An oral infection can increase a child's vulnerability to infections in other parts of the body, such as the ears, sinuses and the brain.

The State of Oral Health in Arizona

In recent years many different organizations in Arizona, including FTF and ADHS, have worked to improve oral health outcomes for young children.

The good news is these efforts are paying off. ***The number of kindergarteners in Arizona with untreated tooth decay has fallen from 35% to 27% since the early***

Figure 1. Kindergarten Children's Oral Health Status

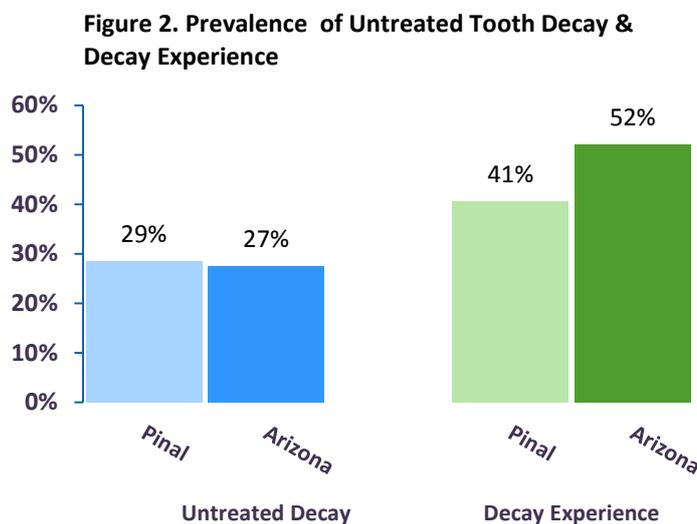


2000s. Additionally, the results of this survey show that Arizona has met its 2020 benchmark of 32% and is well on track to meet Healthy People’s 2020 target of 26%. The bad news is that there has been no significant change in the percent of children with decay experience suggesting that we need to continue focusing efforts on primary prevention.

The State of Oral Health in the Pinal Region

Results show that (see Figure 2) less than one third of kindergarteners (29%) in the First Things First Pinal region have untreated decay and are in need of dental care. Untreated decay findings for the region are similar to Arizona (27%).

When looking at overall decay experience, a lower percentage of kindergarteners in the region had decay experience (41%) compared to Arizona (52%). The trend for dental pain and infection in the Pinal region (1%) was similar to Arizona (2%).



Determinants and Risk Factors for Untreated Decay and Decay Experience

Arizona: The prevalence of **untreated tooth decay** in Arizona is higher among children from low-income households, some racial and ethnic groups, and children that have not been to the dentist in the last year.

The state level risk factors for **decay experience** are income, race/ethnicity, type of health insurance coverage and parental education, with the prevalence of decay experience being higher among children from low-income households, some racial and ethnic groups, children with Medicaid or no health insurance, and children whose parents have less than a college education.

Pinal: In the Pinal region, 219 children were screened and 98 parents/caregivers answered at least one question on the optional questionnaire. Due to the optional nature of the parent/caregiver questionnaire, risk factors at the regional level should be viewed with caution because of small sample sizes and/or small numbers within sub-categories. The demographic characteristics in Table 1, including race, insurance, dental visits, and parent education, were reported by parents/caregivers in the optional questionnaire. The percent of children eligible for the National School Lunch Program (NSLP) in that child’s school was recorded for all children who received an oral health screening; this information can also be found in Table 1. In the Pinal region, children with a dental visit in the last year, children attending higher income schools, and children whose parents attended college were less likely to have untreated decay.

Table 1. Prevalence of Untreated Tooth Decay & Decay Experience by Selected Demographic Characteristics

| | Number of Children with Data | Untreated Decay (%) | Decay Experience (%) |
|-------------------------------------|------------------------------|---------------------|----------------------|
| Pinal Region¹⁷ | | | |
| School participation in NSLP | | | |
| < 25% Eligible for NSLP | 0 | . | . |
| 25-49% Eligible for NSLP | 53 | 21% | 30% |
| 50-74% Eligible for NSLP | 130 | 31% | 44% |
| > 75% Eligible for NSLP | 36 | 33% | 47% |
| Race/Ethnicity | | | |
| Non-Hispanic White | 36 | 27% | 33% |
| Non-Hispanic Black | 5 | 35% | 35% |
| Hispanic (any race) | 50 | 29% | 39% |
| Non-Hispanic American Indian | 6 | 30% | 55% |
| Type of health insurance | | | |
| Employer/Private | 40 | 26% | 34% |
| AHCCCS (Medicaid) | 42 | 36% | 47% |
| None | 7 | 23% | 23% |
| Time since last dental visit | | | |
| Within the last year | 69 | 27% | 39% |
| > 1 year or never | 29 | 36% | 36% |
| Parent education | | | |
| Some College | 53 | 24% | 36% |
| High School or Less | 39 | 38% | 39% |

Note: Race/ethnicity, time since last dental visit, insurance coverage, and parent education were obtained from the optional parent/caregiver questionnaire and will not add up to the children screened. Also, **weighted percentages** are displayed. The weighted percent is the percent of children that accounts for the complex cluster sampling scheme. Calculating percent directly from the number of children will not yield the weighted percent.

¹⁷ Only FTF regional information is displayed as the FTF region and the Arizona County encompass the same area.

THE STATE OF ORAL HEALTH IN SANTA CRUZ

Why is Good Oral Health Important?

Many people consider tooth decay to be a minor problem but for many it results in pain, infection, the inability to chew foods well, embarrassment about damaged or discolored teeth and distraction from play and learning. Tooth decay in the primary teeth is of special importance because an unhealthy tooth in a child puts the child at risk of future oral health problems. The longer early childhood tooth decay remains untreated, the worse the condition gets, making it more difficult to treat. These more complicated procedures are expensive, performed by a smaller number of clinicians and may need to be performed in an operating room or clinic setting using general anesthesia. In other words, as treatment is delayed, the problem becomes more serious and difficult to treat. As a result, access and cost issues multiply.

Definitions

Untreated decay means that a child has at least one tooth with a cavity that has not received appropriate treatment. Untreated decay compromises a child's ability to eat well, sleep well, and function well at home and at school.

Tooth decay experience means that a child has had tooth decay in the primary (baby) and/or permanent (adult) teeth in his/her lifetime. Children can have *past decay experience* (fillings, crowns, or teeth that have been extracted because of decay), or *present decay experience* (untreated tooth decay or cavities).

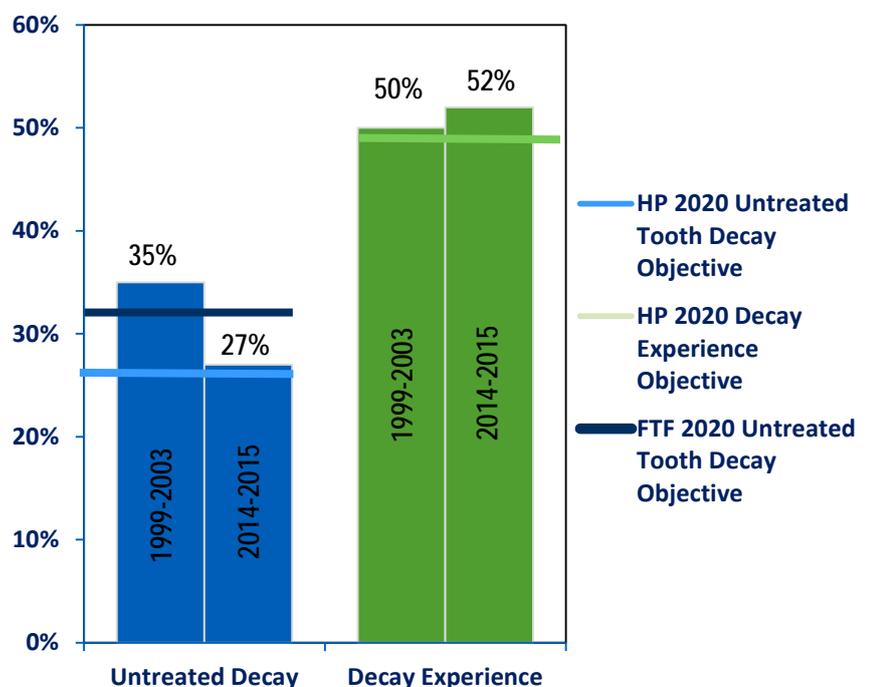
Dental pain or infection means that a child has tooth decay severe enough that they have a toothache or visible signs of an oral infection such as a dental abscess. Dental pain impacts a child's ability to concentrate and learn. An oral infection can increase a child's vulnerability to infections in other parts of the body, such as the ears, sinuses and the brain.

The State of Oral Health in Arizona

In recent years many different organizations in Arizona, including FTF and ADHS, have worked to improve oral health outcomes for young children.

The good news is these efforts are paying off. ***The number of kindergarteners in Arizona with untreated tooth decay has fallen from 35% to 27% since the early***

Figure 1. Kindergarten Children's Oral Health Status

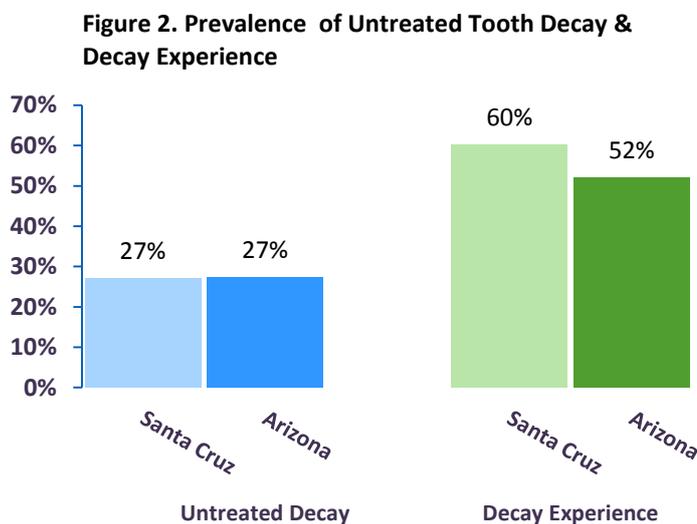


2000s. Additionally, the results of this survey show that Arizona has met its 2020 benchmark of 32% and is well on track to meet Healthy People’s 2020 target of 26%. The bad news is that there has been no significant change in the percent of children with decay experience suggesting that we need to continue focusing efforts on primary prevention.

The State of Oral Health in the Santa Cruz Region

Results show that (see Figure 2) slightly more than one quarter of kindergarteners (27%) in the First Things First Santa Cruz region have untreated decay and are in need of dental care. Untreated decay findings for the region are similar to Arizona (27%).

When looking at overall decay experience, a higher percentage of kindergarteners in the region had decay experience (60%) compared to Arizona (52%). The trend for dental pain and infection in the Santa Cruz region (5%) was higher than for Arizona (2%).



Determinants and Risk Factors for Untreated Decay and Decay Experience

Arizona: The prevalence of **untreated tooth decay** in Arizona is higher among children from low-income households, some racial and ethnic groups, and children that have not been to the dentist in the last year.

The state level risk factors for **decay experience** are income, race/ethnicity, type of health insurance coverage and parental education, with the prevalence of decay experience being higher among children from low-income households, some racial and ethnic groups, children with Medicaid or no health insurance, and children whose parents have less than a college education.

Santa Cruz: In the Santa Cruz region, 119 children were screened and 81 parents/caregivers answered at least one question on the optional questionnaire. Due to the optional nature of the parent/caregiver questionnaire, risk factors at the regional level should be viewed with caution because of small sample sizes and/or small numbers within sub-categories. The demographic characteristics in Table 1, including race, insurance, dental visits, and parent education, were reported by parents/caregivers in the optional questionnaire. The percent of children eligible for the National School Lunch Program (NSLP) in that child’s school was recorded for all children who received an oral health screening; this information can also be found in Table 1. In the Santa Cruz region, children whose parents had attended college were less likely to have untreated decay.

Table 1. Prevalence of Untreated Tooth Decay & Decay Experience by Selected Demographic Characteristics

| | Number of Children with Data | Untreated Decay (%) | Decay Experience (%) |
|---------------------------------------|------------------------------|---------------------|----------------------|
| Santa Cruz Region¹⁸ | | | |
| School participation in NSLP | | | |
| < 25% Eligible for NSLP | 0 | . | . |
| 25-49% Eligible for NSLP | 0 | . | . |
| 50-74% Eligible for NSLP | 0 | . | . |
| > 75% Eligible for NSLP | 119 | 27% | 60% |
| Race/Ethnicity | | | |
| Non-Hispanic White | 0 | . | . |
| Non-Hispanic Black | 0 | . | . |
| Hispanic (any race) | 77 | 21% | 55% |
| Non-Hispanic American Indian | 0 | 0% | 0% |
| Type of health insurance | | | |
| Employer/Private | 14 | 23% | 42% |
| AHCCCS (Medicaid) | 56 | 21% | 64% |
| None | 9 | 34% | 47% |
| Time since last dental visit | | | |
| Within the last year | 60 | 21% | 62% |
| > 1 year or never | 19 | 22% | 32% |
| Parent education | | | |
| Some College | 40 | 16% | 49% |
| High School or Less | 36 | 32% | 71% |

Note: Race/ethnicity, time since last dental visit, insurance coverage, and parent education were obtained from the optional parent/caregiver questionnaire and will not add up to the children screened. Also, **weighted percentages** are displayed. The weighted percent is the percent of children that accounts for the complex cluster sampling scheme. Calculating percent directly from the number of children will not yield the weighted percent.

¹⁸ Only FTF regional information is displayed as the FTF region and the Arizona County encompass the same area.

THE STATE OF ORAL HEALTH IN SOUTHEAST MARICOPA

Why is Good Oral Health Important?

Many people consider tooth decay to be a minor problem but for many it results in pain, infection, the inability to chew foods well, embarrassment about damaged or discolored teeth and distraction from play and learning. Tooth decay in the primary teeth is of special importance because an unhealthy tooth in a child puts the child at risk of future oral health problems. The longer early childhood tooth decay remains untreated, the worse the condition gets, making it more difficult to treat. These more complicated procedures are expensive, performed by a smaller number of clinicians and may need to be performed in an operating room or clinic setting using general anesthesia. In other words, as treatment is delayed, the problem becomes more serious and difficult to treat. As a result, access and cost issues multiply.

Definitions

Untreated decay means that a child has at least one tooth with a cavity that has not received appropriate treatment. Untreated decay compromises a child's ability to eat well, sleep well, and function well at home and at school.

Tooth decay experience means that a child has had tooth decay in the primary (baby) and/or permanent (adult) teeth in his/her lifetime. Children can have *past decay experience* (fillings, crowns, or teeth that have been extracted because of decay), or *present decay experience* (untreated tooth decay or cavities).

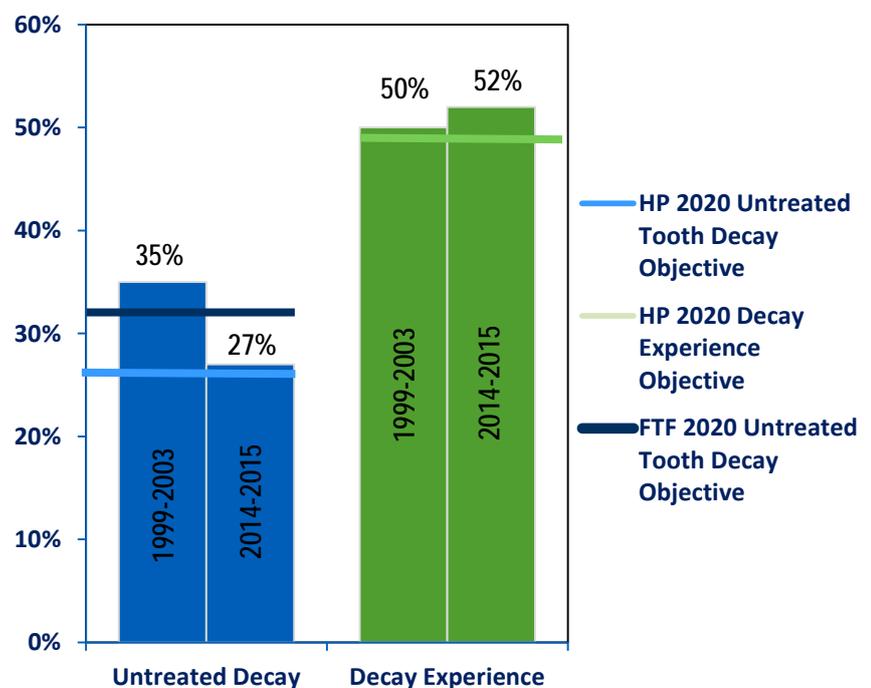
Dental pain or infection means that a child has tooth decay severe enough that they have a toothache or visible signs of an oral infection such as a dental abscess. Dental pain impacts a child's ability to concentrate and learn. An oral infection can increase a child's vulnerability to infections in other parts of the body, such as the ears, sinuses and the brain.

The State of Oral Health in Arizona

In recent years many different organizations in Arizona, including FTF and ADHS, have worked to improve oral

health outcomes for young children. The good news is these efforts are paying off. **The number of kindergarteners in Arizona with untreated tooth decay has fallen from 35% to 27% since the early**

Figure 1. Kindergarten Children's Oral Health Status



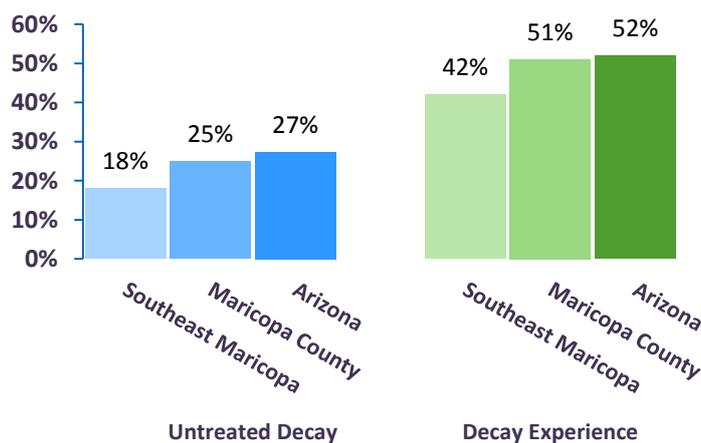
2000s. Additionally, the results of this survey show that Arizona has met its 2020 benchmark of 32% and is well on track to meet Healthy People’s 2020 target of 26%. The bad news is that there has been no significant change in the percent of children with decay experience suggesting that we need to continue focusing efforts on primary prevention.

The State of Oral Health in the Southeast Maricopa Region

Results show that (see Figure 2) less than one fifth of kindergarteners (18%) in the First Things First Southeast Maricopa region have untreated decay and are in need of dental care. Untreated decay findings for the region are lower than in Maricopa County (25%) or Arizona (27%).

When looking at overall decay experience, a lower percentage of kindergarteners in the region had decay experience (42%) in comparison to Maricopa County (51%) or Arizona (52%). The trend for dental pain and infection in the Southeast Maricopa region (1%) was similar to Maricopa County (1%), and Arizona (2%).

Figure 2. Prevalence of Untreated Tooth Decay & Decay Experience



Determinants and Risk Factors for Untreated Decay and Decay Experience

Arizona: The prevalence of **untreated tooth decay** in Arizona is higher among children from low-income households, some racial and ethnic groups, and children that have not been to the dentist in the last year.

The state level risk factors for **decay experience** are income, race/ethnicity, type of health insurance coverage and parental education, with the prevalence of decay experience being higher among children from low-income households, some racial and ethnic groups, children with Medicaid or no health insurance, and children whose parents have less than a college education.

Southeast Maricopa: In the Southeast Maricopa region, 235 children were screened and 109 parents/caregivers answered at least one question on the optional questionnaire. Due to the optional nature of the parent/caregiver questionnaire, risk factors at the regional level should be viewed with caution because of small sample sizes and/or small numbers within sub-categories. The demographic characteristics in Table 1, including race, insurance, dental visits, and parent education, were reported by parents/caregivers in the optional questionnaire. The percent of children eligible for the National School Lunch Program (NSLP) in that child’s school was recorded for all children who received an oral health screening; this information can also be found in Table 1. In the Southeast Maricopa region, children with a dental visit in the last year, children attending higher income schools, and children whose parents attended some college were less likely to have untreated decay.

Table 1. Prevalence of Untreated Tooth Decay & Decay Experience by Selected Demographic Characteristics

| | Number of Children with Data | Untreated Decay (%) | Decay Experience (%) |
|-------------------------------------|------------------------------|---------------------|----------------------|
| Southeast Maricopa Region | | | |
| School participation in NSLP | | | |
| < 25% Eligible for NSLP | 44 | 5% | 27% |
| 25-49% Eligible for NSLP | 93 | 12% | 36% |
| 50-74% Eligible for NSLP | 42 | 31% | 43% |
| > 75% Eligible for NSLP | 56 | 34% | 70% |
| Race/Ethnicity | | | |
| Non-Hispanic White | 69 | 6% | 31% |
| Non-Hispanic Black | 6 | 13% | 29% |
| Hispanic (any race) | 23 | 16% | 36% |
| Non-Hispanic American Indian | 2 | 42% | 100% |
| Type of health insurance | | | |
| Employer/Private | 73 | 7% | 21% |
| AHCCCS (Medicaid) | 25 | 14% | 63% |
| None | 11 | 10% | 36% |
| Time since last dental visit | | | |
| Within the last year | 90 | 5% | 31% |
| > 1 year or never | 18 | 32% | 37% |
| Parent education | | | |
| Some College | 89 | 7% | 26% |
| High School or Less | 17 | 22% | 63% |
| Maricopa County | | | |
| School participation in NSLP | | | |
| < 25% Eligible for NSLP | 150 | 11% | 29% |
| 25-49% Eligible for NSLP | 194 | 23% | 41% |
| 50-74% Eligible for NSLP | 120 | 28% | 43% |
| > 75% Eligible for NSLP | 884 | 29% | 62% |
| Race/Ethnicity | | | |
| Non-Hispanic White | 135 | 10% | 31% |
| Non-Hispanic Black | 28 | 22% | 31% |
| Hispanic (any race) | 284 | 28% | 58% |
| Non-Hispanic American Indian | 9 | 57% | 100% |
| Type of health insurance | | | |
| Employer/Private | 190 | 17% | 31% |
| AHCCCS (Medicaid) | 206 | 21% | 63% |
| None | 43 | 36% | 52% |
| Time since last dental visit | | | |
| Within the last year | 338 | 17% | 46% |

| | Number of Children with Data | Untreated Decay (%) | Decay Experience (%) |
|-------------------------|-------------------------------------|----------------------------|-----------------------------|
| > 1 year or never | 108 | 36% | 48% |
| Parent education | | | |
| Some College | 253 | 18% | 36% |
| High School or Less | 189 | 26% | 62% |

Note: Race/ethnicity, time since last dental visit, insurance coverage, and parent education were obtained from the optional parent/caregiver questionnaire and will not add up to the children screened. Also, **weighted percentages** are displayed. The weighted percent is the percent of children that accounts for the complex cluster sampling scheme. Calculating percent directly from the number of children will not yield the weighted percent.

THE STATE OF ORAL HEALTH IN SOUTHWEST MARICOPA

Why is Good Oral Health Important?

Many people consider tooth decay to be a minor problem but for many it results in pain, infection, the inability to chew foods well, embarrassment about damaged or discolored teeth and distraction from play and learning. Tooth decay in the primary teeth is of special importance because an unhealthy tooth in a child puts the child at risk of future oral health problems. The longer early childhood tooth decay remains untreated, the worse the condition gets, making it more difficult to treat. These more complicated procedures are expensive, performed by a smaller number of clinicians and may need to be performed in an operating room or clinic setting using general anesthesia. In other words, as treatment is delayed, the problem becomes more serious and difficult to treat. As a result, access and cost issues multiply.

Definitions

Untreated decay means that a child has at least one tooth with a cavity that has not received appropriate treatment. Untreated decay compromises a child's ability to eat well, sleep well, and function well at home and at school.

Tooth decay experience means that a child has had tooth decay in the primary (baby) and/or permanent (adult) teeth in his/her lifetime. Children can have *past decay experience* (fillings, crowns, or teeth that have been extracted because of decay), or *present decay experience* (untreated tooth decay or cavities).

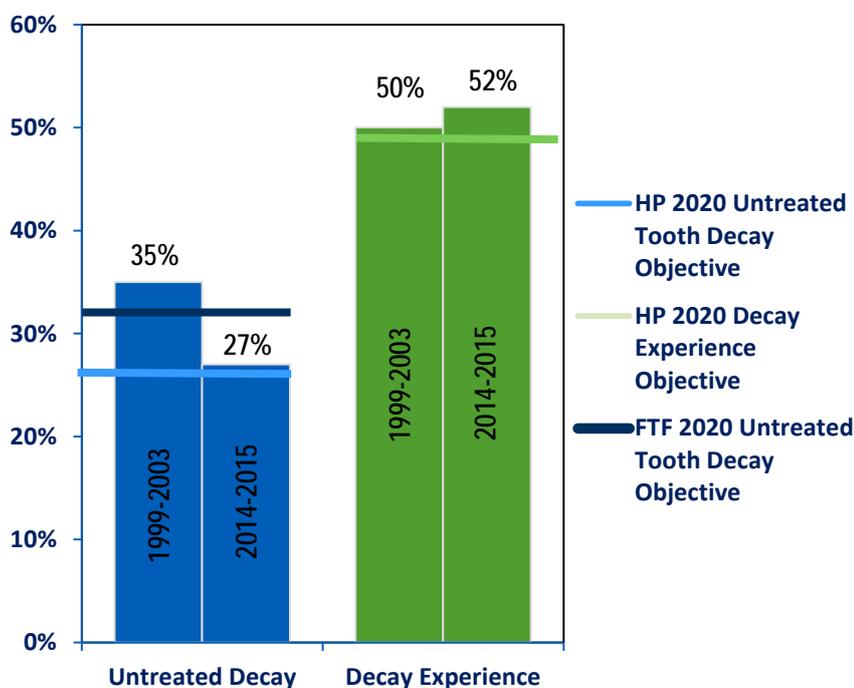
Dental pain or infection means that a child has tooth decay severe enough that they have a toothache or visible signs of an oral infection such as a dental abscess. Dental pain impacts a child's ability to concentrate and learn. An oral infection can increase a child's vulnerability to infections in other parts of the body, such as the ears, sinuses and the brain.

The State of Oral Health in Arizona

In recent years many different organizations in Arizona, including FTF and ADHS, have worked to improve oral health outcomes for young children. The good news is these efforts are paying off.

The number of kindergarteners in Arizona with untreated tooth decay has fallen from 35% to 27% since the early 2000s. Additionally, the results of this survey show that Arizona has met its 2020

Figure 1. Kindergarten Children's Oral Health Status

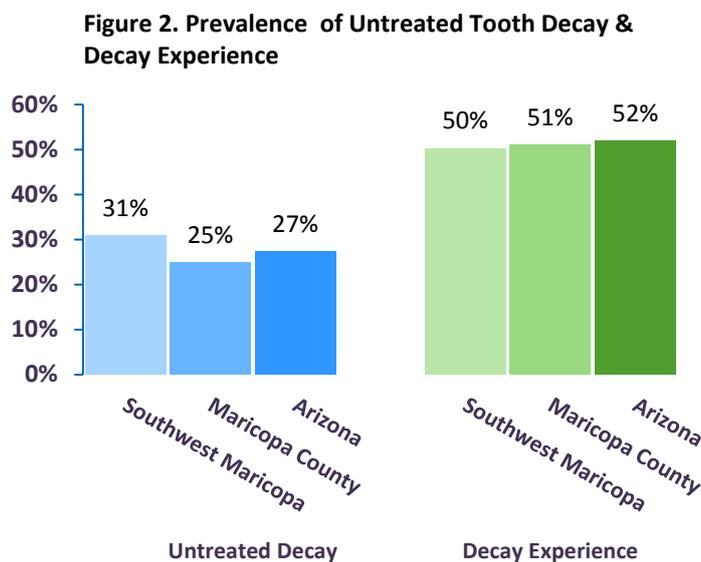


benchmark of 32% and is well on track to meet Healthy People’s 2020 target of 26%. The bad news is that there has been no significant change in the percent of children with decay experience suggesting that we need to continue focusing efforts on primary prevention.

The State of Oral Health in the Southwest Maricopa Region

Results show that (see Figure 2) around one third of kindergarteners (31%) in the First Things First Southwest Maricopa region have untreated decay and are in need of dental care. Untreated decay findings for the region are slightly higher than in Maricopa County (25%) or Arizona (27%).

When looking at overall decay experience, a similar percentage of kindergarteners in the region had decay experience (50%) in comparison to Maricopa County (51%) or Arizona (52%). The trend for dental pain and infection in the Phoenix South region (<1%) was lower than for Maricopa County (1%) or Arizona (2%).



Determinants and Risk Factors for Untreated Decay and Decay Experience

Arizona: The prevalence of **untreated tooth decay** in Arizona is higher among children from low-income households, some racial and ethnic groups, and children that have not been to the dentist in the last year.

The state level risk factors for **decay experience** are income, race/ethnicity, type of health insurance coverage and parental education, with the prevalence of decay experience being higher among children from low-income households, some racial and ethnic groups, children with Medicaid or no health insurance, and children whose parents have less than a college education.

Southwest Maricopa: In the Southwest Maricopa region, 259 children were screened and 66 parents/caregivers answered at least one question on the optional questionnaire. Due to the optional nature of the parent/caregiver questionnaire, risk factors at the regional level should be viewed with caution because of small sample sizes and/or small numbers within sub-categories. The demographic characteristics in Table 1, including race, insurance, dental visits, and parent education, were reported by parents/caregivers in the optional questionnaire. The percent of children eligible for the National School Lunch Program (NSLP) in that child’s school was recorded for all children who received an oral health screening; this information can also be found in Table 1. In the Southwest Maricopa region, children attending higher income schools and children whose parents attended some college were less likely to have untreated decay.

Table 1. Prevalence of Untreated Tooth Decay & Decay Experience by Selected Demographic Characteristics

| | Number of Children with Data | Untreated Decay (%) | Decay Experience (%) |
|-------------------------------------|------------------------------|---------------------|----------------------|
| Southwest Maricopa Region | | | |
| School participation in NSLP | | | |
| < 25% Eligible for NSLP | 0 | . | . |
| 25-49% Eligible for NSLP | 70 | 23% | 34% |
| 50-74% Eligible for NSLP | 35 | 29% | 43% |
| > 75% Eligible for NSLP | 154 | 38% | 67% |
| Race/Ethnicity | | | |
| Non-Hispanic White | 14 | 9% | 25% |
| Non-Hispanic Black | 3 | . | 34% |
| Hispanic (any race) | 43 | 43% | 55% |
| Non-Hispanic American Indian | 0 | . | . |
| Type of health insurance | | | |
| Employer/Private | 30 | 35% | 41% |
| AHCCCS (Medicaid) | 24 | 31% | 56% |
| None | 11 | 40% | 51% |
| Time since last dental visit | | | |
| Within the last year | 45 | 37% | 57% |
| > 1 year or never | 20 | 28% | 30% |
| Parent education | | | |
| Some College | 44 | 29% | 41% |
| High School or Less | 21 | 40% | 56% |
| Maricopa County | | | |
| School participation in NSLP | | | |
| < 25% Eligible for NSLP | 150 | 11% | 29% |
| 25-49% Eligible for NSLP | 194 | 23% | 41% |
| 50-74% Eligible for NSLP | 120 | 28% | 43% |
| > 75% Eligible for NSLP | 884 | 29% | 62% |
| Race/Ethnicity | | | |
| Non-Hispanic White | 135 | 10% | 31% |
| Non-Hispanic Black | 28 | 22% | 31% |
| Hispanic (any race) | 284 | 28% | 58% |
| Non-Hispanic American Indian | 9 | 57% | 100% |
| Type of health insurance | | | |
| Employer/Private | 190 | 17% | 31% |
| AHCCCS (Medicaid) | 206 | 21% | 63% |
| None | 43 | 36% | 52% |
| Time since last dental visit | | | |
| Within the last year | 338 | 17% | 46% |

| | Number of Children with Data | Untreated Decay (%) | Decay Experience (%) |
|-------------------------|------------------------------|---------------------|----------------------|
| > 1 year or never | 108 | 36% | 48% |
| Parent education | | | |
| Some College | 253 | 18% | 36% |
| High School or Less | 189 | 26% | 62% |

Note: Race/ethnicity, time since last dental visit, insurance coverage, and parent education were obtained from the optional parent/caregiver questionnaire and will not add up to the children screened. Also, **weighted percentages** are displayed. The weighted percent is the percent of children that accounts for the complex cluster sampling scheme. Calculating percent directly from the number of children will not yield the weighted percent.

THE STATE OF ORAL HEALTH IN YAVAPAI

Why is Good Oral Health Important?

Many people consider tooth decay to be a minor problem but for many it results in pain, infection, the inability to chew foods well, embarrassment about damaged or discolored teeth and distraction from play and learning. Tooth decay in the primary teeth is of special importance because an unhealthy tooth in a child puts the child at risk of future oral health problems. The longer early childhood tooth decay remains untreated, the worse the condition gets, making it more difficult to treat. These more complicated procedures are expensive, performed by a smaller number of clinicians and may need to be performed in an operating room or clinic setting using general anesthesia. In other words, as treatment is delayed, the problem becomes more serious and difficult to treat. As a result, access and cost issues multiply.

Definitions

Untreated decay means that a child has at least one tooth with a cavity that has not received appropriate treatment. Untreated decay compromises a child's ability to eat well, sleep well, and function well at home and at school.

Tooth decay experience means that a child has had tooth decay in the primary (baby) and/or permanent (adult) teeth in his/her lifetime. Children can have *past decay experience* (fillings, crowns, or teeth that have been extracted because of decay), or *present decay experience* (untreated tooth decay or cavities).

Dental pain or infection means that a child has tooth decay severe enough that they have a toothache or visible signs of an oral infection such as a dental abscess. Dental pain impacts a child's ability to concentrate and learn. An oral infection can increase a child's vulnerability to infections in other parts of the body, such as the ears, sinuses and the brain.

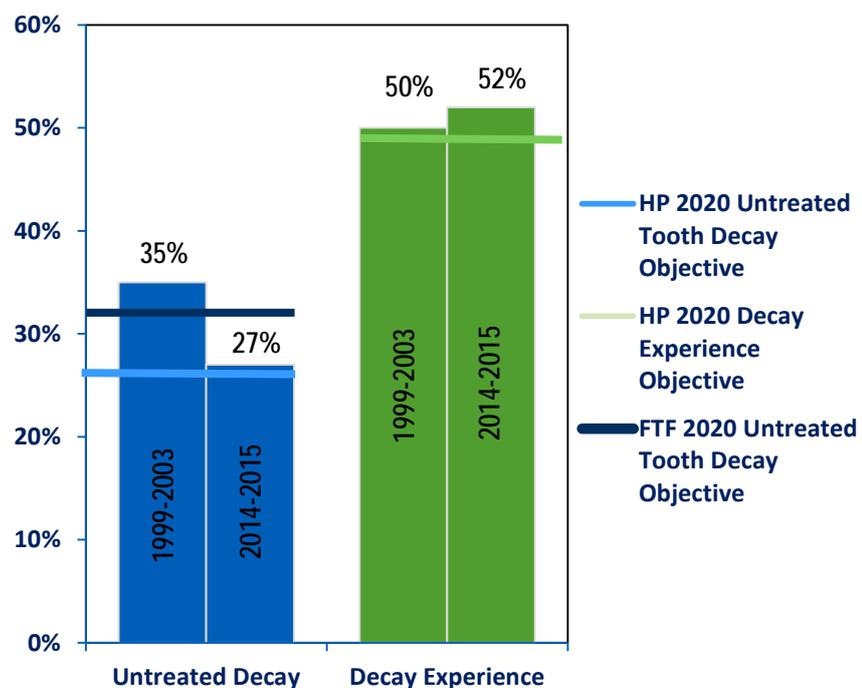
The State of Oral Health in Arizona

In recent years many different organizations in Arizona, including FTF and ADHS, have worked to improve oral health outcomes for young children. The good news is these efforts are paying off.

The number of kindergarteners in

Arizona with untreated tooth decay has fallen from 35% to 27% since the early 2000s.

Figure 1. Kindergarten Children's Oral Health Status



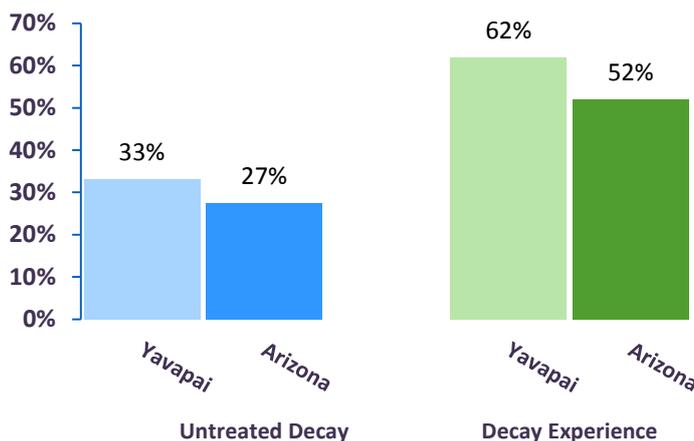
Additionally, the results of this survey show that Arizona has met its 2020 benchmark of 32% and is well on track to meet Healthy People’s 2020 target of 26%. The bad news is that there has been no significant change in the percent of children with decay experience suggesting that we need to continue focusing efforts on primary prevention.

The State of Oral Health in the Yavapai Region

Results show that (see Figure 2) one third of kindergarteners (33%) in the First Things First Yavapai region have untreated decay and are in need of dental care. Untreated decay findings for the region are slightly higher than for Arizona (27%).

When looking at overall decay experience, a higher percentage of kindergarteners in the region had decay experience (62%) compared to Arizona (52%). The trend for dental pain and infection in the Yavapai region (5%) was higher than for Arizona (2%).

Figure 2. Prevalence of Untreated Tooth Decay & Decay Experience



Determinants and Risk Factors for Untreated Decay and Decay Experience

Arizona: The prevalence of **untreated tooth decay** in Arizona is higher among children from low-income households, some racial and ethnic groups, and children that have not been to the dentist in the last year.

The state level risk factors for **decay experience** are income, race/ethnicity, type of health insurance coverage and parental education, with the prevalence of decay experience being higher among children from low-income households, some racial and ethnic groups, children with Medicaid or no health insurance, and children whose parents have less than a college education.

Yavapai: In the Yavapai region, 60 children were screened and 36 parents/caregivers answered at least one question on the optional questionnaire. Due to the optional nature of the parent/caregiver questionnaire, risk factors at the regional level should be viewed with caution because of small sample sizes and/or small numbers within sub-categories. The demographic characteristics in Table 1, including race, insurance, dental visits, and parent education, were reported by parents/caregivers in the optional questionnaire. The percent of children eligible for the National School Lunch Program (NSLP) in that child’s school was recorded for all children who received an oral health screening; this information can also be found in Table 1. In the Yavapai region, children with a dental visit in the last year, children attending higher income schools, and children whose parents attended college were less likely to have untreated decay.

Table 1. Prevalence of Untreated Tooth Decay & Decay Experience by Selected Demographic Characteristics

| | Number of Children with Data | Untreated Decay (%) | Decay Experience (%) |
|-------------------------------------|------------------------------|---------------------|----------------------|
| Yavapai Region¹⁹ | | | |
| School participation in NSLP | | | |
| < 25% Eligible for NSLP | 0 | . | . |
| 25-49% Eligible for NSLP | 0 | . | . |
| 50-74% Eligible for NSLP | 26 | 15% | 46% |
| > 75% Eligible for NSLP | 34 | 53% | 79% |
| Race/Ethnicity | | | |
| Non-Hispanic White | 18 | 21% | 38% |
| Non-Hispanic Black | 1 | 0% | 100% |
| Hispanic (any race) | 15 | 24% | 71% |
| Non-Hispanic American Indian | 2 | 100% | 100% |
| Type of health insurance | | | |
| Employer/Private | 16 | 19% | 38% |
| AHCCCS (Medicaid) | 15 | 30% | 70% |
| None | 5 | 31% | 77% |
| Time since last dental visit | | | |
| Within the last year | 26 | 17% | 56% |
| > 1 year or never | 9 | 42% | 50% |
| Parent education | | | |
| Some College | 27 | 21% | 51% |
| High School or Less | 9 | 38% | 72% |

Note: Race/ethnicity, time since last dental visit, insurance coverage, and parent education were obtained from the optional parent/caregiver questionnaire and will not add up to the children screened. Also, **weighted percentages** are displayed. The weighted percent is the percent of children that accounts for the complex cluster sampling scheme. Calculating percent directly from the number of children will not yield the weighted percent.

¹⁹ Only FTF regional information is displayed as the FTF region and the Arizona County encompass the same area.

THE STATE OF ORAL HEALTH IN YUMA

Why is Good Oral Health Important?

Many people consider tooth decay to be a minor problem but for many it results in pain, infection, the inability to chew foods well, embarrassment about damaged or discolored teeth and distraction from play and learning. Tooth decay in the primary teeth is of special importance because an unhealthy tooth in a child puts the child at risk of future oral health problems. The longer early childhood tooth decay remains untreated, the worse the condition gets, making it more difficult to treat. These more complicated procedures are expensive, performed by a smaller number of clinicians and may need to be performed in an operating room or clinic setting using general anesthesia. In other words, as treatment is delayed, the problem becomes more serious and difficult to treat. As a result, access and cost issues multiply.

Definitions

Untreated decay means that a child has at least one tooth with a cavity that has not received appropriate treatment. Untreated decay compromises a child's ability to eat well, sleep well, and function well at home and at school.

Tooth decay experience means that a child has had tooth decay in the primary (baby) and/or permanent (adult) teeth in his/her lifetime. Children can have *past decay experience* (fillings, crowns, or teeth that have been extracted because of decay), or *present decay experience* (untreated tooth decay or cavities).

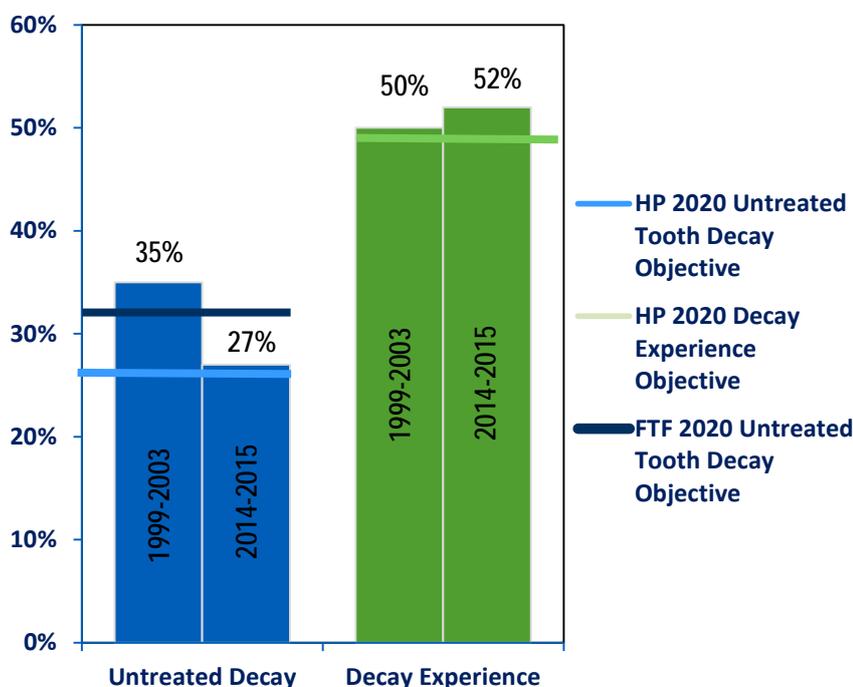
Dental pain or infection means that a child has tooth decay severe enough that they have a toothache or visible signs of an oral infection such as a dental abscess. Dental pain impacts a child's ability to concentrate and learn. An oral infection can increase a child's vulnerability to infections in other parts of the body, such as the ears, sinuses and the brain.

The State of Oral Health in Arizona

In recent years many different organizations in Arizona, including FTF and ADHS, have worked to improve oral health outcomes for young children. The good news is these efforts are paying off.

The number of kindergarteners in Arizona with untreated tooth decay has fallen from 35% to 27% since the early 2000s. Additionally, the results of this survey show that Arizona has met its 2020

Figure 1. Kindergarten Children's Oral Health Status

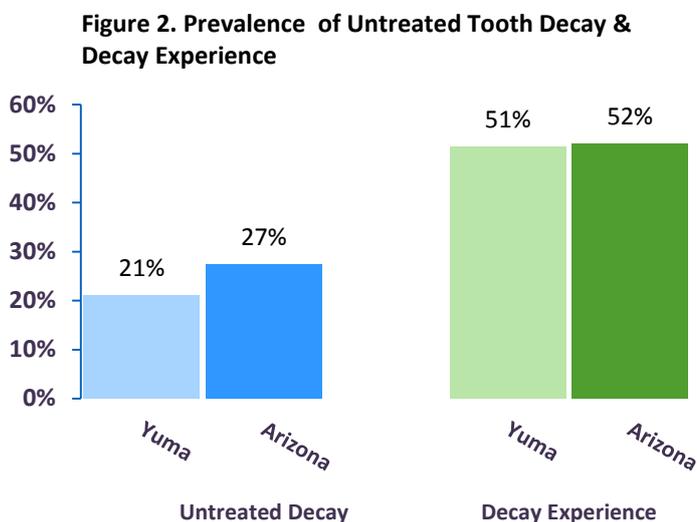


benchmark of 32% and is well on track to meet Healthy People’s 2020 target of 26%. The bad news is that there has been no significant change in the percent of children with decay experience suggesting that we need to continue focusing efforts on primary prevention.

The State of Oral Health in the Yuma Region

Results show that (see Figure 2) around one fifth of kindergarteners (21%) in the First Things First Yuma region have untreated decay and are in need of dental care. Untreated decay findings for the region are slightly lower than for Arizona (27%).

When looking at overall decay experience, a similar percentage of kindergarteners in the region had decay experience (51%) compared to Arizona (52%). The trend for dental pain and infection in the Yuma region (< 1%) was lower than for Arizona (2%).



Determinants and Risk Factors for Untreated Decay and Decay Experience

Arizona: The prevalence of **untreated tooth decay** in Arizona is higher among children from low-income households, some racial and ethnic groups, and children that have not been to the dentist in the last year.

The state level risk factors for **decay experience** are income, race/ethnicity, type of health insurance coverage and parental education, with the prevalence of decay experience being higher among children from low-income households, some racial and ethnic groups, children with Medicaid or no health insurance, and children whose parents have less than a college education.

Yuma: In the Yuma region, 200 children were screened and 83 parents/caregivers answered at least one question on the optional questionnaire. Due to the optional nature of the parent/caregiver questionnaire, risk factors at the regional level should be viewed with caution because of small sample sizes and/or small numbers within sub-categories. The demographic characteristics in Table 1, including race, insurance, dental visits, and parent education, were reported by parents/caregivers in the optional questionnaire. The percent of children eligible for the National School Lunch Program (NSLP) in that child’s school was recorded for all children who received an oral health screening; this information can also be found in Table 1. In the Yuma region, children with a dental visit in the last year, children with employer/private health insurance, and children whose parents attended college were less likely to have untreated decay.

Table 1. Prevalence of Untreated Tooth Decay & Decay Experience by Selected Demographic Characteristics

| | Number of Children with Data | Untreated Decay (%) | Decay Experience (%) |
|-------------------------------------|------------------------------|---------------------|----------------------|
| Yuma Region²⁰ | | | |
| School participation in NSLP | | | |
| < 25% Eligible for NSLP | 0 | . | . |
| 25-49% Eligible for NSLP | 0 | . | . |
| 50-74% Eligible for NSLP | 66 | 20% | 47% |
| > 75% Eligible for NSLP | 134 | 22% | 55% |
| Race/Ethnicity | | | |
| Non-Hispanic White | 9 | 0% | 0% |
| Non-Hispanic Black | 2 | 0% | 77% |
| Hispanic (any race) | 70 | 19% | 46% |
| Non-Hispanic American Indian | 0 | . | . |
| Type of health insurance | | | |
| Employer/Private | 19 | 4% | 19% |
| AHCCCS (Medicaid) | 43 | 14% | 49% |
| None | 10 | 40% | 57% |
| Time since last dental visit | | | |
| Within the last year | 62 | 9% | 40% |
| > 1 year or never | 19 | 38% | 43% |
| Parent education | | | |
| Some College | 43 | 12% | 32% |
| High School or Less | 38 | 20% | 52% |

Note: Race/ethnicity, time since last dental visit, insurance coverage, and parent education were obtained from the optional parent/caregiver questionnaire and will not add up to the children screened. Also, **weighted percentages** are displayed. The weighted percent is the percent of children that accounts for the complex cluster sampling scheme. Calculating percent directly from the number of children will not yield the weighted percent.

²⁰ Only FTF regional information is displayed as the FTF region and the Arizona County encompass the same area.

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Arizona School Readiness Indicators

The following indicators are designed to guide and measure progress in building an effective early childhood system in Arizona. Taken collectively, they provide a comprehensive picture of how our state is preparing its youngest children for success in kindergarten and beyond.

CHILDREN'S HEALTH

Well-Child Visits

% of Arizona children receiving at least six well-child visits within the first 15 months of life

2010: 64% 2020 Goal: 80%

Healthy Weight

% of Arizona children age 2-4 with body mass index (BMI) in healthy weight range

2010: 65% 2020 Goal: 75%

Dental Health

% of Arizona children age 5 with untreated tooth decay

2007: 35% 2020 Goal: 32% or less

FAMILY SUPPORT & LITERACY

Confident Families

% of Arizona families report they are competent and confident about their ability to support their child's safety, health and well being

2012: 42% 2020 Goal: 52%



CHILD DEVELOPMENT & EARLY LEARNING

School Readiness

Benchmark related to developmental domains of social-emotional, language and literacy, cognitive, and motor and physical to be recommended in FY17 based on baseline data from Arizona kindergarten developmental inventory

Quality Early Education

% of Arizona children enrolled in an early care and education program with a Quality First rating of 3-5 stars

2013: 9% 2020 Goal: 29%

Quality Early Education—Special Needs

% of Arizona children with special needs/rights enrolled in an inclusive early care and education program with a Quality First rating of 3-5 stars

2013: 53% 2020 Goal: 73%

Affordability of Quality Early Education

Benchmark related to Arizona families that spend no more than 10% of the regional median family income on quality early care and education programs to be recommended in FY16

Developmental Delays Identified in Kindergarten

Benchmark related to early screening and intervention for children with developmental delays to be recommended in FY16

Transition from Preschool Special Education to Kindergarten

% of Arizona children exiting preschool special education enrolled in kindergarten regular education

2010: 22% 2020 Goal: 30%

Appendix B: Healthy Smiles Healthy Bodies Screening Recording Form

**2014-2015 Healthy Smiles Healthy Bodies
Screening Recording Form**

Survey ID# _____
(pg. office use only)

1. Survey Information

School Name: _____ Grade: _____

Child Name: _____

2. Oral Health Survey Information

| | | |
|-----------------------------|--|---|
| 1. Untreated Decay | <input type="checkbox"/> 0-No <input type="checkbox"/> 1-Yes _____ # teeth | 1-Yes= At least one tooth with loss of at least 1/2 mm of tooth structure at the enamel surface |
| 2. Treated Decay | <input type="checkbox"/> 0-No <input type="checkbox"/> 1-Yes _____ # teeth | 1-Yes= At least one tooth: - has fillings, crowns or other restoration due to decay OR - is missing due to decay. |
| 3. Sealants Present | <input type="checkbox"/> 0-No <input type="checkbox"/> 1-Yes | 1-Yes= At least one permanent molar tooth has a dental sealant OR part of a dental sealant. |
| 4. Sealants Needed | <input type="checkbox"/> 0-No <input type="checkbox"/> 1-Yes | 1-Yes= At least one permanent molar tooth needs a dental sealant on a fully erupted, virgin AND sound occlusal surface. |
| 5. Treatment Urgency | <input type="checkbox"/> 0-None <input type="checkbox"/> 1-Early <input type="checkbox"/> 2-Urgent | 0-None= Routine dental care 1-Early= Dental visit within next several weeks 2-Urgent= Dental visit within 24 hours |

3. Height/Weight

| | |
|------------------|------------------|
| Height – in cm’s | Weight – in kg’s |
| _____ • _____ | _____ • _____ |

4. Signature

| Provider | ID # | Signature | Date |
|-----------|------|-----------|---|
| RDH | | | |
| ASST | | | |
| ASST | | | |
| Comments: | | | <input type="checkbox"/> Summary of Findings Form |

Appendix C: Healthy Smiles Healthy Bodies Parent/Caregiver Questionnaire



Healthy Smiles Healthy Bodies Questionnaire

1. Child's Name: _____ 2. Child's Date of Birth: _____ / _____ / _____
(month) (day) (year)

3. Teacher's Name: _____ Grade: _____

4. Gender: (1) Male (2) Female

Additional Information: The following questions will help in developing programs for children with the most need.

5. What race is your child? (Check all that apply):

- Asian Pacific Islander/Native Hawaiian
 Black/African American White
 Native American/Alaskan Native

5a. Is your child Hispanic? (Check one)

- (1) Yes (0) No

6. Has a doctor or nurse ever told you that your child has asthma? (Check one)

- (1) Yes (0) No

7. How often are your child's teeth brushed? (Check one)

- (1) More than once a day (4) Every few weeks
 (2) Once a day (5) Never
 (3) Every few days

8. About how long has it been since your child last visited a dentist or dental clinic? (Check one)

Include all types of dentists such as pediatric dentists or any other dental specialists; also dental hygienists

- (1) Never (go to 8a) (3) 1-3 years ago
 (2) Within the past year (4) More than 3 years ago

8a. Never: what is the main reason your child has never visited a dentist? (Check all that apply)

- (1) Cannot afford it
 (2) No dental insurance
 (3) No reason to go/no problems
 (4) My doctor or dentist/dental provider indicates my child does not need to be seen
 (5) Other reason (please specify) _____

9. Has your child received a dental screening or fluoride varnish through one of the following within the last year? (Check all that apply)

- (1) WIC Clinic (4) Pediatrician/personal doctor or medical care provider (e.g. family practice)
 (2) Immunization Clinic (5) Other (please specify) _____
 (3) Child Care Center

10. What kind of health/medical insurance does your child have? (Check all that apply)

- (1) Employer provided (4) Indian Health Service (IHS)
 (2) Privately purchased (5) Military
 (3) AHCCCS (Medicaid or Kids Care) (6) None (does not have health insurance)

11. Does your child have insurance that pays for dental care?

- (1) Yes (0) No

12. What is the highest degree or level of school that you (the parent/guardian) have completed? (Check one)

- (1) Less than high school (12 or less) (3) Some college or associates degree
 (2) High school graduate (includes GED) (4) Bachelor degree or higher

For Program Use Only

School ID # _____ School Name _____ Record # _____

**Appendix D: Demographic Characteristics of the Kindergarten Children Participating
Healthy Smiles Healthy Bodies Including Children with Missing or Unknown Data**

| Demographic Characteristic | Number of Children with Data (Unweighted) | Weighted Percent |
|-------------------------------------|---|------------------|
| Gender | | |
| Female | 1,792 | 49.7 |
| Male | 1,838 | 50.3 |
| Rural/Urban status | | |
| Rural | 1,861 | 31.6 |
| Urban | 1,769 | 68.4 |
| School participation in NSLP | | |
| < 25% are eligible | 150 | 10.7 |
| 25-49% are eligible | 787 | 19.2 |
| 50-74% are eligible | 839 | 18.4 |
| ≥ 75% are eligible | 1,854 | 51.7 |
| Race | | |
| White | 866 | 22.5 |
| Black/African American | 99 | 4.2 |
| Asian | 36 | 1.1 |
| American Indian/Alaska Native | 185 | 2.6 |
| Pacific Islander/Native Hawaiian | 9 | 0.2 |
| Multi-Racial | 18 | 0.5 |
| Missing/Unknown | 2,417 | 68.9 |
| Ethnicity (% of children) | | |
| Not Hispanic | 654 | 18.5 |
| Hispanic | 800 | 22.0 |
| Missing/Unknown | 2,176 | 59.5 |
| Race & Ethnicity | | |
| Non-Hispanic White | 436 | 13.4 |
| Non-Hispanic Black/AA | 48 | 2.0 |
| Non-Hispanic AI/AN | 117 | 1.5 |
| Non-Hispanic Other Race | 45 | 1.4 |
| Hispanic (any race) | 800 | 22.0 |
| Missing/Unknown | 2,184 | 59.7 |
| Child has asthma | | |
| No | 1,275 | 35.2 |
| Yes | 154 | 3.9 |
| Missing/Unknown | 2,201 | 60.9 |
| Tooth brushing frequency | | |
| More than once a day | 791 | 21.7 |
| Once a day | 568 | 15.7 |
| Every few days | 67 | 1.6 |
| Every few weeks | 9 | 0.3 |
| Never | 2 | 0.1 |
| Missing/Unknown | 2,193 | 60.6 |
| Time since last dental visit | | |
| Never been | 153 | 3.8 |
| Within the last year | 1,066 | 29.7 |
| 1-3 years ago | 183 | 4.7 |
| More than 3 years ago | 16 | 0.6 |
| Missing/Unknown | 2,212 | 61.2 |
| Health insurance coverage | | |
| Employer or private | 567 | 17.2 |
| AHCCCS (Medicaid) | 703 | 17.7 |
| Other (IHS or military) | 49 | 0.9 |
| None | 98 | 2.8 |
| Missing/Unknown | 2, 213 | 61.4 |

| Demographic Characteristic | Number of Children with Data (Unweighted) | Weighted Percent |
|-------------------------------|---|------------------|
| Dental insurance | | |
| No | 335 | 9.2 |
| Yes | 1,059 | 28.9 |
| Missing/Unknown | 2,236 | 61.9 |
| Parent education | | |
| Less than high school | 156 | 4.3 |
| High school graduate | 406 | 10.8 |
| Some college/associate degree | 512 | 12.4 |
| Bachelor degree or higher | 319 | 10.5 |
| Missing/Unknown | 2,237 | 62.0 |

Note: Race/ethnicity, asthma, tooth brushing, time since last dental visit, insurance coverage, and parent education were obtained from the optional parent/caregiver questionnaire.

Weighted percent: Percent of children that accounts for the complex cluster sampling scheme. Calculating percent directly from the number of children will not yield the weighted percent.

Appendix E: Demographic Characteristics of the Kindergarten Children Participating in *Healthy Smiles Healthy Bodies* Excluding Children with Missing or Unknown Data

| Demographic Characteristic | Number of Children with Data (Unweighted) | Weighted Percent |
|-------------------------------------|---|------------------|
| Gender | | |
| Female | 1,792 | 49.7% |
| Male | 1,838 | 50.3% |
| Rural/Urban status | | |
| Rural | 1,861 | 31.6% |
| Urban | 1,769 | 68.4% |
| School participation in NSLP | | |
| < 25% are eligible | 150 | 10.7% |
| 25-49% are eligible | 787 | 19.2% |
| 50-74% are eligible | 839 | 18.4% |
| ≥ 75% are eligible | 1,854 | 51.7% |
| Race | | |
| White | 866 | 72.4% |
| Black/African American | 99 | 13.4% |
| Asian | 36 | 3.7% |
| American Indian/Alaska Native | 185 | 8.4% |
| Pacific Islander/Native Hawaiian | 9 | 0.7% |
| Multi-Racial | 18 | 1.5% |
| Ethnicity | | |
| Not Hispanic | 654 | 45.6% |
| Hispanic | 800 | 54.4% |
| Race & Ethnicity | | |
| Non-Hispanic White | 436 | 33.2% |
| Non-Hispanic Black/AA | 48 | 5.0% |
| Non-Hispanic AI/AN | 117 | 3.7% |
| Non-Hispanic Other Race | 45 | 3.5% |
| Hispanic (any race) | 800 | 54.6% |
| Child has asthma | | |
| No | 1,275 | 90.1% |
| Yes | 154 | 9.9% |
| Tooth brushing frequency | | |
| More than once a day | 791 | 55.1% |
| Once a day | 568 | 40.0% |
| Every few days | 67 | 4.0% |
| Every few weeks | 9 | 0.8% |
| Never | 2 | 0.1% |
| Time since last dental visit | | |
| Never been | 153 | 9.7% |
| Within the last year | 1,066 | 76.7% |
| 1-3 years ago | 183 | 12.1% |
| More than 3 years ago | 16 | 1.5% |
| Health insurance coverage | | |
| Employer or private | 567 | 44.6% |
| AHCCCS (Medicaid) | 703 | 45.9% |
| Other (IHS or military) | 49 | 2.2% |
| None | 98 | 7.3% |
| Dental insurance | | |
| No | 335 | 24.1% |
| Yes | 1,059 | 75.9% |
| Parent education | | |
| Less than high school | 156 | 11.3% |
| High school graduate | 406 | 28.3% |
| Some college/associate degree | 512 | 32.7% |
| Bachelor degree or higher | 319 | 27.7% |

Note: Race/ethnicity, asthma, tooth brushing, time since last dental visit, insurance coverage, and parent education were obtained from the optional parent/caregiver questionnaire.

Weighted percent: Percent of children that accounts for the complex cluster sampling scheme. Calculating percent directly from the number of children will not yield the weighted percent.

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First Things First partners with parents and communities to strengthen families and give all Arizona children the opportunity to arrive at kindergarten healthy and ready to succeed.

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FIRST THINGS FIRST



RESEARCH AND EVALUATION NATIONAL ADVISORY PANEL

2016 Meeting Summary Report

EVALUATION NATIONAL ADVISORY PANEL

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BACKGROUND

Research and evaluation have been critical components of First Thing First (FTF) since its inception. FTF strives for complete transparency and holds itself, and its collaborations with partners, accountable for achieving intended outcomes for children. In 2011, the FTF Board requested a re-examination of FTF's research and evaluation approach, resulting in the creation of the FTF Early Childhood Research and Evaluation National Advisory Panel (Panel) in January 2012. The Panel was convened to provide recommendations to the FTF Board on developing a comprehensive statewide and regional research and evaluation framework. Representatives from the Panel include experts in early childhood research; 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 early intervention; health; and an Arizona representative.

The Panel met three times in the winter and spring of 2012 that resulted in recommendations to the FTF Board regarding a framework for Research and Evaluation. The current Research and Evaluation Plan, to implement the Panel's recommendations, was approved by the FTF Board in October of 2012. One of the goals of this plan was to establish an advisory Panel to periodically review evaluation and research activities for their soundness and utility, and provide feedback on planning activities based on their alignment with the FTF Board-approved Panel recommendations and best practices in research and evaluation. Annual meetings are open to the public and all interested stakeholders, including regional councils, state agency partners, and tribal leaders.

Two years after the Board approved the initial Panel's recommendations, the Panel was reconfigured to represent the expertise needed for ongoing reviews of FTF's research and evaluation activities. Six continuing members were joined by six new colleagues in March 2014. FTF updated the Panel on its progress, which included discussions of the integrated data system and the FTF data dashboard, the School Readiness Indicators, regional studies, and plans for a Quality First study.

The current Panel responsibilities include:

- Reviewing FTF research and evaluation activities annually to ensure alignment with recommendations of the National Panel and quality standards;
- Reviewing and critiquing approaches for planned research and evaluation activities (e.g., longitudinal data system, Quality First study); and
- Ensuring FTF undertakes high quality planning, coordination, and implementation of all research and evaluation activities.

In addition to the Panel's review of progress and future planning, the Panel may serve as an ongoing resource for technical review and advice on evaluation contracting, programmatic monitoring, and development of data systems, reporting, and analysis.

SUMMARY OF APRIL 26-27, 2016 MEETING

The two day convening of the Panel focused on FTF program implementation regarding key strategies and requirements for enhanced data, a review and discussion on current research and evaluation studies and a focus on the School Readiness Indicators . Below is a summary of the information presented to the Panel, the discussion and considerations provided by the Panel for FTF.

First Things First Program Implementation

The focus of this segment was on FTF's progress in implementing key strategies, including their requirements for enhanced data and included discussion on the strategies of Parenting Education and

Home Visitation (in the Family Support goal area), and Oral Health (in the Health goal area). This session represented a continuation of FTF's focus on implementation, as the Panel had recommended in 2012.

Parenting Education Strategy

The specific intent of Parenting Education is to offer learning activities designed to increase the knowledge and skills of families. The strategy promotes positive parenting practices that result in improved child health and development. The expected outcomes of the strategy (across the different program models) include the following: Increased parental knowledge of child development, increased parenting skills, improved caregiver-child interactions, more effective parental monitoring and guidance, decreased rates of child maltreatment, and better physical/cognitive/emotional development in children.

The Panel discussion focused on various considerations for capturing the strategy's meaningful programmatic outcomes. It was noted that as per the Panel recommendations from the 2014 Panel meeting, FTF had taken measures to significantly reduce the number of funded models based on research evidence, 109 models were funded in 2014 to 11 in 2016. With differences between each of the Parenting Education program models funded as part of the overall strategy it is difficult to identify strategy level programmatic outcomes, as well as strategy level data. The program components and outcomes of the individual program models (e.g., Triple P, Nurturing Parent, Raising A Reader) were presented, highlighting a lack of overlap among the various Parenting Education models at the strategy level due to intensity and curriculum differences prescribed by the programs' national offices. This complicates the development of meaningful data requirements to show outcomes at a strategy level.

Panel Feedback and Considerations

- Consider further reduction of the number of funded models. When doing so, ensure that there are valid program models for the tribal populations that FTF serves and, if possible, establish additional evidence where evidence is limited.
- Revise the FTF Standard of Practice (SOP) to classify program models by their intensity, level of evidence, and other common characteristics instead of listing them alphabetically (as they currently appear). This can make the SOP be a more helpful tool for decision making by regional councils.
- Consider listing in the SOP only those program models which are recommended for funding.
- Because Home Visitation included aspects of parenting education, it may be possible to examine some common outcomes across the two strategies.
- Ensure that fidelity to the evidence base is being monitored to assess where programs are falling short and to determine how many are adhering to program guidelines. Consider a coaching and technical support plan to help build capacity towards fidelity of implementation. One approach may be implementation of a Communities of Practice.
- While discussing the usefulness of pre-post studies to begin collecting some common outcomes, the Panel cautioned that pre-post tests may not be the best way to evaluate the effectiveness of a program. This is because factors (such as the economic context) other than the program itself may influence the observed outcomes (e.g., during a recession change could be a positive outcome).
- Consider collecting parent satisfaction data as a first step toward understanding outcomes.
- Include studies of dosage effects, where possible.

Home Visitation Strategy

The intent of the Home Visitation strategy is to provide support for families with young children, particularly as part of a comprehensive and coordinated system. The expected results include: improved child health and development; improved children's school readiness; enhanced parental abilities to support their children's development; decreased incidence of child maltreatment; and improved family economic self-sufficiency and stability.

The Panel reviewed the strategy's logic model and common expected outcomes of the strategy (based on the Healthy Families Arizona, Nurse Family Partnership, and Parents as Teachers models). Given substantial overlap in outcomes across the models, the Panel's discussion centered on FTF's future directions for collecting outcome data at the strategy level. FTF's plan for capturing outcomes involves:

- Partnering with state agencies on the integrated home visitation data system (funded and initiated by the Maternal Infant Early Childhood Home Visitation Federal Grant (MIECHV) to capture outputs, short-term outcomes, and intermediate outcomes of Home Visitation;
- Linking to family and child-level data currently collected by the state departments of Health, Child Safety and Education to capture the intermediate and long-term outcomes of Home Visitation.

The Panel's advice was solicited regarding the necessity of launching a Home Visitation Study. FTF opted to put the study on hold as it participated in the development of the integrated home visitation data system. The original questions to be addressed by the study were: a) *Are home visitation programs being implemented with fidelity to the evidence-based models they were designed to follow?*; b) *Does each home visitation program reach the intended families and hard-to-reach families?*; and c) *Is the degree of fidelity of model implementation associated with children's school readiness outcomes?*

In addition, the Panel was asked about whether FTF could replace the Home Visitation study with the proposed administrative system (integrated data system) if the data collected in the system could address key outcome questions.

Panel Feedback and Considerations

- The Panel's reaction to the prospect of an integrated data system as source of data for capturing strategy outcomes was uniformly positive.
- A consensus was reached that FTF should first look at the existing data system when attempting to answer Home Visitation study questions. Only after exhausting the integrated data system option might FTF then consider the possibility of launching a Home Visitation study. And then a plan should be laid out to determine what additional questions, if any, the study will address.
- The Panel suggested that the integrated data system represents a huge opportunity and encouraged FTF to think about the big picture and work with state agency partners to continue to build this administrative data system. One Panel member suggested that FTF consider identifying children in Home Visitation programs who have siblings who are not in the system. By comparing them, such factors that often confound evaluation studies, such as demographics and family context, would be the same for both siblings.
- The Panel noted that developing and using an integrated data system might be cumbersome and complicated, especially due to any concerns about cleanliness of the data, but also due to mobility of program participants. It would be useful to consult local and national experts to understand data issues in the system that FTF and its partners may have not anticipated.
- An integrated data system represents an opportunity for involving Tribes to discuss how tribal data can be collected and stored. It is important to anticipate tribal preferences in understanding the research and how it impacts their communities. Specifically, this FTF process provides an opportunity to engage stakeholders and develop relationships with tribes (e.g., among researchers and government entities) to build trust for ongoing partnerships. It was also noted that if a longitudinal outcome study is designed, the stability of tribal families' residence creates an opportunity for tracking a sample population for a strong study.
- Another consideration involved checking with the tribes to see if tribal communities think the outcomes are relevant for tribal children, particularly for regional partnership councils that include tribes as part of their regions.

Oral Health

The Panel reviewed the intent of the Oral Health strategy which is to provide a multi-pronged approach to improve the oral health status of children birth through age 5. Furthermore, it serves to meet the needs of the diverse communities across Arizona by providing: screening and referral of expectant mothers and children from birth to age 5; application of fluoride varnish two to four times a year; oral health education to children, their parents/caregivers, expectant mothers, and child care and preschool staff; outreach to oral health and medical professionals; and, tele-dentistry. Unlike Parenting Education and Home Visitation, the Oral Health strategy does not have any national program models. Instead, this strategy is composed of a series of evidence-based components.

The Panel reviewed possible data indicators and their sources to inform outputs, short-term outcomes, intermediate outcomes, and long-term outcomes. Below are the possible sources for the data indicators.

- Outputs: FTF Partner Grants Management System/PGMS (quarterly reports).
- Short-term Outcomes: the Family and Caregiver Survey, the Oral Health Healthy Smiles Healthy Bodies Survey (expected to be conducted every 5 years).
- Intermediate Outcomes: PGMS (quarterly reports).
- Long-term Outcomes: Healthy Smiles Healthy Bodies Survey (a population-level snapshot of the current oral health status). If this survey is conducted every 5 years, it enables FTF to evaluate changes in the oral health outcomes and indirectly assess the impact of the work (as FTF is the primary funder of oral health efforts for children birth to age 5 in Arizona). It is also possible to collect long-term outcome data through other organizations (e.g., Delta Dental Services).

Although FTF is not currently collecting child-level data for the Oral Health strategy (FTF collects aggregate data on a quarterly basis), many of FTF's grant partners are collecting detailed data using the Basic Screening Survey tool.

Panel Feedback and Considerations

Panel members offered a number of ideas for FTF to consider going forward in Oral Health:

- Consider conducting a time series design to study the combination of components (e.g., screenings in conjunction with parent education) and determine if these combinations are associated with a lower prevalence of decay.
- To capture outcomes, consider requiring all grant partners to collect and submit Basic Screening Survey (BSS) data on an annual basis. If FTF requires the use of the BSS, it can compare grant partner data against the population snapshot to track impact.
- To measure outcomes, compare decay experience prevalence rates of counties/regions that have, or are currently funding, the Oral Health strategy, compared with the prevalence rates of those counties/regions that have not funded the Oral Health strategy (taking into consideration other Oral Health efforts in the region).
- Consider how FTF has improved the coverage of AZ children who are receiving services via the Oral Health strategy—looking at it from the assets framework. As a result of a strong FTF presence in certain regions, other programs may have moved elsewhere.
- Consult experts in the field to understand how the different components of the strategy work together to impact children's outcomes.
- Be cautious in the use of language about the “cultural responsiveness” of providers; potential conflicts of interest may exist regarding state stakeholders who are reporting on dental services regarding particular subpopulations.

Research and Evaluation Studies

Quality First Implementation and Validation Study: Phase 1

The Panel focused significant time on reviewing progress of FTF's study to validate Quality First. A status update on the Validation Study was presented by the Child Trends team, FTF's contractor for the study. This study is the first phase of the three-phase study recommended by the Panel. (Phases 2 and 3 are yet to be funded.) The goals of each phase are as follows:

- Phase 1: (1) review the system conceptual framework and design, (2) review the QF data system, and (3) validate the QF Star Rating Scale.
- Phase 2: (1) review the fidelity of implementation of the QF program components and how they contribute individually and collectively to program quality improvement and (2) evaluate the cost of quality.
- Phase 3: assess the extent to which changes in quality are associated with improved child outcomes.

Child Trends Presentation on Phase 1, Goal 1

Child Trends has submitted a draft report for goal 1 to FTF and is absent of tribal data as tribal data collection is pending tribal approvals. The study methodology, preliminary results, and their considerations were presented to the Panel. The focus of this summary is on the Panel's responses to Child Trends' presentation as details of the Goal 1 report will be available once it has been finalized.

Goal 1 Discussion: What perceptions do QF stakeholders and users have about the QF process and outcomes?

As part of Goal 1, Child Trends conducted surveys and key informant interviews to understand the perceptions that system stakeholders (i.e., QF leadership staff, FTF regional directors, QF TA supervisors, QF TA providers, QF participants, and nonparticipants) have regarding QF processes and outcomes. Based on their findings, Child Trends presented preliminary study considerations for improvement of the model and its implementation by QF participants. Note that these may be revised based on (1) FTF and Panel feedback on this draft and (2) the incorporation of additional data from tribes and regional councils.

Panel Feedback and Considerations

The most significant comments were for FTF to:

- Consider ways of capturing aspects of QF that are not measurable through typical empirical methods, especially in the areas of equity and cultural values.
- Equity should be considered within QF. QRIS may introduce a "Matthew effect," whereby the "rich get richer and the poor get poorer." Implementing a readiness assessment prior to enrollment may exacerbate equity issues because non-ready providers may not obtain funding.
- Consider revising the QF model to include a professional development plan, however Panel noted that this require initiative from providers and may be a financially intense approach, which will require FTF working with system partners to coordinate and leverage resources
- Ensure that the survey sample is representative by surveying a random sample of nonrespondents to verify that the sample is not biased. For future surveys, consider increasing the response rate by using greater incentives.
- Consider conducting the Goal 1 survey again, during Phases 2 and 3 to, capture change over time.
- Investigate the relations between sociodemographic characteristics and the star ratings.
- Look into the potential stigma for a program earning a 1-star rating.
- Consider matching (e.g., based on cultural factors) the technical assistance provider and child care staff to achieve more successful interactions toward improving program implementation.
- Address cultural responsiveness within the QF system. Specifically, QF currently lacks an aspect that addresses cultural sensitivity in childcare settings. "Quality" from provider/teacher/parent

perspectives may in some ways be related to the cultural values of the community and community partners.

- Examine why programs withdraw from QF.
- Look into strategies for increasing access to QF services for populations with the greatest needs by, for example:
 - Increasing capacity building, particularly in rural regions.
 - Addressing perceived challenges by provider type (e.g., family and center providers).
 - Analyzing the characteristics of QF participants in comparison to statewide child care patterns to identify gaps in services.
 - Identifying providers that are enrolled but are not receiving adequate support and determine why this is occurring.
 - Obtaining private investments to have recruiters with a marketing background (rather than a child development or education background) in order to target programs with specific populations (rural, English learners, tribal) for outreach efforts.
- Think about ways of honoring cultural diversity by:
 - Obtaining opinions of child care and perceptions of quality from pertinent stakeholders.
 - Investigating whether the measurement tools are appropriate for use with all of Arizona's subpopulations.

Goal 2 Discussion: Review the QF Data System

Child Trends reviewed the purpose of Goal 2: to assess the QF data system to determine if the existing data elements and infrastructure support effective program management, program evaluation, and quality improvement of the QIRS. Data collection for this goal is nearly complete, and the report is expected to be available in June 2016.

Panel Feedback and Considerations

In a brief discussion about Goal 2, Panel members raised two main considerations:

- That FTF could consult with other state partners to determine which specific data fields should be included in the integrated data system.
- That FTF consider ways to extract “stories” at the provider level from the data system; these could be used to build a provider-level story about what is working well and what is not working and inform best practices for grant partners.

Goal 3 Discussion: Validate the QF Rating Scale

Child Trends reviewed the purpose of Goal 3: to validate the QF Rating Scale (1 to 5 stars) and assess the level to which it is fair, accurate, and meaningful. Child Trends discussed the proposed study methodology for Goal 3 with the Panel and solicited input. They informed the Panel that the data collection for Goal 3 is ongoing and the report is expected to be available in March 2017.

Panel Feedback and Considerations

- Consider conducting more than one classroom observation to collect data for validating the scale. Alternatively, FTF could compare participants' one-time rating in the study with the time-series assessments collected through the QF system.
- Address inter-rater reliability of assessors:
 - Consider having assessors conduct observations in a provider setting with a 4- to 5-star rating to provide diversity in rating experience.
 - Consider having multiple assessors conduct observations at the same time.
 - Consider the confounding issue of inter-rater reliability between QF assessors and Child Trends assessors. Are they assessing similarly?

- Determine the costs of implementing each of the QF components so that when (if) the rating scale is revised, cost tradeoffs can be considered.

Though the impact of QF on child outcomes is expected to be examined at a later date (during phase 3 of the study), Panel members had the following feedback regarding child outcomes in the meeting:

- Consider pre-post measures on the children because there is inconsistent evidence across studies regarding the relation between QRIS quality levels and children’s outcomes.
- Consider a focus on program curriculum (rather than “quality”) to obtain data that may be more strongly associated with later child outcomes.

First Thing First School Readiness Indicators

The focus of the discussion on the 10 School Readiness Indicators (SRIs) was on the School Readiness and Competent and Confident Families Indicators. In regards to the School Readiness Indicator, because FTF and the Panel found it useful to have more-extensive discussion about the QF study than had been planned, the Kindergarten Developmental Inventory (KDI) presentation and discussion were postponed. The Panel will be updated at a later time on the work of the 10-state consortium for which Arizona is participating. The KDI has been identified as the measure for the School Readiness Indicator.

Family and Caregiver Survey (Formerly Known as Family and Community Survey)

Background information on the Family and Caregiver Survey was provided to the Panel as this was a discussion item in the 2014 Panel meeting agenda. The data from this survey are used to measure progress on SRI “Competent and Confident Families”—the percentage of Arizona families that report they are competent and confident about their ability to support their child’s safety, health, and well-being. This survey was originally planned to be conducted by FTF every 2 to 3 years.

In 2014, the National Panel recommended that FTF operationalize the constructs of competence and confidence; define the tools used to measure these constructs; and incorporate an additional qualitative approach to collecting data. The Panel was presented with updated definitions of the constructs of confidence and competence. *Parenting confidence* was defined as parenting self-efficacy (PPSE) and encompasses the beliefs and judgments a parent holds about their capabilities to organize and execute a set of tasks related to parenting. On the other hand, *parenting competence* encompasses various parenting abilities that can be measured in terms of knowledge, skills, behaviors, and approaches needed to care for children that promote positive and adaptive child developmental outcomes.

The purpose of the Family and Caregiver Survey is to (a) get a population level snapshot of Arizona caregivers’ confidence and competence in their ability to support their young children’s safety, health, and well-being; (b) help identify gaps in caregiver knowledge, skills, and behaviors, and gaps in services, informing FTF programmatic strategy development; and (c) support the FTF Board and Regional Councils’ strategic planning efforts by identifying the local community’s unmet needs in relation to caregiver knowledge, skills, behaviors, and access to services.

Finally, the following domains of the survey were proposed:

- General Self-Efficacy
- Competence: Parental Knowledge, Skills and Behaviors
 - Child development (social-emotional; early brain/cognitive; motor/physical/health)
 - Parenting practices (nurturing practices; discipline)
 - Services (early care and education; health & family support)

Feedback from the Panel related to considerations on (a) achieving agreement on definition and purpose and (b) methods, sampling, and measurement tools was requested.

Panel Feedback and Considerations

Construct Definitions and Purpose

- The Panel was in agreement with FTF's proposed definitions and operationalization of confidence and competence.
- The Panel consensus was that there are too many proposed domains; they recommended considering reducing them to a few domains and prioritizing domains based on FTF's needs.
- Consider a potential issue with parenting practices is the cultural overlay; different cultures have different parenting practices.
- The survey should focus on both, the system and the child. Family engagement with the system is critical because caregivers navigate the system and interact with the system in supporting their child. The survey should also capture services (engagement and trust with governance; contact with teachers in child care, and schools; trust; what is working for them; what are the challenges). One of the Panel members with tribal data expertise offered to provide work samples to support this work.

Measures:

- Consider using existing measures and conducting pilot testing. Suggested possible measures or sources of measures included: Knowledge of Infant Development Inventory (KIDI); new Zero to Three parent survey; measures from the Early Childhood Longitudinal Survey-Birth Cohort (ECLS-B), Head Start Impact Study, National Household Education Survey (NHES), National Center for Education Statistics (NCES) school readiness supplement, and the Child Trends data bank.

Methods:

- Carefully consider whether it will be feasible to make conclusions at the regional level, due to the large sample size that would be needed. Smaller sample sizes may not reliably capture changes over time. By conducting a power analysis, FTF can determine how large the sample size is needed for the survey to be sensitive enough to detect meaningful levels of change in the population.
- To obtain a representative sample of AZ caregivers, use mixed methods: telephone, online, in-person, etc.
- Collecting qualitative data could be useful for informing FTF's research questions, but that can be costly.
- Seek regional councils' input regarding the best ways to recruit families in their region.
- Limit the length of the survey to 30-40 minutes (especially if telephonic) so that completion rates will be higher.
- Pilot the survey items with a diverse sample.

CONCLUDING COMMENTS AND FUTURE DIRECTIONS

In addition to the Panel considerations specific to the meeting agenda topics discussed in this report, Panel members provided concluding comments on any aspect of FTF's ongoing research and evaluation efforts and include the following considerations and feedback:

- Augment the work that Child Trends is doing to enrich the data by, for example, increasing the response rate of surveys.
- For the QF model, what we are suggesting may be only minor changes.
- In the QF study, consider observations of curricula, because it is the day-to-day interactions that are critical to children's healthy development. Bring children to the forefront of the work.
- Look into the possibility of a professional development plan as part of the QF model.
- Investigate the association between quality indicators and sociodemographic characteristics in order to evaluate the equity of the current system (and consider solutions to any gaps found).

- Because Home visitation is FTF's second largest investment, and is implemented in 20 regions, be sure all potential study approaches are considered by laying out the options for addressing the Home visitation study questions.
- As you reduce the number of funded models for Home Visitation and Parenting Education (as suggested during the meeting), obtain input from communities on proposed changes so FTF can be culturally responsive.
- Make an effort and investment in Home Visitation that is similar to that of the QF study, perhaps including Parent Education.
- Reduce the number of domains that FTF is measuring with the Family Caregiver Survey.
- Look into how Regional Needs and Assets surveys could augment the data available for addressing research questions at the regional level. Consider the intended audience(s) of programs and strategies.
- FTF should consider *speed* as well as quality in future evaluation studies.
- The creation of an integrated administrative database is particularly promising as a population database, and not only for FTF-funded programs. Emphasis on children with system involvement (i.e., foster kids, criminal justice, etc.) in association with support for children's outcomes.
- Build more tribal and local partners to help champion FTF's work.
- Increase FTF's focus on mental health and communities of special needs parents. Consider how to direct FTF resources to populations that need it most. Consolidate FTF's progress (including outcome data) in a 1-page statement, a value proposition, which can be leveraged as an argument for investing in FTF. Consider quality indicators not only from the perspective of empirically grounded evidence.
- Use your goldmine of data to test relations between inputs and outcomes and consider doing this with other partners; apply for grants to accomplish this work.
- When appropriate, focus on a few, key outcomes of the strategies discussed so that FTF can succinctly demonstrate the value of its investments for children and families.
- Consider ways to improve communication or technical assistance to address issues related to how diverse stakeholders perceive the usefulness of the data. Thus, enable regional council members to act as champions for FTF's work.



FIRST THINGS FIRST

AGENDA ITEM:

Status of FTF Performance Audit

BACKGROUND:

First Things First (FTF) is participating in a special audit being conducted by the Auditor General's office. The audit was requested by state Senator Andy Biggs after the Board's resolution opposing a plan he co-authored to divert FTF funds and change the mission of our agency. Ultimately, that proposal failed to be adopted by the Legislature.

First Things First receives a financial audit every year and is approaching this special audit in the same manner – as an opportunity to build on FTF's strengths and identify areas for improvement. It is also an opportunity to build awareness among policymakers of the early childhood research that informs our FTF's work and to highlight the impact FTF is having on young children in communities statewide.

First Things First Board Chair Janice Decker and the Executive Team met with the audit team to review the audit process. Since November the auditors have been working out of FTF to facilitate meetings, interviews, and information sharing. Their initial focus was learning more about early childhood and FTF generally and then moved into the next phase of the audit, field work which includes an examination in the areas that are part of the audit, including:

- FTF revenues and expenditures;
- Processes for soliciting, reviewing, approving and monitoring grant awards;
- Processes for evaluating the effectiveness and/or outcomes of funded programs;
- The cost and purpose of media and outreach efforts; and,
- Processes for identifying areas of duplication or opportunities for collaboration among programs funded by FTF and other state agencies and/or the educational system.

RECOMMENDATION:

No action required, presented for information purposes for the Committee.



FIRST THINGS FIRST

AGENDA ITEM:

Policy and Program Committee Purpose, Structure and Strategic Direction

BACKGROUND:

The purpose of the Policy and Program Committee is to assist the First Things First Board in fulfilling its oversight responsibilities relating to developing, implementing and monitoring early childhood development and health programs and to contribute to program development and assessment. The Committee's role includes:

1. Monitor staff's development of best practices under each of the Board system priorities identified through strategic planning;
2. Monitor results and evaluation of program activities and outcomes;
3. Review program standards to ensure they meet the highest quality;
4. Review statewide and regional programmatic strategy development and implementation; and
5. Coordinate closely with the Finance, Audit and Administration Committee to ensure alignment between programmatic and fiscal goals.

The Committee shall provide oversight of the following:

1. Exploration of program ideas and strategies at early stages and serve as a sounding board in assessing proposed plans;
2. Review areas of ongoing work in selected fields and program results, and advise on sensitive matters;
3. Review of proposed program budgets for each biennium;
4. Assessment of annual programmatic performance and guide the preparation of a report of the findings to the Board; and
5. Assurance that program policy goals are associated to statewide and regional partnership efforts.

Individual meetings were held with members of the Program Committee from February through April of this year. Key themes from individual discussions centered around 1) The structure, frequency of meetings and membership; 2) The need to focus on statewide policy and strategic direction with emphasis on alignment and collaboration; 3) The need to have outcomes and understand impact; and 4) Implementation of the strategies funded. Below are specific points that were raised under each of these four themes.

STRUCTURE, FREQUENCY OF MEETINGS, AND MEMBERSHIP:

- Willing to meet more often if the work of the Committee calls for more meetings; additional meetings to reach new areas of focus would be supported; don't want to meet to just meet;
- Look at ways to get input/feedback and review information using surveys or other mechanisms;
- Supportive of a sub-committee structure if the work of the Committee calls for having sub-committees;
- Open to extending the time of the meetings;
- Meetings are not frequent enough so don't always recall what the discussion was from previous meeting and how decisions or how identified areas are being followed upon or addressed;
- Different levels of knowledge on Committee so not everyone can or may feel comfortable participating in all agenda topics;
- Staff driven; want to be engaged and able to contribute;
- Appears to be issue based, not goal focused;
- Some feedback that Committee is a rubber stamp;
- Is health adequately represented, Medical expertise at the table;
- Diverse representation on the Committee; and
- Think about how regional council chair and vice chair forums and regional area forums can be a mechanism for bringing information forward.

FOCUS ON STATEWIDE POLICY STRATEGIC DIRECTION WITH EMPHASIS ON ALIGNMENT AND COLLABORATION:

- Move to leveraging and connecting; shaping and strengthening strategic partnerships;
- Need a strategic framework for statewide work and have to go beyond what we are funding to policy changes;
- Use School Readiness Indicators as a frame to develop strategic direction and where we can, align First Things First as an organization and the birth to five systems—how to work and focus on both;
- Bring together state agency partners – to build and strengthen collaboration and partnerships to advance the system;
- Look at structure to support deeper discussions in the goal areas and need a more rounded focus across each goal area—family support, children’s health and early learning;
- Lack of focus on policy and system change. Very program focused;
- Think about and integrate the national perspective and how Arizona is positioned;
- Arizona is diverse and there are state policies that “will hurt” children. Need to keep culture and language in forefront. Concerns about poverty and impact on children – equality and embracing culture and race.

FOCUS ON OUTCOMES AND IMPACT:

- Need to know money is spent efficiently and effectively and how First Things First is having an impact;
- Helpful to integrate the Research and Evaluation Advisory Panel with the Program Committee;
- Look at how information and data that is available can be pulled together to share aggregate level data by strategy, similar strategies, etc.
- How are we aligning work and efforts to the School Readiness Indicators.

FOCUS ON STRATEGY IMPLEMENTATION:

- Think about oversight of grant partners, is it enough/ too much, are we asking too much of grant partners; where can and should more support be provided;
- Do we have the right strategies and investments and what resources can be brought to the table to support capacity building;
- How are grant partners engaged across strategies and across goal areas to understand and learn about implementation, both successes and challenges, and what is needed to address these from a statewide perspective;
- How can First Things First be more nimble strategy by strategy to support replication, efficiencies and to measure impact;
- How do we know where to make change both statewide and regionally;
- Need to focus more on best practices;
- Arizona is diverse and there are state policies that “will hurt” children. Need to keep culture and language in forefront. Concerns about poverty and impact on children – equality and embracing culture and race.

The Program Committee will have an opportunity to review and discuss these themes, and discuss as a collective group the purpose, structure, and strategic discussion of the Committee going forward.

RECOMMENDATION:

No action required, presented for information and discussion purposes for the Committee.