



**Purpose:**

To improve the oral health status of an at-risk population; which integrates a cost effective delivery model that fully utilizes Public Health Dental Hygienists who hold a Public Health Dental Hygiene Endorsement (PHDHE) approved by the Nevada State Board of Dental Examiners (NSBDE). The program collaborates with our restorative dental partners and medical professionals, to increase access in oral health services with a focus on prevention in a school-based setting. Services are to be provided at established School-Based Health Centers (SBHC) or at schools that do not have a SBHC but want to integrate an oral health model into their school setting.

**Mission:**

The Mission of Future Smiles (FS) is to achieve optimum oral health in at-risk populations by increasing access to education and prevention of oral disease.

FS pursues alternative sources that increase access in oral health care for underserved, at-risk populations. All services provided by the program target low-income, at-risk children from birth to 18 years of age, and Medicaid enrollees. The program bills for Medicaid/CHIP services when appropriate. It is well documented that there is a broad disparity in oral health care available to at-risk children. Because of this disparity, FS targets at-risk children through the school environment. Any child or family unable to pay for oral health care will receive services at no cost.

**Vision:**

Our Vision is to decrease a child's pain and suffering from dental decay through education and prevention of oral disease at a convenient community based site like a School-Based Health Center for Education and Prevention of Oral Disease (EPOD), allowing the child to thrive physically, mentally and academically.

**Community Need:**

In Nevada, more than six out of ten (64.8%) third grade students have experienced tooth decay compared to the National average which is just over half (53%)<sup>1</sup>. It is well documented that children from low-income, racial/ethnic minority populations have a higher risk of developing tooth decay. The findings from the 2008 Nevada State Health Division's (NSHD) Basic Screening Survey (BSS) found that the oral disease rate in minority populations living in poverty is significantly higher at 78%, than non-minority children, reaffirming that oral health needs must be addressed in at-risk populations.<sup>1</sup>

The harsh reality of current economic times in Nevada has expanded and deepened the needs of Clark County's (Las Vegas, Nevada) underserved. Once a thriving metropolis, Las Vegas has been hit with one of the highest unemployment rates in the nation, resulting in families that are now uninsured and homeless. In the best of times Clark County had minimal medical, mental health and dental services available to address the needs of the uninsured/underserved population. Existing resources have been reduced or eliminated putting more children at risk. According to the Clark County School District (CCSD), over 50% of its students are eligible for the free and reduced meal program, representing 150,000 children living in poverty.<sup>2</sup> They also report Nevada ranks 45th in the nation in child homelessness.<sup>2</sup> Coupled with a growing minority population of English language learners and a high transient rate, CCSD faces many challenges when trying to improve its low graduation rate (68% in 2009).<sup>2</sup> When we look at Nevada's Health Rankings, the two factors that stand out are: 1) education - high rate of high school dropout, low educational level of citizens and 2) income - childhood poverty, lack of health care and a staggeringly high rate of homelessness.

In the Association of State and Territorial Dental Directors (ASTDD) publication on Best Practice Project, it states that, "There is a relationship between a child's health and academic performance." The document also quotes Former Surgeon General, Dr. Antonia Novello, "Health and education go hand in hand: one cannot exist without the other."<sup>3</sup> The U.S. Department of Education acknowledged that health problems and unhealthy



behaviors have a major effect on students' success. The most cost effective and influential way to address positive health behaviors for the community is to bring health services into at-risk schools<sup>4</sup>. It is critical for the community to intervene by providing cost effective access to health care that works with school administration to jointly impact the health of vulnerable children seeing them to graduation and thriving in life!

The purpose of the School-Based Health Center for Education and Prevention of Oral Disease (CDC), known as an EPOD, is to integrate cost effective preventive oral health services into schools with SBHCs. At schools that do not have a SBHC, the desire of FS is to start the early stages of a preventive oral health program. All preventive oral health services are provided by Future Smiles (FS), a non-profit organization with a mission to increase access to preventive oral health care in an at-risk population. At the drafting of this report, Clark County has seen three SBHCs close, leaving only four operational programs. Two of these sites collaborate with FS to integrate oral health into an existing medical model. FS has a 2011 goal to double its program outreach by operating 3 EPODs (1 full-time site and 2 part-time sites) and coordinating 10 community events at additional schools without a SBHC (4 school-based sealant events) and health fairs. All program outreach is tracked, evaluated and will be part of a 24 month longitudinal study conducted by Future Smiles (FS), Clark County School District (CCSD) and the Nevada State Health Division's Oral Health Program (NSHD OHP).

### **Current Activities:**

#### **School-Based Health Center for Education and Prevention of Oral Disease (SBHC-EPOD)**

FS has found that oral health care is a common community request in needs assessments.<sup>1</sup> At-risk schools typically are interested in providing an oral health program to its students but funding for building a School-Based Health Center (SBHC) can be a barrier. Our program has found a cost efficient system that operates with mobile/portable dental equipment in a dedicated classroom or in an unused modular to provide our oral health services. These services can be ongoing or episodic, depending upon the needs of the school. We refer to our set site facility as a School-Based Health Center for Education and Prevention of Oral Disease (SBHC-EPOD), the short title to be recognized as an EPOD. Our policy and system change goals from these efforts are to: 1) increase the number of schools that provide direct preventive oral health care; 2) increase the understanding of oral health through ongoing education to parents, children and school staff; and 3) show an increase in academic performance (evaluation) 24 months after program enrollment compared to baseline.

During the summer months of June-August 2011 FS will continue to provide part-time oral health care at the Cunningham Health Center (our first location) and will be organizing the new EPOD site at Clark High School. Through our community partnerships with the City of Las Vegas (CLV) and the Clark County School District (CCSD); FS has been awarded a 1,200 sq. ft. modular that is located on the high school campus but has a separate parking lot and building entrance. FS estimates that the remodel will be completed by the end of August 2011 allowing the program to open the EPOD and begin providing oral health services after school starts. The Clark EPOD will act as the program's main center to house supplies, dental equipment, business operation for administration, meeting space for program operations and community educational events.

Our third EPOD is located at Hollingsworth Elementary School (Figures 7-9) where the program is located inside the school and will be opened after schools starts in August. In our initial oral health screenings at Hollingsworth ES, FS found that 49% of the children screened had untreated dental decay. However we suspect that this percentage is low as the mean age of children screened at Hollingsworth ES was 6 years of age and the mean grade was 1<sup>st</sup> grade. As oral health professionals we asked ourselves, "How much oral decay would we find in the older populations at the school?" The EPOD will partner with the school administration to increase the number of positive consent forms from the families at the schools so that the program can provide oral health services to a larger school population.

Our 2011-2012 school year goals for the program will be to work with school administration to see 75% of the school enrollees and to support the community school model by providing oral health education to the parents. It is our intention to become an integral part of the school, a role model for the children and a safety net provider



making a difference in the lives and health of these children/families that benefit from the EPOD experience. FS works diligently to establish a dental home for all recipients, and as such, our program has a goal to provide routine care appointments. Routine care includes at least one preventive service such as oral health education, a dental cleaning, fluoride varnish/topical application, sealant application and retention check, which are provided not less than every 12 months and not more than every 6 months. These appointments are based on recipient availability and residency in Clark County.

**2011-2012 Goals Include:**

- 1,800 at-risk children shall receive an oral health screening with all data to be tracked and reported under the CDC software SEALS
- 1,800 children shall receive an oral health education experience
- 3,600 or more dental sealants shall be applied (CDC surface level data)
- 1,500 or more fluoride varnish/topical applications
- 500 dental cleanings (child prophylaxis)
- The Medicaid value for these services would equal \$190,800

**2011-2012 Program Locations and Timeline**

**Existing site location-20 hours per week**

Cunningham Health Center (set-site/EPOD)

Cynthia Cunningham Elementary

4145 Jimmy Durante Blvd.

Las Vegas, Nevada 89122

**July 2011 new site location-20 hours per week**

Ed W. Clark High School (EPOD)

4291 Pennwood Avenue

Las Vegas, Nevada 89102

**August 2011 new site location-20 hours per week**

Howard Hollingsworth Elementary (EPOD)

1776 East Ogden Avenue

Las Vegas, Nevada 89101

**School-Based Sealant Events**

**September-December 2011-20 hours per week till event completion:**

Fay Herron Elementary School (mobile/portable equipment)

2421 North Kenneth Way

North Las Vegas, NV 89030

J. Harold Brinley Middle School (mobile/portable equipment)

2480 Maverick Street

Las Vegas, NV 89108

**January-May 2012-20 hours per week till event completion:**

Virgin Valley Elementary School (mobile/portable equipment)

200 Woodbury Lane

Mesquite, NV 89207

Reynaldo Martinez Elementary School (mobile/portable equipment)

350 East Judson Avenue



North Las Vegas, Nevada 89030

**Community Health Fairs:**

These events are ongoing and are typically organized by the Southern Nevada Immunization and Health Coalition (SNIHC) and Shots 4 Tots. When invited to participate, FS will fax a statement to the Nevada State Board of Dental Examiners (NSBDE) regarding our attendance and event location. Community Health Fairs allow the program an opportunity to provide an oral health screening, oral health education and fluoride varnish application. All infection control CDC guidelines are adhered to at these events. Personal Protection Equipment (PPE) includes: masks, gloves, safety glasses, individual optic light (hands free equipment), disposable mouth mirror, gauze, counter disinfectant and etc.

**Current Funding:**

In the spring of 2011, FS received a start-up award of \$50,000 from United Way of Southern Nevada (UWSN). Recently, we were approved by UWSN for a second grant award of \$63,000, which will support the continuation of services into the fall of 2011. Through these awards our performance exceeded 100% of all program goals thus supporting 2011-2012 program expansion and an increase in services. It is our intention to establish a school-based model that incorporates an oral health component that other schools and/or states, can replicate to increase access to oral health care in at-risk children.

For 2011-12, funding of \$20,000 through the Clark County Public Education Foundation (CCPEF) and MGM Resorts Foundation has been received and will be utilized to provide dental cleaning, fluoride varnish and dental sealants for approximately 200 uninsured children in the Clark County. In 2010 the CCPEF generously supported FS with a grant award to purchase our first portable dental unit. Of the 1,772 children served by FS in 2010-2011 (Figures 1-3) we were specifically able to provide care to 345 children with the portable unit purchased through the CCPEF funding. Our treatment provided to these 345 children included: 1,435 dental sealants, 52 child cleanings and 345 fluoride varnish applications.

A private foundation award (\$100,000) has provided additional unrestricted funding to the program that will carry over to the 2011 all school year. To date, FS has applied for over \$500,000 in grants to benefit the 2011-2012 school years. Through school-based care our program effectively removes one of the greatest barriers, transportation, which typically prevents at-risk children from seeking health care.

**A Solution to Address the Oral Health Need:**

FS promotes working within the dental community to establish a dental home for at-risk children and their families by providing oral health education and direct dental services at SBHC, within the school setting and at community health fairs.

Our oral health services include:

- 1) Oral health screening with data collection
- 2) Dental cleaning (prophylaxis)
- 3) Fluoride varnish/topical application
- 4) Dental sealants
- 5) Communication with parent/guardian regarding oral health status and referral to a community dental provider for restorative dental needs ensuring that the child gets the care that they need

All services are provided to individuals who have been identified as attending schools with 50% or higher free and reduced lunch, uninsured/underserved, low-income and at-risk populations. No child in need is declined care through our program and all services are provided at no cost to the child or family. Our primary goal is to enhance our recipient's health and well-being, thereby improving their capacity to learn and succeed within the school environment now and in the future.



**Program Partners and Collaborations:**

FS strives to create long-lasting changes in the way people think and act regarding the value of oral health by bringing together strong partners committed to the prevention of oral health disease.

Our greatest strength is the ability to network with organizations that target the supportive needs of those who are less fortunate. One area where we have had great success is working with the CCSD's staff to identify children in oral pain. As a school-based provider, school counselors and teachers have brought these needy children to our door for immediate care. In addition, we have strong collaborative relationships that help us provide oral health services to children in need (oral pain) with the following organizations:

- 1) Title I HOPE-a homeless youth program.
- 2) Communities In School-SBHC sponsor at Cunningham ES.
- 3) City of Las Vegas-EPOD sponsor at Clark HS.
- 4) Project Smile-a program sponsored by the Clark County Public Education Foundation that supports dental care to low-income children.
- 5) UNLV School of Dental Medicine collaborates with FS to support a Clark County Dental Initiative to serve 13 at-risk schools (FS targets 7 of these schools) and to provide free Saturday dental clinics to serve children from the community including referrals from FS.
- 6) Huntridge Teen Clinic a dental home for uninsured teens.

Other professional collaborations include membership in the Community Coalition for Oral Health (CCOH), Southern Nevada Immunization and Health Coalition (SNIHC) and the Southern Nevada Dental Hygienists' Association (SNDHA), which have all resulted in each of these organizations supporting Future Smiles through program funding. To date FS has raised over \$195,000 dollars in grant dollars, dental product donations and leveraged resources. Our funding sources and in-kind donations have come from:

- 1) Center for Disease Control and Prevention (CDC)-utilization of data collection software Sealant Efficiency Assessment for Locals and States (SEALS) and technical support of *Best Practices* which tracks program outreach data
- 2) Clark County School District (CCSD)-utilization of the Cunningham Health Center
- 3) Dental Corporations-dental product donations (toothbrushes, toothpaste, floss, sealant material, fluoride varnish and etc.)
- 4) City of Las Vegas-EPOD sponsor at Clark High School
- 5) College of Southern Nevada-dental hygiene students volunteer at the school-based site
- 6) Communities in Schools (CIS)-community partner
- 7) Nevada State Board of Dental Examiners (NSBDE)-Public Health Dental Hygiene Endorsement (PHDHE)
- 8) Nevada State Health Division (NSHD)-funding and technical support
- 9) Oral Health America (OHA)- funding and dental product donations
- 10) Private Foundations- funding for program operations
- 11) Public Education Foundation- supported the purchase of new portable dental equipment
- 12) United Way of Southern Nevada (UWSN)- funding for program operations and donation of labor/supplies to remodel the "educational cottage" at Ed W. Clark High School new EPOD site

It takes everyone in the community working together to address the oral health needs of the children we serve.

**2010-2011 Program Evaluation:**

Since inception FS has served 1,772 at-risk children, of these children 546 were seen at the CIS' SBHC Cunningham Health Center (Figures 4-6). The remaining children were served at 4 other elementary schools (Figures 7-12), community events and health fairs (Figures 13-15). These activities have allowed FS to collect data for our current needs assessment. The data collected is staggering; identifying that 6 out of 10 children were found to have experienced tooth decay (oral disease). While the program services are available to all



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uninsured or Medicaid/CHIP children enrolled at the school (internal population) we also serve all needy children who come to our EPOD sites (external population). However, it is important to note that FS serves children through 18 years of age but our program data reveals that our mean age and grade served is 7 years of age and 2<sup>nd</sup> grade.

The following Program Outreach Graphs (Figures 1-3) show that 6 out of 10 children served were uninsured (2010-2011 64% uninsured) and that a quarter of the children experience oral pain on a daily basis (2010-2011 24% urgent cases). Furthermore, nearly half (2010-2011 43% untreated decay) of the children presented with untreated tooth decay. These children accept living with oral pain as a normal way of life!

All children, even those in good oral health, are referred for a comprehensive dental exam. The program works hard to assist families by scheduling urgent dental needs with a dental provider. As oral health professionals, we can attest to the fact that oral disease is progressive and cumulative in nature; it is responsible for pain, discomfort, poor school performance, poor nutrition, diminished self-esteem and if left untreated, the disease becomes more complex and difficult to manage.

In our 18-month delivery period, we have seen modest reductions in disease rates from 2009-2010 to 2010-2011 school year data collected (review graph percentages for urgent, caries experience and decay). We also have seen a rise in the number of children enrolled in Medicaid/CHIP participating in the program (23% in 2009-2010 to 36% in 2010-2011). These small improvements in the population's oral health substantiate the efforts of the EPOD and FS.

It is well documented that children from low-income, racial/ethnic minority populations have higher risk factors of living in poverty, as resources are less available.<sup>1</sup> Through our software program developed by the CDC, Sealant Efficiency Assessment for Locals and States (SEALS), all services and population demographics are evaluated and tracked. The attached graph (figure 3) shows our mean demographics, with highest percentage served being a 60% Hispanic population.

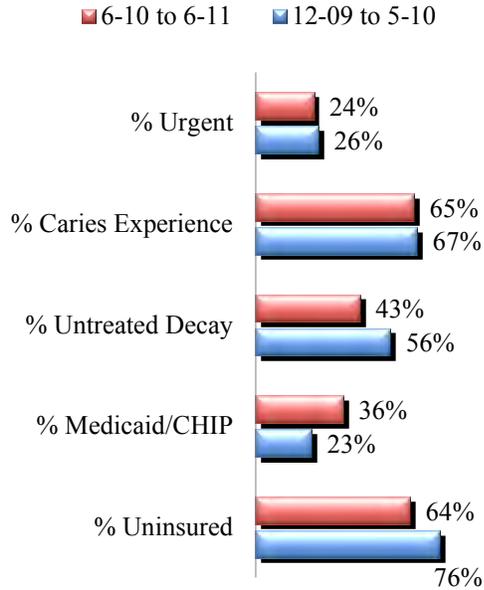
Additional data collected by FS reveals that our target population has a:

- Mean monthly household income well below Federal Poverty Level (FPL), at \$1,189.60
- Mean family members in the home are 4.4
- Mean parent education is 11<sup>th</sup> grade
- 50% are single parents

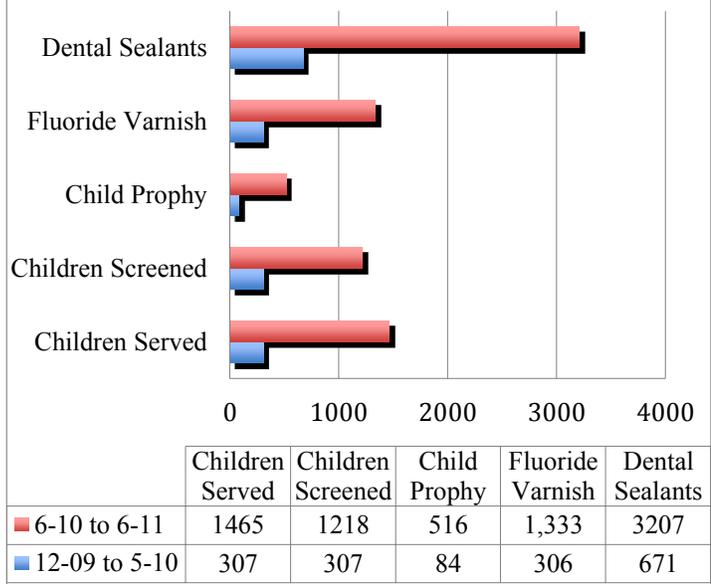
As you review the following graphs (Figures 1-15), note that our greatest concern is for the children attending Howard E. Hollingsworth ES (Figures 7-9), who were identified to have a 40% urgent dental need and 49% untreated decay. This is to say, that 4 out of 10 children screened live with daily dental pain and half of the children have untreated tooth decay (dental disease). These findings created the catalyst to establish an internal EPOD, staffed by FS, at the school to integrate preventive oral health services on a daily basis in the school environment. FS will work diligently with the school staff, parents and community to address the restorative needs of this target population and is in discussions with the UNLV School of Dental Medicine (SDM) to collaborate by working towards integrating a community rotation to bring the dental students into the EPOD at Hollingsworth. It is the program's desire to see that the data from Hollingsworth ES improves in 2012 as we have seen during the service time of 2009-2011 at Cunningham ES.

2009-2011 Combined Program Data

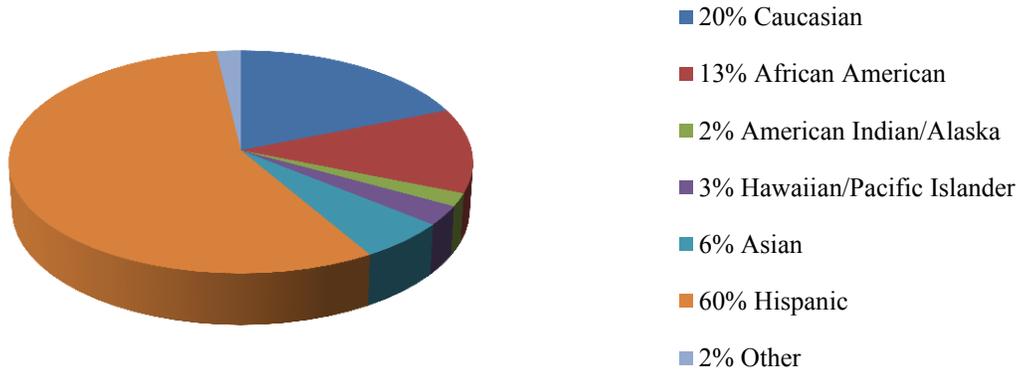
**Figure 1: Summary of Combined Program High-Risk Populations**



**Figure 2: Summary of Combined Program Outreach**

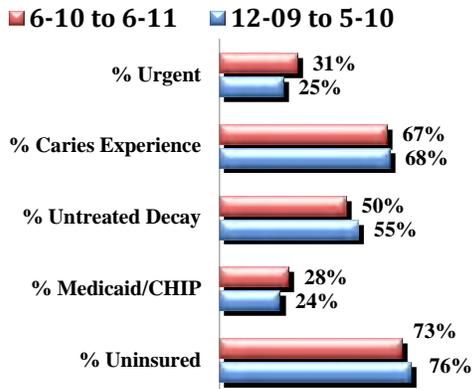


**Figure 3: Summary of Combined Program Demographics**

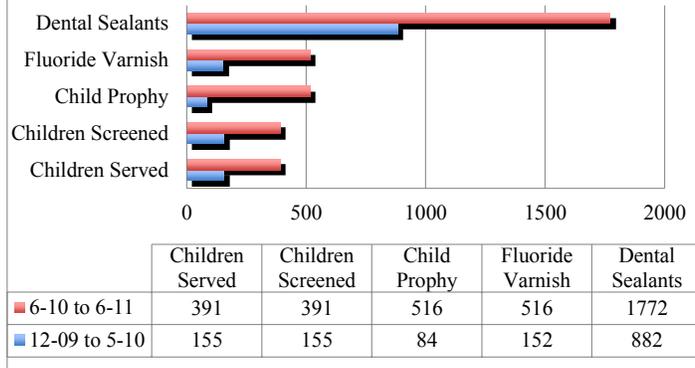


**2009-2011 Data for Cunningham Health Center at Cynthia W. Cunningham ES**

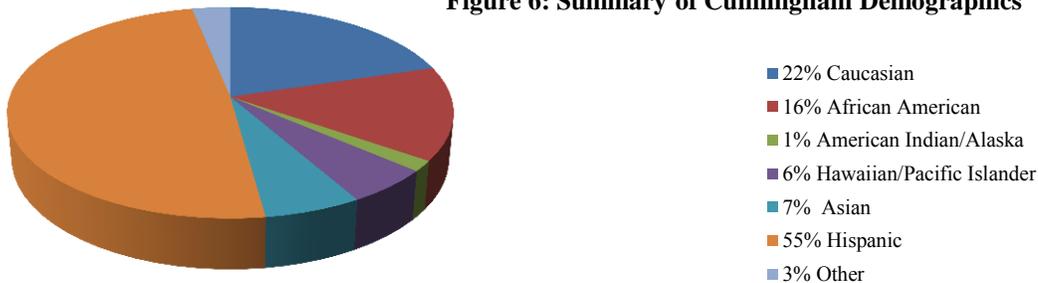
**Figure 4: Summary of Cunningham High-Risk Populations**



**Figure 5: Summary of Cunningham Outreach**

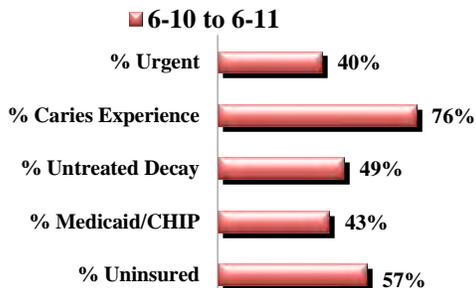


**Figure 6: Summary of Cunningham Demographics**

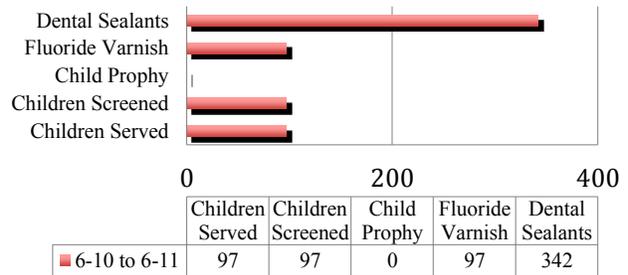


**2010-2011 Data for Howard E. Hollingsworth ES**

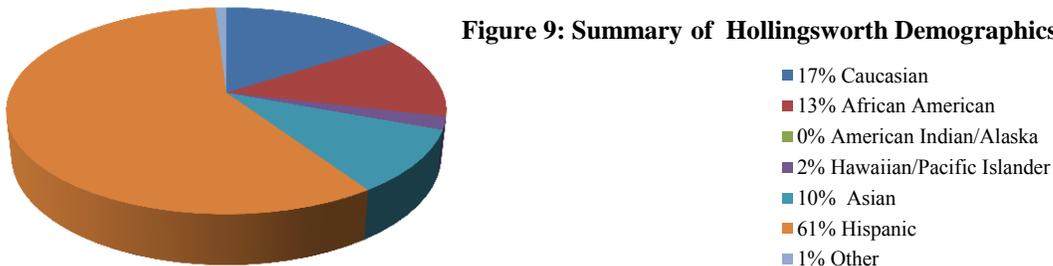
**Figure 7: Summary of Hollingsworth High-Risk Populations**



**Figure 8: Summary of Hollingsworth Outreach**

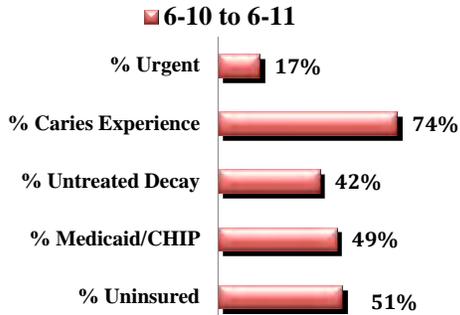


**Figure 9: Summary of Hollingsworth Demographics**

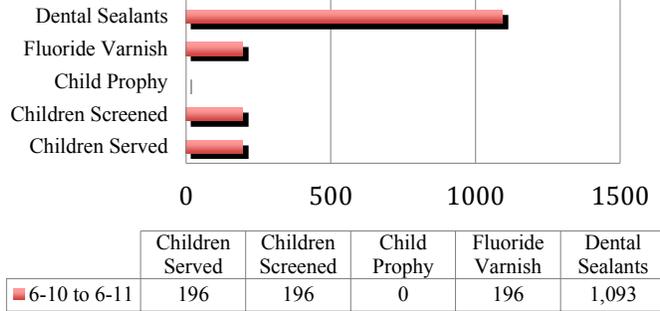


**2010-2011 Data for Reynaldo Martinez ES**

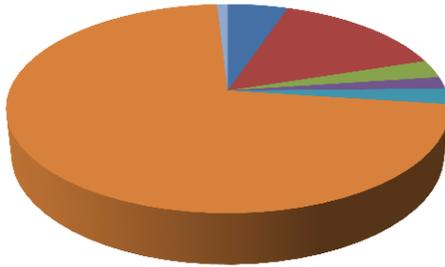
**Figure 10: Summary of Martinez High-Risk Populations**



**Figure 11: Summary of Martinez Outreach**



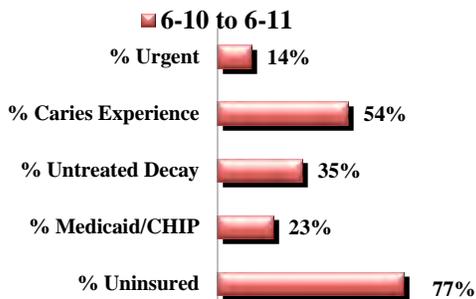
**Figure 12: Summary of Martinez Demographics**



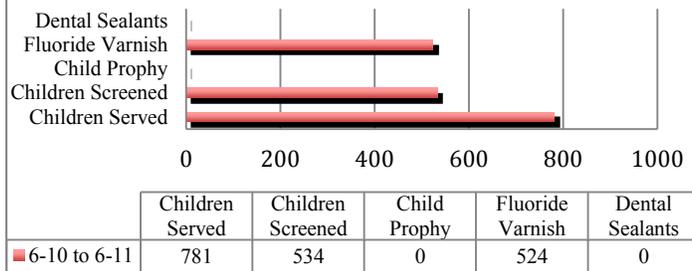
- 17% Caucasian
- 16% African American
- 3% American Indian/Alaska
- 2% Hawaiian/Pacific Islander
- 3% Asian
- 78% Hispanic
- 1% Other

**2010-2011 Data for Combined Community Events, Health Fairs and Presentations**

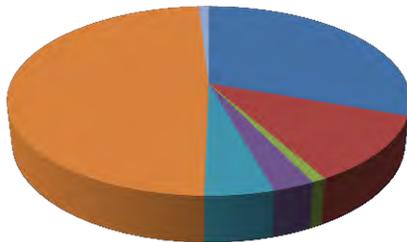
**Figure 13: Summary of Community Events High-Risk Populations**



**Figure 14: Summary of Community Events Outreach**



**Figure 15: Summary of Community Events Demographics**



- 32% Caucasian
- 12% African American
- 1% American Indian/Alaska
- 3% Hawaiian/Pacific Islander
- 5% Asian
- 51% Hispanic
- 1% Other



**REFERENCES**

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3. Association of State of State and Territorial Dental Directors.2010. Best Practice Approach: Improving Children's Oral Health Through Coordinated School Health Programs. Sparks, NV: Association of State and Territorial Dental Directors. <http://www.astdd.org/improving-childrens-oral-health-through-coordinated-school-health-programs-introduction/>
4. U.S. Department of Health and Human Services. Healthy People 2010, 2nd ed. with Understanding and Improving Health and Objectives for Improving Health. 2 vols. Washington, DC: U.S. Government Printing Office; November 2000