

# Dental Health and Academic Success

by Dr. Lauren Governale, D.M.D., M.P.H.

In 2005, the Naples Children and Education Foundation (NCEF) trustees commissioned an assessment of the needs of children in Collier County. This study proved to be a comprehensive overview of the status of child well-being in this community, and identified several significant gaps in basic services of Collier County children. The study determined that dental needs for at-risk children in Collier County were among the most significant needs for this population. In fact, NCEF identified that there was a “pediatric oral health crisis” in the county.

At the time, the NCEF sponsored “Study of Well Being in Collier County” determined that 31 percent of Collier County children lacked adequate care. Low income children were suffering from tooth decay and there were not enough dentists to treat them. There

were many Medicaid-eligible children who had not received any dental care, and the utilization rates were very low for ethnic or racial minority Medicaid-eligible children. Dental examinations performed on all students in one high poverty elementary school by the Ronald McDonald Care Mobile showed a staggering 68 percent of children had one or more cavities (the average number was 4.5), and 18 percent needed to be referred for immediate dental care.

NCEF extensively leveraged resources and collaborated with community-based and academic leaders to serve as a model for other communities nationwide. The University of Florida College of Dentistry proposed a world-class program to close the gaps in oral health and improve access to dental services for at-risk children in Collier County. With almost \$6 million

in support from NCEF, several strategic partners, including the University of Florida, the Healthcare Network of Southwest Florida and its Ronald McDonald Care Mobile, Edison State College, Physicians Regional Healthcare System, Lee Memorial Health System, as well as members of the Collier County Dental Association, worked together to form a public-private partnership and successfully designed a program to improve the lives of Collier County children. In an effort to increase clinical capacity, a 20,000 square-foot facility was built, creating the NCEF Pediatric Dental Center located on the Collier Campus of Edison State College.

The center opened in December 2008 with 17 operatories and includes two sedation suites. The center hosts one of the most advanced pediatric dentistry



A Patient at the Pediatric Dental Center

Photo by Tom Harper



Dr. Dolan at the NCEF Meet the Kids Day 2009

Photo by Heather Donlan

residency programs in the country, which involves a two-year training program for pediatric dentists and is a model for a high level of dental healthcare. The program started with three pediatric dental residents, and now includes eight residents. All of the graduates to-date have successfully completed national board exams. The center has completed over 40,000 patient visits to-date.

The residents are faced daily with the difficult challenge of providing dental care to some very complex cases. The vast majority of the patients at the NCEF Pediatric Dental Center are economically disadvantaged, represent diverse ethnicities, and many suffer from severe dental decay. The national prevalence of dental caries in primary teeth of children aged 2-4 years of age increased from 18 percent in 1988-1994 to 24 percent in 1999-2004.<sup>2</sup> This increasing trend in dental caries is definitely evident at the NCEF Pediatric Dental Center. The dental cases found at the center are among the worst that many of our experienced faculty members have ever seen, particularly the rampant disease in children under age five.

It is not unusual to have a two-year-old with multiple dental abscesses which can cause pain, swelling, lost school days, loss of self-esteem and in rare cases, even death. The residents work diligently every day to manage the damaging consequences of dental decay for these children, both non-pharmacologically and pharmacologically.

One of the clinical goals of the program was to deliver advanced care and specialty services such as sedation and hospital-based pediatric dentistry to meet the severe needs of the population. It is not uncommon for toddlers and even older children to require oral sedation, IV sedation or general anesthesia in order to provide the scope of care needed to improve their oral health. The ability to provide IV sedations is truly a unique service we are able to offer our patients, and it provides a comfortable environment for our very young and special-needs patients. There are very few facilities in the country that are able to provide this service to underserved children. The clinic has been extremely fortunate to partner with Physicians Regional Medical Center – Collier Boulevard and

HealthPark Medical Center to provide dental rehabilitations under general anesthesia in their operating room for patients as well.

While not often thought of as a health crisis, severe medical complications resulting from minimal oral health care and treatment can be extremely dangerous and even fatal in severe cases.

Oral health has been well established as a fundamental component of general health. According to C. Everett Koop, former U.S. Surgeon General, "You are not healthy without good oral health." Dental caries is the most common childhood chronic disease, and evidence shows that increases in missed school time caused by chronic illnesses can lead to declines in school performance.<sup>1</sup>

In fact one study showed that children with poor oral and general health were 2.3 times more likely to perform poorly in school than were those with good oral and general health.<sup>1</sup>

Dental health plays a key role in the quality of life for children, and it also affects child development and growth.



Good dental health enhances the child's ability to develop several physical and social functions such as feeding, speaking, smiling and social adaptation. Consequences of dental diseases in children may include pain, discomfort, embarrassment, challenged cognitive development, reduced self-esteem, and impairments of daily life activities. Severe caries in young children is associated with underweight, poor growth, irritability, higher risk of hospitalization, disturbed sleeping and diminished learning ability.<sup>2</sup> Children with dental problems are not healthy and may be at a disadvantage with regard to social, physiological, and mental development.<sup>3</sup>

It is important to consider the gravity of the effects on school attendance with school performance. School absences caused by dental pain or infection were significantly related to parents' reports of poor school performance, whereas school absences for routine dental care were not. This is evidence that children experiencing pain or infection may have a diminished educational experience

because their discomfort may inhibit their ability to perform well while at school.<sup>1</sup> Poor oral health status was associated with increased parental report of low child school grades.<sup>1</sup>

Another study also found that children with poor oral health are more likely to experience pain or infection and that may have a negative impact on school attendance.<sup>1</sup> Missed school days due to dental problems have adverse implications for children. The problem

***"You are not healthy without good oral health."***

of school absence is important because it can affect children's quality of life in terms of missing academic learning.<sup>3</sup> Poor oral health detracts from the ability to perform well whether present in school or studying at home.<sup>1</sup>

Another study showed that evidence suggests that individuals with oral diseases and from lower socioeconomic backgrounds are more likely than their

counterparts to report poor oral health. The same may be true for children's school performance.<sup>3</sup>

In summary, several studies show that a child with poor oral health is at an increased risk of having a diminished educational experience.

Since poorer dental health is significantly associated with reduced school performance, the importance of preventing and treating child dental problems should be a high priority.

There will be direct clinical effects such as reduction of dental pain and improving dental functioning, as well as for the likely extended benefits of child educational achievement.<sup>2</sup>

Several studies have found that preventing and treating dental problems and improving dental health may benefit child academic achievement and act as a vehicle to improve their educational experience.<sup>2</sup>

NCEF supported a 2010 update of their



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**Early Childhood Caries**

2005 needs assessment which sustained the need to continue to support dental care for Collier County's children. Fortunately, this item remains a high priority target for the trustees of the Naples Children and Education Foundation. NCEF has raised \$107 million at the Naples Winter Wine Festival since 2001 to create and expand charitable programs serving underprivileged and at-risk children in Collier County. Their investments have improved the lives of more than 150,000

children and positively impacted 35 non-profit agencies. 

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Governale is Board Certified in the specialty of pediatric dentistry. Dr. Governale worked as an attending pediatric dentist at Miami Children's Hospital and in a private practice prior to taking the position at the NCEF Pediatric Dental Center.

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