



INSTITUTE FOR  
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2011

whitepaper

2011 conference  
**Prevention**  
Rebranding the Profession



**October 27 & 28, 2011**  
**Chicago, Illinois**

**:: whitepaper excerpt ::**  
**Jessica Y. Lee, DDS, MPH, PhD**

*“Building a future based on prevention would give us the win-win situation we are all looking for. It would decrease costs and increase quality of care. I believe that’s the only hope we have of moving forward.”*

*--Dr. John Luther*

As caries rates reach epidemic proportions in children across America, and millions of people have unmet dental needs, the dental profession faces a greater challenge than ever before. To improve oral health nationwide, the goals are changing from finding better ways to manage disease to imperatives of preventing disease. Toward that end, the Institute for Oral Health (IOH) dedicated 2011 to the theme of prevention, exploring evidence-based best practices and innovative models of care that are advancing disease prevention and early intervention.

In October 2011, the IOH hosted our fifth national conference in Chicago, Illinois on **“Prevention: Rebranding the Profession.”** The event spotlighted impressive steps forward in risk assessment, reducing early childhood caries, integration with primary care, new dental roles and effective collaborations to advance prevention, as well as guiding principles for longevity from the world’s healthiest cultures. The conference welcomed guest speakers from across dentistry, medicine, dental benefits, health policy, and the American Dental Association (ADA).

Key prevention strategies discussed at the conference included:

- **Risk assessment and early disease detection** – Many experts agree that prevention in oral health needs to include a framework centered on caries risk assessment. One progressive approach is an assessment form that reduces the dental office burden by engaging patients to self-assess, and providing choices for treatment strategies that best fit patient needs and willingness to adopt healthier behaviors. Additionally, innovations in salivary diagnostics may soon make it possible for dental teams to conduct quick, scientifically accurate chairside tests to detect the presence of an array of diseases within minutes.
- **Preventive dental visits by age one** – Studies confirm that children who receive their first preventive dental services by age one have lower incidence of caries over time and require fewer hospital visits for restorative care. As a result, these early visits dramatically reduce the cost of care. Reaching parents early also helps them understand oral health milestones and increases continued usage of dental services to prevent early childhood caries.
- **Socially-relevant behavior modification** – An innovative model has been introduced that provides an interactive, visually appealing mobile application that community health workers can use to engage parents in childhood caries risk assessment and oral health education. Using simple, culturally relevant language and nutrition references, the system helps guide low-income, low-literacy minority families toward adopting healthier behaviors that help reduce and prevent caries.
- **New dental roles to increase access to preventive services** – New training programs are underway that establish a new dental team member, the Dental Therapist. Skilled in basic dental services, oral health counseling, and practice management, the Dental Therapist helps increase practice capacity for basic oral exams, risk assessments, and preventive

services, and works closely with families to help them understand ways to maintain good oral health and reduce tooth decay. Another program underway is the ADA-sponsored training for Community Dental Health Coordinators (CDHCs). Supporting the low-income communities in which they live, CDHCs serve as a trusted resource to provide culturally-sensitive oral health education, coordinate access to dental care, and perform basic dental services and risk assessments for families in public health settings.

- **Engaging primary care providers in oral health** – As family physicians and pediatricians have more frequent access to young children, these primary care providers are increasingly taking advantage of oral health training programs to help reduce early childhood caries. Providing basic oral screenings, fluoride varnish, and oral health education, they help families understand the connections between oral health and overall health, and the importance of starting dental prevention early to reduce caries risk over time.

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## Stay up to date on 2012 Institute for Oral Health events

Our 2012 theme is “The Evolution of Oral Health Care Delivery.” Throughout the year, the Institute for Oral Health will host focus groups with industry experts, participate in national oral health events, and convene our **6th annual national conference on October 4 & 5, 2012 in Boston, Massachusetts**. Keep up with the latest news and findings through our website ([IOHWA.ORG](http://IOHWA.ORG)), whitepapers, quarterly newsletter, and Facebook fan page. Additionally, check out the latest advances in oral health care on our site’s special section “Innovation Central.”

## About the Institute for Oral Health

The Institute for Oral Health is dedicated to improving oral health in America by bridging the gap between research and everyday dental practice. Serving as a central resource for education and collaboration, IOH brings together nationally recognized experts to focus on important themes of concern in oral health care today, and works to promote innovation and adoption of progressive treatment guidelines, dental plans, and delivery methods.

## learn more

Web: [IOHWA.ORG](http://IOHWA.ORG)



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## The Effects of Early Preventive Visits on Use, Costs and Oral Health Status

When we focus on prevention in dentistry, a prevalent theme is cost: the more preventive services we provide, the more we potentially reduce costs downstream. Yet it would seem we may need more data to prove the value of prevention to build buy-in across an industry traditionally centered on revenue through restoration. At the 2011 Institute for Oral Health conference, Dr. Jessica Lee, a pediatric dentist and health services researcher, provided valuable evidence on how early preventive care substantially reduces Early Childhood Caries and associated costs.

*The first dentist to receive a presidential commendation for science and engineering, Dr. Lee was celebrated for her progressive work in early childhood caries.*

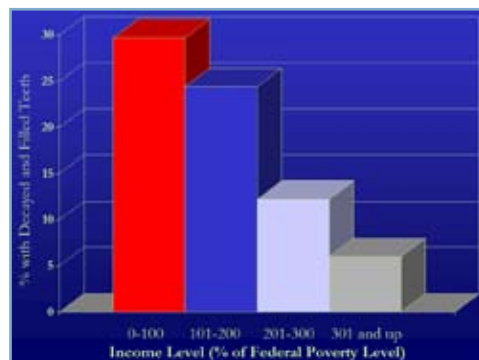
*"Most amazing is that the White House recognized oral health as one of the most important areas of research. That's a major step forward for our profession."*

*—Dr. Jessica Lee*

### The Impact of Early Childhood Caries

#### A look at the prevalence

Dr. Lee began with the end in mind: "Preventive visits work; they do reduce costs. But they have to start early." In every socio-economic status and every race category, the prevalence of caries continues to increase in young children. Even with fluoridated water in many communities and reasonable reimbursement rates for delivering preventive services, NHANES reports that 41% of children age two to eleven have dental caries. Furthermore, in low-income families, nearly 30% of preschool children have treated and untreated tooth decay.



#### Understanding the consequences

In addition to the oral health impacts, early childhood caries introduces a host of other problems that influence a child's physical, mental, and social development. The pain and discomfort of tooth decay and oral infection often affect eating habits, so a child's nutrition suffers, and they often experience learning and sleep disorders.

*"We want children to have routine dental care, and missing school for dental visits is not affecting their school performance. But kids who miss school due to dental pain are also reporting more C's and D's because their poor oral health is affecting their ability to do well in school!"*

*—Dr. Jessica Lee*

Additionally, both children and parents are negatively impacted by lost hours away from school and work, a burden significantly more severe for low-income, minority, non-insured families. Dr. Lee highlighted that while a common statistic refers to 51 million hours of lost school time, it is important to distinguish between time lost due to dental visits versus dental pain and infection. Although a recent study by the American Journal of Public Health showed that the majority of missed school time was for routine dental visits, 17% of children were out due to dental problems, and those children tended to perform more poorly in school. Another study noted that nearly one quarter of all kindergarten to third grade children have experienced dental pain, and over one-third of kids in grades 4-12 have had dental problems. These are alarming statistics when we consider the bigger picture impact on school performance and overall health.

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*"When you take a kid to the operating room, you escalate the treatment costs about 50-fold. The bill is about \$2,000 - \$5,000 for the hospital costs alone. Avoid one of these, and it has tremendous cost savings."*

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*—Dr. Jessica Lee*  
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A further concern with Early Childhood Caries (ECC) is that treatment for young children is considerably more complex and expensive, often requiring general anesthesia or sedation. Because the operating room costs for treating ECC are often captured in medical claims, carriers and even dental providers may not recognize the impact. As an example, studies show that from 1997-2002, dental surgery visits increased nearly 50%, most notably in children age three and four, which typically raised the cost of care to \$2,000 - \$5,000 for each procedure. As these were "avoidable hospitalizations," this data demonstrates a need for much stronger focus on preventive care for children.

## **The Solution: Early preventive dental visits**

### **Start with educating parents**

A key factor in reversing the trends in ECC and related rising costs is early preventive visits –and that starts with helping parents understand the overall impacts on health and child development, as well as the cost savings that come from prevention. Dental providers and community caregivers need to invest time in counseling parents on important age-specific milestones for dental care, and practical ways to maintain good oral health. Dr. Lee emphasized that while pediatricians typically advise parents on key milestones for child care, dentists rarely do. As a result, families have little or no guidance on the changing oral health needs of their children and how to avoid problems that bring so many costly consequences.

By providing this guidance at the earliest opportunity, parents have a better chance of adopting healthy behaviors that reduce ECC and promote better long term health. As new parents are often receptive to learning best practices for child care, it is an ideal time for dental providers to emphasize oral health care. Given babies love to put things in their mouths, parents should get them used to a toothbrush as well.

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*"Countless moms have told me, 'No one told me baby teeth are important or that babies get cavities. No one told me my kid might do poorly in school. If you tell me I need to brush my child's teeth, I'll do it.'"*

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*—Dr. Jessica Lee*  
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## Motivate regular dental visits

An important benefit of early preventive dental visits is that they introduce healthy behaviors to children (and their parents) at the earliest stages of child development. Maintaining good oral health and seeing the dentist on a regular basis are key to reducing ECC, and Dr. Lee's study showed that children who had seen a dentist by age one were more likely to continue seeking preventive services, needed less restorative care, and had fewer dental-related emergency visits than children who first saw a dentist much later. Sadly, the study cited that among a sample of 9,000 children, only 23 had visited a dentist by age one, and less than 9% had seen a dentist by age five.

## The impact on costs

Recent Medicaid data estimates the U.S. spends over \$93 billion each year on treatment to restore tooth decay, with over one-third of that cost spent on children. Another \$53 million is spent on hospitalizations for dental-related treatment –most of which is preventable. Removing even a fraction of the children who require dental surgery could result in substantial cost savings.

In years of research to prove the power of early preventive dental care on reducing ECC, Dr. Lee has also focused on how early preventive visits reduce treatment costs across high-risk populations. Some important highlights include:

- **First preventive visit by age one reduces costs** – Among high-risk children who had their first preventive visit by age one, dental costs were on average dramatically lower (~\$260) than for kids who first saw the dentist at age 4-5 (~\$550). Dr. Lee emphasized that these findings factor in both dental claims data and hospital costs found in medical claims, as this combination provides a more realistic picture of the total costs.
- **Early preventive visit reduce caries** – Based on dental claims data, compared with children who received no preventive services, children who had four or more preventive visits had a 13% reduction in caries for anterior teeth (incisors and canines), and over 17% fewer cavities in back teeth. This represents considerable cost savings in the dental costs alone; it does not factor in the major savings from hospitalization avoided through ECC prevention.

## Improving long term health status

An additional focal point in Dr. Lee's research has been to estimate the effect of early preventive dental visits on a child's oral health over time. A study of children entering kindergarten tracked differences in those who had received their first preventive services by ages 2, 3, 4, and 5, as well as kids who had never seen a dentist by age 5. This latter population is the greatest concern: 62% of these kids had some dental disease when they started school. These children were over three times more likely to develop caries than those who had received preventive care by age two.

While the study noted even a high incidence of caries in children who had early preventive dental visits, their oral health improved with regular care. The kids who had never seen a dentist had over 50% more untreated tooth decay, which is especially dangerous when we consider the impacts on long term oral health, overall health, and a child's intellectual and social development.

## Early prevention as a cost-saving strategy

Overall these studies demonstrate an urgent need to educate parents on ways to maintain good oral health in their children from infancy, and the importance of seeing a dentist by

age one and frequently thereafter. This “anticipatory guidance” to motivate early preventive dental visits is imperative to any strategy aimed at reducing the cost of dental care. Because treating early childhood caries often requires the added expense and complexity of hospitalization, those medical costs must be considered in overall dental costs. Add to that the fact that many hospitals face scheduling backlogs, forcing children to wait six to eight months before receiving restorative dental care. The result is a costly line up at the emergency room of kids in severe pain. Studies show that when high-risk children increased their dental visits to every three to four months, dental-related hospital costs dropped dramatically as the need for oral surgery diminished.

While many general dentists may be reluctant to see children as they lack the training to perform complex restorative care on kids, these providers are well trained in preventive services and often know the families. Our nation needs these dentists to open up their practice to encourage parents to bring kids in early, and help promote prevention-oriented behaviors that set the stage for a lifetime of cost-effective oral health.

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*“Getting kids to a dentist early and frequently reduces costs. But you need to factor in medical costs as well. If you believe in better health outcomes, and keeping kids out of the operating room, that’s where the cost savings will come.”*

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*–Dr. Jessica Lee*  
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