

# It Shouldn't Hurt to Be a Child

## *Preventing Early Childhood Caries (ECC)*



**E**arly childhood caries (ECC) is highly prevalent, can progress rapidly, may cause toothaches, and may have an impact on a child's health and well-being. ECC is a serious public health problem.

## What Is ECC and Who Is at Risk?

ECC is dental caries in children under age 6.<sup>1</sup>

ECC, despite the availability of a variety of preventive and treatment strategies, remains a serious and prevalent childhood disease, especially among the most socially disadvantaged.<sup>2</sup>

Among children ages 2–5, approximately 23 percent have ECC, and 10 percent have untreated ECC in their primary teeth.<sup>1</sup>

In 1999 to 2004, the mean number of decayed and filled dental surfaces was more than three times higher among children ages 2–5 living in households below 200 percent of the federal poverty level than among children in this age range living in higher-income households, and significant disparity persisted in 2011 to 2012.<sup>1</sup>

American Indian children have the highest rate of ECC of any population group within the United States.<sup>3</sup>

Increased maternal salivary bacteria levels of mutans streptococci and lactobacilli, which contribute to dental caries, are associated with transmission of these bacteria to children and predict increased ECC rate occurrence.<sup>4</sup>



## What Are the Costs of ECC?

ECC has a tremendous but often invisible impact on society and the health care system.<sup>5</sup>

Traditional epidemiologic measures such as the decayed, missing, filled teeth index do not adequately portray the effects of ECC on children, families, society, and the health care system.<sup>5</sup>

Many young children endure needless pain and suffering as a result of early childhood caries.<sup>3</sup>

Treatment of ECC is expensive, often requiring extensive restorative treatment and extraction of teeth at an early age.<sup>6</sup>



In addition to the expenses of restorative treatment and extractions, general anesthesia or deep sedation may be required to treat ECC, because young children lack the ability to cope with the procedures.<sup>6</sup>

## How Can ECC Risk Be Reduced?

With increased enrollment in children's dental insurance, federal and state policymakers and insurance programs would be wise to invest more in ECC prevention and disease management to reduce disease and treatment costs.<sup>7</sup>

Existing effective management strategies for ECC include caries risk assessment, brushing with fluoridated toothpaste, fluoride varnish applications, and certain behavioral interventions that affect preventive self-care practices.<sup>8</sup>

Professionally applied fluoride is most effective when applied to the teeth before dental caries develops.<sup>9</sup>

Fluoride varnish applied in primary health care settings decreases caries experience, especially if applied frequently and close to tooth eruption.<sup>2</sup>

Oral health professionals need to determine the reasons parents seek oral health care for their children in emergency departments and ambulatory surgery facilities and to implement effective strategies for preventing ECC to reduce parents' need to seek care for their children in these settings.<sup>10</sup>

Creative interventions that facilitate behavioral change are needed to promote positive health practices among parents of young children to lower the risk for ECC in children.<sup>11</sup>

Preventive oral health services provided by non-oral-health professionals are associated with a reduction in ECC experience in children. Efforts to promote the provision of preventive oral health services in non-oral-health settings should continue.<sup>12</sup>



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