



Oral Health Community Health Worker (CHW) Training





Acknowledgements

The manual was written by Coordinated Oral Health Promotion (CO-OP) Chicago, directed by Dr. Molly Martin, principal investigator, in the Department of Pediatrics and the Institute for Health Research and Policy of the University of Illinois at Chicago. This manual was produced with support from the National Institute of Dental and Craniofacial Research of the National Institutes of Health (Grant No. UH2DE025483). The oral health content was initially designed and organized by William Frese, MD, MPH. The overall design, introduction, formatting, and organization of the manual was provided by Molly Martin, MD, MAPP. Catherine Napolitano provided design support and Anna Sandoval served as the project manager.

Martin, Molly A., Frese, William, Sandoval, Anna, Napolitano, Catherine, and Coordinated Oral Health Promotion (CO-OP) Chicago. Community Health Worker Training Manual: Oral Health Facilitator Manual. Chicago: Institute for Health Research & Policy, University of Illinois at Chicago; 2017.





Initial Reflections





National Caries Prevalence

Most common chronic disease affecting US children

- 5 times more common than asthma.
- 7 times more common than hay fever

Nationally

- 37% of U.S. children ages 2-8 years have caries
 - 14% have untreated dental disease
 - Prevalence in preschool children, 0-3 years, continues to increase

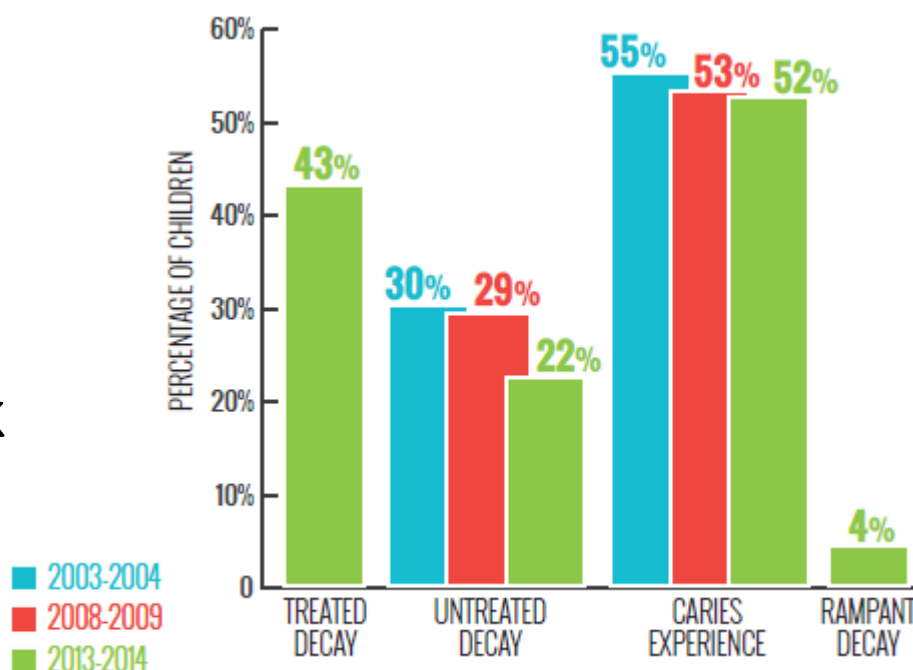
Source: NHANES; 2011-2012. <http://www.cdc.gov/nchs/data/databriefs/db191.htm>



Oral Health in Illinois

Dental caries in 3rd graders:

- 52% in Illinois
- 51% in Chicago
- 62% in suburban Cook County
- 22% untreated

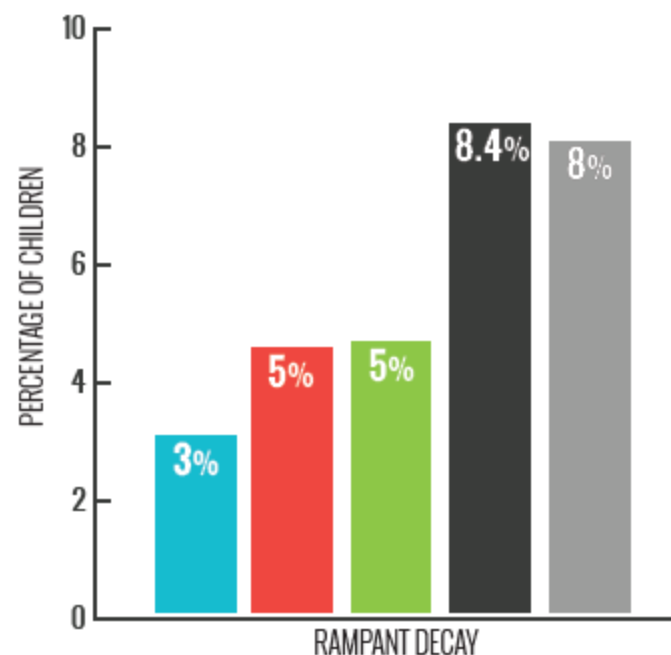


Healthy Smiles, Health Growth 2013-2014: Assessing the Oral Health Status and Body Mass Index of Third Grade Children in Illinois

Oral Health in Illinois

Dental caries in 3rd graders:

- 58% in Latino
- 55% in Asian
- 54% in African American
- 47% in White children



Rampant decay = 7 or more teeth untreated

Healthy Smiles, Health Growth 2013-2014: Assessing the Oral Health Status and Body Mass Index of Third Grade Children in Illinois



What is a “Health Disparity”





How can health disparities be fixed?

Who is going to do it?

- Only 33% of children enrolled in Medicaid/SCHIP utilize oral healthcare services
- The number of Medicaid children who utilize services highest among aged 4-5 years, & lowest among aged 0 to 3 years
- 84% of dentists in Illinois are located in only 3 of its 102 Illinois counties
- Only 1 in 4 dentists in Illinois is a registered Medicaid provider
 - Most offices that are registered Medicaid providers see hardly any Medicaid patients (less than 4 patients)

Illinois Department of Public Health. Illinois Dental Workforce Census Report 2006. Pp. 4.
http://www.idph.state.il.us/HealthWellness/oralhlth/Dental_Workforce_Census2006_09.pdf
<http://oralhealthillinois.org/data-and-maps/publicly-funded-services/participating-dentists/>



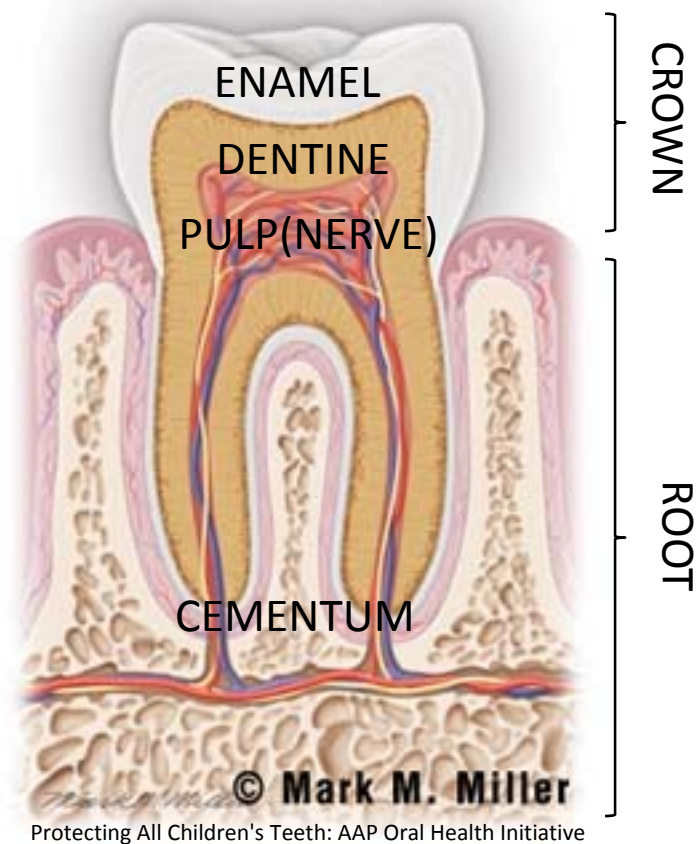
YOU are going to fix oral health disparities!



Molly Martin, MD, MAPP

Community health workers at Centro Comunitario Juan Diego, Chicago, IL

What is a tooth?



What is a cavity?



Used with permission from Miller Medical Illustration & Design
Protecting All Children's Teeth: AAP Oral Health Initiative

Early Childhood Caries (ECC)

- **Early Childhood Caries (ECC)**
 - The presence of ≥ 1 *decayed, missing* (due to caries), or *filled* tooth surfaces in the primary tooth in a child < 5 years old
- **Severe Early Childhood Caries (S-ECC)**
 - Extensive decay in children < 3 years



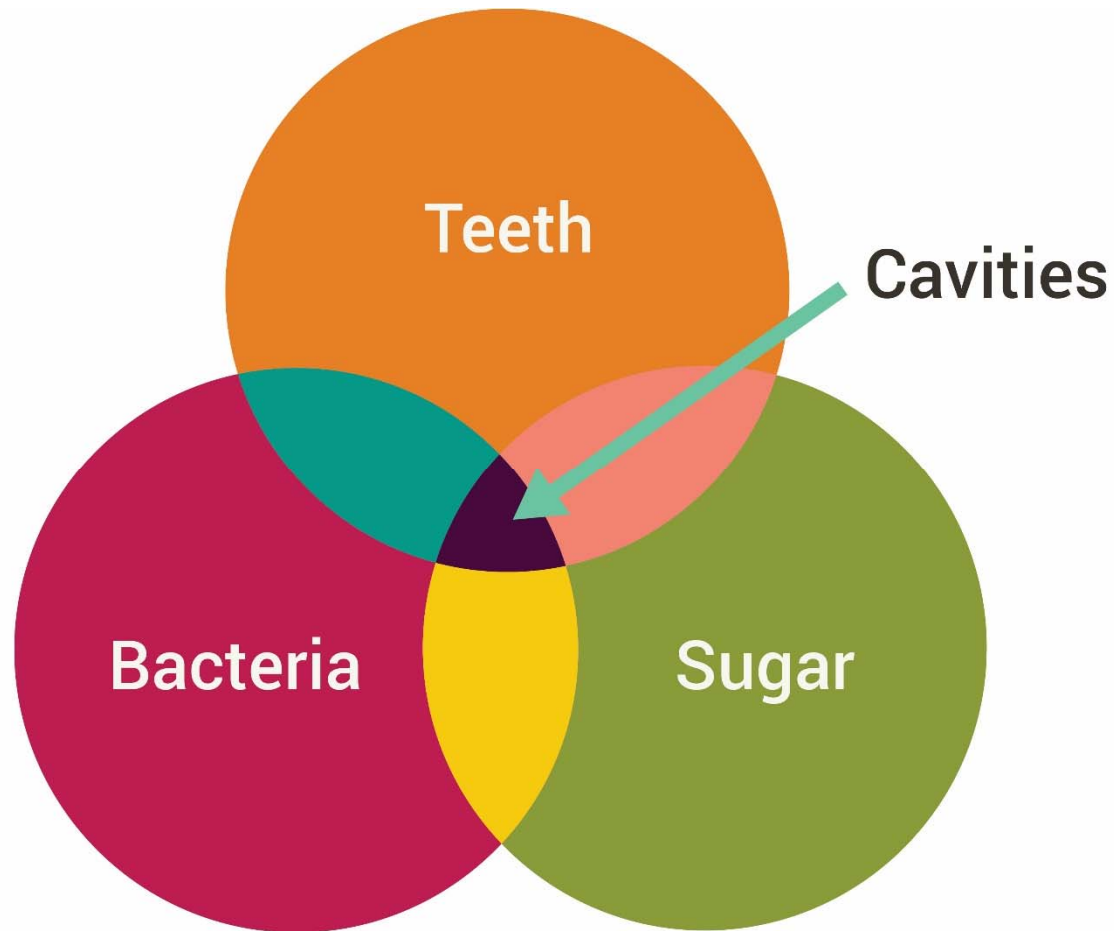
Joanna Douglass, BDS, DDS
Protecting All Children's Teeth: AAP Oral Health Initiative



What causes caries?



Main components needed for a cavity to form





What are some behaviors that cause caries?



Behaviors that cause caries

- ‘Bad’ bacteria in caregiver’s mouth
 - *Streptococcus mutans*,
Lactobacillus, and *Streptococcus sobrinus*
- Passed from caregiver to infant
 - Happens in first two years of life
 - Can occur as early as 2 months!
- These ‘cavity-causing’ bacteria break-down food, which produces acid that demineralizes and erodes tooth enamel.



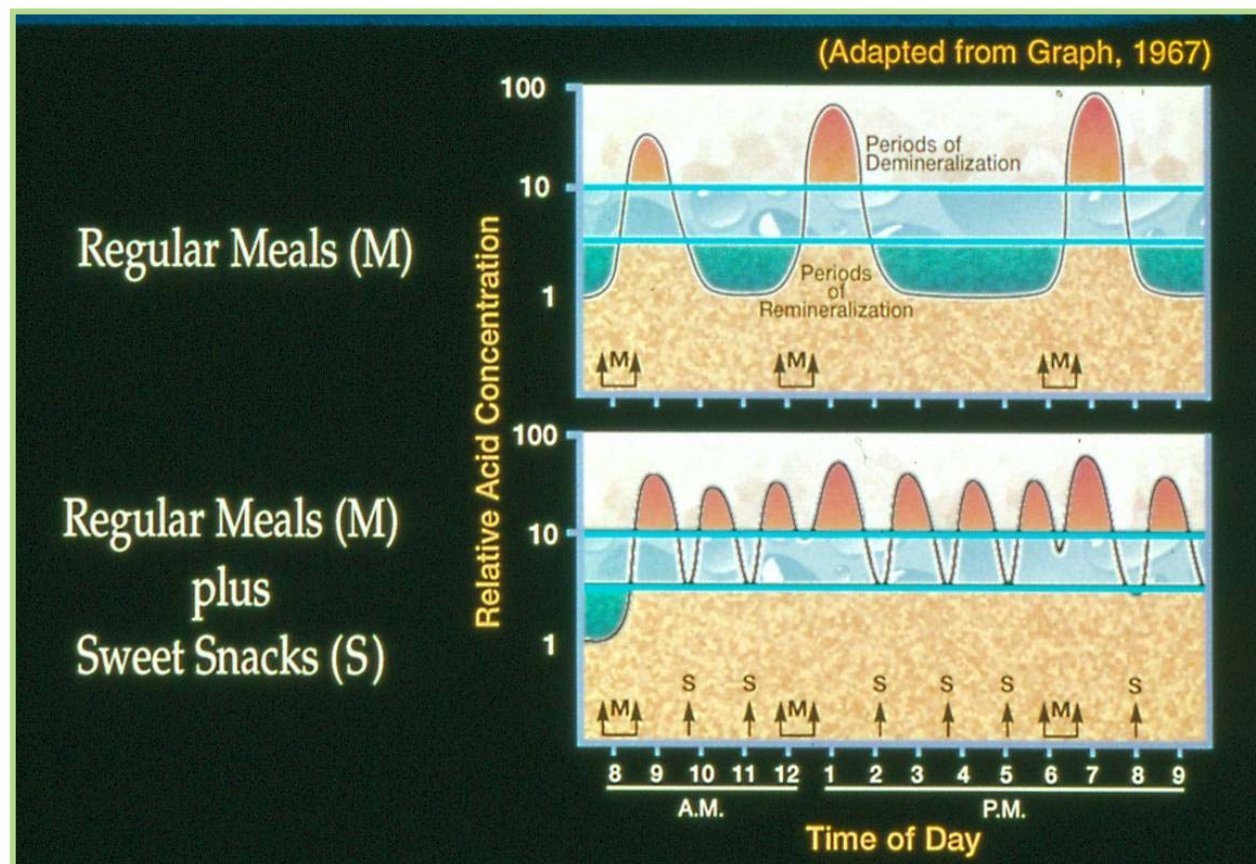


Diet and Caries



Diet and Caries

- Amount of sugar
- Sticky foods
- How often we eat



Baby Bottle Tooth Decay



ANZ Photography
Protecting All Children's Teeth: AAP Oral Health Initiative



Donald Greiner, DDS, MSc
Protecting All Children's Teeth: AAP Oral Health Initiative

Other Risk Factors

Family/Caregiver Issues

- Oral health status of primary caregiver
- Recent Family history of caries
- Low income
- Insurance Status
- Rural areas
- Cultural practices

Children with Special Healthcare Needs

- Developmental & cognitive limitations
- Poor motor skills limit self care
- Medication interactions – xerostomia (dry mouth)
- Special dietary regimes increase carbohydrate exposure
- Overwhelmed caregivers



What are some screening questions for caries you could ask families?





Role Play





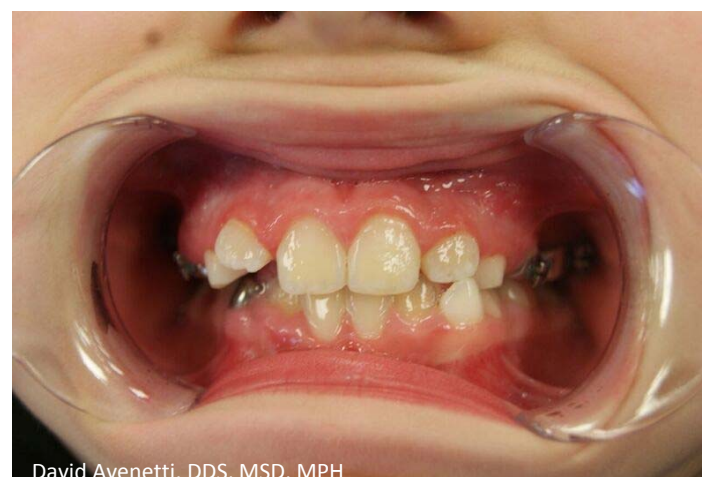
What do caries look like?



Dental plaque



David Avenetti, DDS, MSD, MPH



David Avenetti, DDS, MSD, MPH

White spot lesions (pre-caries)



Protecting All Children's Teeth: AAP Oral Health Initiative



Joanna Douglass, BDS, DDS
Protecting All Children's Teeth: AAP Oral Health Initiative



Protecting All Children's Teeth: AAP Oral Health Initiative

Caries



Donald Greiner, DDS, MSc
Protecting All Children's Teeth: AAP Oral Health Initiative



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North Carolina
Protecting All Children's Teeth: AAP Oral Health Initiative



Other Dental Diseases

- Periodontal disease
- Gingivitis
- Malocclusion
- Others?





Medical and Dental Providers





Medical and Dental Providers

- Dental
 - 1 year old or within 6 months of first tooth
 - Every 6 months after
- Medical
 - Screening at 6, 12, 18, 24, 30, and 36 months
 - Fluoride varnish



Recommended Risk-based Counseling Strategies for CHWs



- Delay Vertical Transmission.
 - Get Mom a Dentist
 - No licking pacifiers
 - No sharing utensils
- Reduce Sugar: Amount and Frequency.
 - Eliminate nighttime eating/drinking when teeth erupt
 - Limit snacking to less than twice daily
 - Avoid unnatural sticky foods



Nighttime and Bottle Feeding Recommendations

- Infants/Toddlers with teeth should be weaned from nighttime nursing and bottle feeds due to baby bottle tooth decay concerns.
 - If child absolutely needs to have nighttime bottle, give only water.
- When child is 1 year of age, should be weaned off bottle completely and onto a cup for all liquid intake.
- If use sippy cup, hard top cups preferred.



Video Link, Bottle Mouth Decay:

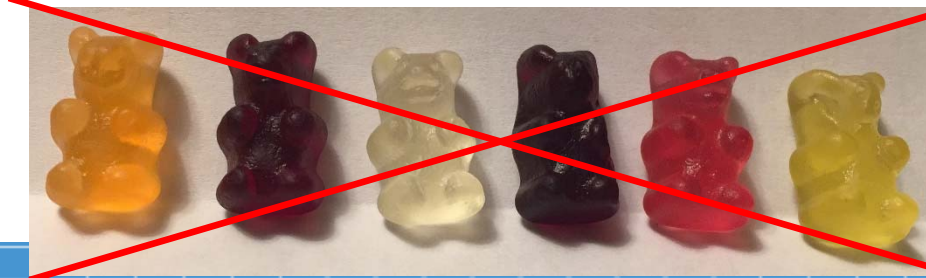
<https://www.youtube.com/watch?v=0EAqpmk4TbI>

Other Dietary Recommendations

- Sugar-free gum and similar foods after and in-between meals helps reduce caries.



- Avoid sticky foods, including gummy vitamins/candies, caramels, fruit roll-ups, etc.





Fluoride





Fluoride

- Natural mineral
- Becomes a part of the tooth enamel
- Has three effects
 - Helps the tooth rebuild the enamel after acid exposure. (This is called remineralization.)
 - Fluoride makes the tooth stronger and more able to resist eroding from acid.
 - Fluoride has some antibacterial properties which reduce the amount of acid produced by bacteria in the mouth.





Fluoride Sources

- Water
- Toothpaste and mouthwash
- Dentist and medical providers



Community Water Fluoridation

- CDC declared “One of the 10 Greatest Public Health Achievements”
- Most common fluoride source in Illinois
 - ~98%
- Cost Effective
 - 75¢ /person/yr
- Chicago is “optimally fluoridated” at 1ppm
 - CDC recommends 0.7-1.2 ppm

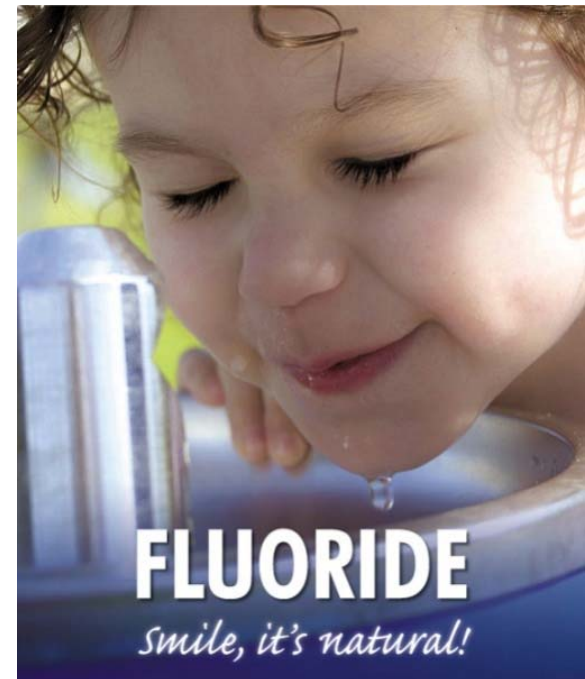


IMAGE COURTESY OF
[HTTP://WWW.ADA.ORG.AU/ORALHEALTH/FLN/FLNFRONT.ASPX](http://www.ada.org.au/oralhealth/fln/flnfront.aspx)

Community Water Fluoridation

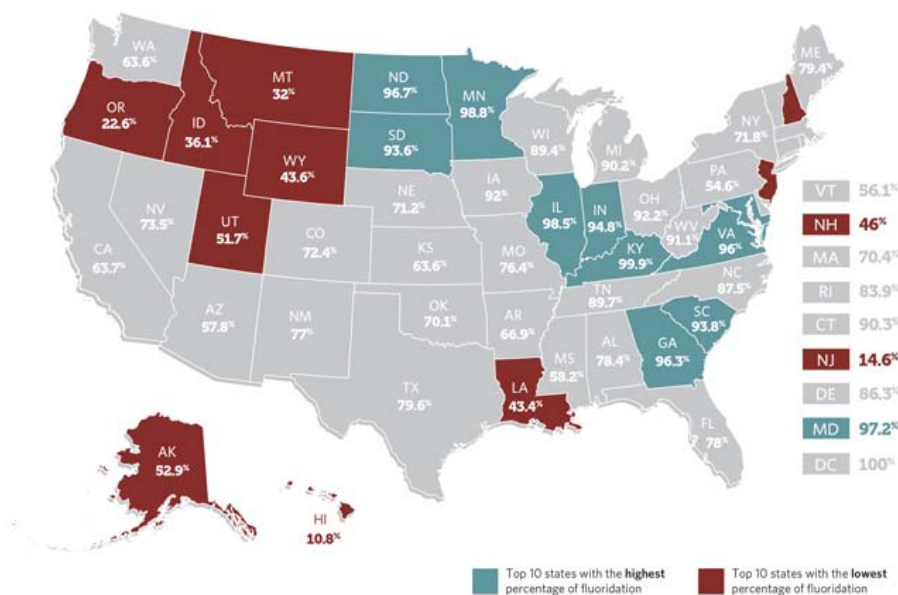


THE PEW CHARITABLE TRUSTS

| Jan 2014

Community Water Fluoridation: The Top 10 and Bottom 10

The percentage of residents served by public water systems in each state who are receiving fluoridated water.¹



72 million Americans who are served by public water systems **lack** access to fluoridated drinking water

The CDC has recognized water fluoridation as one of "10 great public health achievements of the 20th century."²



¹ Centers for Disease Control and Prevention, "2012 Water Fluoridation Statistic." Data covers only residents whose homes are connected to public water systems.
² Centers for Disease Control and Prevention, "Ten Great Public Health Achievements-United States, 1900-1999," <http://www.cdc.gov/mmwr/preview/mmwrhtml/00056796.htm>.



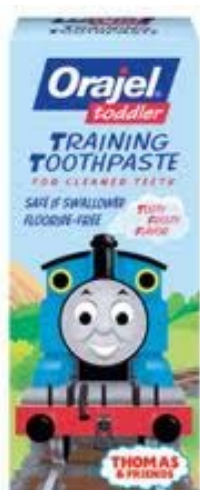
Other Sources of Water and Filters

- Bottled Water: **No Fluoride!**
 - Nursery Water @ 0.7ppm, but other brands variable to none
 - Fluoride content not required by FDA to be reported as part of nutrition facts
 - 45% of lower income, minorities drink bottle water due to health/taste misperceptions
- Home Water Filtration: **Depends**
 - Charcoal “Pitcher” type water filters (ie Brita®) do not remove fluoride
 - Reverse osmosis or ionization purification system (i.e. under the sink) do remove fluoride



Gorelick et al. Arch Pediatr Adolesc Med. 2011; 165(10): 928-32.

Toothpaste and Fluoride



*Fluoride-free
(Not recommended)*



*With Fluoride
(Recommended)*



*With Fluoride
(Recommended)*

Fluoride Varnish

What is it?

- Fluoride applied to teeth

Does it help?

- Reduces caries by 30-80%!
- Can actually **reverse** early-stage caries

Is it difficult to do?

- Costs ~\$1.00/application
- Can be applied by a child's doctor or dentist



David Avenetti, DDS, MSD, MPH



Who should get fluoride varnish?

“At-risk” children under 4 years old

Every 3-6 months

- Low income
- Children with special needs
- Frequent feedings
- Dry mouth
- Medical interaction
- Visible plaque or white spot lesions
- Poor oral health of caregiver



Anti-Fluoride Movement

- Fluorosis
- Most of things on internet not true





Tooth Brushing





Tooth Brushing - How

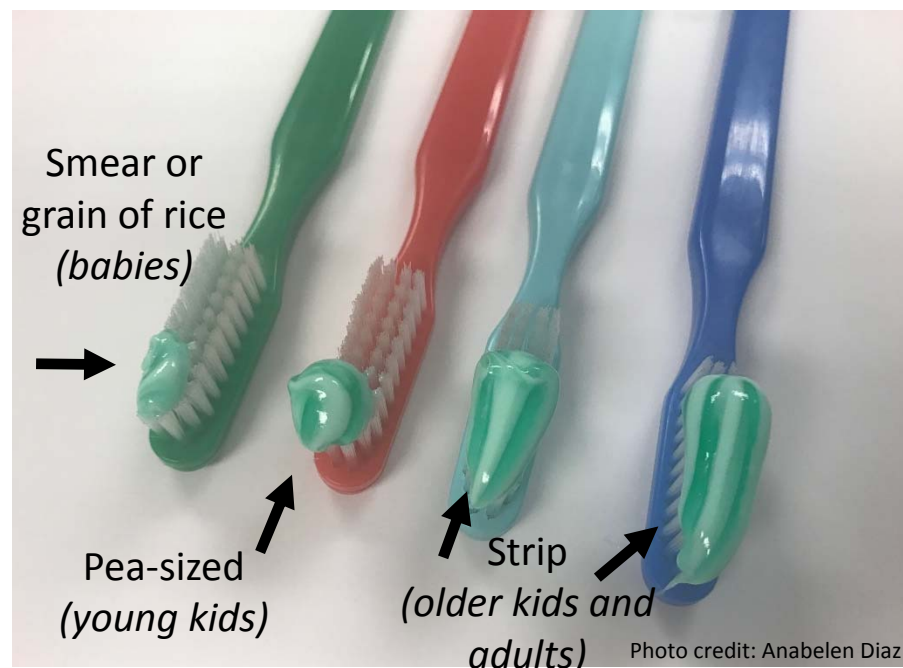
Adult brushing video:

[https://www.youtube.com/watch?v=ImmFRJja
dOI&index=3&list=PLEbUg8bEgmRWGhvM1Kg
vX9bA_FkbG9WEM](https://www.youtube.com/watch?v=ImmFRJja
dOI&index=3&list=PLEbUg8bEgmRWGhvM1Kg
vX9bA_FkbG9WEM)



Tooth Brushing - Toothpaste

- With fluoride
- Amount depends on age
- Spit out when done (*for young children, do not drink water after brushing*)



Age	Under 3 yrs	3-6 yrs	7 or more yrs
Toothpaste Amount	Smear	Pea-sized	Strip

Tooth Brushing - Toothbrushes

- Manual or electric?
 - Both fine
- What type?
 - Soft bristle
- What size?
 - Whatever fits your mouth
- How to store it?
 - Upright, uncovered, air dry
- When to get a new one?
 - Every 3-4 months





Tooth Brushing

- When start? When have 1st tooth
- How often? Every morning and night
- How Long? About 2 minutes

Parents need to supervise or participate until children at least 7 years old!





Tooth Brushing Children's Teeth

- Video of brushing baby:

<https://www.youtube.com/watch?v=kyJo7vUpbT8>

<https://www.youtube.com/watch?v=KB8mwBfcrXw>

- Video of child brushing:

[http://www.colgate.com/en/us/oc/oral-](http://www.colgate.com/en/us/oc/oral-health/basics/brushing-and-flossing/video/No-More-Nasties-Brushing-for-Kids)

[health/basics/brushing-and-flossing/video/No-More-](http://www.colgate.com/en/us/oc/oral-health/basics/brushing-and-flossing/video/No-More-Nasties-Brushing-for-Kids)

[Nasties-Brushing-for-Kids](http://www.colgate.com/en/us/oc/oral-health/basics/brushing-and-flossing/video/No-More-Nasties-Brushing-for-Kids)



Making tooth brushing fun



Flossing

- When more than 2 teeth touch
 - Uncommon with primary teeth
 - Important for older children and adults
- With assistance from caregiver



Mouthwash



Dental Sealants

- Children can be eligible for sealants around age 5 or 6 years, which is a more permanent cavity prevention agent.
- It is a polyurethane-like material applied to grooves of permanent molars.
- CHWs should encourage families to ask their dentist if their child is eligible for sealants.



Teething & Tooth Care

Teething usually starts between four to seven months. The two front teeth (central incisors), either upper or lower, usually appear first, followed by the opposite front teeth. The first molars come in next, followed by the canines or eyeteeth.

Featured Article



Amber Teething Necklaces: A Caution for Parents

The American Academy of Pediatrics (AAP) does not recommend that infants wear any jewelry. Suffocation is the leading cause of death for children under a year old and among the top five causes of death for children between the ages of 1 and 4.

[View](#)

How to Prevent Tooth Decay in Your Baby

Baby teeth are important. If baby teeth are lost too early, the teeth that are left may move and not leave any room for the adult teeth to come in. Also, if tooth decay is not prevented it can be costly to treat, cause pain, and lead to life-threatening infections.

Tooth decay (*called early childhood caries*) is the most common chronic infectious disease of childhood. Tooth decay may also be called nursing caries or **baby bottle tooth decay**.

Healthy dental habits should begin early on because tooth decay can develop as soon as the first tooth comes in. The following is information from the American Academy of



Articles

[Amber Teething Necklaces: A Caution for Parents](#)

[Dental Health: Keeping Your Child's Teeth Healthy](#)

[Healthy Children Radio: Early Oral Health for Infants & Toddlers](#)  **AUDIO**

[How to Help Teething Symptoms without Medications](#)

[How to Prevent Tooth Decay in Your Baby](#)

[Teething Pain](#)

[Teething: 4 to 7 Months](#)

Teething Pain

Discomfort from **teething**, which may begin as early as 3 months, can wake a baby. The gums around the emerging teeth may be swollen and tender.

How to Ease Baby's Teething Pain

Give her firm objects to chew on—teething rings or hard, unsweetened teething crackers. Frozen teething toys should not be used; extreme cold can injure your baby's mouth and cause more discomfort.



Medication





ICAAP: Bright Smiles from Birth

<http://illinoisaap.org/projects/bright-smiles/>

Family Resources

[Back to Bright Smiles from Birth Home](#)



[Physician Resources](#) | [Family Resources](#)

Bright Smiles from Birth has assembled resources for families to learn about oral health for their young children. Parents can find information about oral health strategies dealing with:

- Baby teeth and early childhood caries
- Plaque and tooth decay
- How to brush and floss a child's teeth
- Fluoride prevention
- Dietary habits
- Dental visits and referrals
- Community water fluoridation

From these resources, parents can expect learn more about prevention strategies, learn how to access pediatric dentistry referrals, and understand the importance of the pediatricians' assessing and monitoring infant and toddler oral health.

Bright and Healthy Smiles Begin at Birth

A child's teeth begin erupting at around 6 months of age, and the development of these teeth play important roles in early childhood development. Without proper care, tooth decay can occur in infants and preschool-aged children. Tooth decay at this stage of development is called early childhood caries.

This fact sheet provides information on the importance of baby teeth, early childhood caries, and how to ensure a healthy childhood dentition. [\[...more\]](#)

Tooth Decay

Plaque is a film that develop on teeth and contains bacteria that can cause cavities. This fact sheet explains the nature of plaque, its effects on child dentition, and how plaque and tooth decay can be prevented. [\[...more\]](#)

How to Brush and Floss a Childs Teeth

Brushing a young child's teeth is an important, sometimes delicate process. This fact sheet explains how to correctly brush the child's teeth from the time when the teeth first appear in the mouth, through 4-5 years of age. [\[...more\]](#)

Bright Smiles from Birth Training

The Illinois Chapter provides a one hour web-based training on oral health for children under three. The training provides information on the pathogenesis of early childhood caries, anticipatory guidance for families, performing oral health assessments and application of fluoride varnish. Providers who complete this program are eligible to receive a reimbursement of \$26 per application on children under 36 months.

Web-based Trainings

Providers can access the Bright Smiles from Eirth training online at www.brightsmilesfrombirth.org. Primary care providers in Illinois who complete the training will be eligible to receive Medicaid reimbursement for application of fluoride varnish on children under three.

Maintenance of Certification (MOC) Credit

Bright Smiles from Birth: A Model for Improvement for Children's Oral Health is an ABP-approved Performance in Practice activity that meets requirements for Maintenance of Certification (MOC) Part 4. [\[...more\]](#)

Bright Smiles from Birth Tools For Your Practice

The following resources are intended to support Illinois pediatricians' efforts to make preventative oral health a part of their practice. For educational handouts for families, visit the [Family Resources](#) page.

Bright Smiles from Birth Fluoride Varnish Video

This video provides a real-world example of how to apply fluoride varnish on children. [\[...more\]](#)

Oral Health Screening Form

The Oral Health Screening Checklist is a tool to assist providers during oral health screenings. The checklist includes a visual representation of a child's dentition (and associated eruption and exfoliation dates), a checklist for pre-existing factors, an oral health questionnaire, procedure questionnaire, and a signature field for provider verification. [\[...more\]](#)

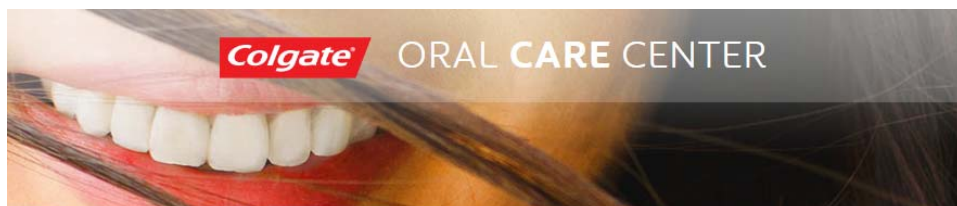
Bright Smiles from Birth Fluoride Varnish Consent Form

Bright Smiles from Birth made available this consent form for application of fluoride varnish to a child's teeth as part of the Fluoride Varnish Program. [\[...more\]](#)



More resources


- <http://www.colgate.com/en/us/oc/oral-health/life-stages/childrens-oral-care>
- <http://www.youroralhealthhub.com/just-for-kids/>




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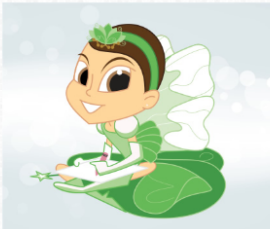
Just for Kids




Download our activity book for kids.



Download the previous issue of *Grin! for Kids*.



Visit the Tooth Fairy's site for more activities.



Make sure your kids are brushing for the recommended 2-3 minutes. Download the free Delta Dental mobile app for [Apple](#) and [Android](#) to access the toothbrush timer to track brushing time.

[Common Questions](#)

[Dental Hygiene for Kids](#)

[Four Developmental Milestones in Your Child's Oral Health](#)

[Get the Baby Toothbrush Ready](#)

[Delta Dental for Kids & Teens](#)

[Dentist Appointment Anxiety: 3 Ways to Alleviate Your Child's Fears](#)

[Fun Teeth Facts for Kids: Part II](#)

[How to Prevent Toddler Tooth Decay](#)



Dental Referrals

- Refer to a dentist at 1 year of age or within 6 months of getting first tooth
- Care should be:
 - Affordable
 - Accessible, family-centered, coordinated, compassionate, and culturally effective
 - Should meet child's unique needs
- Referral sources vary:
 - UIC College of Dentistry
 - Dentaquest website:
<https://govservices.dentaquest.com/Router.jsp?component=Main&source=Logon&action=ProviderDirectory2&state=IL&locale=en>





Summary





Summary

- Emphasize importance of oral health
- Brushing
- Nutrition
- Fluoride
- Seeing the dentist





Summary

- **Emphasize importance of oral health**
 - Even babies need their teeth taken care of
- **Brushing**
 - Start as soon as have teeth
 - Twice a day with fluoride toothpaste
 - Help them!
- **Nutrition**
 - Limit juice, sugar drinks, sticky foods, and other unhealthy foods
 - No bottles after 1 year old
 - No bottles and cups when sleeping
 - Careful about frequency of drinks and food
- **Fluoride**
 - Look for water with fluoride
- **See the dentist**
 - Every 6 months once have teeth





Thanks!



**Coordinated Oral Health
Promotion (CO-OP) Chicago**

<http://go.uic.edu/COOPChicago>

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