# Community Health Worker Training Manual ORAL HEALTH©

Co-oP CHICAGO

*Facilitator Manual*

THE UNIVERSITY OF ILLINOIS AT CHICAGO

UIC

# COOP Manual Contents




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# Overview

## Background

**COordinated Oral health Promotion (CO-OP) Chicago** brings together a team of clinical pediatricians and dentists, researchers, health psychologists, and policy experts to rigorously test the ability of an oral health promotion intervention to improve child and family oral health. The primary intervention is family-focused education and support from community health workers (CHWs); this intervention will be applied in a range of settings to determine which settings, or combination of settings, result in the best outcomes. CO-OP Chicago is funded by grant number UH2DE02583 from the National Institutes of Health, National Institute of Dental and Craniofacial Research (NIDCR).

This training manual has been created to aid in the training of **Community Health Workers (CHWs)**. CHWs, also known as health outreach workers, health advisors, and promotores de salud have been a part of health promotion and disease prevention efforts in the US for many decades. The use of CHWs has increased in the last few years. In 2005, there were more than 121,200 CHWs in the United States; up from an estimated 86,000 in 2000.[1] CHWs work almost exclusively in community settings, acting as a bridge between residents and healthcare providers. The CHWs serve as liaisons between health service providers and the community. CHWs typically provide health education, information, assistance with services, and build individual and community capacity for health.[1] Research has shown positive associations between CHW interventions and improved community health, particularly in the areas of childhood immunization, some infectious diseases, and breastfeeding promotion.[2-3]

Successful CHWs have special qualities. They know their communities well. They are dedicated to improving the life of their community. They enjoy teaching others, feel comfortable in front of a group, and know how to work with a group. In the United States, CHWs help to meet national Healthy People goals by conducting community-level activities and interventions that promote health and prevent diseases and disability. CHWs are trusted and respected members of the community. They provide an important service by establishing and improving relationships between these professionals and members of the community. As community health educators and role models, CHWs promote, encourage, and support positive, healthful self-management behaviors among their peers. They have the ability to strengthen their community's understanding and acceptance of medical care.

**The CHW model is limited by inconsistencies in CHW training.** While many CHW curriculums can be found at local universities and agencies, no formal CHW curriculum or certification exist which results in tremendous variability in the existing CHW curriculums. Most focus on knowledge, but it is behaviors that CHWs typically target. Many curriculums use didactic teaching methods while CHWs typically work one-on-one or in small groups with their clients. Specialized CHW training curriculums such as this one should emphasize that self-management skills (problem solving, social support, self-monitoring, environmental restructuring, and action planning) are the real focus of the CHW program. Self-management skills can be easily taught using popular education methods and then incorporated into target diseases. (Contact Dr. Martin for these modules.)

## Pedagogy

We recommend CHW trainings use Paulo Friere's critical pedagogy or popular education model in order to provide a curriculum for people of varying literacy levels, languages, and cultures. Friere's education model was designed with disenfranchised people of color with low literacy levels in mind. It differs from traditional education and medical education models because it places emphasis on

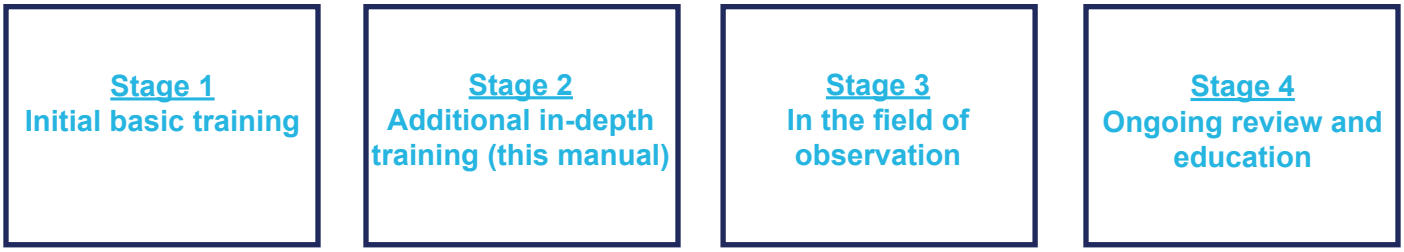
high levels of participation, learning through people's experience and the lack of distinction between the teacher and learner. The model and the modules in the curriculum utilize minimal lectures, brainstorming exercises, self-discover learning exercises, and role playing to facilitate learning.

The popular education model has been used in other CHW training programs. La Palabra es Salud, a comparative study of the effectiveness of popular education vs. traditional education models in CHW trainings found that "popular education can help participants develop a deeper sense of empowerment and community and more multi-faceted skills and understandings, with no accompanying sacrifice in the acquisition of knowledge".[4] Project MATCH (Mexican American Trial for Community Health Workers), a clinical trial to test the effectiveness of a promotora-based intervention for Mexicans with diabetes, found similar results in their evaluation of skills acquisition among its CHWs.[5]

## Curriculum

The curriculum is intended to be delivered to groups. We recommend group sizes of 10-15 adults. We typically train more people than we intend to hire. One reason is because it provides trained back-up staff to replace CHWs that leave the project. The other reason is because this type of basic education is meaningful and useful even if it does not directly translate into employment. We typically do not announce who we will hire until after the training is completed. This helps with attendance and inspires full participation. All trainees who complete the training should receive certificates and instructions for how to report the training on their resumes.

We implement the curriculum in multiple stages. The initial stage is intended to provide the basic CHW training on how to be a CHW. Basic training typically involves a general overview of health, home visitation, documentation, self-management skills, motivational interviewing, and advocacy. The second stage is to provide more in-depth specialized training for the CHWs. Third, observation of other CHWs in the field is recommended as well as supervision in the field initially. Finally, CHWs require regular reviews of core topics and also new topics as they arise during delivery of the intervention.



## Layout of Training Manual

Each section contains:

i. A summary for that content area

ii. Diagram with main topics and length

Each lesson will contain:

i. Lesson objectives

ii. Time required

iii. Unit overview with lists of activities

iv. Documents

v. Outline of the content

## Training Schedule

The training can be scheduled however works best for the participants and facilitators. Some choose to do two consecutive days. Others choose to separate into weekly days or half days and spread over several weeks. When adapting the training to your group's schedule, try not to stop mid-module. When reconvening the group on subsequent days, 15-30 minutes needs to be planned at the start of the session for review in an open discussion format. Participants will have generated new thoughts, insights, and questions over the break. The facilitator only needs to ask "So what have you been thinking about regarding your oral health since we last met?"

## Training Evaluation

Two evaluation components are recommended. See final module for details.

1. Pre/post knowledge evaluation
    a. These should be short, just several questions.
    b. The purpose is to assess knowledge gain.
    c. See evaluation example at the end of manual.
2. Final role play evaluation
    a. This is a good way to determine who is ready for the field.
    b. See evaluation model at the end of manual.

## How to Use this Manual

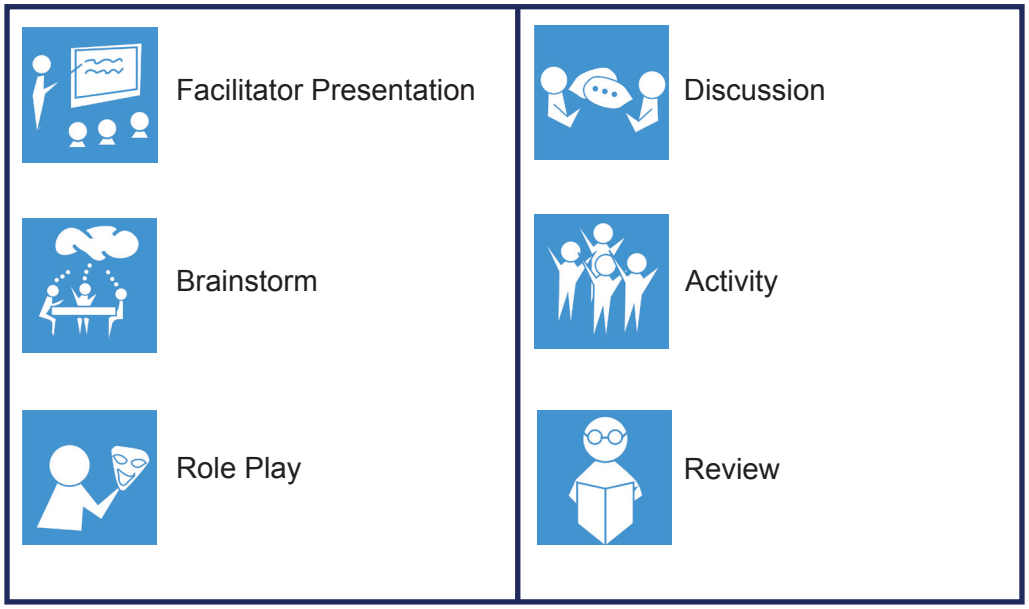
This manual is **Adaptable.** It has been created and used, but is a suggested template and guide for facilitator's to follow. Presenters may choose to alter or adapt as they see fit including the length and activities provided in this manual.

The manual is arranged in sections. There are many different ways to deliver these sections. The order will depend on which content areas are delivered and the timing of the training. For example, some trainings are delivered in several consecutive days. Others are delivered in smaller sessions and spread over several weeks.

This manual is accompanied by a power point slide set. This could be projected or used as handouts, although we recommend projection of the slides along with internet access because the videos are very helpful.

**Trainers and trainees should already have a firm grasp of the roles and expectations of Community Health Workers.** Understanding how to build trust, work with participants, and facilitating home visits should be concepts to understand in conjunction with this manual.

The following icons are used throughout the manual to identify the teaching method(s) used. These are the recommended approaches and can be adapted to different teaching styles.



## Working with your Group

CHW trainers must be comfortable leading and educating groups. If your experience in group leadership is limited, here are some suggestions.

1. Tips for leading your group:

    a. Provide name tags and other necessary items to create a comfortable and cooperative environment.

    b. Take adequate time to prepare for sessions.

    c. Consult experts and/or outside resources for accurate information.

    d. Get to know the members of your group and maintain a professional, encouraging tone.

    e. Encourage trainees to ask questions throughout the session.

    f. Keep the sessions flowing smoothly, so that everyone is interested, involved, and engaged.

    g. Be prepared to answer questions. Consult a reliable resource if the answer is unknown to you.

    h. Use frequent checks for understanding throughout each session to ensure that group members understand the material.

    i. Be observant. Watch for clues from group members who are falling behind or in need of a break.

    j. Be flexible. Allow group members to explore content areas with self-discovery.

    k. Constantly monitor how much the moderator is talking. If he or she is talking a lot, they are not facilitating optimally. Be sure to listen. Allow lots of space for the group to generate ideas.

2. References on how to effectively lead a group include:

    - http://www.toi.edu/Training%20Materials/leading_groups/Student%20Notes/C5How%20to%20Lead%20%20Group%20dicussion.pdf
    - http://www.mindtools.com/pages/article/instructor-led-training.htm
    - http://www.mindtools.com/pages/article/RoleofAFacilitator.htm

3. Motivating Group Members

    a. Praise or reward group members' efforts.

    b. Maintain a positive, encouraging environment.

    c. Strive to link the content to situations that group members can relate to.

    d. Accommodate for adequate settings, refreshments, and breaks to keep participants motivated and ready to learn.

    e. Encourage group members to share their opinions or ideas.

## Role Plays

There are many different options for role plays. Below are three to consider:

### Option 1:

1. Ask for two volunteers or select people to play the roles.
2. Position them facing each other in front of the group.
3. Provide them with short scenarios (see examples at end of manual).
4. Give the CHWs 1-2 minutes to think about what they want to say. Actors may only work together if the scenario indicates that they should do so.
5. Start the role play and stop it after 3 minutes.
6. Thank the CHWs and tell them they did a good job.
7. Lead a discussion with the full group using the following questions, but use probes as appropriate.
8. Write the responses on large poster sheets.
9. Repeat the same role play with different CHWs or move to another one depending on time and interest.
    a. If repeat, use new suggestions from discussion.

*Discussion questions:*

- What did you think about the role play? Was it realistic?
- Did the approach work for_____? Why or why not?
- What would you change?

### Option 2:

1. Separate into groups of 2.
2. In each group, assign one CHW and one client (they can self-assign).
    a. Seat them in different areas around the room so they can talk freely and not bother others.
3. Hand out role play script.
    a. Script should have different instructions for CHW and for client.
    b. Sometimes it helps to keep the scripts separate so they do not know what to expect.
    c. The CHW script will have instructions about the goals of the visit and some details about the client. (For example, goal is to discuss taking medicine. In the past, every time you bring up medicine, she changes the subject. She has been successful at other things you have worked on together so you aren't sure why she is evading this.)

d. The client script will have specific information on client issues. (For example, this client recently lost her prescription insurance and has no money to pay for medications. She is embarrassed so she changes the subject when talking about medications.)

e. Variations: Sometimes it works best to have ONE scenario that all practice, especially if the concept is very important to convey. Other times it is helpful to have variations on the scenarios and tasks. Not everyone practices the same thing, but they do have exposure to the other concepts during the discussion phase.

4. Give the groups time to practice the scenario. Usually 10-20 minutes.
5. Have the groups report back about their experiences. Each group should be allowed a few minutes to reflect. This can take 10-20 minutes.

    a. Emphasize things the CHW did well

    b. Discuss things that could have been done differently

    c. Everyone can offer ideas

**Option 3:**

1. Pick two people to perform the role play. They are seated facing each other in the front of the room. One person is assigned as the CHW, the other as the client.
2. Hand out role play script.

    a. Script should have different instructions for CHW and for client.

    b. Sometimes it helps to keep the scripts separate so they do not know what to expect.

    c. The CHW script will have instructions about the goals of the visit and some details about the client. (For example, goal is to discuss taking medicine. In the past, every time you bring up medicine, she changes the subject. She has been successful at other things you have worked on together so you aren't sure why she is evading this.)

    d. The client script will have specific information on client issues. (For example, this client recently lost her prescription insurance and has no money to pay for medications. She is embarrassed so she changes the subject when talking about medications.)

3. Have the pair act out the role play. Usually 10 minutes.
4. Open up for group discussion. Usually 10 minutes.

    a. Allow demonstrating pair to self-reflect first before opening to the group

    b. Emphasize things the CHW did well

    c. Discuss things that could have been done differently

This can be repeated with different scenarios. Be sure to rotate the CHW and client, to ensure all members of the group have a turn eventually.

## 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 Napoletano provided design support and Anna Sandoval served as the project manager.

## Citation

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## Website

http://go.uic.edu/COOPChicago

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# ORAL HEALTH

## Summary

This curriculum is designed for CHWs who will work with parents and children. The curriculum focuses on achieving healthy oral health behaviors for the entire family. Delivery of the curriculum requires a solid foundation of adult education methods (mainly popular education). A health educator or clinical provider can deliver this curriculum.

For trainers who do not have a background in oral health, it is recommended that trainers take at least one of the following on-line curriculums to give them the necessary background education to efficiently deliver this training:

The American Academy of Pediatrics, *Protecting All Children's Teeth, (PACT)*: http://www2.aap.org/oralhealth/pact/

Society of Teachers of Family Medicine, *Smiles for Life*: http://www.smilesforlifeoralhealth.org/buildcontent.aspx?tut=555&pagekey=62948&cbreceipt=0

## Main Topics and Approximate Lengths

| Topic | Time Needed (Minutes) |
|---|---|
| Pre-Test | 10 |
| Prevalence and Health Disparities | 25 |
| Anatomy, Definitions, and Causes | 60 |
| Oral Health Recommendations for Children | 10 |
| Fluoride | 15 |
| Brushing Basics | 60 |
| Patient resources | 5 |
| Review and Practice | 60 |
| Post-Test | 10 |

# *Pre-Test*

Please feel free to use pre-test at the end of this manual or create your own.

# *Lesson #1: Prevalence and Health Disparities*

## Lesson Objectives

By the end of this lesson, trainees will be able to:

1. Describe the **prevalence of caries** in children nationally and in Illinois
2. Define health **disparities** as they relate to oral health in children

## Estimated Time Required

25 minutes, depending on the amount of conversation generated

## Documents

Power point slides

## Materials

Large flip chart and/or whiteboard

Computer/projector

## Optional references for the presenter (Please adjust or add references specific to your region.)

- "A Cavity Culture". New Yorker Article (http://www.newyorker.com/magazine/2005/08/29/the-moral-hazard-myth) talking about oral health to both emphasize the widespread prevalence of this issue, and as a warm-up activity to get CHWs in right learning and discussion mind-set.
- Oral Health in Illinois report. Available at http://oralhealthillinois.org/wp-content/uploads/2016/11/Oral-Health-in-Illinois.pdf.
- Healthy Smiles Healthy Growth 2013-2014, Assessing the Oral Health Status and Body Mass Index of Third Grade Children in Illinois. By the Heartland Alliance. Available at https://www.heartlandalliance.org/wp-content/uploads/sites/3/2016/02/healthy-smiles-healthy-growth_final.pdf.

## Content

### 1. Initial Reflections

Ask ***"Tell me your thoughts about oral health and children"***

Prompt: ***"Tell me some of your experiences or things you have heard of"***

Goal is to let them talk about their beliefs, thoughts, experiences. There should be little comment or clarification. Just assurance that we will explore all this in the training.

Ask ***"Why are baby teeth important?"***

The reasons are because baby teeth play an important role in learning how to eat and talk properly. They help make the spaces needed in the mouth for the permanent teeth later. Caries in baby teeth can interfere with the formation of health permanent teeth.

### 2. Prevalence/Health Disparities

***"Let's start with how common oral health problems are"***

**Present slides 4-6 (Please substitute slides/data specific to your region.)**

**Pause on slide 6**: Ask ***"What do you think of these data?"***

Goal is discussion of disparities. If they bring up different questions or ideas regarding why some groups are affected differently than others, write on white board or flip chart and save.

**Slide 7**: ***"What is a 'Health Disparity'?"***

If they did not define previously, see if they will define. If not, define for them: Inequalities in healthcare, access, or outcomes that happen across groups, usually racial, ethnic, geographic, or socioeconomic groups.

**Slide 8**: Ask ***"How can health disparities be fixed? Who is going to do it?"***

Discuss questions and data.

**Slide 9**: Let them read it. Emphasize that they are the solution.

# *Lesson #2: Anatomy, Definitions, and Causes*

## Lesson Objectives

By the end of this lesson, trainees will be able to:

1. Describe basic tooth anatomy
2. Define “caries”
3. Describe the causes of caries
4. Describe other dental diseases

## Estimated Time Required

60 minutes, depending on discussion generated from discussion slides.

## Documents

Power point slides

## Materials

Large flip chart and/or whiteboard

Computer/projector

## Content

### 1. Basic Tooth Anatomy

**Slide 10**: Define the basics of teeth anatomy:

- Enamel is the outermost, hardest layer of the tooth. It serves as the tooth's 'protective shield'.
- Dentin is just underneath the enamel, it gives the tooth its shape and structure, but is made of softer bony material that allows cavity to quickly get bigger when it reaches into the dentin. When cavities penetrate into the dentin, this also is typically when people start to experience tooth sensitivity.
- Pulp is the deepest layer that contains the tooth's nerves and blood vessels. This layer is soft and does not contain bone. People who have a cavity into the pulp have exquisite tooth sensitivity and typically need the tooth pulled, a root canal, or both.
- The crown is part of the tooth above the gum line.
- The root is the part of the tooth inside the gum, the part that is not visible.

### 2. Define Caries

**Slide 11**: Define: Caries is the process of a tooth becoming decayed or the crumbling of a tooth. They are also called cavities. A good way to think about this is caries are potholes in the road. Some can be small, others are huge. The small ones will become huge if not fixed.

**Slide 12**: Define early childhood caries and severe early childhood caries.

Early Childhood Caries is the presence of more than 1 decayed, missing (due to caries), or filled tooth surfaces in primary teeth of a child less than 5 years of age.

## 3. Causes of Caries


**Slide 13**: Ask ***"What do you think causes caries?"*** Write down on board, discuss as a group.

**Slide 14**: Describe the three main components that cause caries:

1. Teeth: Clearly one needs teeth to have caries (i.e. young baby's teeth do not have cavities yet).
2. Bacteria: Everyone has bacteria in their mouth. Some bacteria are good. They help us digest food and keep us healthy. However some bacteria in the mouth are not good.
3. Sugar: All foods have sugar, but some have more than others. The bad bacteria use the sugar in food to make acid that eats away at teeth.

Think about limestone (which is also made of calcium like teeth) that is used to make buildings and tombstones. Acid rain erodes away the limestone, causing them to develop holes and eventually to crumble.

There are a lot of factors that lead to caries, such as behaviors in the family and community and environmental conditions. However, three components are needed for a cavity to form.


**Slide 15**: Ask ***"What are some behaviors that could cause caries?"***

**Slide 16**: Adults have 'bad' acid-producing bacteria, such as *Streptococcus mutans, Lactobacillus, and Streptococcus sobrinus.*

Babies are born with no bacteria in their mouths. Bacteria are passed from caregiver to infant. This happens during the first two years of life, but can occur as early as 2 months! Children can become infected before they even have teeth.


Ask ***"How does this happen?"***

*Make sure they mention: Hands in mouth, kissing mouth, sharing utensils, licking pacifiers, 'testing' food temp.*


Ask ***"What could you do to help prevent this?"***

*Make sure they mention:*

- *Screen mom's oral health status/access to dental care; moms with bad teeth (suggesting high bacteria counts) are more likely to pass this 'infection' along to their children.*
- *Educate families not to share eating/drinking utensils, do not lick pacifiers, etc.*


**Slide 17**: Ask ***"So what are some of the ways that diet is related to caries?"***

**Slide 18**: First, sugar causes cavities. Processed sugars like high fructose corn syrup are not good.

Ask: ***"What about the natural sugars in milk or 100% natural juice?"*** Let them think about it.

The bottom line is that sugar is just sugar. All sugars are broken down by bacteria the same way. So juices and milk, even when natural, can cause tooth decay. Foods that are carbohydrates (crackers, cookies, chips) also break down into sugar

Ask: ***"What about breast milk?"***

Breast milk breaks down into sugar, the same as any other milk.

***More on next page →***

Also sticky foods cause problems because the sugar sticks to the teeth. A big culprit in children? Gummy candy, including gummy vitamins!

High fiber fruits and vegetables (like apples and carrots) are good because they clean the teeth while you are eating them.

Finally, how often we eat is important. There is a natural recovery process for teeth in between meals (see upper graph) that allows the tooth to 'heal' from this acid. However, with frequent snacking seen in the lower graph, this recover process never really is allowed to occur, so, just like a pothole in the road, this erosion becomes deeper and deeper, which produces a cavity.

CHWs counseling pearl: This is partly why chewing gum after meals, which gets saliva flowing, helps to prevent caries (i.e. remember those trident commercials). The saliva "cleans" the teeth.


Ask: ***"What does "frequent snacking" in a baby or toddler look like?"***

*Make sure they mention children who are constantly drinking something other than plain water from a cup or bottle.*


Ask: ***"How do you know when a baby is teething versus hungry?"***

Just because a baby is fussy does not mean they are hungry. Babies are often fussy when they are tired or for other reasons as well. They need to learn how to settle without food or drink.


Ask: ***"Why do babies sleep with bottle?"***

There are a lot of reasons. Discuss them. Then explain the consequences of this which is baby bottle tooth decay.

**Slide 19**: Baby bottle tooth decay is a kind of early childhood caries that comes from sleeping with a bottle in the mouth. The sugar in the milk or juice sits on the teeth, especially the front teeth, and causes caries. Baby bottle tooth decay can happen with sippy cups too. Babies are supposed to be laid down to sleep with no bottle or cup in the bed. If a sippy cup is used, encourage the use of a sippy cup with a hard top.

**Slide 20**: This slide discusses some additional risk factors for caries.

- Family/caregiver issues
    - Oral health status of primary caregiver
    - Recent family history of caries
    - Low income
    - Public or no insurance
    - Rural areas
    - Cultural practices
- Children with special healthcare needs
    - Developmental and cognitive limitations—it often is behaviorally challenging for parents to successfully brush these children's teeth.
    - Poor motor skills limit self care—largely due to same as above.
    - Medication interactions –most pediatric medications contain sugar, and some also can cause dry mouth, which reduces salivary flow and the flushing-away of bacterial acids on teeth.
    - Special dietary regimes increase carbohydrate exposure—again these may contain high amounts of sugar or require frequent feeding regimens.
    - Overwhelmed caregivers

*Note that questions might come up regarding some of the family/caregiver issues. These are multi-factorial. For example, low income is related to access to food, good child care, and poor access to medical and dental care. Emphasize just that we know these things are associated with caries, but the reasons they are related to caries is likely more to do with income, neighborhood, and other social determinants of health.*

**Slide 21**: Ask ***"What are some screening questions for caries you could ask caregivers?"***

- *Do you [mom caregiver] have a dentist? When is the last time you saw your dentist? How are your teeth? Etc.*
- *Do you or your family ever share utensils, toothbrushes, etc?*
- *What is the child's diet like? Does she/he like to eat candy, drink juice, eat gummy foods, etc?*

- *How frequently does the child snack?*
- *Does the child take any regular medications?*
- *Does the child have any chronic disease that places her/him at risk?*

*Also, consider 'background' racial/ethnic, socioeconomic, and medical condition associations in terms of potential caries risk.*

**Slide 22:**Role play exercise: Practice screening caregivers for high risk behaviors.

**Slide 23**: Ask ***"What do caries actually look like in a child? Can you tell if a cavity is starting?"***

**Slide 24**: Caries don't just happen overnight. First we start to see a buildup of plaque. That is the thick white or yellow stuff around the edges of the teeth where they touch the gums. You can also see that the gums look red and sore.

**Slide 25**: White spot lesions are pre-caries. See these bright white areas? Those can turn into caries if nothing is done to stop them.

**Slide 26**: These are caries.  Brown decaying of teeth.

## 4. Other Dental Diseases


**Slide 27**: Ask ***"Does anyone know what periodontal disease is?"***

It just means the inflammation, or swelling of the gums around the teeth. Gingivitis is the early stage of this. It means the body is reacting to harmful bacteria. With good care, treatment, and behavior change, gingivitis can be stopped and prevent worse periodontal disease.

Malocclusion just means teeth that aren't straight, or when the upper teeth and lower teeth do not line up properly.

Allow discussion on other diseases they can think of.

# *Lesson #3: Oral Health Recommendations for Children*

## Lesson Objectives

By the end of this lesson, trainees will be able to:

1. Discuss when a child should see a dentist
2. Describe the responsibility of the medical provider in oral health
3. Describe ways a CHW can help families reduce caries and improve oral health

## Estimated Time Required

10 minutes

## Documents

Power point slides

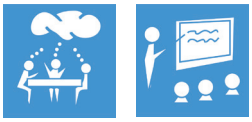
## Materials

Large flip chart and/or whiteboard

Computer/projector

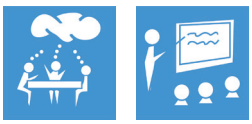
## Content

### 1. Dental and Medical Providers



**Slide 28**: Ask: ***"When should a child start going to the dentist?"***

Correct answer: At age one year old or within six months of the first tooth erupting, and every 6 months ongoing.



Ask: ***"What is the role of the pediatrician or family doctor regarding oral health?"***

Correct answer: Doctors are supposed to screen children for oral health risk at 6, 12, 18, 24, 30, and 36 months, and then every year. They are supposed to ask questions about the family's oral health behaviors, refer to a dentist, and apply fluoride varnish.

**Slide 29**: Although such medical provider screening is ideal, it does not always happen due to other conflicting priorities, so CHWs may be the first and only line for such caries risk screening and counseling.

## 2. Counseling

**Slide 30**: Recommended risk-based counseling strategies for CHWs include:

- Delay Vertical Transmission
  - Get mom a dentist.
  - No licking pacifiers.
  - No sharing utensils.
- Reduce dietary sugars: amount and frequency
  - Eliminate nighttime dietary intake when teeth erupt.
  - Limit snacking to less than twice daily.

Avoid unnatural sticky foods.

**Slide 31**: Nighttime and Bottle Feeding Recommendations

- Infants/Toddlers with teeth should be weaned from nighttime nursing and bottle feeds due baby bottle tooth decay concerns, as the constant slow drip of sugary fluids, even milk promote tooth decay.
  - 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 due to similar nipple flow-rate concerns.
- Regular cups are preferred, but if families use a sippy cup, hard top cups are preferred.

Show the video link, 'Bottle Mouth Decay': https://www.youtube.com/watch?v=0EAqpmk4TbI

Ask ***"What are your thoughts about that video?"***

**Slide 32**: Other Dietary Recommendations

- For older children and parents, xylitol gum and other similar foods after and in-between meals helps reduce caries by increase salivary flow—remember the old commercials “brush your teeth with Dentyne”?
- Avoidance of sticky foods includes: gummy vitamins/candies, caramels, fruit roll-ups, etc. that can stick in between teeth grooves, especially for younger children who do a poor job of using their tongue to get stuck food out of their teeth when eating.

# *Lesson #4: Fluoride*

## Lesson Objectives

By the end of this lesson, trainees will be able to:

1. Explain what fluoride is and how it prevents caries.
2. Discuss how and why to brush teeth and floss.
3. Describe challenges and strategies for getting enough fluoride, with an emphasis on filtered/bottled water.
4. Describe what fluoride varnish is, where/when/why to get it.

## Estimated Time Required

15-20 minutes, depending on discussion generated

## Documents

Power point slides

## Materials

Large flip chart and/or whiteboard

Computer/projector with internet connection

## Content

### 1. Fluoride

**Slide 33**: Ask: ***"What is fluoride? Why is it important?"***

**Slide 34**: Fluoride is a natural mineral.

Fluoride gets incorporated into the tooth enamel and does a few things:

1. Helps the tooth rebuild the enamel after acid exposure (This is called remineralization).
2. Fluoride makes the tooth stronger and more able to resist eroding from acid.
3. Fluoride has some antibacterial properties which reduce the amount of acid producing bacteria in the mouth.


Ask: ***"How do we get fluoride?"***

**Slide 35**: Main sources are:

- Water
- Toothpaste and mouthwash
- Dentist or medical provider treatments

**Slide 36**: **Please substitute fluoride data specific to your region.**

- Community water fluoridation is cited as one of the top 10 greatest public health achievements.
- Illinois was actually one of the founders of this movement with Evanston being one of the first cities in the nation to fluoridate community water.
- Water is the most common source of fluoride for almost 98% of people in Illinois.
- Levels in Chicago are in the recommended range.

**Slide 37**: Not everyone fluoridates water however. You can see that there is a lot of variability in other parts of the county.

**Slide 38**: Not everyone drinks water directly from the tap.

- Bottled water is not a reliable source of fluoride. One brand, Nursery Water, has some fluoride but most others do not. The manufacturers do not have to say if there is fluoride or not in the bottles. And when we look at the populations we serve—lower income, minority—we see that almost half drink bottled water.
- Water filters are used by many people. Brita-type filters do not remove fluoride. More fancy systems often do remove fluoride from the water.

**Slide 39**: So toothpaste is another source of fluoride.

Ask ***"How many of you think that babies and young children should use special toothpaste? Why do you think that?"***

You think they should use special baby toothpaste because we know that babies eat their toothpaste, and you have been told by stores and maybe doctors that it is dangerous for babies to eat fluoride.

But actually the recommendation is fluoridated tooth paste only.

Toddler training or other non-fluoridated toothpastes are not recommended. Which toothpastes have fluoride and which don't? You need to read the labels.

However fluoridated toothpaste needs to be used safely to prevent accidental over-ingestion. We will talk about how to do that later when we discuss brushing.

**Slide 40**: Ask ***"Have any of you ever had a doctor paint something on your child's teeth to prevent cavities?"***

What is it, and what does it do?:

It is typically a clear or yellowish substance with a honey-like consistency, that is also flavored. It instantly sticks to kids teeth when applied. In technical terms, it is highly concentrated fluoride that is incorporated into tooth's enamel.

It is very effective:

Reduces Caries by 30-80%!

Can actually reverse early-stage caries, meaning it can make early caries go away.

It's very Cheap:

Costs ~$1.00/application.

Can be applied by a child's Doctor or Dentist

**Slide 41**: Who Should Receive it?

"At-risk" children who are <4 years old. Should be applied every 3-6 months.

"At-risk" eligible children are defined as:

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

Ask ***"Isn't too much fluoride dangerous?"***

**Slide 42**: Sadly if one googles "community water fluoridation" many anti-fluoride websites and coalitions pop up.

Despite how beneficial and safe we know fluoride to be in tap-water there still is a lot of skepticism about fluoride's safety, etc in drinking water supplies. Beliefs range from it being a 'government plot' to fluoride causing cancer (which has never been proven).

Patients may be exposed to such messaging, so CHWs are not expected to be experts on this subject, they similarly need to be prepared about receiving such questions, and know how to properly discuss some basic facts presented in this training with families about community water fluoridation and fluoride in general.

# *Lesson #5: Brushing Basics*

## Lesson Objectives

By the end of this lesson, trainees will be able to:

- Describe how and when to brush teeth
- Discuss types of toothbrushes
- Explain how to floss
- Describe the role of mouthwash

## Estimated Time Required

60 minutes

## Documents

Power point slides

## Materials

Large flip chart and/or whiteboard

Computer/projector with internet connection

Tooth model if available

Toothbrushes and toothpaste for all

Disclosing solution

Handheld mirrors

Vaseline (to prevent lip staining)

Cotton Swabs (to apply the Vaseline)

## Content

**Slide 43:** How to brush teeth

Ask ***"How many of you feel that you know how to brush your teeth perfectly?"*** Show of hands. ***"Ok, let's give it a test."***

Give everyone a toothbrush and toothpaste. Have them go into the bathroom and brush their teeth. When they are done, apply disclosing agent. Look in mirrors.

Ask ***"What do you think? Is this what you expected?"***

**Slide 44**: So how do we properly brush our teeth?

If you have a tooth model, demonstrate. (Consider asking one of class to demonstrate if they seem to know well how to do it.) Otherwise use online video of adult. Review basic steps.

**Slide 45**: So let's talk about some of the details. Toothpaste. Remember, we always want toothpaste with fluoride. The amount to use depends on the age. Under the age of 3, we say to use a "smear" or the size of a grain of rice. Children 3-6 years old can have a pea-sized amount. After age 6, then can have a regular strip of toothpaste. Spit it out when done brushing. For children and babies that do not understand how to spit, do not give them water after brushing because they will then just drink the toothpaste left in their mouths.

**Slide 46**: What type of toothbrush is best?

- They are all fine.
- Manual or electronic are both ok.
- Electric are better for people who have weakness in their hands.
- Soft bristle is best for children.

What size toothbrush?

- Whatever fits in the mouth and can reach all the teeth.

How should toothbrushes be stored?

- Upright
- Uncovered
- Let them air dry

When should you get new toothbrushes?

- Every 3-4 months, or when they start to get frayed (picture).

**Slide 47**: When to start brushing?

- When child gets first tooth!
- Some people start by wiping the tooth with a clean cloth, but a small toothbrush is fine too.

How often should everyone brush?

- At minimum, every morning and night.

How long should you brush?

- The goal is 2 minutes.

When are children able to brush on their own?

- As babies and toddlers, they really need you to brush for them.
- When they get more coordinated and focused, they can brush on their own but they need supervision at least until they are 7.
- Children don't have the manual dexterity (strength and coordination) to brush by themselves.
- Good option is to take turns: Child brushes for one minute, then parent for one minute.

Be sure to brush all the different surfaces of the teeth, and brush the tongue and gums. Don't be afraid if the gums bleed a little. That just makes them more healthy.

**Slide 48**:

Videos of how to brush a baby/toddler's teeth

- 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-health/basics/brushing-and-flossing/video/No-More-Nasties-Brushing-for-Kids

**Slide 49**: There are a lot of ways to make brushing fun, such as timers and sticker charts.

**Slide 50**: Flossing is generally not needed for younger children unless more than 2 teeth touch. When children are older, and as adults, they should floss daily. Some cavities form between the teeth and not visible to the eye.When younger children floss, they need assistance from caregivers.

**Slide 51**: Some people like mouthwashes, and sometimes dentists recommend them. They do not replace brushing, but are an additional source of fluoride. Just make sure to not swallow them.

**Slide 52**: 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. Dentists, dental hygienists, and dental assistants  can apply sealants, so CHWs should encourage families to ask their dentist if their child is eligible for sealants.

## *Lesson #6: Patient Resources*

### Lesson Objectives

By the end of this lesson, trainees will be able to:

- Describe and access additional resources for dental care and oral health.

### Estimated Time Required

5 minutes

### Documents

Power point slides

### Materials

Large flip chart and/or whiteboard

Computer/projector with internet connection

## Content

**Slides 53-55**: The following 3 slides shows CHWs available online patient educational materials from respected resources that they can use with families.

- AAP: www.healthychildren.org
- ICAAP: Bright Smiles from Birth
    - http://illinoisaap.org/projects/bright-smiles
- Colgate: http://www.colgate.com/en/us/oc/oral-health/life-stages/childrens-oral-care
- Delta Dental: http://www.youroralhealthhub.com/just-for-kids/

**Slide 56:**

Dental Referral Resources

Remember that:

- Children should see a dentist starting at 1 year old or within six months of getting their first tooth.
- Care should be
    1. Affordable.
    2. Accessible, family-centered, coordinated, compassionate, and culturally effective.
    3. Should meet child's unique needs. Special needs children sometimes need to be taken care of by specialized dentists at places like UIC.

Referral sources vary:

- UIC DDS School
- DentaQuest website

## *Lesson #7: Review and Practice*

### Lesson Objectives

By the end of this lesson, trainees will be able to:

- Demonstrate use of the training content.

### Estimated Time Required

60

### Documents

None

### Materials

Large flip chart and/or whiteboard

## Content

### 1. Discussion

Ask ***"What did you learn today that most surprised you?"***

***"What did you learn today that you think might be most useful?"***

### 2. Review


**Slide 57**: Ask: ***"What are the key areas CHWs can work on with families?"***

**Slide 58 - 59: Emphasize importance of oral health**

- Even babies need their teeth taken care of.

**Brushing**

- Start as soon as they 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.

*Show slides 58-59 at end if missing anything, should get most of it in discussion. Try to get them to organize it into categories. Write on a white board or flip charts.*

## 3. Practice

Have them do two role plays. One where they are the parent, one as a CHW. Pretend they are in the home. Ask them to be creative, the person who is the parent should throw some curve balls (all my kids slept with the bottle, he goes crazy without the bottle and I'll get kicked out of my apartment if I allow that, city water will get us all sick, fruit snacks are much better than candy).

Discuss as a group after.

# *Evaluation*

Evaluation is a critical step for all trainings. Pre- and post-examinations of knowledge is one way to evaluate the training. However the true test is if CHWs can apply this knowledge in a real-life situation.

We also encourage trainers to evaluate their own training delivery skills and the facilities where the training was conducted. We suggest trainers conduct a verbal feedback session or distribute a written evaluation at the completion of the training.

## Objectives

By the end of this evaluation, trainees will be able to:

- Demonstrate knowledge gained in the training through a pre/posttest.
- Demonstrate the application of skills in a situation where the CHW is trying to help an individual or family.

## Estimated Time Required

It depends on the number of trainees. Each trainee takes about 5 minutes for the pre/posttest and 15 minutes for each role play.

## Documents

- Pre/posttest
- Role play
- Role play evaluation form

## Materials

None

## Other

You will need a quiet separate room from the main room where each trainee can be tested alone.

You will need a minimum of 2 evaluators.

You will need an “actor” for the role plays.

## 1. Pre/posttest of Knowledge

Before and after the training, distribute a test of the knowledge you hope trainees will gain. Some optional questions are listed here:

1. When should parents start brushing their children's teeth?
   a. Age 1 or within six months of the first tooth erupting
   b. Two years old
   c. Three years old
   d. Five years old
   e. When they have at least 4 teeth

2. What types of toothpaste should babies and toddlers use?
   a. No toothpaste
   b. Infant toothpaste without fluoride
   c. Any toothpaste (childrens or adult) with fluoride
   d. Natural toothpaste

3. How often should children's teeth be brushed?
   a. As needed
   b. At least once a day
   c. At least twice a day
   d. At least three times a day

4. Parents do not need to help their toddlers and young children brush their teeth if the child wants to do it on his or her own.
   a. True
   b. False

5. At what age should babies stop using bottles?
   a. One year old
   b. 18 months
   c. 24 months
   d. It doesn't matter

6. Water with fluoride is dangerous.

a. True
b. False

7. Sugar in natural foods like juice is healthier than sugar in soda.

a. True
b. False

8. Drinking small amounts of sugary drinks all day long is more dangerous than drinking them quickly.

a. True
b. False

9. How often should children see the dentist?

a. Every six months
b. Once a year
c. Every other year
d. Only when they have pain or a problem

## Role Play Evaluation instructions

1. Trainees should know beforehand how they will be tested.  They will get very nervous about this. Reassure them.

2. Give everyone the role play to study beforehand.

3. Role play evaluation

    i. Bring trainees one-by-one into a separate room. (The trainees not being currently tested should not watch.)

    ii. Face the trainee across from the evaluators and next to the actor

    iii. Instruct the trainee to be the CHW.

    iv. You can decide if you want this to be a “first” visit (in which case they are screening to determine the needs and goals of the participant, and building trust) or a follow-up visit (where they will assess actions). Give the CHW clear instructions about what you expect them to accomplish. The actor needs to follow the same script and pattern for each trainee.

    v. Give them 10-15 minutes. You can warn them when time is ending.

    vi. When they have completed the role play and the evaluators have completed their documentation, give the trainee feedback.

4. Score forms

## Sample role play scenarios:

**Scenario 1 (First visit, goal is to identify areas of need)**

**Tell CHW:** You already know this from your referral form: Maria is a 25 year old mother of three. She has a five year old, 3 year old, and 12 month old. Maria lives with her mother, her brother who is 21, her brother's 2 year old child, and her 18 year old sister. Maria works at a call center from 6am to 2pm. Maria gets LINK, WIC, and Medicaid.

**Tell Maria/actor:** Your mother watches the kids a lot for you but she is overwhelmed. She gives them whatever they want, anything to make them quiet. This includes tons of juice, junky foods, and candy. You know your mother won't support you on the change to the bottle because you have already been through this all with her with your 3 year old. Whatever you say, your mother just ignores when you are gone. You are trying to save enough money to move into your own apartment but you just can't afford any other child care and don't know what to do.

**Scenario 2 (First visit, goal is to identify areas of need)**

**Tell CHW:** You already know this from your referral form: Wendy is a 21 year old new mom. Her baby is 10 months old. She and her boyfriend live in an apartment by themselves. Wendy gets LINK, WIC, and Medicaid.

**Tell Wendy/actor:** She doesn't have much help. Her family all live in California. Her boyfriend's family live in Chicago but they do not get along well. She and her boyfriend take turns caring for the baby when they are not at work. She doesn't know what fluoride is. Her baby already has four teeth but no one has ever told her anything about how to care for them. She assumes she will wait until 3 years old since that seems like something she heard somewhere…

## Sample role play review form

CHW: Date of Rating: / /

**Description of Role Play:**

**Directions:** For items, 1-9, assess the CHW on a scale from 1 – 5. Calculate the average rating at the bottom of the page.

**1** Needs review of content and additional practice in this area

**2** Demonstrates a basic understanding of the skill and is ready to practice a more complicated skill

**3** Demonstrates an adequate understanding of a complicated skill, but needs more practice before starting on a clinical trial

**4** Demonstrates an adequate understanding of the skill and is ready for entering the field on a clinical trial

**5** Demonstrates a sophisticated understanding of the skill and could likely be role model for his/her peers.

**N/E** Not evaluated: This role play scenario did not allow opportunity to evaluate this skill

| | SKILL | RATING | COMMENTS/SUGGESTIONS |
|---|---|---|---|
| 1 | ACCURACY OF CONTENT: CHW demonstrates knowledge of oral health information or self-management skill. | | |
| 2 | CLARITY OF CONTENT: Communicates content in lay person's language, keeps the level of detail simple, and limits amount of material covered so it's likely to be retained, and not overwhelm the participant. | | |
| 3 | OPENNESS TO QUESTIONS: Responds to questions from participant. If CHW does not know the answer, talk about how participant could pursue the answer or assures participant that they will learn what they can and get back to them at the next meeting. | | |
| 4 | INDIVIDUALIZING the CONTENT and PROCESS: Shows an ability to find out what is most relevant to this participant and tailors the protocol to maximize acceptance of material. | | |
| 5 | MODEL & GUIDE: CHW used modeling and experiential learning. Used conversational and problem-solving approaches (rather than lecture or debate) to promote guided discovery and learning, helping participants to draw their own conclusions. | | |
| 6 | CHECK FOR PARTICIPANT UNDERSTANDING of MATERIAL: CHW checks for participant understanding by asking the participant to answer open-ended questions, to put presented material into their own words, and/ or to demonstrate knowledge by practicing the skill within the session. | | |
| 7 | ACTION: Discussed an action plan for weekly practice of skills. Encouraged participant to tie the content of material to their daily lives by developing a plan to take some action or to practice a skill in the time before their next meeting. | | |
| 8 | ASKED FOR FEEDBACK: CHW asked participant for feedback on how this meeting and the overall process in the study is going. | | |
| 9 | INTERPERSONAL EFFECTIVENESS: CHW displayed optimal levels of warmth, concern, confidence, genuineness, professionalism, and maintained appropriate boundaries. | | |
| | | | |
| | AVERAGE RATING (Calculated) | | |

## Final determination of CHW competencies

Many factors go into to the final determination of CHW competencies. Demonstrated knowledge in pre- and post-tests are important. It is also important if CHWs can demonstrate they know how to draw out participants, react to their needs, and help families make change.

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