Reducing Oral Health Disparities by Training Community Health Champions to Identify Principal Social Determinants

Ileana Maria Ponce-Gonzalez, MD
Community Health Workers Coalition for Migrants and Refugees
CEO

Allen Cheadle
Director
Center for Community Health and Evaluation
Kaiser Permanent Research Institute

Stacy Torrance, MPH
ARCORA Foundation
Senior Program Officer

Midwest Stream Forum for Agricultural Worker Health
CHWCMR Team

Master Trainers
- Giselle Zapata Garcia
- Silvia Kennedy
- Socorro Garcia
- Katherine Newton
- Ana Elisa Wilson
- Carlos Jiménez
- Luz Romero

Lay Leaders
- Angelica Rivera
- M. Guadalupe Gaitan
- Julissa Schneider
- Kalli Morales-Donahue
- Rosalba Mata

Collaborators

Allen Cheadle
Co-Investigator
Evaluation consultant

Gino Aisenberg
Co-investigator
Figure Drawing Assessment

Ileana Maria Ponce-Gonzalez, MD, MPH, Project Director
Executive Director of CHW Coalition for Migrants and Refugees
Co-Investigator & Sponsor
ARCORA
Oral Health Trainings: Origin and Goals

Community based participatory project - CHWCMR & ARCORA

26% of Hispanic 6- to 9-year old suffered from untreated tooth decay

English and Spanish-language focus groups: Seattle and Eastern Washington.

Goal: Gain a better understanding of the knowledge, attitudes and behaviors regarding oral health

Good oral health is important to control chronic diseases, and quality of life

Good oral health is important to control chronic diseases, and quality of life
Learning Objectives

By the end of this presentation participants will be able to...

- describe the content and challenges of developing an oral health curriculum for migrant populations.
- explain principles about how to train community health workers to conduct interactive oral health workshops for migrant populations.
- discuss the results from the oral health workshops conducted with Washington State migrant populations.
- advocate for resources to train community health workers to address health needs in their community.
Wealthy WA, but our migrant population has poor oral health, a reflection of fundamental health inequity.

Important public health priority to educate migrants about how to prevent oral health disease and how to maintain good oral health.

Poor oral health reduces quality of life and is related to systemic chronic conditions: stroke, heart, and lung disease and diabetes.

Emerging research also suggests that the relationship between serious gum disease and diabetes is two-way. Not only are people with diabetes more susceptible to serious gum disease, but serious gum disease may have the potential to affect blood glucose control and contribute to the progression of diabetes.

Migrant workers, most of whom are Spanish-speaking workers, face many barriers to receiving health care in general and dental health care in particular, including lack of transportation, insurance, and sick leave; the threat of wage or job loss; language barriers; lack of regular dental practitioner; and limited clinic hours.

Many migrant workers lack basic oral health knowledge, including the relationship between sweet foods and caries and the positive effects of good oral hygiene and fluoride dental health and overall health.

Migrant farmworkers experience 150 to 300 percent more decay.
Phase I

- Development of the Curriculum/Experts
- Recruitment-Outreach Focus Group
Oral Health and Social Determinants of Health Workshops

- Conducted by a lay leader (or two co-presenters) who are CHWs trained by CHWCMR
- Learning activities
- Pre-Post surveys
Workshop Modules

- Oral Health Statistics
- Oral Health Conditions
- Oral Health Care
- Social Determinant of Health Affecting Oral Health
- The Relationship about Oral Health and Chronic Conditions
- Oral Health and Social Determinant of Care
- The Role of CHWs in Oral Health
- What Dentists Expect from Patients
- Resources and Tools for Oral Health in your Community
- Being an Advocate for Oral Health
<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
<th>Objective</th>
</tr>
</thead>
</table>
| Presentation topics   | **Oral Health Statistics**  
|                       | **Oral Health Conditions**  
|                       | **Oral Health Care**  
|                       | **Social Determinant of Health Affecting Oral Health**  
|                       | **The Relationship about Oral Health and Chronic Conditions**  
|                       | **Oral Health and Social Determinant of Care**  
|                       | **The Role of CHWs in Oral Health**  
|                       | **What Dentists Expect from Patients**  
|                       | **Resources and Tools for Oral Health in your Community**  
|                       | **Being an Advocate for Oral Health**                                                                                                                                  | Present information in an accessible way about key topics in oral health |
| Figure drawing exercise | Prompt for drawing: How do you feel about your own *oral cavity*? If your oral health is good then: How do you notice how other members of your family feel about their oral health? | Allow participants to express their feelings about their oral health and how it affects them |
| Gallery               | **Exercise eliciting participant opinions about key social and other determinants of oral health**                                                                 | Identify key barriers and facilitators of good oral health from a community perspective |
| Fish Tank             | **Exercise about how to effectively clean your mouth. Participants take turns cleaning their own teeth and getting advice**                                                                                     | Provide hands-on training for good oral health practices |
Phase II

1- Resources, funding, partnership

2- Training methods used included case studies, gallery, fish tank, figure drawing, role-playing, and lectures
Interactive Learning Experiences

- Figure drawing on a piece of paper:
  - How do you feel about your own oral cavity? Identify yourself. If your oral health is good then:
  - How do you notice how other member of your family feel about their oral health?

- Gallery: Exercise about Social Determinants of Health & Oral Health

- Fish Tank: Exercise about how to clean your mouth
Phase III

1-Analysis of quantitative data and analysis of qualitative data

2-Professional Evaluation

Table 2. Demographics of education program participants
2017 Workshops

- 12 workshops
- In-person, two hours long
- Two trainers
- 311 participants
- Pre/post surveys: ~95% responding
<table>
<thead>
<tr>
<th>Demographics of Education Program Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Number of respondents</strong></td>
</tr>
<tr>
<td><strong>Gender</strong></td>
</tr>
<tr>
<td>Female</td>
</tr>
<tr>
<td>Male</td>
</tr>
<tr>
<td>Other</td>
</tr>
<tr>
<td><strong>Age</strong></td>
</tr>
<tr>
<td>&lt;18 years</td>
</tr>
<tr>
<td>18-24</td>
</tr>
<tr>
<td>25-49</td>
</tr>
<tr>
<td>50-64</td>
</tr>
<tr>
<td>&gt;65 years</td>
</tr>
<tr>
<td><strong>Education</strong></td>
</tr>
<tr>
<td>No formal education</td>
</tr>
<tr>
<td>Elementary school</td>
</tr>
<tr>
<td>High school</td>
</tr>
<tr>
<td>Some college</td>
</tr>
<tr>
<td>College degree+</td>
</tr>
<tr>
<td><strong>Country of origin</strong></td>
</tr>
<tr>
<td>Mexico</td>
</tr>
<tr>
<td>United States</td>
</tr>
<tr>
<td>El Salvador</td>
</tr>
<tr>
<td>Other Latin America</td>
</tr>
</tbody>
</table>
POST-Survey

Your Initials: ___
Your Month of Birth: ___

1. Are you familiar with any conditions or illnesses that may be related to oral health (or negatively impacted by poor oral health)?
   - Yes
   - No
   Please provide any examples: __________________________

Multiple choice: Please pick the best response.

2. Dry mouth can cause:
   - Bad breath
   - Tooth decay
   - Problems swallowing
   - Difficulty speaking
   - All of the above

3. A mouth infection, like an abscessed tooth:
   - A. Needs immediate attention
   - B. Will heal itself with ice or with something hot
   - C. Will be helped by consulting a neighbor
   - D. Can result in very serious complications
   - Both A & D, above

4. Oral health problems may be due to:
   - Having poor oral hygiene alone
   - Lack of economic resources
   - Inability to communicate in the language of my oral health care provider (dentist or doctor)
   - Living in an area where free or low cost oral health services are unavailable
   - All of the above

5. When I have a cavity or other dental problem:
   - I visit my health center to see my medical doctor
   - I pull my own tooth
   - I visit the dentist so that he or she can pull my tooth
   - I visit the dentist or other provider and follow the instructions
   - I ask my family or neighbors for advice and follow their instructions

Please check the box if the statement is True or False

6. Children in low-income families experience more tooth decay than other children.

7. Drinking juice is good for teeth.

8. People with dentures need to visit the dentist.

9. Fluoride is a naturally occurring mineral that heals and strengthens teeth.

Please rate your level of satisfaction with the following:

10. The training leader's knowledge and skill

11. The content of the training

12. The location/timing of the training

13. The training overall

14. What did you learn in the training that you will use in your work?

15. What other information, knowledge or skills would you like to have included in this training?

For office use: Date: ___/___/___ (mm/dd/yy)   Training Site/Code: ___
<table>
<thead>
<tr>
<th>Question</th>
<th>Pre</th>
<th>Post</th>
<th>Difference</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple choice</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dry mouth can cause...difficulty speaking</td>
<td>57.4%</td>
<td>71.7%</td>
<td>14.3%</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>A mouth infection... can result in very serious complications</td>
<td>37.5%</td>
<td>60.5%</td>
<td>23.0%</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Oral health problems can be due to...a number of factors (e.g., lack of economic resources)</td>
<td>46.6%</td>
<td>73.8%</td>
<td>27.2%</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>When I have a cavity...I visit the dentist or other provider</td>
<td>41.3%</td>
<td>52.4%</td>
<td>11.1%</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>True/False</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Children in low-income families experience more tooth decay (True)</td>
<td>64.6%</td>
<td>86.4%</td>
<td>21.8%</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Drinking juice is good for teeth (False)</td>
<td>82.3%</td>
<td>88.8%</td>
<td>6.5%</td>
<td>0.05</td>
</tr>
<tr>
<td>People with dentures need to visit the dentist (True)</td>
<td>86.8%</td>
<td>97.0%</td>
<td>10.2%</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Fluoride is a naturally occurring mineral that heals and strengthens teeth (True)</td>
<td>86.5%</td>
<td>94.8%</td>
<td>8.3%</td>
<td>&lt;0.01</td>
</tr>
</tbody>
</table>

Table: Changes in knowledge pre/post the education sessions
### Housing of Participants

<table>
<thead>
<tr>
<th>Housing</th>
<th>Freq</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apartment</td>
<td>88</td>
<td>35%</td>
</tr>
<tr>
<td>House</td>
<td>136</td>
<td>54%</td>
</tr>
<tr>
<td>Trailer</td>
<td>23</td>
<td>9%</td>
</tr>
<tr>
<td>Other</td>
<td>4</td>
<td>2%</td>
</tr>
<tr>
<td>Total</td>
<td>251</td>
<td>100%</td>
</tr>
</tbody>
</table>
“Chalk Talk”

Three stations with:
1. Examples of curriculum slides
2. Pre/post results from knowledge survey
3. Social determinants results

Visit stations of interest and post stickies in answer to questions:
- What seems important to you?
- How could these results apply in your own work?
- What questions or suggestions do you have?

Come back together and debrief
### Table 2
Determinants of health mentioned by education program participants

<table>
<thead>
<tr>
<th>Issue/barrier</th>
<th># of mentions</th>
<th>Examples of responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access</td>
<td>32</td>
<td>Lack of insurance, high cost of services, no access to dental services, no dentist in rural areas</td>
</tr>
<tr>
<td>Dental practices</td>
<td>17</td>
<td>Not brushing every day, do not use floss, lack of sealants, use needle to clean teeth</td>
</tr>
<tr>
<td>Language/legal status</td>
<td>16</td>
<td>Language barriers, lack of legal status, limited English</td>
</tr>
<tr>
<td>Social/Economic status</td>
<td>16</td>
<td>Housing problems, limited education, unemployed, poverty</td>
</tr>
<tr>
<td>Fear/trust</td>
<td>15</td>
<td>Do not trust the dentist, fear of dental procedures, sounds of drills</td>
</tr>
<tr>
<td>Food behaviors</td>
<td>13</td>
<td>Drink too much soda, eating sweets, junk food, chewing gum all of the time</td>
</tr>
<tr>
<td>Cultural</td>
<td>12</td>
<td>Different food cultures, family beliefs, myths, use of home remedies</td>
</tr>
<tr>
<td>Transportation</td>
<td>10</td>
<td>Lack of transportation</td>
</tr>
<tr>
<td>Knowledge</td>
<td>8</td>
<td>No oral health education, lack of information about resources</td>
</tr>
<tr>
<td>Time/energy</td>
<td>8</td>
<td>Lack of time</td>
</tr>
<tr>
<td>Substance use</td>
<td>7</td>
<td>Alcohol consumption, use of drugs, smoking</td>
</tr>
<tr>
<td>Water quality</td>
<td>5</td>
<td>Lack of safe drinking water, poor quality of water</td>
</tr>
<tr>
<td>Stigma/appearance</td>
<td>4</td>
<td>Stigma of losing teeth, nice smile improves appearance, stigma of HIV</td>
</tr>
</tbody>
</table>
Social Determinants -1

- **Access**
  - 32 times
  - Lack of insurance
  - High cost
  - No access to dental services
  - No dentist in rural areas

- **SES**
  - 16 times
  - Housing problems / Homeless
  - Limited education
  - Unemployed
  - Poverty

- **Transportation**
  - 10 times
  - Lack of transportation

- **Time/energy**
  - 8 times
  - Lack of time
  - Laziness

Note: Numbers in bars = Number of times mentioned in the training sessions (out of ~200 total mentions)
Social Determinants - 2

Dental practices
17
- No brushing every day
- Do not use floss
- Lack of sealants
- Use needle to clean teeth

Language/Status
16
- Language barriers
- Lack of legal status
- Limited English

Fear/trust
15
- Do not trust the dentist
- Fear of dental procedures
- Sounds of drills

Knowledge
8
- No oral health education
- Lack of information about resources

Stigma/appearance
4
- Stigma of losing teeth
- Nice smile improves appearance
- Stigma of HIV

Note: Numbers in bars = Number of times mentioned in the training sessions (out of ~200 total mentions)
Social Determinants -3

- **Food behaviors**
  - 13 mentions
  - Drink too much soda
  - Eating sweets
  - Junk food
  - Chewing gum all of the time

- **Cultural**
  - 12 mentions
  - Different food cultures
  - Family beliefs
  - Myths
  - Use of home remedies

- **Substance use**
  - 7 mentions
  - Alcohol consumption
  - Use of drugs
  - Smoking

- **Water quality**
  - 5 mentions
  - Lack of safe drinking water
  - Poor quality of water

Note: Numbers in bars = Number of times mentioned in the training sessions (out of ~200 total mentions)
Regarding the questions we ask to participants about the drawing:

- Good day, we are going to talk about oral and dental health today. Rather than introduce each other, we are going to write our name on the page given to you, then you are going to draw the first thought you have about your own oral and dental health and how you feel about your mouth and teeth.
Tools for Healthy Teeth
Over time, cost of delay in seeking care.....
Impact on Sense of Self
Impairs sense of attractiveness
Apprehension to show smile
Odio mis problemas de salud dental y me deprimen sobre manera, no poder solucionarlos porque los seguros no cubren para la cura y a veces me dan ganas de ahorrarme.
Pain and Suffering
Hate Smile
Lack of confidence
Bad Smell
Barriers—lack of insurance, poverty, can’t afford treatment or meds
Health impact

Se cayeron los dientes porque tiene diabetes
Confidence in appearance
Cultural shift in practice
Phase IV

1-ARCORA Foundation program to reduce oral health in migrant’s populations

Arcora Foundation

► Determined to change the arc of oral health so that everyone enjoys good oral health.

► Funded by nonprofit Delta Dental of Washington

► Believes everyone deserves good oral health, with nobody left behind. Equity drives our work. We are improving oral health by partnering with communities and boldly transforming systems.

► Everyone is healthier with a healthy mouth. Oral health affects employment opportunities, well-being, and quality of life. That’s why everyone should have good oral health and a life free from oral disease and pain.
Designed to reduce oral health disparities among underserved populations.

Goal: To identify and execute the best sustainable ways to engage CHWs to address oral health in their communities, especially linguistically and geographically isolated populations, to address oral health in their communities and connect people to dental care.
In Washington State - Arcora Foundation Can Provide:

- Oral health training for health champions
- Coaching support and assistance with barriers that arise
- Free patient education materials in multiple languages: www.deltadentalwa.com/educational-materials
- Assistance with dental referral sources
DentistLink.org is a new technology service operated by Arcora Foundation through an online portal. The goal of DentistLink.org is to increase access to care by connecting patients to dentists who accept their type of insurance and are located near where the patient lives or works.
Step 1
Go to DentistsLink.org and tell us how to best communicate (text or phone). Tell us about your dental needs: Preferred location, reason for the visit and insurance type.

Step 2
A DentistLink Referral Specialist will reach out to you in your language (English, Spanish, other).

Step 3
Our Referral Specialists will match you with a local dentist based on your specific needs.

Step 4
Choose an appointment that best suits you and remember it with the help of our personalized reminder service.