

Virtual Dental Home: Increasing Access to Care through Onsite Dental Services

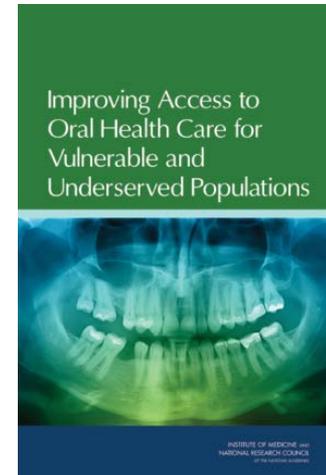
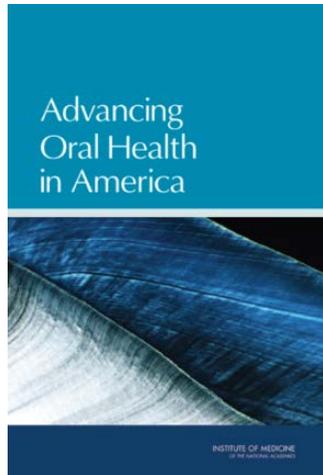
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PACIFIC
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School of Dentistry

Pacific Center for Special Care

The majority of underserved people with the majority of dental disease **DO NOT** take advantage of the traditional dental care delivery system.

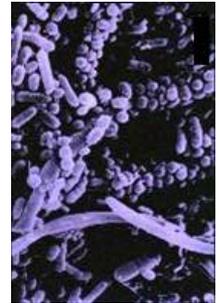
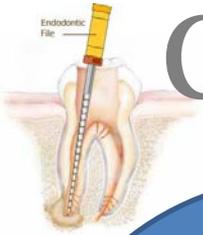
Themes from 2011 IOM Reports: Oral Health



Improve access to services and oral health through:

- Chronic disease management
- Delivery Systems
 - Telehealth
 - Payment incentives
 - Workforce expansion
- Drive change and accountability through
 - Quality measures and improvement

Care for Chronic Oral Diseases



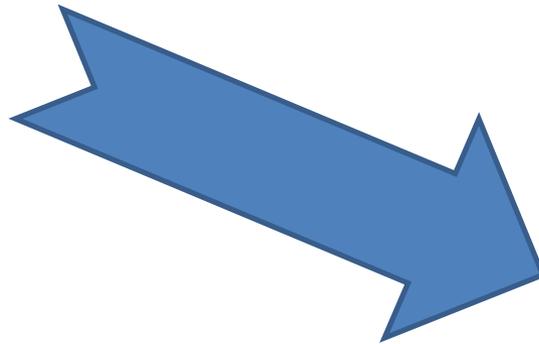
Acute Care/
Surgical
Intervention



Before CEREC®



After CEREC®



Chronic
Disease
Management

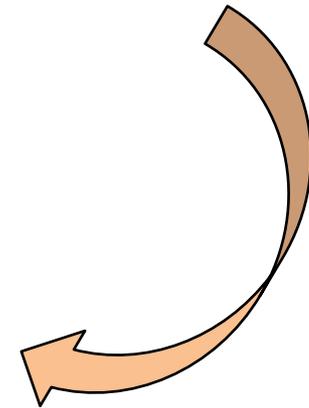
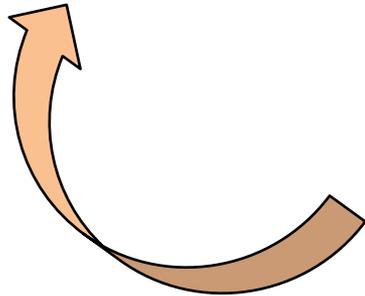
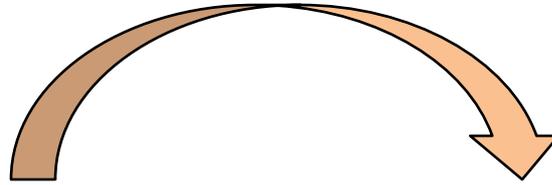


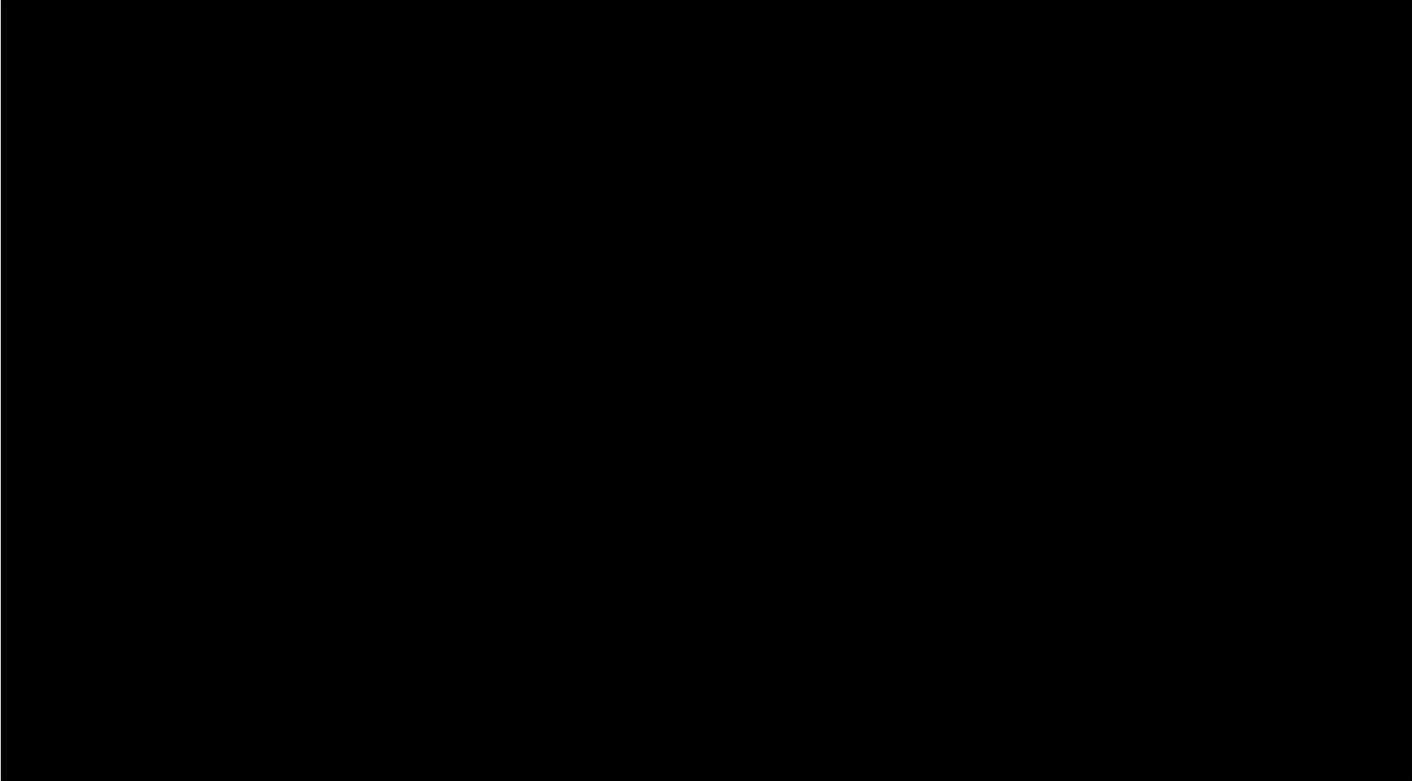
Care for Chronic Oral Diseases

Acute Care/Surgical Intervention Chronic Disease Management

- Provider-centric model
 - Care delivered in fixed offices and clinics
 - “Treatment” based on discrete procedure-based episodes of care
 - Payment based on discrete procedure-based episodes of care
 - Emphasis on surgical interventions
- Patient-centric model
 - Care delivered where people are to the extent possible
 - “Management” based on maintaining health across the life-cycle of a condition
 - Payment based on value of health improvement across life-cycle of a condition
 - Emphasis on risk assessment, prevention, and early intervention, using biological, medical, behavioral, and social tools

The Virtual Dental Home





What happens clinically on site?

- Collect patient information (medical and dental history, consent forms, caries risk assessment)
- Chart pre-existing conditions
- Take digital radiographs
- Take digital intra and extra-oral photographs
- Prophylaxis
- Fluoride varnish
- Sealants
- Interim Therapeutic Restorations



Clinic



Medical Information

Patient: Kim, Chae U	Type SS	Patient ID 109	Age/Sex: 43 / M	Responsible: Kim, Chae U	Prim. Ins:
(H) :		Age/Sex:		Balance: 0.00	
(C) :		First Visit:	01/15/2009	Est Ins: 0.00	Ben Rem: 0.00
(W) :		Last Visit:	07/30/2009	Est Pat: 0.00	Ded Rem: 0.00

Previous Medical History Medical History As Of 1/15/2009 11:09:00 AM PST

Medical Alerts

Allergic To	<input type="checkbox"/> Anemia / Leukemia	<input type="checkbox"/> Environmental Allergies	<input type="checkbox"/> Low Blood Pressure
<input type="checkbox"/> Aspirin	<input type="checkbox"/> Ankles Swell	<input type="checkbox"/> Epilepsy	<input type="checkbox"/> Mental Health Problems
<input type="checkbox"/> Barbiturates / Sleeping Pills	<input type="checkbox"/> Anorexia / Bulimia	<input type="checkbox"/> Fainting Spells / Seizures	<input type="checkbox"/> Mitral Valve Prolapse
<input type="checkbox"/> Codeine / Other Narcotics	<input type="checkbox"/> Arthritis	<input type="checkbox"/> Fever Blisters / Herpes	<input type="checkbox"/> Persistent Diarrhea
<input type="checkbox"/> Erythromycin	<input type="checkbox"/> Asthma / Hay Fever	<input type="checkbox"/> Frequent Headaches	<input type="checkbox"/> Premedicate
<input type="checkbox"/> Iodine	<input type="checkbox"/> Blood Clotting Problems	<input type="checkbox"/> Frequently Dry Mouth / Sjogren	<input type="checkbox"/> Rheumatic Fever
<input type="checkbox"/> Latex Rubber	<input type="checkbox"/> Blood Transfusion	<input type="checkbox"/> Gall Bladder Trouble	<input type="checkbox"/> Rheumatic Heart Disease
<input type="checkbox"/> Local Anesthetics	<input type="checkbox"/> Bronchitis	<input type="checkbox"/> Heart Attack / Stroke	<input type="checkbox"/> Sexually Transmitted Disease
<input type="checkbox"/> Metals	<input type="checkbox"/> Cancer / Tumor or Growth	<input type="checkbox"/> Heart Disease / Angina	<input type="checkbox"/> Shortness of Breath
<input type="checkbox"/> No Epinephrine	<input type="checkbox"/> Cardiac Pacemaker	<input type="checkbox"/> Heart Murmur	<input type="checkbox"/> Sinus Trouble
<input type="checkbox"/> Penicillin	<input type="checkbox"/> Chest Pain Upon Exertion	<input type="checkbox"/> Hepatitis / Jaundice	<input type="checkbox"/> Stomach Ulcers
<input type="checkbox"/> Prior Hepatitis	<input type="checkbox"/> Color Blindness	<input type="checkbox"/> High Blood Pressure	<input type="checkbox"/> Thyroid Problems
<input type="checkbox"/> Sulfa Drugs	<input type="checkbox"/> Contact Lenses	<input type="checkbox"/> Hives / Skin Rash	<input type="checkbox"/> Tuberculosis
Check, if applicable	<input type="checkbox"/> Damaged Heart Valve	<input type="checkbox"/> Joint Replacement	<input type="checkbox"/> Unusual Weight Loss
<input type="checkbox"/> AIDS/HIV Infection	<input type="checkbox"/> Diabetes	<input type="checkbox"/> Kidney / Bladder Trouble	<input type="checkbox"/> Urinate Frequently
<input type="checkbox"/> Alcohol/Drug Abuse	<input type="checkbox"/> Emphysema	<input type="checkbox"/> Liver Disease	

Dental Questionnaire

Medical Questionnaire

Patient Chart

Patient: Mouse, Mickey M **Type:** Patient ID 100 **Responsible:** Mouse, Mickey M **Prim. Ins:** Delta Dental of Cali
 (H) : 714-555-1212 CA Age/Sex: 59 / M Balance: 5839.40 949-555-1212
 (C) : 714-555-1213 MD First Visit: 11/29/2004 Est Ins: 2838.10 Ben Rem: 0.00
 (W) : 800-555-1212 RT Last Visit: 01/12/2009 Est Pat: 3001.30 Ded Rem: 0.00

Change Dentition View Chart as on 1/12/2009 Clear Selection ADA Codes Progress Notes Perio

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

Pre-existing Compl. Procs. Treat Plans

Decay Defective

Crown Bridge

Implant Denture

Missing Impacted

Erupted Watch

Pre-existing Conditions

Type	Date	St	Code	Description	Th	Surf	Est. Ins.	Fee	Office
LEDGER	10/27/2008		D2140	Amalgam One Surface Perm/Prim	3	M	\$0.00	\$84.00	LA
LEDGER	10/27/2008		D2140	Amalgam One Surface Perm/Prim	4	M	\$0.00	\$84.00	LA
LEDGER	10/27/2008		D2140	Amalgam One Surface Perm/Prim	5	M	\$0.00	\$84.00	LA
LEDGER	10/27/2008		D2140	Amalgam One Surface Perm/Prim	6	M	\$0.00	\$84.00	LA
LEDGER	10/27/2008		D2140	Amalgam One Surface Perm/Prim	7	M	\$0.00	\$84.00	LA
LEDGER	10/27/2008		D2140	Amalgam One Surface Perm/Prim	8	M	\$0.00	\$84.00	LA
LEDGER	10/27/2008		D2140	Amalgam One Surface Perm/Prim	9	M	\$0.00	\$84.00	LA
LEDGER	10/27/2008		D2140	Amalgam One Surface Perm/Prim	10	M	\$0.00	\$84.00	LA
LEDGER	10/27/2008		D2140	Amalgam One Surface Perm/Prim	11	M	\$0.00	\$84.00	LA
LEDGER	10/27/2008		D2140	Amalgam One Surface Perm/Prim	12	M	\$0.00	\$84.00	LA
LEDGER	10/27/2008		D2140	Amalgam One Surface Perm/Prim	13	M	\$0.00	\$84.00	LA
LEDGER	1/12/2009		D2140	Amalgam One Surface Perm/Prim	2	M	\$0.00	\$84.00	LA

EHR: Photographs



EHR: Photographs

Denticon!3.5 :- Patient Window :- Welcome, PGLASSMAN :- Windows Internet Explorer

https://www.denticon.com/imaging/asp/xray.aspx

Scheduler Patient Transactions Charting Reports Utilities Setup Office [Redacted] Help Logout

DentiRay

Patient: [Redacted]	Type	Patient ID: 477	Responsible: [Redacted]	Prim. Ins:
{H}: BD:	Age/Sex: / F	Balance: 35.00	BD:	Ben Rem: 0.00
{C}:	First Visit: 11/29/2010	Est Ins: 0.00	Est Pati: 35.00	Ded Rem: 0.00
{W}:	Last Visit: 03/28/2011			

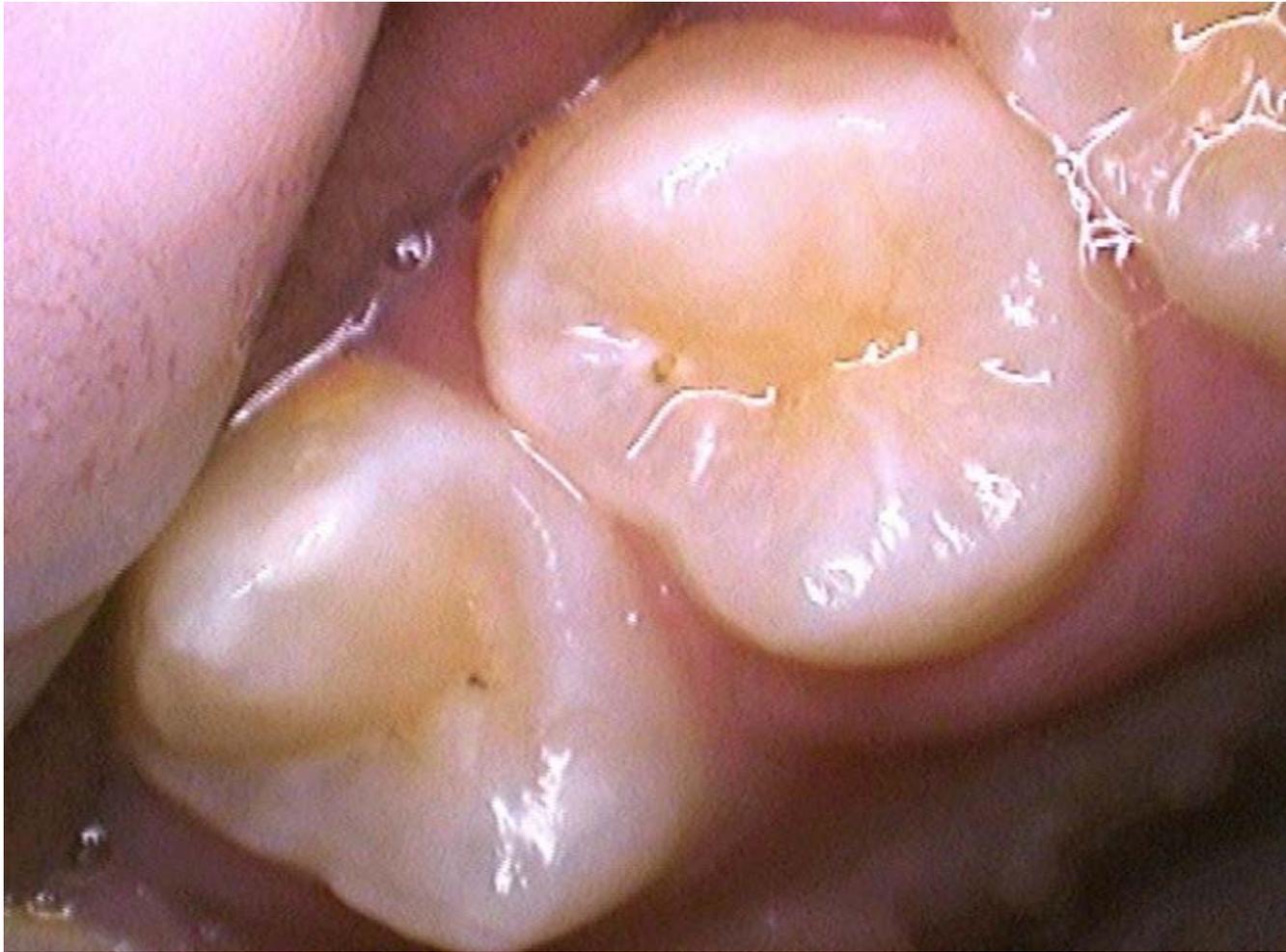
X-Ray Capture Presentation



Select Series: Study 02092011

Print Series Delete Series Move Series

EHR: Photographs



EHR: Risk Assessment

Denticon!3.5 ::- Patient Window ::- Welcome, PGLASSMAN ::- Windows Internet Explorer

https://www.denticon.com/ASPX/Patients/PatCarriesRisk.aspx

Scheduler Patient Transactions Charting Reports Utilities Setup Office Pacific Center For Special Care Help Logout

Add New Patient Caries Risk Assessment

Patient: Kim [REDACTED]	Type TP	Patient ID 109	Responsible: [REDACTED]	Prim. Ins:
(H): BD: [REDACTED]		Age/Sex: 44 / M	Balance: 0.00 BD: [REDACTED]	
(C):		First Visit: 07/30/2009	Est Ins: 0.00	Ben Rem: 0.00
(W):		Last Visit: 09/09/2010	Est Pat: 0.00	Ded Rem: 0.00

Date: 4/10/2011

Diagnosed Risk Level: **Medium Risk Level (Score: 4)**

Disease Indicators	Risk Factors	Protective Factors
<input checked="" type="checkbox"/> Visible cavities	<input checked="" type="checkbox"/> Visible heavy plaque	<input checked="" type="checkbox"/> Fluoride toothpaste daily
<input type="checkbox"/> Proximal lesions not in dentin	<input checked="" type="checkbox"/> Frequent snacking	<input type="checkbox"/> Fluoride rinse daily
<input checked="" type="checkbox"/> Smooth surface white spots	<input checked="" type="checkbox"/> Deep pits and fissures	<input type="checkbox"/> Hx of Peridex use
<input type="checkbox"/> Restorations in last 3 years	<input type="checkbox"/> Acidic pH	<input type="checkbox"/> Office fluoride in the last 6 months
	<input type="checkbox"/> ATP (>1,499)	
	<input type="checkbox"/> Xerostomia	

Save... Cancel

EHR: Radiographs



EHR: Radiographs

Denticon!3.5 - Patient Window - Welcome, PGLASSMAN - Windows Internet Explorer

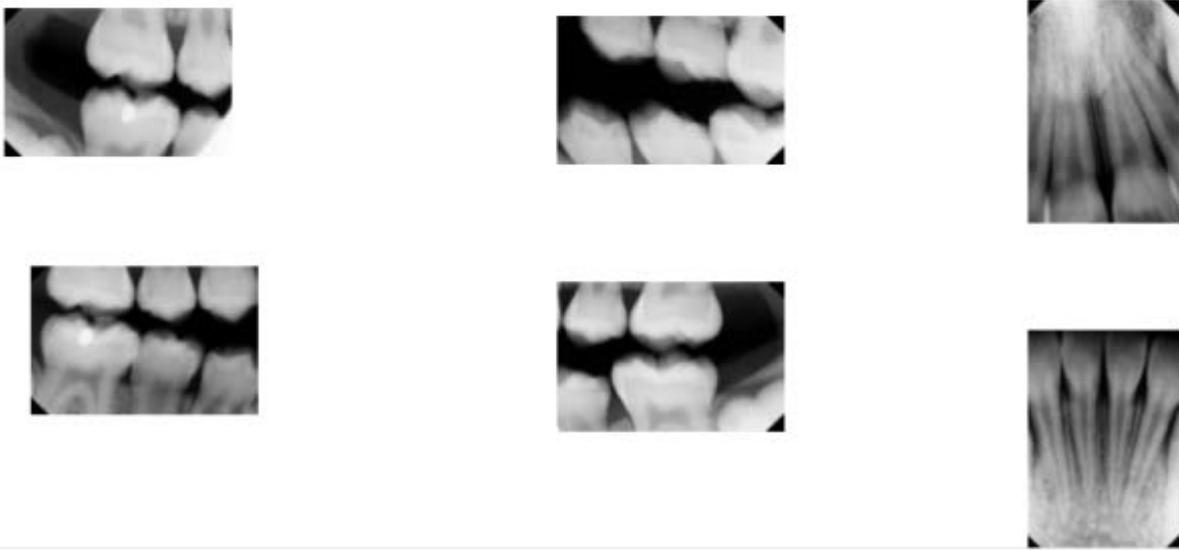
https://www.denticon.com/Imaging/ASPX/xray.aspx

Scheduler Patient Transactions Charting Reports Utilities Setup Office [Redacted] Help Logout

Denticon

Patient [Redacted]	Type	Patient ID: 477	Responsible: [Redacted]	Prim. Ins:
(H) : BO :		Age/Sex: / F	Balance: 35.00 BO :	
(C) :		First Visit: 11/29/2010	Est. Ins: 0.00	Ben Ram: 0.00
(W) :		Last Visit: 03/28/2011	Est. Pat: 35.00	Ded Ram: 0.00

X-Ray Capture Presentation



Select Series: Study 03232011 Print Series Delete Series Move Series

EHR: Radiographs



Interim Therapeutic Restoration (ITR)

REFERENCE MANUAL V 30 / NO 7 08 / 09

Policy on Interim Therapeutic Restorations (ITR)

Originating Council

Council on Clinical Affairs

Review Council

Council on Clinical Affairs

Adopted

2001

Revised

2004, 2008

AAPD Policy on Interim Therapeutic Restorations (ITR)

What else happens onsite?

- Patient, parent, staff oral health education
- Nutritional counseling
- Oral hygiene instructions
- Case management
- Referrals



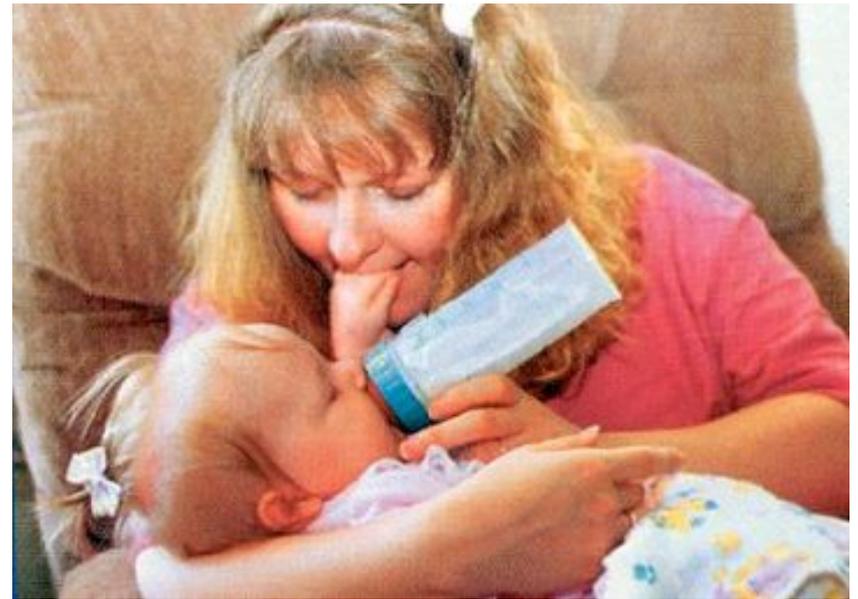
What is ECC?

- Any tooth decay, including extractions and fillings from previous decay, in baby teeth.
- Most prevalent chronic disease of childhood
- 5 times more prevalent than asthma
- 7 times more prevalent than hay fever



ECC is an infectious, transmissible disease

- Mutans streptococci, lactobacilli, and other acid-producing bacteria
- Transmission both vertical and horizontal
- Germs are passed from parent to child



Early Signs of Decay: White Spot Lesions



The Caries Balance



Tooth Decay

- Decay causing bacteria
- Frequency of fermentable carbohydrate ingestion
- Reduced salivary function

No Tooth Decay

- Fluoride and remineralization
- Antibacterials such as chlorhexidine and xylitol
- Saliva and its components
- Dental Sealants

Research Results

- Many Latino families avoid drinking tap water because they fear it causes illness.
- Unnecessary use of bottled and filtered water is costly and may result in negative dental health outcomes.
- Guidance should be provided to families about the safety, low cost, and dental health benefits of drinking tap water.

Why fluoridate drinking water?

- The amount of natural fluoride in water supplies is generally not enough to provide oral health benefits.
- Water fluoridation is the addition of small amounts of fluoride to a water supply to achieve the optimal fluoride level that helps prevent tooth decay.
- Fluoridated water benefits the entire community, children and adults of all ages, especially low-income and underserved populations.
- California law requires water systems to fluoridate their water supplies, **if funding is available.**

How does poverty impact learning and the uptake of health behaviors?

- Preoccupation can impede cognitive function
- Financial concerns have a cognitive impact comparable to losing a full night of sleep
- Chronic stress of poverty can impact behavior change

System Results

Head Start: 1759 children seen during 3054 visits

- With need for referrals going from 44% to 22%
- 888 digital x-rays taken
- 369 ITRs placed
- Patients, parents and administrators are very satisfied
- Parents report convenience and less fear in children

Community-Based Telehealth Enabled Dental Teams

Considerations for Adoption:

- Uses existing workforce of underemployed RDHs & RDHAPs
- Low training costs
- Low deployment costs
- Dentists or health centers as collaborating dentists
- Dentists or health centers willing to accept referrals for advanced procedures



Next Steps

- National attention to underserved communities and populations
- Ready workforce of RDHs & RDHAPs
- Community readiness needs to match readiness of well-trained providers

Thank you!

www.virtualdentalhome.org

Pacific Center for Special Care

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