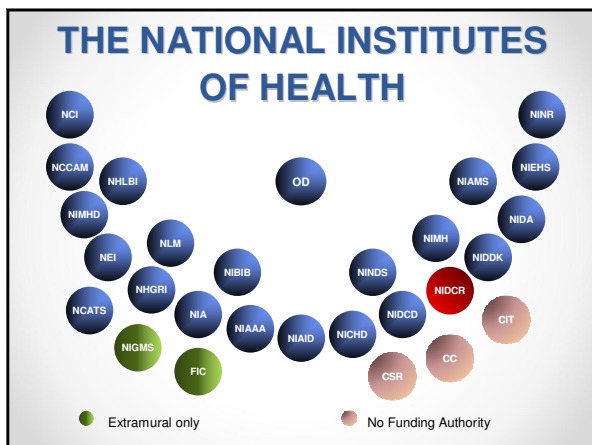
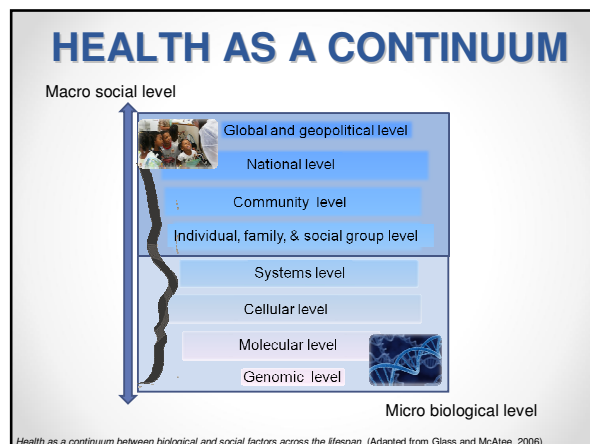


NIH National Institute of Dental and Craniofacial Research

Investments in Innovation

National Oral Health Conference
April 22, 2013

Martha J. Somerman, DDS, PhD
Director, National Institute of Dental and Craniofacial Research
National Institutes of Health



RESEARCH AGENCY FY 2012 ~ \$31 BILLION

NIH is an institution (Intramural Research)

- ~ 6,000 scientists
- ~ 10% of NIH budget
- ~ 1,500 active trials
- Clinical Research Center

NIH supports institutions & people (Extramural Research)

- > 4,000 institutions, small businesses
- > 300,000 scientists & research personnel
- ~ 80% of the NIH budget

NIH/NIDCR at a Glance

- Mission: To improve oral, dental, craniofacial health through

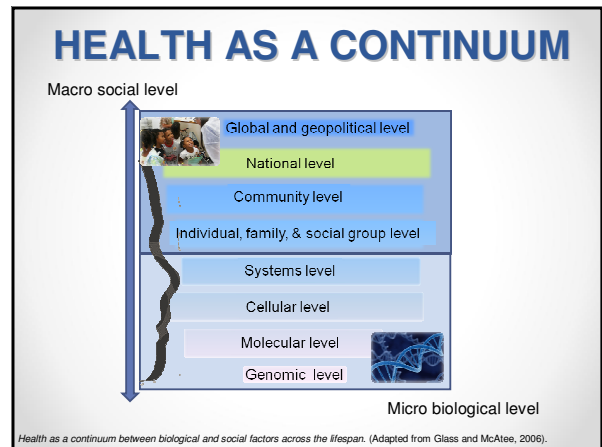
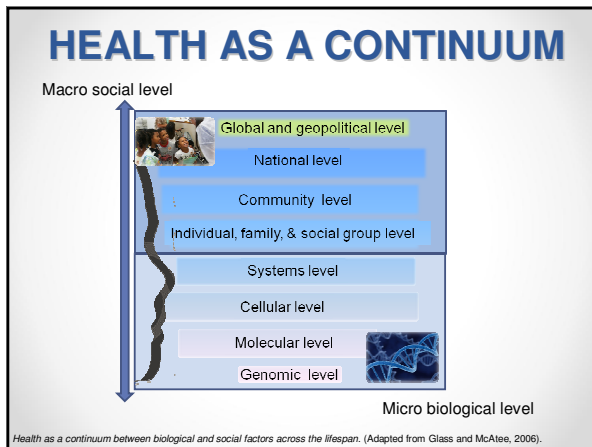
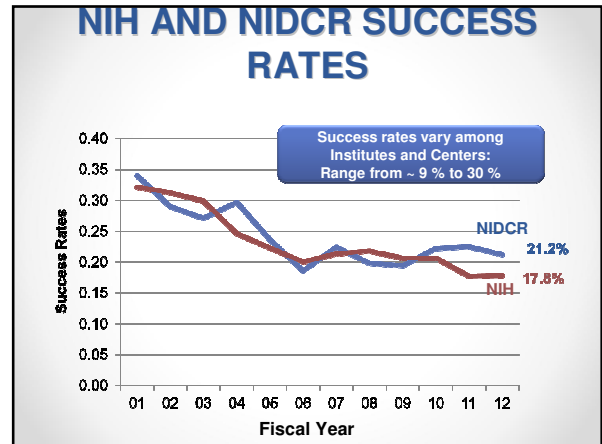
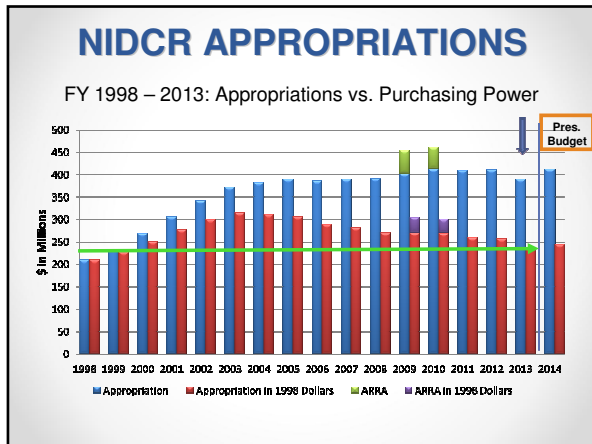
Four themes at NIDCR

- Bring the Best Science to Bear on Problems in Health
- Address Pressing Public Health Challenges
- Advance Translational and Clinical Research
- Strengthen the Pipeline

nearly all dental research training at NIH

DOCR

- Supports over **1,000** research projects in more than **200** institutions and small businesses in **44** states (FY11)
- Ensures a strong and diverse future research workforce by funding nearly **350** individuals through training and career development programs (FY11)
- Provides vital support to the nation's **~6,500** oral health researchers and the intellectual foundation for nearly **187,000** dentists



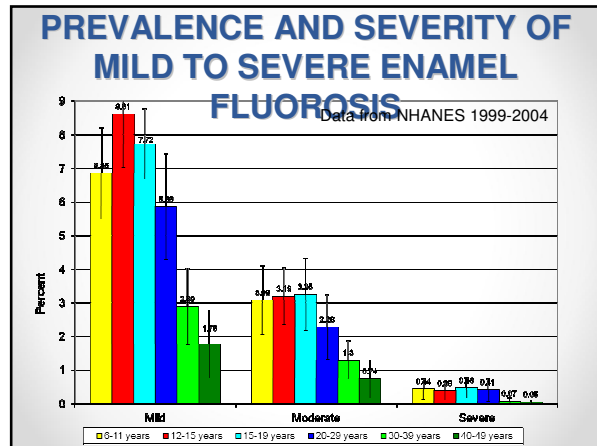
FEDERAL ROLE IN DATA COLLECTION AND DATA SYSTEMS

CDC <ul style="list-style-type: none"> • NCHS, NHIS, Vital Stats • BRFSS, NIAHES, WFRS 	CMS <ul style="list-style-type: none"> • Medicare, Medicaid/CHIP • Nat'l Health Expenditures
NIH <ul style="list-style-type: none"> • SEER, State Cancer Profiles • Hispanic Community Study • National Children's Study 	HRSA <ul style="list-style-type: none"> • UDS, ARF, HPSAs • Geospatial Data Warehouse
AHRQ <ul style="list-style-type: none"> • MEPS, HCUP • HCUPnet, Evidence reports 	IHS <ul style="list-style-type: none"> • Oral Health Surveys • Program Statistics

HHS ORAL HEALTH INITIATIVE: NATIONAL ORAL HEALTH SURVEILLANCE PLAN

The cover of the report includes the title "National Oral Health Surveillance Plan" and "HHS ORAL HEALTH INITIATIVE 2010 - PROGRESS REPORT" dated MARCH 2013. It also features a URL: <http://www.nidcr.nih.gov/DataStatistics/OralHealthSurveillance>.

DCR-CDC DATA COLLABORATION



DEVELOPMENT OF A NOVEL IMAGING SYSTEM TO MEASURE ENAMEL FLUOROSIS SEVERITY

- Challenge: Enhance validity and reproducibility of fluorosis measurement in large representative population surveillance
- Developed multispectral imager to digitally capture polarized white light and Quantitative Light-induced Fluorescence (QLF) images
- Piloting implementation of imager in NHANES 2013-14

DEVELOPMENT OF A NOVEL IMAGING SYSTEM TO MEASURE ENAMEL FLUOROSIS SEVERITY

Polarized White Light

Used for scoring by dentist-examiners

QLF (Quantitative Light-Induced Fluorescence)

Used for scoring by software algorithm

STUDY / STUDY OF LATINOS (HCHS/SOL)

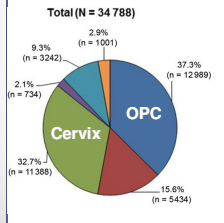
- Multi-center epidemiologic study in Hispanic/Latinos (sponsored by NHLBI with 6 other ICs)
- Determine the role of acculturation in the prevalence and development of disease
- Identify prevalence and risk factors playing a protective or harmful role -- includes heart, lung, blood, sleep disorders; kidney/liver function; diabetes; cognitive function, dental conditions, and hearing disorders

¡Salud SOL!

- Recruiting 16,000 adults (18-74) who self-identify as Mexican, Puerto Rican, Dominican, Cuban, Central or South American
- NIDCR funds oral health component including clinical oral exam and questionnaire:
 - caries, tooth loss, periodontal disease (CAL, PD), restorations, pain
 - Dental utilization, self-reported QoL measures, treatment need, oral cancer exam
- Datasets to be made available to the scientific community following a period of exclusive rights to the PIs

CHALLENGES: HPV-RELATED OROPHARYNGEAL CANCER

Number of new HPV-associated cancers overall in U.S. 2009

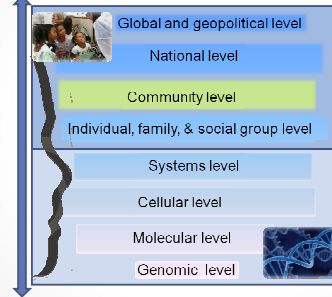


- Estimates suggest HPV-related oropharyngeal cancer (OPC) incidence more than tripled from 1988 to 2004
- Oropharyngeal cancer accounts for 37% of HPV-associated cancers
- HPV-OPCs have distinct genetic profile, prognoses, response to treatments
- Knowledge gaps:
 - incidence
 - risk factors
 - natural history and biology
 - efficacy of the HPV vaccine in preventing OPC

Chaturvedi A K et al. JCO 2011;29:4294-4301; Gillison ML et al. JAMA 2012;307:693-703; Jemal A et al. JNCI 2011;103:179-186

HEALTH AS A CONTINUUM

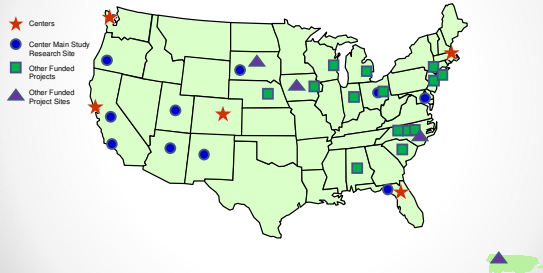
Macro social level



Micro biological level

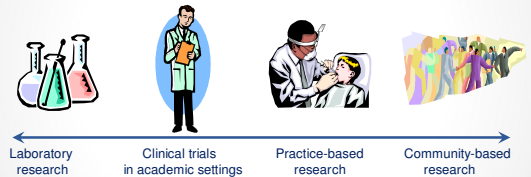
Health as a continuum between biological and social factors across the lifespan. (Adapted from Glass and McAtee, 2006).

DISPARITIES RESEARCH SITES 2011



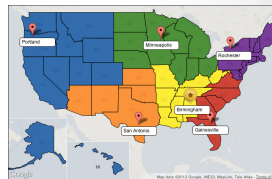
Dr. Ruth Nowjack-Raymer: Director Health Disparities Research program

HOW IS PBRN RESEARCH DIFFERENT FROM OTHER RESEARCH CONTEXTS?



The National Dental Practice-Based Research Network NATIONAL DENTAL PRACTICE-BASED RESEARCH

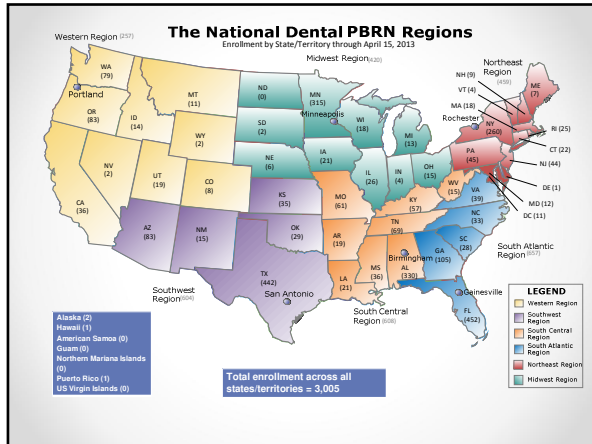
- Research in the "real world"
- Union of academic and practicing dentists
- Regional Network launched in 2005
- 2012, 7-year award expands on the initial investment
- National coordinating center oversees six regional DPBRN research nodes



The nation's network

DENTAL PRACTICE-BASED RESEARCH NETWORKS ACCOMPLISHMENTS

- Over **3,000** PBRN practitioners in several diverse geographic locations participated in one or more studies after 7 years
- Over **29,000** subjects enrolled in studies
- Over **40** studies completed
- Over **170** manuscripts, abstracts and presentations including the first textbook chapter on dental practice-based research



PBRN RESEARCH ACTIVITIES: A FEW OF MANY

- Caries risk assessment
- Dental pulp capping
- Third molar removal
- Cracked teeth
- Dentin hypersensitivity
- Remineralization of white spot lesions
- Blood glucose testing
- Peri-operative endodontic pain
- Medication prescribing practices of PBRN clinicians
- Implant survival



PERSPECTIVE

C. Van Pozzok
Making a Case for Defining Osteonecrosis of the Jaw
Journal of Dental Research, 90(10), 2011

RESEARCH REPORTS

Clinical

J.J. Felleus*, D.B. Rindoff*, A. Baranich*, C.M. Collins*, W. Rush*, D.J. Palatoni*, and J. Richmond*, for The DPBRN Collaborative Group**
ONJ in Two Dental Practice-Based Research Network Regions
Journal of Dental Research, 90(10), 2011

RESEARCH REPORTS

Clinical

A. Baranich*, J. Curcio-Cruz*, F.A. Camp*, P. Hajduk*, A.H. Sung*, D. Veno*, and A.E. Voinova-Griffin*, for the CONDOR* Collaborative Group*
Risk Factors for Osteonecrosis of the Jaws: a Case-Control Study from the CONDOR Dental PBRN
Journal of Dental Research, 90(10), 2011

ABSTRACT
 The incidence of osteonecrosis of the jaws (ONJ) in the population is low, but potential risk factors include...

INTRODUCTION
 Osteonecrosis of the jaws (ONJ) is a rare clinical entity... which has historically been described in the context of cancer... or systemic disease or after intravenous bisphosphonate (Alonso and Woo, 2009). Beginning in 2005, case reports, case-series, and cohort studies linked ONJ with high-dose bisphosphonate treatment, with prevalence varying from less than 1% to 28% (Wang et al., 2003; Ruggiero et al., 2004; Woo et al., 2006).

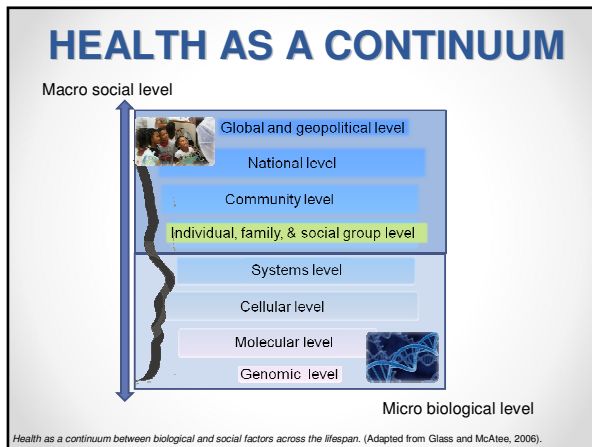
Results from a PBRN collaboration (April, 2011) suggest that, while the overall risk for ONJ is low, BP use is a risk factor (both IV and oral)

NIDCR-SUPPORTED INVESTIGATORS DEVELOP RAT MODELS OF BISPHOSPHONATE-INDUCED ONJ

Developed model of severe periodontal disease

- Animals exposed to BP + infection developed ONJ
- Lesions in rat model strikingly similar to those in human patients
- Vitamin D deficiency may increase risk

Aghaloo, T. L., et al. (2011) Periodontal disease and BPs induce ONJ in the rat. *JBMR*, 25
 Hukugo et al. (2010) Increased prevalence of BP-related ONJ with Vit.D deficiency in rats. *JBMR*, 25
 Bashutski et al. (2011) The impact of Vit.D status on periodontal surgery outcomes. *JDR*, 90(Mayo. Clinic/pain and vit.D. et al. (2012)



EXAMPLES OF NIDCR-FUNDED COMPARATIVE EFFECTIVENESS RESEARCH

- Evaluate the treatment- and cost-effectiveness of an early bio-behavioral intervention program for preventing chronic TMD
- Effectiveness of screening, brief intervention and referral services for tobacco in dental offices
- Promoting behavioral change for oral health in American Indian mothers and children
- Timing of Primary Surgery for Cleft Palate

CARIES RISK ASSESSMENT: Predicting Caries Risk in Underserved Toddlers in Primary Medical Settings

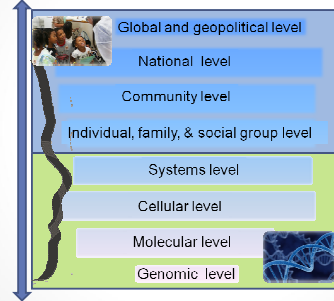
- Children with untreated caries, acute dental pain and infection often have diminished capacity for the basic functions of eating, sleeping, speaking, and certainly attending to learning
- Healthcare system has limited capacity to provide early access to dental services for young children
- Children have greater access to medical care than to dental care
- **OBJECTIVE:** to validate a structured caries risk questionnaire for use in primary medical healthcare settings to help identify young (1-4 years of age) U.S. children of diverse backgrounds at highest risk for dental caries



PI: Margherita Fontana

HEALTH AS A CONTINUUM

Macro social level



Micro biological level

Health as a continuum between biological and social factors across the lifespan. (Adapted from Glass and McAtee, 2006).

PAIN IS A NATIONAL CHALLENGE



IOM Report (2011)

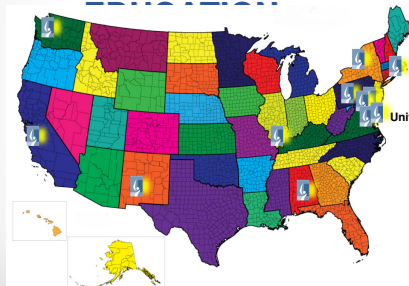
- Affects at least 100 million American adults
- Costs society \$560–\$635 billion annually
- Key recommendation: Increase support for interdisciplinary research in pain



TRANS-NIH PAIN-RELATED WORK: PURPOSE

NIH Pain Consortium	To enhance pain research and promote collaboration among researchers across NIH
Blueprint for Neuroscience Research	A cooperative funding effort among the 15 NIH ICs and Offices that support neuroscience research
Interagency Pain Research Coordinating Committee	Established by the Patient Protection and Affordable Care Act, this Federal Advisory Committee includes six Federal Agencies, extramural scientists, and members of the public

NIH PAIN CONSORTIUM 12 CENTERS OF EXCELLENCE IN PAIN



Harvard School of Dental Medicine
University of Maryland Baltimore

DEMOGRAPHIC CUES AFFECT DENTISTS' PAIN MANAGEMENT DECISIONS



Figure. 3D8 frame of virtual human (VH) with cues representing female gender, Caucasian race, younger age, and high pain expression.

- Dentists used demographic cues when making pain management decisions

- Dentists rated pain intensity higher and were more willing to prescribe opioids to female, African-American, and younger patients



Using Virtual Human Technology to Capture Dentists' Decision Policies about Pain

Wandner, L.D., et al., (2013) JDR

HUMAN MICROBIOME PROJECT



Goals:

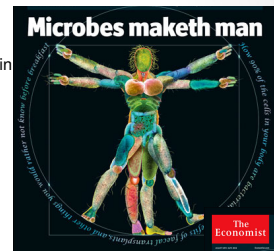
- To characterize the microbial communities that inhabit the human body
- To define the role of these microbes in human health and disease.

Human Microbiome Phase 1

- Metagenomic dataset of microbiome and host properties as a community resource

Human Microbiome Phase 2

- Expand to other 'omic technologies metabolomics, proteomics, etc.



Proctor, L. M. Cell Host & Microbe, Volume 10, Issue 4, 20 October 2011, Pages 287–291

WE ARE WHAT WE EAT:

CLUSTER BY



Animal Behavior and the Microbiome
Feedbacks between microbiomes and their hosts affect a range of animal behaviors.

Vanessa O. Ezenwa, Nicole M. Gerardo, David W. Inouye, Monica Medina, Joao B. Xavier. *Science*.338;Oct.2012 p.198

Herbivores

Why are women more likely to develop autoimmune disease? Different populations of gut bacteria may be part of the reason

Sex Differences in the Gut Microbiome Drive Hormone-Dependent Regulation of Autoimmunity

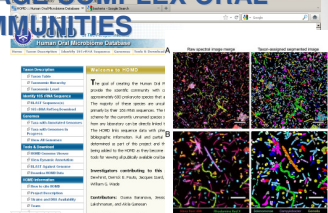
Janet G. M. Markle,^{1,2} Daniel N. Frank,³ Steven Martin-Toth,¹ Charles E. Robertson,⁴ Leah M. Feazel,⁵ Ulrike Rolle-Kampczyk,⁶ Martin von Bergen,^{1,4,7} Kelly D. McCoy,² Andrew J. Macpherson,³ Jayne S. Daniels^{1,2,8}

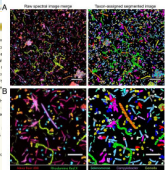
Ley, RE et al., *Science*, 2008, 320:1647


NEW FRONTIERS IN PERSONALIZED MEDICINE:

ABILITY TO IMAGE COMPLEX ORAL COMMUNITIES

- Human Oral Microbiome Data Base: *Defining the complex community & as a diagnostic*
- One day, dentists will be able to visualize the microbes within a patient's oral biofilm in real time – offering new tools to diagnose and treat oral disease

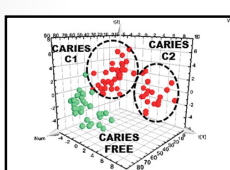






Valm A M et al. *PNAS* 2011;108:4152-4157

MICROBIOTA OF SEVERE EARLY CHILDHOOD CARIES



Slackia exigua,
S. parasanguinis I & II,
Prevotella species,
Neisseria flavescens,
Bifidobacteriaceae,
S. wiggisiae,
S. mutans

- Bacteria
- Diet
- Host

Environment
Socio-economic status

JDR
JOURNAL OF DENTAL RESEARCH

Tanner A et al. *J DENT RES* 2011;90:1298-1305

HEALTH AS A CONTINUUM

Macro social level

Global and geopolitical level

National and state level

Community and workgroup level

Individual, family, & social group level

Systems level

Cellular level

Molecular level

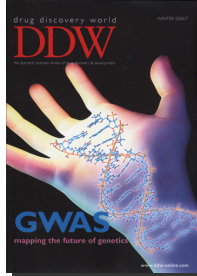
Genomic level

Micro biological level

Health as a continuum between biological and social factors across the lifespan. (Adapted from Glass and McAtee, 2006).


IDENTIFYING GENETIC FACTORS THAT INFLUENCE HEALTH & DISEASE: GWAS

- GWAS: Genome-Wide Association Studies
 - Start with a large group of people – some healthy, some with disease
 - Note their physical condition and scan their genomes for DNA variants
 - Find segments of DNA that show unequal distribution of variants between those with disease, and those without
- And you get ...
 - A list of DNA variants associated with specific diseases

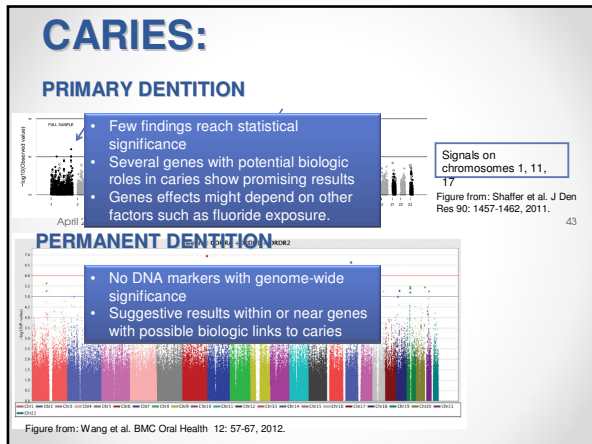


drug discovery world
DDW
GWAS
mapping the future of genetics


FACTORS CONTRIBUTING TO ORAL HEALTH DISPARITIES IN APPALACHIA



- Oral health, with a focus on caries
- Goal: to understand why oral health remains so poor in the Appalachian region.
- Integration of genetic, environmental, behavioral, and microbiologic factors
- Genetic factors may affect:
 - Foods you prefer to eat
 - Make-up of saliva & saliva flow
 - Shape & size of teeth
 - How teeth are formed, enamel & dentin



FLUORIDE, ORAL HEALTH, & BONE DEVELOPMENT



- Integration of behavioral, family, growth, and genetic factors
- Birth cohort in Iowa, recruited 1992-1995
- Longitudinal follow-up
 - Iowa Fluoride Study: Oral health through age 13 years [completed]
 - Iowa Fluoride Project results suggest genes can modify the susceptibility of caries in children
 - Iowa Bone Development Study: Bone measurements ages 5-19 years old [ongoing]

NIDCR-FUNDED ORAL HEALTH DISPARITIES PROGRAM



NIDCR National Institutes of Health National Institute of Dental and Craniofacial Research

Improving the Nation's Oral Health


NIDCR Home Oral Health Clinical Trials Research Grants & Funding Careers & Training

Health Disparities Research Program

Contact: Dr. Ruth Nowjack-Rayner (301) 594-6304, ruth.nowjack-rayner@nih.gov

Despite remarkable improvements in the oral health of the American population, not everyone in the nation has benefited equally. Oral, dental and craniofacial conditions remain among the most common health problems for low-income, racial/ethnic minority, disadvantaged, disabled, and institutionalized individuals across the life span. Dental caries, periodontal disease, and oral and pharyngeal cancer are of particular concern.

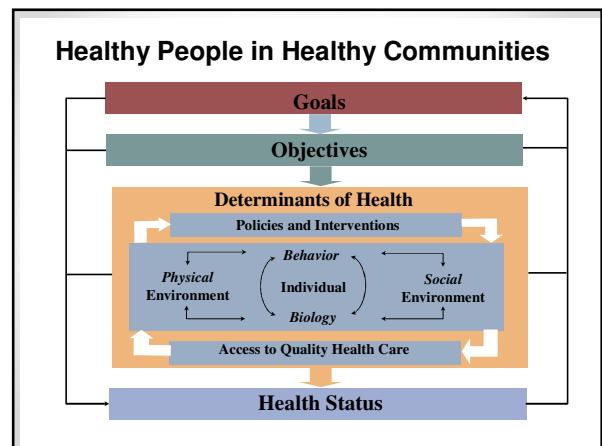
NIDCR Strategic Plan 2009-2013

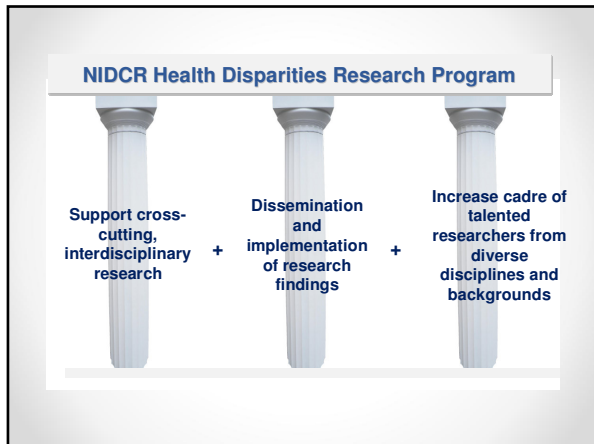


Goal 4:
Apply rigorous, multidisciplinary research approaches to eliminate disparities in oral, dental and craniofacial health

"We need to learn much more about what causes disparities— including the role of society, the environment, and genes— and to find effective ways of overcoming or changing them."

Francis S. Collins, MD, PhD
September 2010

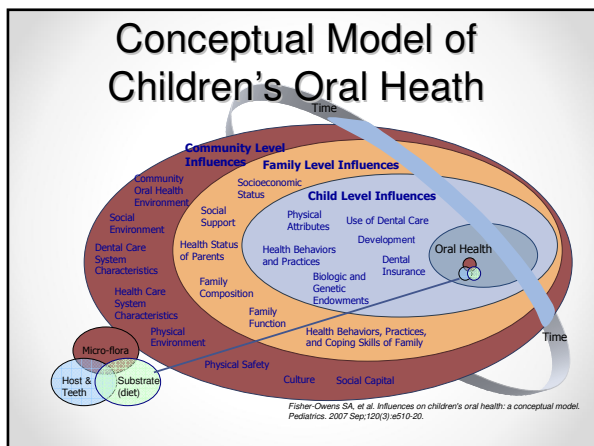
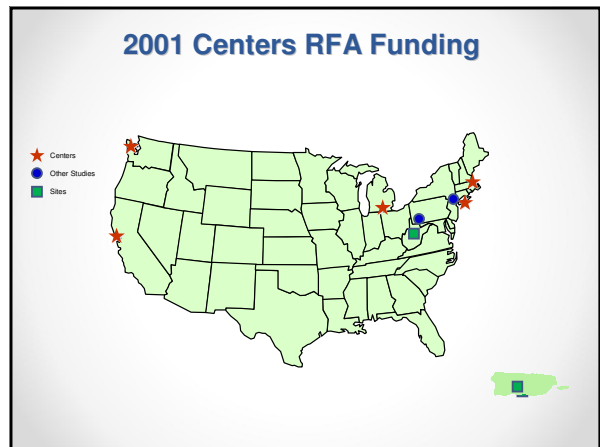




Vulnerable Populations

- Racial/ethnic minorities
- Rural/urban dwelling poor
- Special needs: acquired & developmental disabilities
- Elders: frail and functionally dependent

- Support cross-cutting, interdisciplinary research
- Effective dissemination and implementation of research findings
- Increase cadre of researchers from diverse disciplines and backgrounds



- Support cross-cutting, interdisciplinary research
- Effective dissemination and implementation of research findings
- Increase cadre of researchers from diverse disciplines and backgrounds

RESEARCH REPORTS

Clinical

J.A. Weintraub*, F. Ramos-Gomez,
B. Jue, S. Shain, C.I. Hoover,
J.D.B. Featherstone, and S.A. Gansky

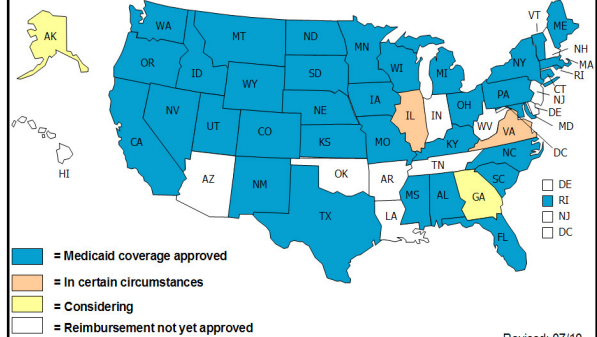
Center to Address Disparities in Children's Oral Health and
Comprehensive Oral Health Research Center of Discovery,
University of California, San Francisco School of Dentistry,
3333 California Street, Suite 495, San Francisco, CA 94143-
1361, USA; *corresponding author, Jane.Weintraub@ucsf.edu

J Dent Res 85(2):172-176, 2006

Fluoride Varnish Efficacy in Preventing Early Childhood Caries

**Purpose: To determine efficacy of fluoride varnish in
addition to counseling in preventing Early Childhood
Caries**

States with Medicaid Funding for Physician Oral Health Screening and Fluoride Varnish

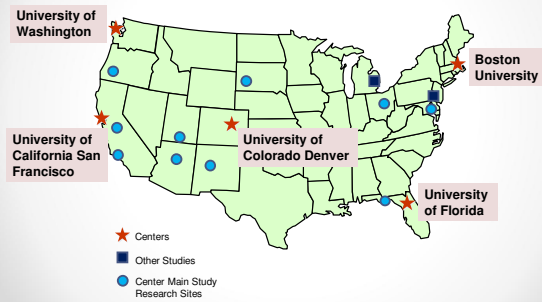


RFA Oral Health Disparities Research Centers

• 2008 Centers

- o Established community partnerships
- o Convene active community advisory boards
- o Conduct major intervention studies with multidisciplinary research teams at multiple levels
- o Cost analysis
- o Support developmental projects
- o Facilitate training and career development
- o Assure dissemination of research findings

2008 Centers for Research to Reduce Oral Health Disparities



Mission

Conduct community-based research
on solutions to oral health disparities
among vulnerable, rural, and under-
served populations.

Studies

1. Baby Smiles: RCT using a brief motivational intervention given during the prenatal and/or postnatal period(s) to increase utilization of preventive dental care.
2. Social-Ecology of Oral Health and Disease in Young Children with Special Needs; Young Children's Distress and Coping During Preventive Dental Care; Dental Caries in Head and Neck Cancer: Analysis of Veterans Affairs Database.



Baby Smiles

- Location: 4 rural Oregon counties
 - Participants: 400 low income pregnant women and their babies (95% retained to date)
 - Primary Outcome: Utilization of preventive dental care during pregnancy and at 12-18 months of age.
 - Preliminary Findings: Experimental interventions increased utilization among children significantly more than control interventions.
- Implications: Dental managed care companies and state of Oregon adopted a quality improvement metric to boost utilization during pregnancy and early childhood.
- Leading to experiments to better reach low income women and their families.
- Plans to follow the children to assess the impact on oral health and cost effectiveness.

UF Southeast Center for Research to Reduce Disparities in Oral Health
College of Dentistry

Home About Research Resources News & Events

MISSION
Engaging the rural, minority community in promoting early detection and prevention of oral cancer.

MAJOR STUDIES
1) Testing theoretically derived media messages tailored for Black, rural men.
2) Reducing barriers to oral cancer screenings.

Primary Outcome Measure: Participation in oral cancer screenings.
Secondary Outcomes: Increased intentions and reduced fear.

Current Research

1. Evaluation of Media Campaign Promoting Oral Cancer Screening

- **Setting:** Rural North Florida
- **Sample:** 2620 Adults
- **Current Enrollment:** 825
- **Intervention:** Tailored Media Campaign to promote oral cancer screenings
- **Control:** Wait listed comparison
- **Timelines:** Wave 3 Survey to be completed in no cost extension year

2. Removing Barriers to Participation in Oral Cancer Screenings

- **Setting:** Rural North Florida
- **Sample:** 300
- **Current Enrollment:** - start 6/1/13
- **Intervention:** Two experiments that address defensive avoidance (self affirmation and contemplation)
- **Timelines:** 12 months of refining experiments, testing, and assessing primary and secondary outcomes.

Early Childhood Caries
Collaborating Research Centers = EC4

- **Three Centers (Boston, San Francisco, Colorado) with single Data Coordinating Center (UCSF)**
 - Rigorous pilot testing
 - Fidelity monitoring
 - Reviewed by single DSMB
 - Clinical monitoring conducted to assure GCP
 - Collaborations are ongoing

Products to date of EC4 collaboration

- Standardized caries assessment and manual
- Standardized gold standard examiner training and calibration in partnership with U Iowa
- Clinical trials management system developed
- Common Basic Research Facts Questionnaire
- Standardized cost analyses methods
- Recruitment and Retention Working Group
 - Finalizing first paper
- Software development for caries assessment, calibration analysis, and macro for ClinicalTrials.gov

Center for Research to Evaluate and Eliminate Dental Disparities
Welcome to CREEDD

MISSION
Eliminate oral health disparities in children & their caregivers through community-engaged research, training, and information dissemination in partnership with the communities.

POPULATIONS
Children and caregivers in:
- Public housing developments in Boston metropolitan area
- Community Health Centers in Massachusetts, Maryland and southeastern Ohio.

RANDOMIZED CLINICAL TRIALS
1. Oral Health Advocates in Public Housing
To determine if behavioral intervention (MI), delivered by peer health educators in public housing developments, reduces ECC incidence.
- 1039 families enrolled at 26 housing sites

2. Partnering with Community Health Centers to Prevent ECC
To determine if a behavioral intervention delivered by medical care providers in CHCs reduces ECC incidence (in developmental/planning phase).

Centers for American Indian and Alaska Native Health
COLORADO SCHOOL OF PUBLIC HEALTH

MISSION
To work with American Indian/ Alaska Native communities to develop, test, and disseminate culturally relevant oral health interventions

MAJOR STUDIES
Two RCTs of behavioral interventions for primary prevention of ECC in two reservation locations

Primary Outcome Measure: level of dental caries (dmfs) in the intervention group, compared to non-intervention group

Secondary Outcomes: oral health related behaviors, knowledge, attitudes, and oral health-related quality of life

Moderators/Mediators: socio-demographics; psychosocial variables; baseline oral health knowledge and behavior; access and utilization of dental services

RANDOMIZED CLINICAL TRIALS

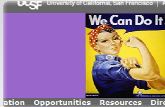
1. Behavior Change for Promoting Oral Health in AI Mothers and Children

- **Setting:** Northern Plains Tribe
- **Sample:** 600 Mothers and children (0 to 3 months)
- **Current Enrollment:** 400 parent-child dyads
- **Intervention:** Motivational Interviewing (MI) to instill caries prevention behaviors in mothers
Control: enhanced community service*
- **Timelines:** MI every 6 months for 2 years; surveys & dental exams every year for 3 years

2. Testing a Unique Service Delivery Model in AI Head Start Centers

- **Setting:** Southwestern Tribe
- **Sample:** 52 Head Start classrooms
- **Completed Enrollment:** 1015 parent-child (3-5 yrs) dyads in 52 classrooms
- **Intervention:** Fluoride Varnish (FV), parent oral health education, classroom activities delivered by tribal Community Oral Health Specialists (COHS)
Control: usual care
- **Timelines:** FV x 4 every year for 2 years; survey & dental exams annually for 3 years

*PSAs on Radio, billboards, culturally relevant education materials & tooth brushes and toothpaste



UCSF School of Dentistry and NIDCR
The Center to Address Disparities
Children's Oral Health
The "CAN DO" Center
To understand, prevent, and reduce oral health disparities among young children

MISSION

Reduce oral health disparities by preventing & reducing early childhood caries

POPULATION

- Low-income, mostly Hispanic preschoolers **RANDOMIZED CLINICAL TRIAL (RCT)** & their caregivers
- 28 total California locations

PARTNERS

- UCLA
- UC Davis
- San Diego State University
- San Francisco State University
- Contra Costa County Health Dept.
- San Ysidro Health Center (FQHC)
- Comprehensive Health Center Ocean View (FQHC)

Glass Ionomer Fluoride Varnish Trial

- Accrual completed Jan 2013 (n=597)
- Follow up visits every 6 months

Purpose: To compare efficacy of 36-month caries prevention (dmfs) using **fluoride varnish with and without glass ionomer sealants** for eligible primary molars in 3-6 year-olds in San Diego county



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UCSF (CAN DO) Developmental Projects

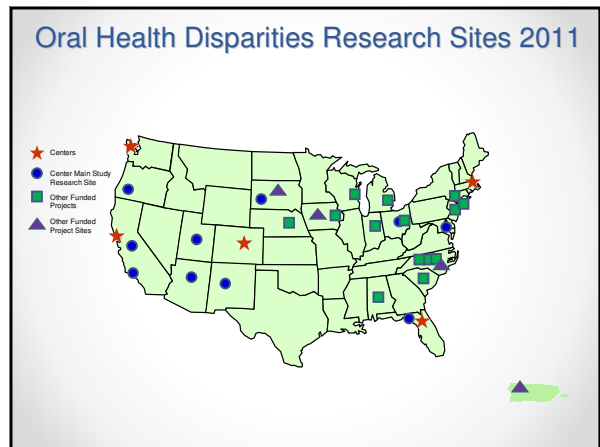
Centering Pregnancy™ Oral Health Promotion (CPOP) Extension
Bacteria assays & behavior questionnaires of CPOP & control mother-child dyads

Metagenomics
Evaluation of salivary mutans streptococci from 3 studies of children w/without caries

Mediation Modeling
Development & assessment of new statistical methods for testing causal mechanisms

Fluoride Varnish Reach in Early Childhood (FV REACH) Pilot
Trained 52 physicians & 298 nurses/staff in primary care & WIC sites to apply FV; Sustained Contra Costa County fluoride varnish program

Salt Fluoridation Feasibility
Feasibility & acceptability study of fluoridated salt in Central Valley (Mendota, CA); if no extra expense, fluoridated salt would be acceptable after education



Building the Evidence Base

- Broad array of determinants of health disparities in the elderly, low birth weight infants, aggressive periodontitis, ECC, oral cancer
- Understanding communications and health literacy with vulnerable populations and with caregivers, the poor, dental school clinics, recent immigrants
- Systems and Social network analysis
- Multimodal, integrated approaches to preventing ECC in rural communities – Implementation research

Current Trans-NIH FOAs

- Behavioral and Social Science Research on Understanding and Reducing Health Disparities
- Dissemination and Implementation Research in Health
- Understanding and Promoting Health Literacy
- Native American Research Centers for Health (NARCH VIII) – soon to be released

- Support cross-cutting, interdisciplinary research
- Effective dissemination and implementation of research findings
- Increase cadre of researchers from diverse disciplines and backgrounds

Health Disparities Teams are Diverse and Multidisciplinary

- **Health Professionals:**
 - Dentistry, Dental Hygiene, Dental Public Health, Pediatric Dentistry, Pediatrics, Nursing, Occupational Therapy, Social Work, Nutrition, Lay Health Workers
- **Science Disciplines:**
 - Basic
 - Pilot and developmental project opportunities in NIDCR Centers
 - Clinical
 - Other health disparities-related FOAs
 - Diversity Supplements
 - Summer Research Awards – ARRA
 - Health Disparities Loan Repayment
 - K – Awards

Among the award winning researchers....

- Presidential Early Career Award in Science and Engineering (PECASE)
 - Jessica Lee (UNC), Suchitra Nelson (CWR), Margherita Fontana (UM)
- American Public Health Association's Drotman Award for a Promising Young Professional
 - Tracy Finlayson (Michigan, UCSF, USD)
- American Indian College Fund Fellowship
 - Joaquin Gallegos (Jicarilla Apache/Pueblo of Santa Ana) (UCD)
- AAPHD Foundation's First Herschel Horowitz Scholarship
 - Lisa Chung (UCSF)

Contact Information:

Fact sheets
Wednesday's Federal Roundtable

Ruth.Nowjack-Raymer@nih.gov

FUTURE RESEARCH INITIATIVES

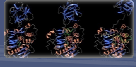
- The Role of Uncultivable Bacteria in the Oral Microbiota
- Effectiveness of Treatment for Oral Diseases in Medically Compromised Patient
- Developing a Multi-Disciplinary Oral Health Research Workforce
- Establishing Measures of Clinical Outcomes and Mechanisms of Action of Behavioral Interventions

YOUR INPUT REQUESTED

NIDCR Strategic Plan
Development Underway

Share your ideas now

[Read more >](#)



NIDCR *Turning Discovery
into Health*

