UCSF Disparities Research Symposium Program

8:05: Barbara Gerbert welcomes and MC for Morning


8:25 – 8:30 questions and discussion

8:30 – 8:45: Leah Karliner, ES Hwang, CP Kaplan. Challenges to Patient-Centered Care for Limited English Proficient Breast Cancer Patients

8:45 – 8:50 Questions and discussion

8:50 – 8:55: Commentary: Eliseo Perez-Stable


9:10- 9:15 questions and discussion


9:30 – 9:35 questions and discussion

9:35 – 9:40 Commentary: Esteban Burchard

9:40 – 9:55 break


10:10 – 10:15 questions and discussion

10:15 – 10:30 Hai-Yen Sung, Max W, Tucker L-Y. Disproportionate Cost of Smoking for Communities of Color

10:30 – 10:35 questions and discussion

10:35 – 10:40 Commentary: Nancy Adler

10:55 – 11:00 questions and discussion


11:15 – 11:20 questions and discussion

11:20 – 11:40 Eugene Washington

11:40 to 1:30 Posters and Lunch

For questions regarding the symposium please contact Karen Newhouse:
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415-502-5666
Abstracts

The Impact of Language Barriers on Poor Glycemic Control Among Latino participants in the Diabetes Study of Northern California (DISTANCE).

Authors: Fernandez A (1), Schillinger D (1), Wharton M (2), Ahmed A (2), Adler N (3), Parker M (2), Schenker Y(1), Karter A (2).

1. Department of Medicine, UCSF
2. Kaiser Division of Research, Northern California
3. Department of Psychiatry, UCSF
Presenter: Alicia Fernandez, MD, Associate Professor of Clinical Medicine

Background: Latinos with diabetes have high rates of microvascular complications, a consequence of poor glycemic control. Prior studies have had difficulty isolating the impact of language barriers from other barriers to care among Latinos with diabetes. We used data from a diabetes registry and responses from the 2005-2006 Diabetes Study of Northern California (DISTANCE) survey to determine the impact of language barriers on glycemic control.

Methods: Retrospective cohort study comparing Latino English speakers and Latinos with limited English proficient (LEP) Participants: 3049 Latino patients, of whom 462 had LEP. All were continuously enrolled in the health care organization from 2003-2007 and had medication insurance. For each patient, we developed a cumulative exposure measure of glycemic control. We then calculated (a) the percentage of time between 2003-2007 with hemoglobin A1c over 9.0 and (b) the proportion of participants with chronically poor control defined as hemoglobin A1c over 9.0 for 50% time or greater during the study period. Generalized estimating equations were used to control for clustering by health care site and isolate the impact of language.

Results: Latinos with LEP had poorer mean glycemic control than Latino English speakers (mean AIC 8.22 vs. 7.94 p=0.04), spent more time in poor control (23.8% vs. 19.1% p=0.003) and were more likely to have chronically poor glycemic control even after adjustment for full range of demographic and clinical characteristics, medication use, health care site and specialty services (Adj. OR 1.35; 1.03, 1.77). Adherence to medication did not appear to explain the results. Latinos with LEP whose physicians did not speak Spanish spent more time in poor control than those with language concordant MDs (28% vs. 17% p = 0.05).

Conclusions: Language barriers are associated with poor glycemic control despite uniform access to health care and medications. Language barriers in health care may be an important contributor to the excess microvascular complications observed among Latino diabetics. Language concordant physicians may decrease the likelihood of poor glycemic control.
Challenges to Patient-Centered Care for Limited English Proficient Breast Cancer Patients

Karliner LS¹ (Assistant Professor), Hwang ES², Kaplan CP¹. School of Medicine. 1. Division of General Internal Medicine, Medical Effectiveness Center for Diverse Populations, Department of Medicine. 2. Carol Franc Buck Breast Care Center, Department of Surgery

Background Provision of high quality patient-centered care is fundamental to eliminating healthcare disparities in breast cancer. This is particularly true for the large and growing population of women with limited English proficiency (LEP). These women are less likely to experience patient-centered care because their communication with their physicians is complicated by a language barrier. We set out to investigate physicians’ experiences communicating with LEP breast cancer patients, and to assess their perceived difficulty in discussing treatment options and prognosis across a language barrier.

Methods We conducted a survey of a representative sample of California physicians by randomly selecting 1250 surgeons and oncologists from the American Medical Association Masterfile. Physicians were excluded if they spent <10% of their time in clinical practice or if fewer than 10% of their patients had breast cancer, if they had retired or moved out of state, or if their contact information was no longer valid, resulting in an eligible sample of 628.

Results Of the 313 respondents (50% survey participation rate), 301 reported having some patients in their panel (mean 19%, s.d. 19; range 1-98%) with a limited ability to communicate in English. Of those 301 respondents, 58% were surgeons, 75% were male, and 67% were in private practice. They had been in practice on average for 19 years (s.d. 10, range 2-50); and, on average 33% (s.d 23, range 10-100) of their patients had breast cancer, and 21% (s.d. 16, range 0-95) had less than a high school education. Of the 173 physicians who reported ever speaking directly with patients in a non-English language, only two-thirds reported adequate language skills to do so. Additionally, only 40% reported often/sometimes using any kind of professional interpretation services (in-person, telephonic, videoconferencing). Half (52%) reported setting aside extra time for visits with LEP patients. Although 75% of physicians surveyed felt they were usually able to communicate effectively when treating a breast cancer patient who is LEP, 47% said they tend to be more directive about treatment recommendations, 54% said they tend to simplify their discussion of risks and benefits, and 64% worry that their LEP patients may not have asked all of their questions. Many more physicians reported difficulty discussing both treatment options and prognosis with LEP patients than with patients either from a different culture or with a low level of education.

<table>
<thead>
<tr>
<th>How difficult is it to discuss breast cancer (treatment/prognosis) when the patient…</th>
<th>Very Difficult/Difficult to Discuss Treatment Options N (%)</th>
<th>Very Difficult/Difficult to Discuss Prognosis N (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is from a culture very different from your own</td>
<td>74 (25)</td>
<td>99 (33)</td>
</tr>
<tr>
<td>Has a low level of education</td>
<td>71 (24)</td>
<td>86 (29)</td>
</tr>
<tr>
<td>Does not speak English</td>
<td>173 (59)</td>
<td>166 (57)</td>
</tr>
</tbody>
</table>

In multivariable analysis, physicians who reported worry that LEP patients don’t ask all their questions had a two-fold odds of reporting difficulty discussing treatment options (OR 2.1; 95% CI 1.2-3.6) and prognosis (OR 2.6; 95% CI 1.5-4.5). Although there was no difference by specialty in difficulty discussing treatment options, oncologists had twice the odds of reporting difficulty discussing prognosis than surgeons (OR 1.9; 95% CI 1.1-3.2).
Conclusions California oncologists and surgeons caring for breast cancer patients find communication about both treatment options and prognosis markedly more challenging when it takes place across a language barrier than across cultures or education levels. Despite this, the majority of respondents do not use professional interpreters, even over the telephone; and many of them simplify important discussions with their LEP patients, worrying that these women are not asking all of their questions. In addition to increased access to, reimbursement for, and use of professional interpreters, these physicians and their LEP patients may benefit from the development and implementation of best practice communication tools to assist in complex treatment and prognosis discussions.
Disparity in outcomes of surgical revascularization for limb salvage: race and gender are synergistic determinants of vein graft failure and limb loss

Michael S. Conte, MD; Louis L. Nguyen, MD, MBA, MPH; Nathanael Hevelone, MPH; Selwyn O. Rogers, MD, MPH; Dennis F. Bandyk, MD; Alexander W. Clowes, MD; Gregory L. Moneta, MD; Stuart Lipsitz, ScD

Division of Vascular Surgery, UCSF; Division of Vascular and Endovascular Surgery, Center for Surgery and Public Health, Brigham and Women’s Hospital, Boston, Massachusetts; Division of Vascular and Endovascular Surgery, University of South Florida, Tampa, FL; Division of Vascular Surgery, University of Washington, Seattle, WA; Division of Vascular Surgery, Oregon Health Sciences University, Portland, OR

Introduction

Vein bypass surgery is an effective therapy for atherosclerotic occlusive disease in the coronary and peripheral circulations, however long-term results are limited by progressive attrition of graft patency. Failure of vein bypass grafts in patients with critical limb ischemia (CLI) incurs morbidity, limb loss and additional resource utilization. Although technical factors are known to be critical to the success of surgical revascularization, patient-specific risk factors are not well defined. In particular, the relationship of race and gender to the outcomes of peripheral bypass surgery has been controversial.

Methods

We analyzed the PREVENT III randomized trial database, which included 1,404 lower extremity vein graft operations performed exclusively for CLI at 83 North American centers. Trial design included intensive ultrasound surveillance of the bypass graft and clinical follow-up to one year. Multivariable modeling (Cox proportional hazards and propensity score) was employed to examine the relationship of demographic variables to clinical endpoints including perioperative (30-day) events and one year outcomes (vein graft patency, limb salvage, and patient survival). Final propensity score models adjusted for 16 covariates (including type of institution, technical factors, selected comorbidities, and adjunctive medications) to examine the associations between race, gender, and outcomes.

Results

Among the 249 African-American (AA) patients enrolled in PREVENT III, there were 118 females (AAF) and 131 males (AAM). AAM were at increased risk for early graft failure (Hazard Ratio (HR), 2.832 for 30-day failure; 95% Confidence interval (CI), 1.393-5.759; P = 0.0004), even when the analysis was restricted to exclude high-risk venous conduits. AA patients experienced reduced secondary patency (HR 1.49, 95% CI 1.08-2.06, P = 0.016) and limb salvage (HR 2.02, 95% CI 1.27-3.20, P = 0.003) at one year. Propensity score models demonstrate that AAF were the most disadvantaged, with an increased risk for loss of graft patency (HR 2.02 for secondary patency; 95% CI 1.27-3.20; P = 0.003) as well as major amputation (HR 2.38; 95% CI 1.18-4.83; P = 0.016) at one year. Perioperative and one-year mortality were similar across race/gender groups.

Conclusions

AA race and female gender are risk factors for adverse outcomes following vein bypass surgery for limb salvage. Graft failure and limb loss are more common events in AA patients, with AAF being a particularly high-risk group. These data suggest the possibility of an altered biologic response to vein grafting in this population, however further studies are needed to determine the mechanisms underlying these observed disparities in outcome.
Figure 1. Propensity score-adjusted multivariable Cox proportional hazard analysis of race and gender combinations for secondary graft patency
The Association of African Ancestry and Kidney Function among Young African Americans—The CARDIA Study

Carmen A. Peralta¹ Ryan Kimes¹ Alex Reiner² Michael Shlipak¹ Elad Ziv¹ Stephen Hulley¹ Neil Risch¹ David Siscovick² Kirsten Bibbins-Domingo¹

1 University of California, San Francisco, CA, 2 University of Washington, Seattle, WA

Background: African Americans are disproportionately affected by end stage renal disease (ESRD). Whether genetic factors more commonly found among persons of African descent account, at least in part, for disparities in kidney disease is not well understood.

Methods: We evaluated the association of African ancestry and kidney function among 1625 self-identified Black participants in the Coronary Artery Risk Development in Young Adults (CARDIA) study, ages 38-50 years at the time of kidney function assessment. Kidney function was estimated using MDRD estimated glomerular filtration rate (eGFR) and albumin/creatinine ratio. Individual African ancestry was estimated using 42 autosomal single nucleotide polymorphism (SNP) markers previously known to have high allele frequency differences between African and European populations using the program STRUCTURE. We examined the association of African ancestry with eGFR and albumin/creatinine ratio in multivariable linear regression and the association with the lowest quintile of eGFR in logistic models using nested models adjusting for socioeconomic status and relevant comorbidities.

Results: Greater percent African ancestry was significantly associated with lower eGFR in men, but not in women, and there was a significant interaction between African ancestry and sex (p value = 0.04). In men, higher African ancestry was independently associated with lower eGFR in all models (Table). African ancestry was also an independent predictor of having a GFR in the lowest quintile (<80 ml/min/1.73m²) among men, but not among women (Table). Higher African ancestry was associated with higher albumin/creatinine ratio in men and women in unadjusted models (β coefficient 0.05, 95%CI 0.01-0.09), but not in adjusted analysis (β coefficient 0.02, 95% CI -0.02-0.06).

Conclusions: Higher African ancestry may be associated with increased risk of kidney dysfunction, particularly among black men. The observed associations of ancestry with kidney function may be due to genetic or non-genetic effects or their interactions. Future studies should focus on elucidating important gene-environment and gene-gene interactions that may explain the observed associations and sex differences.

The Association of African Ancestry with eGFR among Young African Americans by Sex

<table>
<thead>
<tr>
<th>African Ancestry (per 10% increase)</th>
<th>Linear eGFR β coefficient (95%CI)</th>
<th>Logistic OR GFR lowest quintile (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEN†</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unadjusted</td>
<td>-1.38 (-2.7 to 0.01)</td>
<td>1.23 (1.06 to 1.45)</td>
</tr>
<tr>
<td>SES Adjusted*</td>
<td>-1.75 (-3.11 to -0.38)</td>
<td>1.30 (1.1 to 1.54)</td>
</tr>
<tr>
<td>Fully Adjusted**</td>
<td>-2.36 (-3.84 to -0.89)</td>
<td>1.33 (1.1 to 1.62)</td>
</tr>
<tr>
<td>WOMEN‡</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unadjusted</td>
<td>0.45 (-0.66 to 1.57)</td>
<td>0.97 (0.86 to 1.11)</td>
</tr>
<tr>
<td>SES Adjusted*</td>
<td>0.47 (-0.66 to 1.60)</td>
<td>0.98 (0.86 to 1.11)</td>
</tr>
<tr>
<td>Fully Adjusted**</td>
<td>1.08 (-0.16 to 2.33)</td>
<td>0.94 (0.81 to 1.08)</td>
</tr>
</tbody>
</table>

SES= socioeconomic status variables *adjusted for age, income, education ** adjusted for age, income, education, BMI, SBP, HTN, DM, smoking, CVD (MI, CHF, stroke), fasting glucose, CRP† p-value for sex interaction: p=0.04 for linear and p=0.02 for the logistic models

Fang MC, Panguluri P, Machtinger EL, Schillinger D.
First author: MC Fang, Assistant Professor of Medicine, Division of Hospital Medicine, University of California San Francisco.

Background: Although warfarin is commonly prescribed to prevent stroke, little is known about how people taking warfarin perceive the goal of therapy and how they describe stroke. We assessed the ‘stroke-related health literacy’ of anticoagulated patients to inform ways in which to improve health communication among high risk populations.

Methods: We surveyed a sample of 183 ethnically and linguistically diverse people taking warfarin to prevent stroke. Trained bilingual research assistants fluent in English and Spanish or Chinese verbally administered surveys and collected information on subject characteristics, including race/ethnicity, primary language, and educational attainment. Literacy was measured in English and Spanish speaking subjects using the short-form Test of Functional Health Literacy in Adults (s-TOFHLA). Participants were asked to describe in their own words (1) why they were taking warfarin, and (2) what was a stroke. Answers were transcribed and then coded as “concordant” or “discordant” with established indications for warfarin and definitions of stroke. Multivariable logistic regression was used to determine whether subject characteristics were associated with discordant answers.

Results: Among 183 subjects, 42.6% were Asian-Pacific Islander, 26.8% were Latino, and 10.9% were African-American. Approximately one-fourth of subjects stated that English was their most comfortable language and over half were taking warfarin to prevent atrial fibrillation-related stroke. The mean s-TOFHLA score was 17, corresponding to marginal levels of literacy. When asked to describe their indication for warfarin, 42.6% of participants provided a response discordant with established indications for warfarin, and only 9.3% of people specifically stated that the purpose of taking warfarin was to prevent stroke. Not speaking English (adjusted odds ratio and 95% confidence interval [aOR] 2.4 [1.1-5.6]) and less than a college education (aOR 3.3 [1.4-7.3]) were independently associated with discordant answers about warfarin. When asked to describe a stroke, 23.5% of subjects stated “I don’t know” and 17% provided inaccurate descriptions of stroke. Among people who were able to appropriately define a stroke, only one-third of them described symptoms or signs of stroke. In multivariable analysis, inadequate literacy was strongly associated with discordant responses regarding stroke (aOR 5.8 [2.1-15.6]).

Conclusions: Among high risk people taking warfarin to prevent stroke, significant gaps in stroke-related health literacy exist, with substantial proportions of individuals not able to accurately describe their indication for warfarin or define a stroke. Since stroke risk awareness and early recognition of the signs and symptoms of stroke are critical aspects of stroke prevention and treatment, clinicians should more strongly link warfarin therapy to stroke prevention. Moreover, clinicians should ensure that patients know the presenting symptoms and signs of stroke. Public health communication strategies regarding stroke prevention need to target individuals with limited literacy and limited English proficiency.
Disproportionate Cost of Smoking for Communities of Color
Sung H-Y, Max W, Tucker L-Y
School of Nursing, Institute for Health & Aging

Background. People of color are known to have the highest rates of illness and mortality from cigarette smoking, but the cost burden has not been fully analyzed. This study estimated the economic impact of smoking on African Americans, Hispanics, and others in California. The study had two specific aims: 1) to estimate smoking-attributable healthcare expenditures; and 2) to estimate the losses resulting from smoking-caused mortality.

Methods. A series of econometric models were developed to estimate the healthcare expenditures. These models predict smoking-related disease, poor health status, and the probability of using healthcare services as a function of smoking status. These models were estimated separately for African Americans, Hispanics, and all other Californians and use national survey data as well as California-specific data on smoking prevalence, risk behaviors, and sociodemographics. Smoking-caused mortality was estimated using an epidemiological relative risk approach to determine the smoking-attributable fraction (SAF) of deaths by disease category, age, and gender. The SAFs were then applied to California death data. We also calculated the years of life lost and the value of lost productivity.

Results. In 2002, 3.6 million adult Californians were current smokers, including 287,000 African Americans; 917,000 Hispanics; and 2.4 million others. African Americans had the highest adult rate – 19.3%, while Hispanics had the lowest rate – 13.1%. In addition, nearly 5 million Californians were former smokers, representing 20.7% of the adult population. The smoking-attributable fraction (SAF) of healthcare expenditures that can be attributed to smoking varied across race/ethnicity groups. SAFs for Hispanics were the lowest for all types of expenditures, and SAFs for African Americans were the highest. For example, smoking-attributable illness accounted for 2% of hospital expenditures for Hispanics, 13% for whites/others, and over 14% for African Americans. While African Americans account for 6% of the California adult population, they account for 8% ($629 million) of smoking-attributable healthcare expenditures. Hispanics, on the other hand, represent 29% of the adult population but only 9% ($666 million) of smoking-attributable healthcare expenditures. These differences reflect the lower smoking-prevalence among Hispanics, and may also reflect more limited access to care on the part of Hispanics. In 2002, 39,680 Californians died of smoking-attributable illness, including 3013 African Americans and 3003 Hispanics. This represented a loss of almost 500,000 years of life lost. The years of life lost per death was highest for African Americans (16.3) and Hispanics (14.6), indicating that they died at younger ages. These lost lives represented a loss of over $6 million in productivity in the state.

Conclusions. African Americans in California bear a disproportionate share of the cost of smoking. They have the highest adult smoking prevalence, the highest smoking-attributable healthcare expenditures per adult, the highest years of potential life years lost per death, and the highest mortality costs per death and per adult. They bear the highest smoking-attributable total costs - per adult, at $898 per adult. The findings for Hispanic Californians are less clear. While they have the lowest smoking prevalence among race/ethnic groups, there are nonetheless nearly 1 million Hispanic smokers, representing 25% of the adult smokers in the state. They bear a high mortality cost per death and a high number of years of potential life lost, reflecting the young age at which Hispanic smokers are dying. The economic burden on the Hispanic community is large – nearly $1.4 billion in 2002.
Predictors of unintended pregnancy and inadequate birth spacing: A mixed-methods approach. Bryant A$^{1,4}$, Nakagawa S$^1$, Gregorich S$^{2,4}$, Fernandez-Lamothe A$^1$, Fuentes-Afflick E$^{3,4,5}$, Kuppermann, M$^{1,4,5}$

Departments of $^1$Obstetrics, Gynecology and Reproductive Sciences, $^2$Medicine and $^3$Pediatrics, and the $^4$Medical Effectiveness Research Center for Diverse Populations, $^5$Department of Epidemiology and Biostatistics; School of Medicine; University of California, San Francisco

**Background:** African-American and Latina women are at high risk for unintended pregnancy and short birth intervals. We explored the impact of maternal attitudes on these adverse perinatal outcomes, using quantitative and qualitative approaches.

**Methods:** We analyzed baseline data from 1070 English-, Spanish-, or Chinese-speaking pregnant women of socio-demographically diverse backgrounds who participated in a prospective cohort study of prenatal testing decision making in the San Francisco Bay Area. Logistic regression was used to explore the relationship between attitudinal factors, socio-demographic factors and pregnancy intent. In addition, we conducted seven focus groups in English and Spanish with 47 low-income, recently postpartum women from diverse backgrounds. Transcripts of focus group discussions were content-analyzed for themes related to birth spacing and pregnancy planning.

**Results:** 35% of women in the prospective cohort had an unintended pregnancy. African-American women were more likely than women of other races/ethnicities to report an unintended pregnancy (absolute risk 62.1%; AOR (vs. White women) 2.29, 95% CI [1.38-3.80], p=0.001). Whereas higher subjective social standing (a measure of socioeconomic status) was associated with a decreased risk of unintended pregnancy among White and U.S.-born women (AOR 0.64 [0.52, 0.78], p<0.001; AOR 0.75 [0.66, 0.85], p<0.001, respectively), we found no association between social standing and unintended pregnancy among minority or foreign-born women. The increased risk of unintended pregnancy among African-American women was not explained by differences in fatalistic attitudes or distrust of the health care system. More permissive views toward abortion availability were associated with higher unintended pregnancy risk among Latinas, but not among other women (AOR 4.84 [1.83-12.8], p = 0.002). Among women who participated in the focus groups, 36% of women desired more children and 36% were unsure. Of those planning more children, 31% desired another pregnancy within one year. In general, women were unaware of adverse health consequences associated with short birth intervals. Maternal health status was mentioned as a determinant of whether and when to pursue a future pregnancy, though the most important consideration was desired family structure. Other factors that influenced birth spacing were finances, desire for closely-spaced children and career goals. African-Americans, in particular, expressed occasional conflict between their desire and their partner’s desire for more children. Many women in the focus groups reported unplanned pregnancies. While some women valued pregnancy planning, many felt that planning is not useful. Pervasive themes included “there’s no guarantee things will turn out as planned,” “not planning, but being prepared” and “you just roll with it”. When asked about high rates of unplanned pregnancies among African-Americans and Latinas, women from both groups felt these rates were problems for their communities. Lack of education, parental role modeling, and community resources were identified as contributors in African-American communities, while foreign-born Latinas cited the need to work hard to succeed in the U.S. to explain their lower risk of unplanned pregnancy relative to U.S.-born Latinas.

**Conclusions:** Racial and ethnic minority women are at higher risk of unintended pregnancy, regardless of subjective social standing. Among low-income women, attitudes regarding birth spacing are largely related to social considerations and pregnancy planning is not uniformly accepted. Interventions to reduce unwanted or mistimed pregnancies in these populations should consider cultural and social context, and should not be aimed exclusively at women of lower socioeconomic standing.
Oral Health Disparities Research: The Fluoride Varnish Example from Clinical Trial to Health Policies. Weintraub, JA¹, Gansky SA¹, Ramos-Gomez, F² and “CAN DO” Research Team. UCSF School of Dentistry¹, Division of Oral Epidemiology and Dental Public Health, Center to Address Disparities in Children’s Oral Health, and UCLA School of Dentistry².

Background: Early childhood caries (ECC) or tooth decay that can occur in young children as soon as their teeth erupt around age one, has a disproportionately higher prevalence locally and nationally among children in families of low socio-economic position, children of color, and children in underserved geographic locations. It is difficult and costly to treat, often requiring conscious sedation or general anesthesia in an operating room.

Methods: The NIH-funded UCSF Center to Address Disparities in Children’s Oral Health (Center nicknamed CAN DO) has been conducting studies to understand, prevent and reduce ECC, especially through early intervention and prevention with children and their caregivers. A dental-examiner blinded randomized clinical trial (RCT) was conducted to determine the efficacy of a resin-based, high concentration topical fluoride varnish (FV), applied to the teeth once or twice a year with parental counseling, vs. counseling alone, in preventing ECC. The study was conducted in San Francisco at the Chinatown Public Health Center and the San Francisco General Hospital Family Dental Center with 376 caries-free children initially 1-3 years old.

Results: Children who received no FV treatments were 2.2 times more likely to develop ECC than were the children who were assigned to the annual FV and counseling group. Compared to the children assigned to the FV and counseling twice per year group (a total of four treatments over the two-year period of the study), the children who received no FV treatments were 3.8 times more likely to develop tooth decay.

These efficacy findings were then disseminated through a variety of mechanisms to study participants, scientific and lay audiences. Additional analyses and a policy brief (Gansky et al. 2007) were presented to state legislative aids and mailed to >1,000 federally qualified health centers throughout California. Several national professional organizations developed clinical guidelines and policy statements supporting the use of FV among young, high caries-risk children. The CA Medicaid Program included a new FV benefit and FV can be applied by dental personnel as well as physicians, nurses and medical personnel when the attending physician delegates the procedure. FV is now being implemented by many communities and states by different types of providers, in different settings, populations, frequencies, type and amount of parental counseling, reimbursement levels, and combinations with other preventive agents.

Conclusions: Dissemination research and clinical trials are needed to determine 1) the best methods to translate the FV efficacy research evidence into action and adoption by providers, parents and policymakers for children most likely to benefit and 2) the best combination of preventive methods for cost-effective public health programs. We are about to receive new NIH funding for RCTs to help determine 1) the best practices and methods to reduce oral health disparities by reaching the children who can most benefit from FV and parental counseling and 2) the relative efficacy of FV and counseling with and without other caries-preventive methods.

Supported by NIH/NIDCR P60 DE13058, U54 DE14251, U54 DE019285 (pending), California Program on Access to Care Grant #ENN08N