□Cancer Prevention in Latino Populations

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Summary of Presentation

- Latinos in the U.S.
- Cancer Incidence and Mortality
- Primary Prevention: Tobacco Cessation
- Early Detection: Cancer Screening
- Interventions in the Community
- Clinical Care
- What is to be done?

Latinos in the US: 1 ethnicity Many National Origins

- More similarities than differences
- Central role of Spanish language
- Cultural themes unify
- Racial admixture–500 years
- Common cultural heritage:
  - –Catholics, Spain, Indigenous

Demographic Profile for Latinos

- Less household income on average
- About 30% live in poverty and have less wealth at every level of income
- Fewer average years of education and proportion of college graduates
- < 50% of Latinos > 25 y completed high school compared with 77% of Whites
- More single-parent households

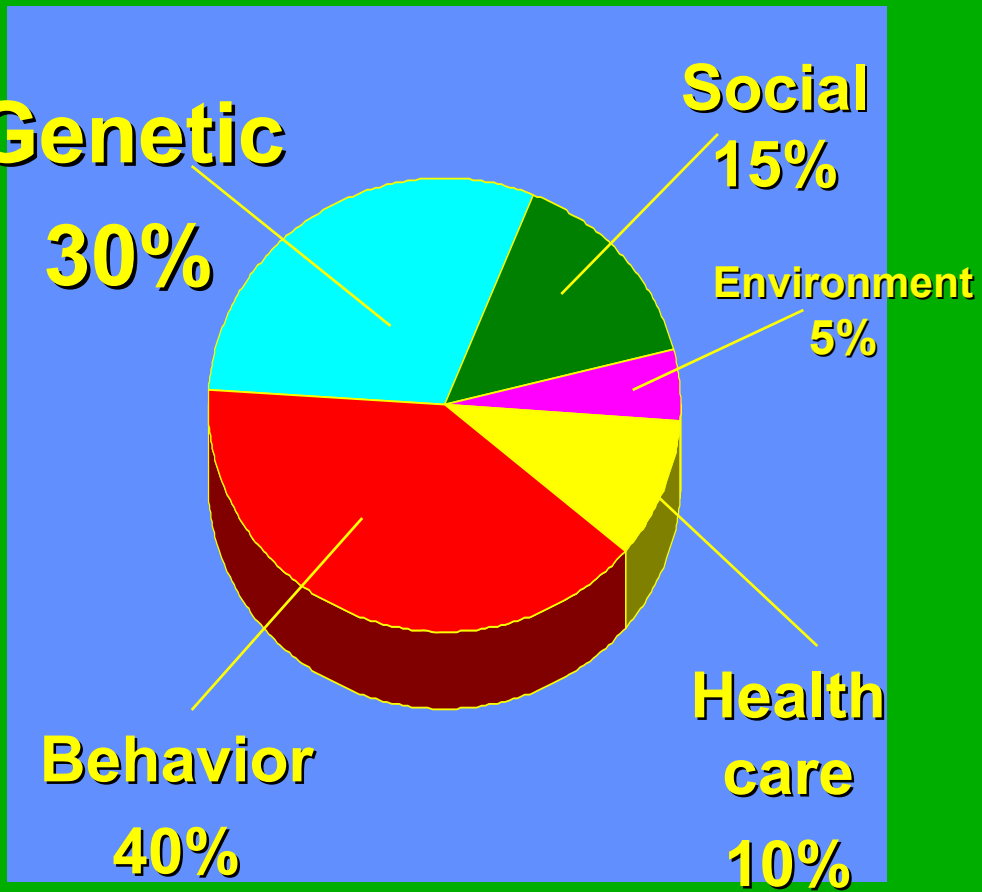
Adverse Social and Access Factors

- Lower functional health literacy
- Limited English proficiency–25%
- Lowest health insurance coverage– 40% between 18-64 y are uninsured
- Less access to primary care MD
- Twice as likely to report using ER as primary source of care

Determinants of Health

- **Genetic**
- **Behavioral**
- **Environmental**
- **Social Setting**
- **Health care**

Proportions
(Premature Mortality)



Source: McGinnis JM, Russo PG, Knickman, JR. Health Affairs, April 2002.

Causes of Death, US 2001

Latinos	%	Whites	%
Heart Disease	23.9	Heart Disease	29.7
Cancer	19.7	Cancer	23.3
Injury	8.4	Stroke	6.8
Stroke	5.7	COPD+	5.6
Diabetes	5.0	Injury	3.9
Homicide	2.9	Flu/pneumonia	2.6
Liver Disease	2.9	Diabetes	2.6

Cancer Incidence by Site in Women

	White	African American	Latina	Asian
Breast	148.3	121.7	89.8	97.2
Lung	53.9	54.8	24.4	28.4
Colorectal	47.5	56.2	32.9	38.8
Cervix	7.6	12.4	16.8	10.2
Stomach	4.3	9.9	10.0	12.8
Liver	2.4	3.9	5.6	7.7

*Rates per 100,000 age-adjusted to the US 2000 population

** SEER Registries: 12 SEER areas

Cancer Mortality Rates Women

	Breast	Cervical	Colon	Lung
African American	34.1	5.0	22.8	40.2
White	24.9	2.3	10.0	42.6
Asian/P.I.	12.9	2.3	10.1	17.6
Latina	15.7	3.2	11.2	14.8
Am. Indian/Alaska Native	13.9	3.0	12.7	27.5

Per 100,000

Cancer Incidence by Site and Ethnicity in Men, U.S. 2000 (per 100,000 age-adjusted)

	Af Am	API	White	Latinc
Prostat	234	83	145	103
Lung	117	52	76	42
Colon	61	45	56	38
Stomac	11	15	6	10

Cancer Mortality Rates - Men

	Prostate	Colon	Lung	Liver	Stomach
African American	63	33	96	10	12
White	26	23	73	7	5
Asian/P.I.	10	16	37	16	10
Latino	22	17	37	11	9
Am Indian/Alaskan	16	16	42	7	6

Per 100,000

Latino Paradox in Cancer

- Lack of diagnosis not likely
- Less smoking, less PA, more obesity
- Less screening but not explain gap
- Mechanisms for differences?
- Gene-Environment interactions?
- Access to care and treatment

Cigarette Smoking in the U.S. – 2002
National Health Interview Survey

	% Men	% Women
White	25.6	22.3
African Am	27.0	19.2
Latino	21.8	11.7
Asian	18.1	6.8
Am Indian	42.8	39.1
8 years or less	25.4	13.5
9-11 yrs school	38.1	30.9
high school dipl	29.8	22.1
College degree	13.6	10.5
Below poverty	36.9	30.1

MMWR 2004;53:427-431

Cigarette Smoking Behavior in Latinos by Sex, NHLIC *En Acción*, 1993-1994

	Percent Current Smokers	
	Men %	Women %
Mexican American	25.0	10.4
Central American	23.0	10.1
Puerto Rican	27.6	24.2
Cuban American	24.7	12.4
South American	23.0	15.8

Am J Public Health 2001; 91: 1424-30

Acculturation and Smoking Behavior in Latinos: Good for Men and Bad for Women

	Percent Current Smokers	
	Men	Women
Acculturation Score		
1 to <2 (less)	25.7	10.3
2 to <3	25.0	11.9
3 to <5 (more)	23.0	15.5

Predictors of Current Smoking among Latinos, NHLIC *En Acción*, 1993-1994

- More acculturated men are less likely to smoke (OR=0.86)
- More acculturated women are more likely to smoke (OR=1.12)
- Women of Puerto Rican (OR=2.78) and Cuban (OR=1.46) national origin are more likely to smoke than Mexican origin women

Am J Public Health 2001; 91: 1424-30

Latino Smoking Attitudes and Beliefs
Summary of Subjective Culture Research

- Family Concerns - Second Hand Smoke
- Health Issues Heightened— Physician role?
- Appearance and interpersonal relations are important - *Simpatía*
- Habitual Use Less Important and addiction is less of a problem

Access to Cessation Aides

Latinos and Whites, Colorado

- MD Advice: 46% vs 56%
- Cessation attempt: 72% vs 62%
- Any Medication: 11% vs. 25%
- Odds of physician advice to Latinos: OR= 0.82 (0.57- 1.19)
- Odds of medication use: OR = 0.31 (0.17 - 0.57)

Levinson A, Am J Prev Med 2004; 26: 105-111.

Language Concordance Matters

- Monolingual Spanish speaking patients with Spanish speaking physicians should do better
- Understand more of the physician instructions
- Better medication adherence?
- Ask more questions–patient centered
- Language fluency is a gradient

Cancer Prevention: Early Detection through Screening

- Apply subjective culture model to common cancers
- Evaluate attitudes, beliefs and behavior
- Health care system overwhelms in importance with screening
- Potential role of physicians
- Our goal was develop an intervention

Preventive Services BRFSS, Cancer Screening, U.S. 2001-2002

Screening Test	Latinos * P < 0.01	Whites
Mammo	84.7% ever*	90.3% ever
Women 40+	73.5% 2 yrs**	77.1% 2 yrs
Pap Smear	94.0% ever*	96.9% ever
Pap Smear 3y	85.8%*	88.8%
FOBT 2 yrs	20.1%*	32.0%
Scope ever	37.9%*	49.2%
Scope ≤ 5 y	32.0%*	40.1%*

Sampling Strategy

- Cross-sectional RDD telephone survey
- SF census tracts ≥ 10% Latinos
- Self identified Latino or Anglo
  - Current cigarette smoker
- 18 to 65 years of age
- last one to have birthday

Cancer Knowledge, Beliefs and Attitudes: Latinos and NLW

- 844 Latinos, 510 NLW
- Half men, 50% 50 y old or more
- 75% employed
- Latinos: 31% < high school and 31% some college
- Non-Latino Whites: 5% < HS and 61% some college
- Latinos: 58% born outside US

Association of Latino Ethnicity with Knowledge About Cancer Causes

- Latinos were more likely to believe that the following cause cancer:

	OR
•Breast feeding	2.0
•Bruises	1.7
•Antibiotics	2.4
•Microwaves	2.4
•Sugar substitutes	2.0
•Eating pork	2.5
•Coffee	1.7
•Pollution	0.6

Association of Latino Ethnicity with Attitudes About Cancer

- Latinos were more likely to believe that the following cause cancer:

	OR
•Talk to friends	0.6
•God's punishment	2.0
•Touching someone	1.7
•Death sentence	2.0
•Little to prevent	1.4
•Rather not know if incurable	1.6

Latino Ethnicity Associated With Self-Report Use of Cancer Screening Tests

Cancer Screening Test	Odds Ratio	(95% CI)	p
Ever had a mammogram	0.76	(0.48, 1.21)	0.25
Mammogram in past 2 yrs.	0.76	(0.51, 1.12)	0.16
Pap smear in past 3 yrs.	1.48	(0.85, 2.56)	0.16
Clinical breast examination in past 2 yrs.	1.08	(0.64, 1.83)	0.76
Breast self-examination in past month	0.82	(0.57, 1.17)	0.27
Ever had digital rectal examination	0.60	(0.45, 0.79)	<.001
Digital rectal examination in past 2 yrs	0.95	(0.74, 1.22)	0.68
Ever had fecal occult blood test	0.77	(0.59, 1.01)	0.05
Fecal occult blood test in past 2 yrs	1.03	(0.78, 1.36)	0.83
Ever had a sigmoidoscopy	0.70	(0.52, 0.95)	0.02
Sigmoidoscopy in past 5 yrs	1.04	(0.74, 1.48)	0.81

Pathways to Cancer Screening for Latinas: Community Intervention

- Free distribution of educational booklet in Spanish on breast and cervical cancer screening
- Creation of a network of volunteers to disseminate materials
- Spanish-language mass media campaign using community role models to increase awareness

Demographics of Latinas, Age 40 - 74 Interviewed, 1993 and 1996

	San Francisco 1993 - 1996		Other Cities 1993 - 1996	
(N)	(430)	(500)	(407)	(477)
	Percent		Percent	
Perceived Health Status				
Fair or Poor	38	42	39	39
Health Insurance Coverage				
None	37	29	24	20
Country of Birth**				
United States	15	12	46	55
Mexico	19	24	45	36
Central America	56	55	4	4
Other Latin Am	9	8	4	3
Acculturation Score**				
1 to < 3	77	75	54	43
Language of Interview				
Spanish	83	81	63	46

* p≤ ; ** p≤ .001; Comparison of San Francisco to Other Cities Within Year of Survey

Pathways to Early Cancer Detection for Latinas: En Acción

Mammography in Previous Year

	1993		1996	
	N	%	N	%
San Francisco				
40 - 49	168	59	225	55
50 - 74	262	61	275	78
Other Cities				
40 - 49	170	48	277	49
50 - 74	237	61	200	66

Did the Intervention Work?

- Multivariate models for mammography among 50-74 year old women showed a significant effect by site (OR=1.55; 95% CI=1.08-2.21)
- Mammography had borderline significance of site by year of interview interaction (OR=1.74; 95% CI= 0.86-3.52).

Pathways to Early Cancer Detection for Latinas: En Acción

	Heard of En Acción			
	1993		1996	
	N	%	N	%
San Francisco				
40 - 49	167	40	221	32
50 - 74	262	42	271	39
Other Cities				
40 - 49	170	31	274	23
50 - 74	237	37	196	35

Evaluation Of Community Interventions

- Is it Possible To Prove Efficacy?
- Effectiveness Methods Less Rigorous
- What About Process Measures?
- Need much larger sample size or natural experiments

Screening Mammography Differences May Explain Breast Cancer Disparities

- Mammography Registry Cohort: 1,010,555 women, 40+ y, from 1996-2002, 17,558 diagnosed with breast cancer
- Non-white women were 20%-40% more likely to receive “inadequate” mammography screening
- African American women had higher rates of high-grade tumors
- Lower rates of cancer among Asian, American Indian, Latinas

Smith-Bindman *AIM* 2006; 144: 541-53

Telephone Care Management to Improve Cancer Screening in NYC

- Randomized Trial of 1,413 women in care at 11 community clinics in
- Intervention: 4 telephone calls from Prevention Care Manager vs. usual care
- Outcomes were measured from Medical records

Telephone Care Management Improves Use of Cancer Screening Tests

	Telephone Rx	Usual
Mammography	58% to 68%	6% to 58%
PAP Test	71% to 78%	71% ±
CRC Screen	9% to 63%	39% to 50%

Dietrich *AIM* 2006; 144:563-571

Factors to Consider in Clinical Care of Latinos

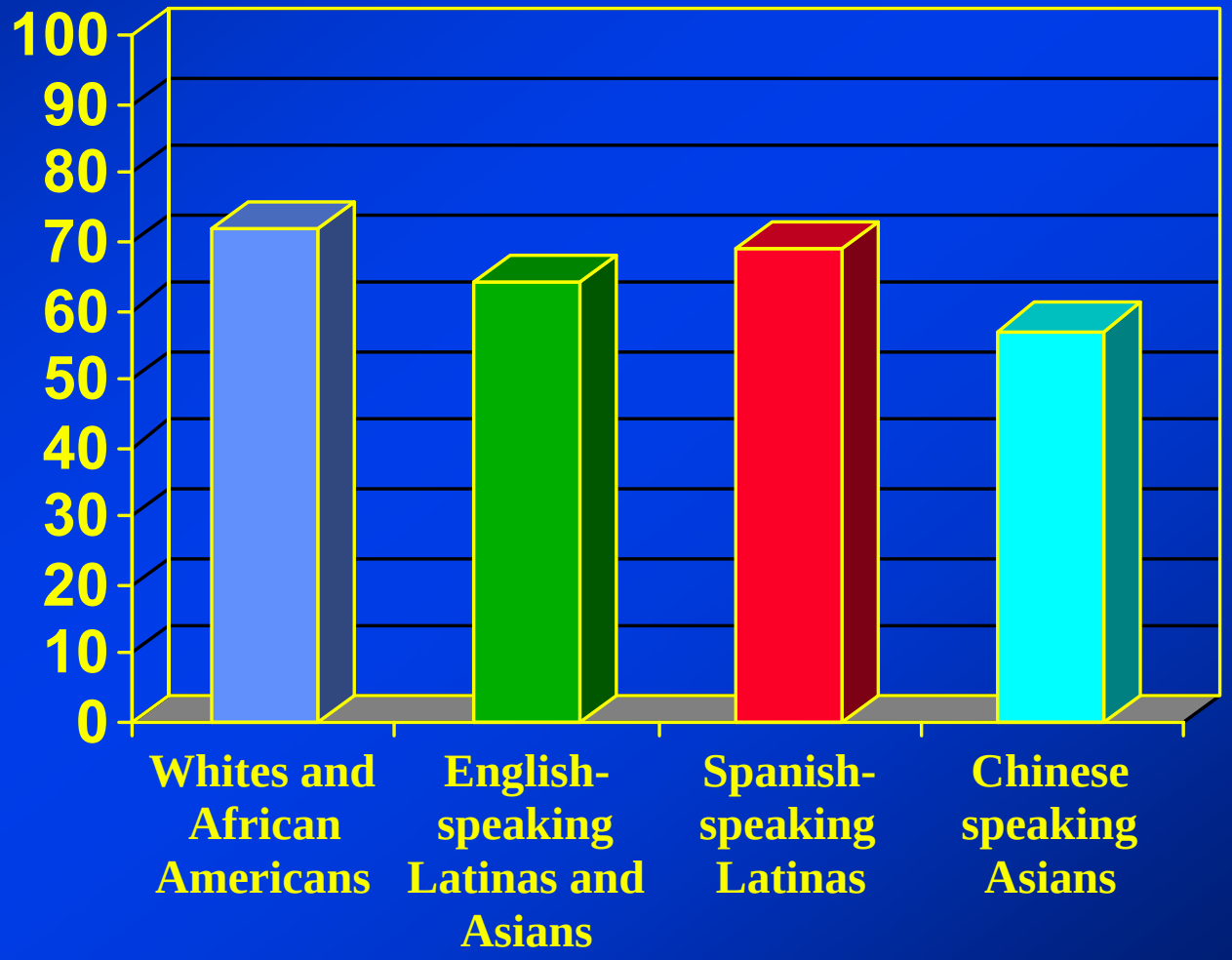
- *Familismo* - Helps Adherence?
- *Simpatía* Cultural Script for positive interpersonal interactions
- *Personalismo*–informal friendliness
- *Confianza* – trust
- *Respeto* For Authority of MD

Understanding Abnormal Mammography Results

- 970 women with abnormal mammogram
- Full understanding: 72% Whites, 73% AA, 66% Latino, 63% API (OR = 0.4)
- Consulting with primary care MD (OR = 2.3) or indeterminate result (OR = 2.4)
- Notification in person or phone increased understanding of BIRADS 4/5 as abnormal

Karliner L, JGIM 2005; 20: 432-437

Percent of Participants with Full Understanding of Doctor's Explanation of Mammography Results, by Ethnicity and Language of Interview



Follow-Up Evaluation

	Asian/PI % N=1 45	Afr Am % N=2 39	Latina % N=1 82	White % N=4 04
Additional Mammogram	57	49	52	57
Ultrasound	41	35	40	35
Biops y	41	37	25	45
None	21	26	23	18

What Is to Be Done?

Factors in Addressing Disparities

- Access to care–screening, follow-up and treatment
- Communication – patient/clinician, social marketing, interventions
- Effectiveness – narrow the gap between evidence and practice
- More Latino health care professionals

Going Beyond Describing Disparities by Race/Ethnicity

- We all want interventions that work
- Need to define mechanisms or pathways so we can target efforts
- Basic research in development of intervention content
- Optimal point of interventions not clear – community, patients, system, clinicians
- Continue to describe and monitor disparities as natural history

Interventions to Test to Prevent cancer

- Smoking cessation—web, quit lines, health professionals, policy
- Access to care
- Strong recommendations
- Patient Education— literature, media
- Patient navigators