

TITLE: Cancer Risk Factors and Screening Behaviors of the Hopi Tribe

CO-LEADERS:

NAU: Priscilla R. Sanderson, Ph.D., Assistant Professor Health Sciences Department, College of Health and Human Services and Applied Indigenous Studies, College of Social and Behavioral Sciences

UA: Sylvia R. Brown, Ph.D., M.P.H., Research Scientist, Mel and Enid Zuckerman College of Public Health

Hopi Tribe: Lorencita Joshweseoma (Martin), M.P.H., Director, Hopi Women's Health Program, Kykotsmovi, AZ

ABSTRACT

Within the past several years, published research has documented disparities in the cancer burden of Native Americans compared to non-Hispanic Whites and many Native Americans perceive cancer as a major health challenge. In order to address community cancer issues and concerns and to develop culturally appropriate intervention programs, Native American Tribes/Nations need to identify the knowledge, attitudes, beliefs and behaviors about cancer of their respective populations. While the Behavioral Risk Factor Surveillance System (BRFSS) and Health Information National Trends Survey (HINTS) have been administered nationwide and in several states, these tools fail to provide the information needed by individual tribes since a) Native Americans are overall a very small sample within any specific survey year, b) Native American tribes/nations are not homogeneous although their data are customarily aggregated for statistical purposes and c) many times these national or state surveys are administered by telephone— a recruitment strategy that is inappropriate in communities where not all households have telephone lines. We propose to address these issues with the development of a tribal-specific, cancer-focused behavioral risk factor survey for the Hopi Tribe. This research will be undertaken as a collaborative effort between the Hopi Office of Health Services and the Hopi Women's Health Program (HWHP) and researchers from the Arizona Cancer Center at the University of Arizona and Northern Arizona University. The team seeks to evaluate the hypotheses that Hopi men and women are interested in obtaining additional knowledge about cancer in general and specific cancers such as colorectal cancer; that behaviors are related to knowledge and beliefs; that specific attitudes and lack of knowledge can be identified that would form the foundation for Tribal specific interventions; and that the Hopi people look to the Tribe for guidance and support when dealing with cancer. This overall project is proposed as a three-year study. In this one-year pilot study proposal, we focus on 1) the development of a culturally appropriate cancer risk factor and knowledge survey instrument and research protocol suitable for Hopi men and women age 18 and older, and 2) assurance of appropriate training and faculty experience in survey methodology and qualitative analyses. Survey items will be selected from national survey tools, including the BRFSS, HINTS and First Nations Regional Health Survey, and through refinement with community input via four focus groups. Implementation of the community survey is proposed for years 2 and 3 (which will be proposed as a full project) when we plan to conduct the survey among Hopi tribal members living on the Reservation, using household in-person interviews. This recruitment method achieved an **DELETED FROM EXAMPLE: DATA NOT YET PUBLISHED** response rate among Hopi women in our previous study. Depending on funding, we will administer the survey to Hopi enrollees living either on or off the reservation and examine differences in knowledge, attitudes and behaviors between those living on and off reservation. Finally, we will evaluate the validity of the traditional telephone methodologies of the BRFSS and HINTS by conducting a subset of the survey using different methodologies, including telephone and mail. .

DETAILED BUDGET FOR INITIAL BUDGET PERIOD DIRECT COSTS ONLY: NAU						FROM 09/01/2010	THROUGH 8/31/2011	
PERSONNEL <i>(Applicant organization only)</i>		Months Devoted to Project			INST.BAS E	DOLLAR AMOUNT REQUESTED <i>(omit cents)</i>		
NAME	ROLE ON PROJECT	Cal. Mnths	Acad. Mnths	Summer		SALARY REQUESTED	FRINGE BENEFITS	TOTAL
Priscilla Sanderson	Co-Leader	X	x	X	x	X	x	x
Priscilla Sanderson	Co-Leader	X	X	X	X	X	X	X
Regina Eddie	Researcher	X	X	X	X	X	X	X
Regina Eddie	Researcher	x	X	x	X	x	X	X
Kwaayesnom Onsae	Undergraduate Assistant	X	x	x	x	x	x	X
SUBTOTALS						Xx,xxx	Xx,xxx	Xx,xxx
CONSULTANT COSTS								
Dr. Neil Weinstein: consultant								Xxxx
EQUIPMENT <i>(Itemize)</i>								
SUPPLIES <i>(Itemize by category)</i>								
QSR NVivo 8 Full License: One full license (\$595).								595
TRAVEL								
Meetings for faculty and student in Tucson (\$1331) and Kykotsmovi (\$1971)								3,367
PATIENT CARE COSTS		INPATIENT						
		OUTPATIE						
ALTERATIONS AND RENOVATIONS <i>(Itemize by category)</i>								
OTHER EXPENSES <i>(Itemize by category)</i>								
40 Hopi participants x \$25 = \$1,000								
Focus group refreshments (4 focus groups x \$60 = \$240)								1,200
CONSORTIUM/CONTRACTUAL COSTS					DIRECT COSTS			
SUBTOTAL DIRECT COSTS FOR INITIAL BUDGET PERIOD <i>(Item 7a, Face Page)</i>							\$	
CONSORTIUM/CONTRACTUAL COSTS					FACILITIES AND ADMINISTRATIVE COSTS			
TOTAL DIRECT COSTS FOR INITIAL BUDGET PERIOD							\$ 60,000	

**BUDGET FOR ENTIRE PROPOSED PROJECT PERIOD
DIRECT COSTS ONLY: NAU**

BUDGET CATEGORY TOTALS		INITIAL BUDGET PERIOD <i>(from Form Page)</i>	ADDITIONAL YEARS OF SUPPORT REQUESTED			
			2nd	3rd	4th	5 th
PERSONNEL: <i>Salary and fringe benefits. Applicant organization only.</i>		42,453				
CONSULTANT COSTS		Xx,xxx				
EQUIPMENT						
SUPPLIES		595				
TRAVEL		3,367				
PATIENT CARE COSTS	INPATIENT					
	OUTPATIENT					
ALTERATIONS AND RENOVATIONS						
OTHER EXPENSES		1,200				
CONSORTIUM/ CONTRACTUAL COSTS	DIRECT					
SUBTOTAL DIRECT COSTS <i>(Sum - Item 8a, Face Page)</i>		60,000				
CONSORTIUM/ CONTRACTUAL COSTS	F&A					
TOTAL DIRECT COSTS		60,000				
TOTAL DIRECT COSTS FOR ENTIRE PROPOSED PROJECT PERIOD						\$ Xx,xxx

PERSONNEL

TOTAL: \$xx,xxx

Priscilla Sanderson, PhD, [calendar months effort on project = 2.0 academic (22%) / 1.2 summer (40%)] is the NAU Co-Leader for this pilot study and, as such, will be responsible for all NAU activities associated with this grant. She will insure that all NAU research activities are carried out in a culturally sensitive manner, aid in the development of the survey instrument and will share equally in the compilation of reports to the Hopi Tribe and to NACP leadership, as requested. Dr. Sanderson will be the primary person responsible for the planning, implementation and analysis of the proposed focus groups.

Regina Eddie, MS in Nursing [calendar months effort on project = 0.9 months (10% fte) academic: 0.6 calendar months (20% fte) summer] will serve as research assistant to Dr. Sanderson. She will assist in completing all research related activities, including but not limited

to literature reviews, facilitating focus groups, writing progress reports, development of the survey instrument, transcription of focus groups and preparation of reports as needed.

Kwaayesviöm Onsaë (9 calendar months for 28 weeks at 10 hours per week at \$8/hr) will serve as an undergraduate assistant. She will assist Dr. Sanderson and Ms. Eddie in preparing for meetings and focus groups, and assist with focus group activity, write monthly progress reports, assist with transcription of focus groups and general office work.

CONSULTANT/Advisor COSTS:

TOTAL: \$ xx,xxx

Neil Weinstein, Ph.D. is the pilot project consultant. He has extensive experience in the development and implementation of surveys in different communities. He is nationally recognized as an expert in risk perception and behavioral change. Dr. Weinstein will provide expert advice on theory-based instrument development, and will be the lead person in the training sessions identified in Aim 2 of this proposal. He will provide ongoing guidance to the project team in the development and implementation of the proposed survey. (\$xxxx)

Weinstein consultant travel: Round Trip Mileage from Tucson to Kykotsmovi: 785 miles * 0.445 cents/mile = \$349. Lodging at Hopi Cultural Center = \$85 per night * 2 nights * = \$85 (note: Hopi Cultural Center is the only place to stay on the Hopi Reservation). Per Diem in Navajo County=\$49 per day * 3 days * = \$147. Total Consultant Trip Cost = \$583. 1 Trip = \$666

SUPPLIES:

The NAU project team will need to conduct content analysis on the results from the focus groups, thus the purchase of QSR NVivo 8 Full License software is needed. Each full license allows installation of NVivo 8 software on two computers (\$595) and has no expiration date.

TRAVEL:

1 Round Trip from Flagstaff to Tucson (3 days/2 nights)

Purpose: To attend a two-day meeting with UA research team and consultants to receive training on survey design and methods and to develop detailed 1 year plan.

Mileage: 514 miles * 0.445 cents/mile = \$229

Lodging: \$119 per night * 2 nights = \$238 pp

Per Diem: \$44 per day * 3 days = \$132 pp

Costs for 3 people = (238+132) * 3 + 229 (1 care) = \$1,339

4 Round Trips from Flagstaff to Kykotsmovi (2 days/ 1 night each)

Mileage: 242 miles * 0.445 cents/mile = \$108

Lodging at Hopi Cultural Center = \$85 per night * 1 night * = \$85pp

Per Diem: \$49 per day * 2 days = \$98 pp

Costs for 3 people for 1 trip = (85+98) * 3 = \$549 + \$108 (1 car) = \$657 per trip

Costs for 3 trips = 657 * 3 = \$1,971

OTHER EXPENSES: Focus Groups

During Year 1 of this study, the research team plans to conduct focus groups to refine the survey instrument. The Hopi participants (20 men and 20 females) will receive \$25 stipends for their participation in this effort which expected to last approximately 2 hours. The stipends are designed to offset the travel costs or time commitments incurred in this valuable effort. (\$1,000).

Focus group refreshments (4 focus groups x \$50 = \$200). Due to the likelihood of a high number of individuals with type II Diabetes, we will need to provide healthy snacks during the 2-hour focus groups.

DETAILED BUDGET FOR INITIAL BUDGET PERIOD DIRECT COSTS ONLY: UA						FROM 09/01/2010	THROUGH 8/31/2011	
PERSONNEL <i>(Applicant organization only)</i>		Months Devoted to Project			INST.BAS E	DOLLAR AMOUNT REQUESTED <i>(omit cents)</i>		
NAME	ROLE ON PROJECT	Cal. Mnth	Acad. Mnth	Summer		SALARY REQUESTED	FRINGE BENEFITS	TOTAL
Sylvia Brown	Co-Leader	x	x	x	x	x	x	X
Mignonne Guy	Researcher	X	x	X	x	X	X	x
Robin Harris	Advisor	x	X	x	X	x	X	X
SUBTOTALS						Xx,xxx	Xx,xxx	Xx,xxx
EQUIPMENT <i>(Itemize)</i>								
SUPPLIES <i>(Itemize by category)</i>								
TRAVEL								
Meetings on Hopi reservation in Kykotsmovi, Arizona								3,539
PATIENT CARE COSTS		INPATIENT						
		OUTPATIE						
ALTERATIONS AND RENOVATIONS <i>(Itemize by category)</i>								
OTHER EXPENSES <i>(Itemize by category)</i>								
CONSORTIUM/CONTRACTUAL COSTS					DIRECT COSTS			
SUBTOTAL DIRECT COSTS FOR INITIAL BUDGET PERIOD <i>(Item 7a, Face Page)</i>								\$ 60,000
CONSORTIUM/CONTRACTUAL COSTS					FACILITIES AND ADMINISTRATIVE			
TOTAL DIRECT COSTS FOR INITIAL BUDGET PERIOD								\$ 60,000

BUDGET FOR ENTIRE PROPOSED PROJECT PERIOD DIRECT COSTS ONLY: UA						
BUDGET CATEGORY TOTALS		INITIAL BUDGET PERIOD <i>(from Form Page</i>	ADDITIONAL YEARS OF SUPPORT REQUESTED			
			2 nd	3rd	4th	5 th
PERSONNEL: <i>Salary and fringe benefits. Applicant organization only.</i>		56,461				
CONSULTANT COSTS						
EQUIPMENT						
SUPPLIES						
TRAVEL		3539				
PATIENT CARE COSTS	INPATIENT					
	OUTPATIENT					
ALTERATIONS AND RENOVATIONS						
OTHER EXPENSES						
CONSORTIUM/ CONTRACTUAL COSTS	DIRECT					
SUBTOTAL DIRECT COSTS <i>(Sum = Item 8a, Face Page)</i>		60,000				
CONSORTIUM/ CONTRACTUAL COSTS	F&A					
TOTAL DIRECT COSTS		60,000				
TOTAL DIRECT COSTS FOR ENTIRE PROPOSED PROJECT PERIOD						\$

UA PERSONNEL YEAR 1 : \$xx,xxx

Sylvia R. Brown, PhD, MPH: (calendar months effort on project = 4 months (33% fte) is a research scientist at the Mel and Enid Zuckerman College of Public Health at the University of Arizona and Arizona Cancer Center. She is an experienced epidemiologist with decades of analytic experience, including survey design, analysis and implementation. Since 2005, Dr. Brown has participated in numerous studies with the Hopi Tribe through both the Native American Cancer Research Partnership and the Southwest American Indian Cancer Network. She led the NCI pilot project which assessed the cancer burden of the Hopi tribe by matching Arizona Cancer Registry data to the Hopi tribal rolls. Dr. Brown has developed a strong positive working relationship with the Hopi Tribe and as such will bear primary responsibility for the development of the survey instrument in the pilot year and field testing, analysis, interpretation

and reporting in subsequent years. She will participate in all phases of survey development and training.

Mignonne Guy, PhD : (calendar months effort on project = 2.5 months (20% fte)); is an assistant research scientist for the University of Arizona, Center for Health Outcomes and PharmacoEconomic Research and holds a postdoctoral fellowship with the Arizona Cancer Center. She has extensive experience developing research and programmatic collaborations with several social service agencies and community volunteers from Pascua Yaqui and Tohono O'odham designing and coordinating health/wellness/education programs. Dr. Guy brings to the project knowledge of qualitative methodology, extensive experience in the design, administration and analysis of health-related surveys and assessments. She will provide training in qualitative methods and will also participate in focus group facilitation. She will play a key role in qualitative analysis, interpretation and write up. Additionally, she will aid in the development of survey instruments during the first year of the project and she will play a central role in the field test, analysis, interpretation, report and manuscript writing in subsequent years.

Robin Harris, PhD, MPH: (calendar months effort on project = 0.6 months (.5% fte)); is an associate professor of epidemiology in the Mel and Enid Zuckerman College of Public Health and head of the Skin Cancer Institute at the Arizona Cancer Center. She previously served as Co-Leader on the two of the Hopi studies – 2006 Women's Survey and HWHP Program Evaluation - successfully completed under the NACP. Dr. Harris will serve as advisor to all members of the UA-NAU team. She will provide regular input on decisions relating to both research and training and will guide Drs. Brown and Sanderson on project management.

Travel **UA YEAR 1** **: \$3,539**

Funds are request for in-state travel. This pilot year requires an extensive amount of interaction among all participants and the Hopi Tribe in order to develop a culturally appropriate survey. We therefore propose 1 trip every 3 months for 12 mo. to Hopi for 2-3 people for 2-3 days each time, including round trip travel (6+ hours each way).

4 Round Trips Between Tucson to Kykotsmovi:

Mileage: 785 miles * 0.445 cents/mile = \$349 (1 car only)

Lodging at Hopi Cultural Center = \$85 per night * 2 nights= \$170pp.

(note: Hopi Cultural Center is the only place to stay on the Hopi Reservation)

Per Diem in Navajo County = \$49 per day * 2.5 days = \$123pp

Total Trip Cost for 2 = (\$170+123) * 2 = \$586 + \$349 (1 car only) = 935

4 Trips = 983 * 4 = \$3,740

BIOGRAPHICAL SKETCH

Provide the following information for the key personnel and other significant contributors.
Follow this format for each person. **DO NOT EXCEED FOUR PAGES.**

NAME Sanderson, Priscilla Rose		POSITION TITLE Assistant Professor, Department of Health Sciences and Applied Indigenous Studies	
eRA COMMONS USER NAME			
EDUCATION/TRAINING <i>(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)</i>			
INSTITUTION AND LOCATION	DEGREE <i>(if applicable)</i>	YEAR(s)	FIELD OF STUDY
Southwestern College, Winfield, KS	BA	1983	Psychology
Oklahoma State University, Stillwater, OK	MS	1984	Psychology with an emphasis in Rehab Counseling
University of Arizona, Tucson, AZ	PhD	2005	Rehabilitation and Special Education
University of Arizona, Arizona Cancer Center, Tucson, AZ	Postdoctoral Training	2008	Cancer Prevention and Control

A. Positions and Honors.**Positions and Employment**

1984-1986	Vocational Rehabilitation Services Specialist II, State of Arizona, Department of Economic Security, Rehabilitation Services Administration, Tucson, AZ. Vocational Rehabilitation Services
1986-1992	Vocational Rehabilitation Services Specialist III, State of Arizona, Department of Economic Security, Rehabilitation Services Administration, Flagstaff, AZ.
1992-2003	Program Director, Northern Arizona University, Institute for Human Development, Arizona Center on Disabilities, American Indian Rehabilitation Research and Training Center and Capacity Building for American Indians Project, Flagstaff, AZ.
2003-2005	Outreach Coordinator, Northern Arizona University, Native American Cancer Research Partnership, Flagstaff, AZ.
2004-2008	Co-Leader Evaluation of Breast Cancer Video for Navajo Women, Northern Arizona University American Cancer Research Partnership.
2008-2008	Assistant Professor of Research (non-tenure), College of Health and Human Services, Department of Health Sciences, Flagstaff, AZ.
2004	Principal Research Specialist, Navajo NARCH Project, University of Arizona, College of Public Health, Health Promotion Sciences.
2004-2005	Consultant, Pathways Into Health Project, Northern Arizona University, Vice-Provost for Research and Graduate Studies Office, Flagstaff, AZ.
2005-2008	Research Associate, Cancer Prevention and Control Postdoctoral Fellow, University of Arizona, College of Medicine, Arizona Cancer Center
2009-present	Assistant Professor, Northern Arizona University, College of Health and Human Services, Department of Health Sciences and College of Social and Behavioral Sciences, Department of Applied Indigenous Studies (tenure-track joint appointment).
2009-present	Senior Scientist, Health Disparities Improvement, Northern Arizona University, College of Health

and Human Services Interdisciplinary Health Policy Institute.

Other Experience and Professional Memberships

- 1990-1992 Flagstaff Mayor's Committee on Disability Awareness. Appointed by Mayor Christopher Bavasi.
- 1992-1994 Native American Program Council. Appointed by President Eugene Hughes
- 1993-1996 Statewide Independent Living Council. Appointed by the Governor of Arizona
- 1993-1996 Advisory Panel, American Indian Disability Legislation, Montana University
- 1993-1997 Rehabilitation Leadership Council, Distance Learning Project, College of Business Administration, University of Northern Colorado and Mind Extension University
- 1994-2005 Advisory Board, Undergraduate/Graduate Rehabilitation Education, University of Arizona
- 1995-1997 President's Committee on Employment of People with Disabilities. Subcommittee on Employee Disability Concerns.
- 1995-2001 Institutional Review Board, Northern Arizona University
- 1998-1999 Post-Employment Training in Rehabilitation Administration, San Diego State University, San Diego, California; Rehabilitation Administration Certificate
- 1999-2002 Research Advisory Panel, Center for Minority Training and Capacity Building for Disabilities Research, Texas Southern University
- 1999-2004 Consulting Editor, *Journal of Rehabilitation Administration*
- 2002-2005 Native American Commission of Northern Arizona University
- 2003-2005 Co-chair, Commission for Native Americans. Appointed by President John Haeger.
- 2003-2013 Certified Rehabilitation Counselor (CRC) # 28961
- 2006-2009 Fellow, Northwest Native American Research Center for Health – Portland.
- 2009-present Native American Faculty Fellow, Native American Research and Training Center, College of Medicine, University of Arizona
- 2009-present Community Health Committee. Department of Health Sciences. College of Health and Human Services, Northern Arizona University.
- 2009-present College of Health and Human Services, Native American Academy for Student Success. Appointed by Dean Leslie Schulz, College of Health and Human Services, Northern Arizona University.
- 2009-Present Self-Study/Program Review Committee. Department of Applied Indigenous Studies, College of Social and Behavioral Sciences, Northern Arizona University.
- 2009-Present Native American Recruitment and Retention Team. Department of Applied Indigenous Studies, College of Social and Behavioral Sciences, Northern Arizona University.
- 2009-Present Curriculum Redesign Committee. Department of Applied Indigenous Studies, College of Social and Behavioral Sciences, Northern Arizona University.
- 2009-present Flagstaff Community Health Action Network (CHAN). Represent NAU Health Sciences Department

Selected Honors and Awards

- 1983 *Residence Hall Association*, Oklahoma State University Achievement Award.
- 1984 *Outstanding Young Women of America*, Sonoma Club.
- 1996 *Consortia of Administrators for Native American Rehabilitation (CANAR) Founder's Award*.
- 2001 *Mary E. Switzer Scholar*, National Rehabilitation Association-Systems Change:

Emerging Service Delivery Model.

- 2002 *T.K. Bridges Practitioner Award for exceptional commitment and service to multicultural populations*, National Association of Multicultural Rehabilitation Concerns (NAMRC), National Rehabilitation Association.
- 2006 Published refereed journal article, *Breast Cancer Education for Native American Women* received the Gold Award in the Scholarly Journals, Feature Article category in the Society of National Association Publications.

B. Selected peer-reviewed publications (in chronological order).

1. Middleton, RA, Rollins, CW, **Sanderson**, PL, Leung, P., Harley, DA, Ebener, D., & Leal-Idrogo, A. (2000). Proposed professional multicultural competencies and standards. Special Issue on Multicultural Competencies. *Rehabilitation Counseling Bulletin*. PROED.
2. **Sanderson**, PL, Yazzie-King, E. (2001). Access to independent living and assistive technology for American Indians with severe disabilities. In CA Marshall (Ed.). *Rehabilitation and American Indians With Disabilities*. 2001, Athens, GA: Elliott & Fitzpatrick, Inc.
3. **Sanderson**, PL. (2001). American Indians: An overview of factors influencing health care, disability, and service delivery. In CA Marshall (Ed.). *Rehabilitation and American Indians with Disabilities*. Athens, GA: Elliott & Fitzpatrick, Inc.
4. Robinson, F., Sandoval, N., Baldwin, J., **Sanderson**, P. (2005). Breast cancer education for Native American women: Creating culturally relevant communications, *Oncology Nursing Journal*, 9(6), 689- 691.
5. Marshall, CA, **Sanderson** PR, Johnson, SA, DuBois, B., Kvedar, JC. (2006). Considering class, culture, and access in rehabilitation intervention and research. In Handbook of Applied Disability and Rehabilitation. Springer Publishing, Inc.
6. Leung, P., Flowers, CR, Talley, WB, & **Sanderson**, PR. (2006). Multicultural Issues in Rehabilitation and Allied Health. Aspen Professional Services.
7. **Sanderson**, PR, Teufel-Shone, N., Baldwin, J., Sandoval, N., & Robinson, F. (2010 Jan). Breast cancer education for Navajo women: A pilot study evaluating a culturally relevant video. *Journal of Cancer Education*. Online Publish.
8. **Sanderson**, PR., Weinstein, N., Teufel-Shone, N., & Martinez, EM. (replying to editorial committee comments). Assessing colorectal cancer screening knowledge at tribal fairs in the Navajo Reservation. *Preventing Chronic Disease Journal*.

Completed Research Support

USDOE, OSERS, RSA Carroll (PI)
10/01/96 - 08/31/99 (\$360,000 each year)

Capacity Building for American Indians Project
Institute for Human Development (IHD), Northern Arizona University (NAU).

The goal of this project was to train federally and state recognized tribes grant writing for vocational rehabilitation services and other types of OSERS grant competition.

Role: Project Director

USDOE, OSERS, NIDRR Carroll (PI) 10/01/98 – 09/30/03 (\$600,000 each year)

American Indian Rehabilitation Research and Training Center
IHD, NAU

The goal of this project was to improve the quality of life for American Indians/Alaska Natives with disabilities through employment and independent living research, training, technical assistance and training stakeholders and individuals with disabilities.

Role: Project Director

USDOE, OSERS, RSA Carroll (PI)
10/01/99 - 08/31/02 (\$360,000 each year)

Capacity Building for American Indians Project

Institute for Human Development (IHD), Northern Arizona University (NAU).

The goal of this project was to train federally and state recognized tribes grant writing for vocational rehabilitation services and other types of OSERS grant competition.

Role: Project Director

NACRP, NAU-UA Stearns and Canfield (Co-PI) 01/01/05-05/31/06 (\$45,000)

Pilot Project: Evaluation of Breast Cancer Video for Navajo Women.

Pilot proposal included in the U54 grant that was submitted to the National Cancer Institute's Minority Institute.

The goal of this pilot study was to evaluate a culturally specific video designed to teach Navajo women about breast cancer treatment options

Role: NAU Co-Leader

NIH/NCI Alberts (PI) 12/01/05-12/31/08

R25 Cancer Prevention and Control Postdoctoral Training Fellowship

The primary goal of this training program is to prepare scientists and clinicians to conduct cancer prevention research with interdisciplinary teams.

Role: Postdoctoral Fellow

BIOGRAPHICAL SKETCH			
Provide the following information for the Senior/key personnel and other significant contributors in the order listed on Form Page 2.			
NAME Sylvia R. Brown		POSITION TITLE	
eRA COMMONS USER NAME (credential, e.g., agency login)		Research Scientist	
EDUCATION/TRAINING <i>(Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable.)</i>			
INSTITUTION AND LOCATION	DEGREE <i>(if applicable)</i>	MM/YY	FIELD OF STUDY
University of Pennsylvania Philadelphia, Pa	BA (cum laude)	05/69	History
University of Medicine and Dentistry of New Jersey / Rutgers, the State University of New Jersey , Piscataway/New Brunswick, NJ	MPH	5/96	Public Health/ Epidemiology
University of Medicine and Dentistry of New Jersey / Rutgers, the State University of New Jersey , Piscataway/New Brunswick, NJ	PhD	5/09	Public Health/ Epidemiology

A. Positions and Honors

Positions and Employment

1981-1993 Senior Programmer, Infomed, Princeton, NJ
 1993-1996 Research Assistant, UMDNJ Program in Public Health
 1997-2000 Research Associate, University of Arizona
 2000-2004 Project Manager and Analyst, TCE Exposure Surveillance System, El Pueblo Clinic, Tucson, AZ
 2000-pres. Statistical Analyst, Arizona Cancer Center, University of Arizona, Tucson
 2005-2007 Lead Data Analyst/Epidemiologist, Native American Cancer Research Partnership, Hopi and Navajo Breast and Cervical Cancer Screening Program, Arizona Cancer Center, University of Arizona, Tucson
 2006-2007. Consulting Epidemiologist, Southwest American Indian Collaborative Network, Tucson, AZ
 2007-pres. Analyst, health outcomes research projects, College of Pharmacy, University of Arizona, Tucson
 2009-pres. Consulting Epidemiologist/ University of Medicine and Dentistry of New Jersey
 2009 Research Scientist, University of Arizona

Honors

Phi Beta Kappa, April 1968
 Four Year Mayor's Scholarship, Univ. of Pennsylvania, 1965-69
 Delta Omega, National Public Health Honor Society, May 2009

B. Peer-reviewed publications (in chronological order).

1. Williams B, Greenberg M, **Brown S**. Determinants of perceptions of trust among residents surrounding the Savannah River Site. *Environ Behav* 31:354-371, 1999.
2. Williams B, **Brown S**, Greenberg M. Risk Perception in context: the Savannah River stakeholder study. *Risk Anal.* 19: 1019-1033, 1999.
3. Williams B, Vallei A, **Brown S**, Greenberg M. Frequency of use and perceived credibility of information sources and variations by socioeconomic factors among Savannah River stakeholders. *Risk: Health, Safety, and Environment* 69: 69-92, 2000.
4. Williams B, Suen H, **Brown S**, Bruhn R, de Blaquiére R, Rzasa S. Hierarchical linear models of factors associated with public participation among residents living near the U.S. army's chemical weapons stockpile sites. *J Environ Planning and Management* 44:41-65, 2001.
5. Wartenberg D, **Brown S**, Mohr S, Cragle DL, Friedlander B. Are African-American nuclear workers at lower mortality risk than Caucasians? *J Occup Environ Med.* 43:861-871, 2001.
6. Hakim IA, Harris RB, **Brown S**, Chow HH, Wiseman S, Agarwal S, Talbot W. Effect of increased tea consumption on oxidative DNA damage among smokers: a randomized controlled study. *J Nutr* 133:3303S-3309S; 2003.
7. Wartenberg D, Schneider D, **Brown S**. Childhood leukaemia incidence and the population mixing hypothesis in US SEER data. *Brit J Cancer* 90:1771-1776, 2004.
8. Hakim IA, Harris RB, Chow H-HS, Dean M, **Brown S**, Ali IU. Effect of a 4-month tea intervention on oxidative DNA damage among heavy smokers: role of glutathione S-transferase genotypes. *Cancer Epidemiol Biomarkers Prev* 13:242-249, 2004.
9. Begay RC, Goodluck C, Coe K, **Brown S**, Martin L. Hopi traditionalism and breast and cervical cancer screening. *J Native Aging Health* 2, 2007.

C. Research Support

Ongoing Research Support

1U18HS017001-01 Woosley (PI)

1/08-8/12

Source: Arizona Center for Education and Research on Therapeutics

Title: Examination of Drug-Drug Interactions

Goal: Strategies and programs to prevent harm induced by drug-drug interactions, especially those affecting women.

Role: Analyst/Epidemiologist

Novartis (contract) Chisolm-Burns (PI)

11/09-6/10

Source: Novartis Pharmaceuticals

Title: Adherence Patterns of Mycophenolate Mofetil and Mycophenolic Acid in Renal Transplant Recipients

Goal: to determine adherence patterns of Cellcept® and Myfortic® in RTRs and associated cost of care using data reported in the USRDS, which contains Medicare prescription claims data..

Role: Analyst/Epidemiologist

California Health Care Foundation Boesen (PI) 10/01/09 – 06/30/10

Source: State of California

Title: The Impact of E-Prescribing in the Northern Sierra Rural Health Network

Goal: to identify barriers to the implementation of e-prescribing in a rural and medically underserved location and to assess the impact of e-prescribing on duplicate therapies, generic drug utilization and drug-drug interactions post-implementation.

Role: Analyst/Epidemiologist

P01 CA 17094-28A2 Dorr (PI)

07/07 – 06/12

Source: NIH/NCI

Title: Therapeutic Targeting of Hypoxic and Oxidative Stress

Goal: To develop entirely new classes of cyanoaziridine-based anticancer agents with redox mechanisms of action that induce apoptosis via novel pathways. Analogs are evaluated for antitumor activity and for molecular mechanisms of action.

Role: Biostatistician for the Biometry Core

Completed Research Support (2004 to present)

3U01 CA114696-03S2 COE (PI)

09/07-04/30

Source: NIH/NCI

Title: Cancer Burden of the Hopi Tribe, Incidence and Survival

Goal: To assess the incidence and survival of cancer among enrollees of the Hopi Tribe, 1995-2005

Role: Co-PI: primary responsibility for all phases of pilot grant, including submission, coordination, implementation and dissemination. Manuscript on process accepted for publication 01/29/2010 to *Public Health Reports*

Malone (PI)

06/07-07/07

Source: Arizona Health Care Cost Containment System

Title: An Analysis of Psychotropic Medication Use in Children Enrolled in the Arizona Health Care Cost Containment System.

Goal: The purpose of this study was to assess the prevalence of psychotropic medication use among children enrolled in Arizona's Medicaid system (AHCCCS).

Role: Co-investigator/Analyst

5 U54 CA096281-05 (Canfield)

05/05-5/07

Source: NIH/NCI

Title: Native American Cancer Research Partnership: Subaward – Pilot Study

Goal: To assess the effectiveness of the Hopi and the Navajo breast and cervical screening programs to reach eligible women and to ascertain, via a population survey, the barriers and incentives for Hopi women to receive timely cancer screening. Programmatic Assessments and survey implementation completed. Surveys completed/ manuscripts submitted and awaiting final acceptance.

Role: Lead Analyst/ Epidemiologist

1 UO1 CA114696 (Coe)

5/06-4/08

Source: NIH/NCI

Title: Southwest American Indian Collaborative Network (SAICN)

Goal: To develop an organizational infrastructure for comprehensive cancer care, community-based, participatory research, and community-based activities in cancer education (housed at the Inter Tribal Council of Arizona).

Role: Consultant

PR023104 (Hakim)

07/07 - 06/08

Source: DOD

Title: A Chemopreventive Trial to Study the Effects of High Tea Consumption on Smoking-related Oxidative Stress

Goal: To assess the association between tea consumption and oxidative stress among smokers and former smokers.

Role: Biostatistician

Warholak (PI)

9/07 – 2/08

Source: Saint Luke's Health Initiatives

Title: The impact of the Medicare Modernization Act on outcomes in Arizona's dual eligible (Medicare/Medicaid) residents

Goal: To examine the effect of the implementation of Medicare Part D on health care costs among participants of Arizona's Medicaid program (AHCCCS)

Role: Analyst/Epidemiologist

Completed Research Support (pre 2004)

UA-EI Pueblo Clinic Medical Surveillance System

Southeastern Arizona Tea Study (SEATS)

Arizona GIS/Environmental Epidemiology/Arsenic Project

Arizona Smoker's Hotline (ASH)

DOD Chemical Weapons Site Survey

DOD Chemical Weapons Site Follow-up Survey

Tucson Water Consumption Survey

Pediatric Alternative Medicine Survey

Risk Perception Survey among residents living in the vicinity of the Savannah River Site (SRS)

Mortality among nuclear workers employed at the Savannah River Site (SRS)

Meta-Analysis of the mortality of nuclear workers

BIOGRAPHICAL SKETCH

NAME Lori Joshweseoma (Martin)		POSITION TITLE Director	
EDUCATION/TRAINING <i>(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)</i>			
INSTITUTION AND LOCATION	DEGREE <i>(if applicable)</i>	YEAR(s)	FIELD OF STUDY
Northern Arizona University	Bachelors	1996	Dental Hygiene
University of Arizona	MPH	2003	Public Health

Positions and Employment

- Health Educator for the Hopi Women's Health Program - 1998-2001
- Director of the Hopi Women's Health Program - 2001-present

Other Experience and Professional Memberships

- Member- Hopi Tribe, Arizona
- Hopi Health Care Center Board Member - May 2001 -May 2002
- Arizona Women's Cancer Network Board Member – 1999- 2003
- Legal Services Board Member - July 2003- 2005
- Co Chair – National Native American Board – CDC, Atlanta Georgia 2003-2004
- Board Member – Community Advisory Board Advisor – Native Circle/Spirit of Eagle Rochester Minnesota October 2005 – present

Completed Research Support (2004 to present)

3U01 CA114696-03S2 COE (PI) 09/07-04/30

Source: NIH/NCI

Title: Cancer Burden of the Hopi Tribe, Incidence and Survival

Goal: To assess the incidence and survival of cancer among enrollees of the Hopi Tribe, 1995-2005: Manuscript on process accepted for publication 01/29/2010 to *Public Health Reports*

Role Hopi Collaborator/co-leader

5 U54 CA096281-05 (Canfield) 05/05-5/07

Source: NIH/NCI

Title: Native American Cancer Research Partnership: Subaward – Pilot Study

Goal: To assess the effectiveness of the Hopi and breast and cervical screening programs to reach eligible women and to ascertain, via a population survey, the barriers and incentives for Hopi women to receive timely cancer screening. Programmatic Assessments and survey implementation completed. Surveys completed/ manuscripts submitted and awaiting final acceptance.

Role: Hopi Collaborator/ co-leader

Peer-reviewed publications

Begay RC, Goodluck C, Coe K, Brown S, **Martin L.** Hopi traditionalism and breast and cervical cancer screening. *J Native Aging Health* 2, 2007

I. RESEARCH PLAN

1.1 SPECIFIC AIMS

The partnership which has developed through the Native American Cancer Research Program (NACP) between the Hopi Tribe and faculty of the Arizona Cancer Center (AzCC), the University of Arizona (UA) and Northern Arizona University (NAU), provides the foundation for a three year project to assess the prevalence of cancer knowledge, attitudes, beliefs and behaviors (KABB) of the Hopi people. The aims for the first year of the study, for which we currently seek funding, are:

1. To develop a culturally appropriate cancer-focused risk factor survey
2. To increase the research capacity of NAU investigators in health-related survey design

The above stated objectives fall within our three overall aims for the entire three year project:

1. To identify the current knowledge, attitudes, beliefs and behaviors of Hopi men and women about cancer, cancer risk factors, cancer screening, and cancer treatment and ascertain whether there are differences in these factors between those living on versus off the Hopi Tribal lands.
2. To identify the optimal method for administering the survey in order to ascertain this knowledge in a tribal community
3. To build capacity within the Hopi Tribe to ascertain changes in KABB in subsequent years while increasing the capacity of NAU researchers to perform similar research on Hopi with other Native American tribes/nations.

1.2 PROJECT'S RELEVANCE TO THE OVERALL PRIORITIES OF THE NAU/AZCC

COMPREHENSIVE CANCER GRANT (U54). The proposed project is designed to address all 3 priorities of the NAU/AZCC Comprehensive Cancer Grant (U54) as described below:

Priority #1: To train Native American students for careers in cancer-related research and health care: Ms. Regina Eddie will be working with Dr. Sanderson on the proposed grant. She is a master's level clinical assistant professor at NAU with plans to pursue doctoral training. Her participation in this study will expand her knowledge of cancer-related research in Indian Country. During the 2nd year of this proposed study, we expect that Ms. Maxine Janis, assistant clinical professor in Dental Hygiene will work with Dr. Sanderson and Ms. Eddie. Ms. Janis is currently a doctoral student at NAU and a Minority Faculty Fellow.

Priority #2: To build cancer-related research capacity at NAU: The proposed research represents an extensive collaboration among faculty from NAU, UA, AzCC, and the Offices of Health Services (OHS) for the Hopi Tribe. Participants in previous NACP research projects are now assuming leadership positions in this effort. Specifically, Dr. Priscilla Sanderson, an assistant professor at NAU, is now the NAU Co-Leader on this project. Inclusion of Regina Eddie also helps build cancer-related research capacity at NAU. In Year 2, we expect that Maxine Janis will begin working with Dr. Sanderson and Ms. Eddie.

Priority #3: Alleviate disparities in cancer in Native American Communities: In order "to alleviate disparities in cancer in Native American Communities" it is essential to clearly delineate factors that contribute to the cancer burden in Native peoples of Arizona. In the past, we have identified factors that contribute to women's cancers as well as the burden of cancer (incidence and mortality) among Hopi tribal members; however, we have not addressed risk factors for all cancers for the entire population. There is widespread concern within Hopi that cancer is caused by exposure to mining and other environmental issues. It is not known whether major risk factors within in the larger U.S. population such as diet, obesity and the potential diabetes-

cancer link, are thought to be primary concerns among the Hopi people. The proposed research will increase our understanding of the factors associated with cancer and cancer-related concerns among peoples of the Hopi Tribe and will inform development of appropriate prevention programs for the Hopi people.

II. BACKGROUND AND SIGNIFICANCE

2.1 Hopi Tribe: The Hopi Tribe is a federally recognized sovereign tribe located on more than 1.5 million rural acres in the northeast part of Arizona. The reservation consists of 11 quasi-independent villages, each with its own culture and beliefs. In 2000 (9), there were about 7,000 people living on Hopi; only 5% of these were not Native American. In the past several years, researchers from the UA and NAU have worked collaboratively with the Hopi Tribe on several cancer related research projects. Together, they have also identified gaps that this proposed pilot aims to fill as part of the Hopi goal to create a tribal specific cancer control plan.

2.2 Cancer Burden of the Hopi Tribe: Due to a successful collaboration between the Hopi Tribe, the UA and the Arizona Cancer Registry (ACR) (see 3.1.3), the cancer burden of the Hopi Tribe has been ascertained for the years 1995-2005 ¹⁻². These data are confidential and belong to the Hopi Tribe; however, in an effort to support this grant application and with written permission of the Hopi Tribe (Appendix C) we present these data below for counts of at least 10 or greater.

2.2.1 Hopi Cancer Incidence: DELETED FROM EXAMPLE DUE TO CONFIDENTIALITY OF TRIBAL DATA

2.2.2 Hopi Cancer Incidence Rates 1995-2005 (Table 1): DELETED FROM EXAMPLE DUE TO CONFIDENTIALITY OF TRIBAL DATA

TABLE 1: HOPI INCIDENCE RATES* FOR SELECTIVE INVASIVE CANCERS BY GENDER

	FEMALE (% OF TOTAL)	MALE (% OF TOTAL)	TOTAL CASES	UNADJUSTED RATE	AGE ADJUSTED RATE *** (95% Confidence Interval)
PROSTATE					
BREAST					
KIDNEY					
DIGESTIVE SYSTEM ¹					
-LIVER					
-COLORECTAL (CRC)					
NHL & LEUKEMIA					
FEMALE GENITAL					

NR – Not Reported / Counts are < 10

* Rates may be underestimated due to some uncertainty in the denominator data

Reported rate based on sex-specific population size * Adjusted to 2000 Standard Population/19 age group

2.2.3 Hopi Cancer Staging and Mortality: DELETED FROM EXAMPLE DUE TO CONFIDENTIALITY OF TRIBAL DATA

2.2.4 Cancer Screening on Hopi: Funded by the Center for Disease Control and Prevention (CDC), the Hopi Women's Health Program (HWHP) is a tribal breast and cervical cancer screening program that has been screening women for breast and cervical cancer on Hopi since 1996. Implementation of the HWHP has almost doubled the rate of mammography screening among women age 40+ on the Hopi reservation since 1993. This has been confirmed by both self report and data on actual screenings performed and submitted to the CDC for reimbursement³⁻⁵ (see 3.1.1 and 3.1.2)

The HWHP is the sole Hopi entity performing cancer screening and has become the center for all cancer-related questions and concerns on Hopi, regardless of gender and/or cancer site. For example, the HWHP runs the Hopi Cancer Assistance Fund which provides funds to Hopi tribal members diagnosed with cancer and who are in need of financial support for gas, meals and/or lodging. The program has provided 54 individuals with this support since the inception of the program. In addition, the HWHP now partners with the State of Arizona to provide colorectal cancer screening to the Hopi community through a grant obtained by the state from the CDC. This new project will promote the importance of early detection of colorectal cancer to both the male and female population age 50 and older. Research (see 3.1.1) has shown that ever having used the HWHP is a positive factor associated with obtaining mammogram screening during the prior **DELETED FROM EXAMPLE: DATA NOT YET PUBLISHED**
4-5

2.3 Perceptions of Cancer on Hopi: The beliefs people hold about health and safety hazards (i.e., their "risk perceptions") are among the most powerful determinants of behavior. Beliefs about risk likelihood and severity and about the efficacy of precautions occupy central roles in nearly all theories of individual health behavior⁶. Mistaken beliefs can lead people to expose themselves to avoidable hazards and can dissuade them from adopting healthy behaviors. However, unfocused attempts to change behaviors through "education" are seldom effective because health campaigns need to be guided by *specific* information about their perceptions. For example, messages that encourage cancer screening will have little effect if people believe that cancer, once detected, is incurable or that treatments are intolerable. Messages focusing on the seriousness of influenza are unlikely to increase vaccination if people believe that they can get influenza from the vaccine.

Thus, attempts to decrease cancer risk behaviors (such as smoking) or increase cancer preventive behaviors (such as eating vegetables) need to be based on detailed information concerning what people believe about the nature of cancer and the links between behavior and cancer. Neither accuracy nor inaccuracy of risk perceptions can be assumed. Instead, they are typically determined from carefully constructed surveys or interviews. National recognition of the importance of risk perception information (and its absence on a national basis) was the stimulus that led to NCI's ongoing HINTS (Health Information National Trends Surveys) surveys⁷. While the total number of cancer cases on Hopi does not appear to be large, the community perceives its cancer burden as a major health challenge. **DELETED FROM EXAMPLE: DATA NOT YET PUBLISHED**. Both men and women have also expressed heightened concerns about their risks for non-gender-specific cancers. The community-based Health Summit held on Hopi on November 15, 2007, identified cancer as the primary health concern of the Hopi Tribe, according to our Hopi collaborators.

2.4 Assessment of Health Risks and Behaviors: Theory, recent research findings and community concerns dictate the need for a carefully constructed survey instrument to assess

knowledge, attitudes, beliefs and behaviors about cancer for the Hopi Tribe. There are several standardized survey instruments already developed which are designed to collect data on risk factors and risk perceptions; however there are limitations precluding an a priori choice of any one. We discuss each of these survey instruments below, how it has been utilized previously in Indian Country, and the limitations each one imposes, thus supporting the need to develop a culturally appropriate survey instrument for the Hopi people.

2.4.1. BRFSS (Behavioral Risk Factor Surveillance Survey): The BRFSS is a state-based system of health surveys established in 1984 by the CDC. More than 350,000 persons are interviewed by telephone each year. Information on health risk behaviors, preventive health practices, and health care access primarily related to chronic disease and injury are collected⁸. Survey modules through 2010 are currently available in both English and Spanish⁹. All items collect close-ended responses. The 2010 survey consists of 22 Core sections and 26 Optional Modules, each of varying length. Three sections address cancer screening behaviors: Women's Health (Section 18), Prostate Screening (Section 19), and Colorectal Screening (Section 20), one module examines HPV (Module 13) and another Cancer Survivorship (Module 14)¹⁰.

Data from the BRFSS have been used in several studies that have focused on AI/AN health. Due to the small number of AI/AN respondents, these studies have aggregated data across large geographic areas and over several survey years¹¹⁻¹⁴. For example, in the most recent national study¹⁴, BRFSS data from 2000-2006 were aggregated. Out of 1,863,461 respondents during this seven year period, less than 2% of these respondents (n= 32,426) were American Indian/Alaska Natives (AI/AN) and only 14% (n=4491) of these were located in the Southwest service region of the Indian Health Service (IHS). Four states - Nevada, Montana, Oklahoma and New Mexico – have administered modified BRFSS surveys within their own AI/AN populations¹⁵⁻²⁰ in order to ascertain the health risks and behaviors of AI within their own geographic areas.

These data obtained at the national and state level are valuable for planning purposes within these political boundaries. However, both national and statewide approaches have several flaws. First, they are limited by the assumption of inter-tribal homogeneity and thus fail to address the specific needs of each sovereign tribe/nation. Second, these surveys are administered by telephone in communities where the availability of telephones may be limited. Third, aggregation over time precludes an assessment of temporal changes. Fourth, the response rates in these studies are not optimal. For example, the response rate in the Nevada study²⁰ was only 34%. This would necessarily challenge the generalizability of the study results. Finally, the survey instrument is not necessarily appropriate for the non-majority population, thus possibly challenging the validity of the study results.

2.4.2. HINTS (Health Information National Trends Survey): The HINTS survey is a National Cancer Institute (NCI) cross-sectional survey administered every other year to a nationally-representative sample of adults in the United States. The purpose of the survey is "to assess the impact of the health information environment. Specifically, HINTS measures how people access and use health information; how people use information technology to manage health and health information; and the degree to which people are engaged in healthy behaviors." Finally, several items in HINTS have a specific focus on cancer prevention and control."²¹

The HINTS survey was created by combining items from several national surveys, including the BRFSS, some smaller surveys and also some items created by HINTS program members²¹. The survey consists of five categories: Health Communication, Mental Models of Cancer, Primary Cancer Risk Behaviors, Cancer (Breast, Cervical, Colon, Lung, Prostate, Skin) and

Respondent Characteristics ²². Dr. Weinstein, consultant on this proposed pilot project, was a key participant in the development and testing of the HINTS survey and wrote most of the risk perception questions on the initial HINTS survey.

The HINTS survey was administered in 2003 and 2005 and 2007 by phone using Random Digit Dialing lists. In 2007, it was also administered by mail using address lists made available from the United States Postal Service. The HINTS program discourages state investigations since, “data can only be assessed as a representation of the nation, as there is not enough data from each state to analyze them individually”. This limitation would also apply to sovereign Tribes and Nations. For example, in 2003, only 203 of the 6369 participants were AI/AN, and in 2005, this percentage was only 2.5% (141 of the 5586) ²³. Additional limitations to these data are similar to those noted above for the BRFSS.

2.4.3 First Nations Longitudinal Health Survey (RHS): The RHS is a longitudinal national health survey governed by and administered for First Nations peoples in Canada ²⁴. It is designed to “address a comprehensive range of health status, wellness and health determinant measures.... while foremost addressing First Nations priorities within a cultural and holistic framework” ²⁵. The RHS consists of 4 separate surveys: Adult (18+), Youth (12-17), Child (0-11) and Community. Overall, the surveys are design to assess physical, emotional, spiritual, mental, environmental, economic and social determinants of health. These instruments were developed by and for the First Nations people of Canada – the process and contents thereof would inform our creation of a culturally appropriate instrument for the Hopi Tribe and other Native Americans of the Southwest. However, it does not contain all the risk perception questions we believe are appropriate to our study.

III. PRELIMINARY STUDIES: We seek funding for the first year of a three year project which will assess the KABB of all Hopi men and women. The expected success of this proposed project is based upon our recent experiences in working together to achieve similar goals on Hopi. Underlying all these efforts is the strong level of trust that has developed among the Hopi Tribe, UA and NAU researchers. We detail these projects below and further summarize peer-reviewed activities in Appendix A.

3.1 Preliminary Studies on Hopi: Members of our team have had considerable experience working in collaboration with the Hopi Tribe. We have developed a strong relationship of mutual trust which has enabled us to complete the studies described below. These studies also resulted in numerous presentations at the UA, on Hopi, and at peer-reviewed conferences.

3.1.1 2006 Hopi Women’s Study ⁴⁻⁵: In 1993, a cross-sectional survey was conducted among Hopi women to determine the rate of and predictors for participation in breast and cervical cancer screening ²⁶⁻²⁷. Dr. Anna Giuliano was the Principal Investigator of this project, working with Mr. Leon Nuvayestewa of the Hopi OHS. This study was used by the Hopi Tribe to apply for and obtain funding from the CDC for the Hopi Women’s Health Program (HWHP), the Hopi Breast and Cervical Cancer Screening Program (BCCP). Hopi’s Office of Health Services is one of a few tribal health departments in the nation to obtain such funding and has been successfully implementing this program ever since. Ms. Lori Joshweseoma (Martin), is Director of the HWHP. She is a Hopi Tribal member, bilingual, is the Director of the Hopi Women’s Health Program and has extensive knowledge of her culture and health care issues.

A follow-up study ⁴⁻⁵ on knowledge, attitudes, beliefs and behaviors of Hopi women about breast and cervical cancer screening was developed and conducted during the years 2005-2008. Co-Leaders on this study were Lori Joshweseoma (Hopi), Dr. Robin Harris (UA) and Dr. Charlotte

Goodluck (NAU). Dr. Sylvia Brown, Co-Leader on the proposed effort, was a major participant in all phases of this study, from survey development through analysis and dissemination. The 2006 survey instrument⁴⁻⁵ was a culturally appropriate survey based on the 1993 survey, modified to be temporally and culturally appropriate with input from the HWHP staff, individual community members and community focus groups. Participants in the study were randomly selected from Hopi Tribal Enrollment. Interviews were conducted in-person in Hopi and/or English and resulted in an **DELETED FROM EXAMPLE: DATA NOT YET PUBLISHED** response rate.

3.1.2 HWHP Program Evaluation (MDE Analysis)³: Extensive data on breast and cervical cancer trends, incidence, and mortality are recorded by the HWHP as part of its routine data collection. While these data contain information on residence, stage of diagnosis, age, and screening history, these data are not routinely analyzed. As a result, in 2005, Drs. Robin Harris and Sylvia Brown undertook an extensive analysis of these data with the HWHP and NAU collaborators. The primary data source for this effort was the Minimum Data Element (MDE) reporting system utilized by the CDC for all funded BCCP programs. Population estimates were obtained from tribal enrollment and from US Census files. A data matrix was developed to outline content areas and map variables and data sources. This matrix was reviewed with Program staff for clarification and refinement. As part of these conversations about program evaluation needs, additional process variables were identified that assisted in evaluation of the program effectiveness, e.g. distances traveled by case managers. A multiple page report³ formatted according specifications outlined by the HWHP director was issued to the Hopi Tribe and presented to HWHP staff and Hopi OHS personnel.

3.1.3 Hopi Cancer Burden: Conversations between Lori Joshweseoma and Sylvia Brown while accomplishing the above efforts identified a strong need on the part of the Hopi Tribe for an assessment of the Hopi-specific cancer burden. Aggregate data spanning several decades (1975-2004) on cancer incidence and survival among Native Americans had recently been published in much detail²⁸, and cancer incidence data was available statewide via a system called Community Health Analysis Area (CHAAs) which are geographically congruent with individual reservations. However, due to limitations in these data, it could not be assumed that these aggregate data reflected the cancer burden of the Hopi Tribe. As a result, Dr. Brown and Ms. Joshweseoma partnered with the Arizona Cancer Registry (ACR) and obtained funding to identify the Hopi Cancer Burden. Primary funding was obtained from the National Cancer Institute as a pilot grant administered through the Southwest American Indian Cancer Network (SAICN) [3U01 CA114696-03S2] and partial funding was provided by NACRP. In addition, the CDC provided support to the ACR under cooperative agreement 5U58DP000796.

To assess the burden of cancer among Hopi enrollees, this study matched Hopi tribal enrollment data to ACR data. The results were analyzed and presented in report and oral format to the Hopi Tribe¹⁻². This was a rare event wherein the Hopi Tribe shared highly confidential tribal enrollment data with university researchers and state health professionals. Results from this effort are presented, with Tribal permission, in the Background Section above.

3.2 Other Work in Indian Country: In addition to our team's experience in working with the Hopi Tribe, we have had considerable experience working with other Native American tribes/nations in the area of cancer research. Most of this additional experience has been with the Navajo Nation (NN) and under the NACP umbrella. We briefly describe our experience with the NN below.

3.2.1 Navajo Language Breast Cancer Video: Dr. Sanderson (NAU) was a co-Investigator with Dr. Nicolette Teufel-Shone (UA) in the first community-driven project for NACP, a video on

breast cancer education that was produced on the Navajo Nation and in the Navajo language, with English subtitles. The video script written by a Navajo breast cancer survivor in collaboration with the NACP and has been widely disseminated locally and nationally. The manuscript describing the video received the Gold Award in the Scholarly Articles: Feature Article category in the 2006 EXCEL Awards Competition. The pilot study resulted in numerous invited lectures, poster presentations, and 2 refereed journal articles.²⁹⁻³⁰

3.2.2 Barriers to Breast and Cervical Cancer Screening among Navajo Women: Dr. Harris guided the completion of a survey designed to assess barriers to breast and cervical cancer screening among Navajo women age 40 and older who had never or rarely been screened for breast cancer and who resided in Chinle, Tsaile, and Piñon Service Units. The study results have been publically presented and the manuscript is under review.

3.2.3 Survey of Knowledge, Attitudes, Beliefs and Behaviors among Navajo Nation employees: This study was a survey of KABB related to cancer among employees of the Navajo Nation, the largest single employer in the community. Dr. Brown worked closely with the Navajo graduate student in the analysis of survey results and in the preparation of the manuscript which is currently under review by the Navajo Nation co-PI.

3.2.4 Navajo Nation Breast and Cervical Cancer Program (NNBCCP) Evaluation: The NNBCCP has participated in the CDC sponsored Breast and Cervical Cancer Program since 1996. Screening services have been provided at 5 Service Units - Chinle, Ft. Defiance, Kayenta, Tuba City, Winslow- since 1999. Beginning in 2005, the NNBCCP partnered with NACP to evaluate its BCCP program. Drs. Brown and Harris were actively involved in this project, along with NAU investigators. A multi-volume report was issued by the UA to the NNBCCP in late 2006 and the results were publically presented by NAU and UA investigators at peer reviewed meetings

3.2.5 Colorectal Cancer Screening on Navajo: Dr. Sanderson was a postdoctoral fellow in cancer prevention and control at the Arizona Cancer Center where she developed a draft survey whose purpose was to assess colorectal cancer screening knowledge, attitudes, awareness, practices, and recommendations for Navajo people living on the Navajo Reservation. She utilized three interview methods to make this assessment: written surveys administered at 2 tribal fairs, in-person interviews administered to 2 hospital outpatients and community focus groups (n=5). The pilot study resulted in numerous invited lectures, poster presentations, invited class lectures, refereed journal article is currently in revision³¹.

IV. RESEARCH DESIGN AND METHODS

Aim #1 (Pilot Year): To develop a culturally appropriate cancer-focused risk factor survey on Hopi

Overview: The overall goal of the project is to assess prevalent knowledge, attitudes, beliefs and behaviors (KABB) about cancer of both men and women who are members of the Hopi Tribe. Previous research on Hopi is limited to women's cancers only and little is known about men's cancers and those cancers that are not gender specific. We will build upon our previous relationships and experience to create and implement a culturally appropriate survey which will serve as a foundation for future grants. In this pilot proposal, we describe activities and plans for Year I of the survey. We will be seeking further funding, either through NACP or to another agency for implementation of the survey. However, to better contextualize the proposed pilot study activities, we present an overview of our plans for Year 2 and 3 of the survey.

Population Study Base: The population consists of all Hopi men and women, age 18 and older, enrolled in the Hopi Tribe. For the initial survey, the members must be living on the Hopi reservation at the time of recruitment.

Research Design:

4.1 Research Design Year 1 (Pilot): Survey Development

Survey Development: The survey instrument will be developed in collaboration between NACP and HWHP personnel. This is the focus of the pilot year for which we are requesting funding. Items from the Behavioral Risk Factor Surveillance System (BRFSS), the Health Information National Trends Survey (HINTS), and the Canadian First Nations Regional Longitudinal Health Survey (FNHS) will be examined in detail. Additionally, upon a comprehensive literature review, items from additional validated questionnaires deemed appropriate will be included. From these standardized questionnaires we will identify core items that address our research questions and community interests/concerns. For concepts such as perceived risk, perceived seriousness, and perceptions of control, we will start with questions suggested by the NCI online resource “Health Behavior Constructs: Theory Measurement, and Research” and/or with the NCI Health Information¹⁹ [co-authored by Dr. Weinstein, a member of the UA research team, who developed many of the original health risk questions]. Although these are recognized measurement instruments, most have not been tested with Native Americans. We expect this to be a time-intensive iterative process that will require the expertise of all team participants. Based on our previous experience in developing the 2006 Women’s survey in which we had a survey instrument on which to build and given the percent effort allocated within proposed funding level, we anticipate approximately one year to complete this effort.

While all team members will participate in the development of the survey instrument, Dr. Brown will undertake the primary responsibility for coordinating these development efforts. She will work in close collaboration with Dr. Sanderson, Dr Guy and Ms. Joshweseoma to ensure continued joint collaboration in these efforts and will utilize the advisory support provided by Dr. Harris to achieve the project’s goals.

Focus Groups: Approximately 10 individuals will participate in one of four focus groups to further refine our survey instrument. The focus groups will be 1-2 hours in duration. Each session will be audio-taped for later transcription upon consent of participants. Prior to meeting, the initial draft pool of survey items will be distributed to participants. Participants will be asked to sign a consent form in order to participate in the focus groups. Participants will be asked to review the questionnaire and make notation of items that are problematic and/or questionable. In short, the groups will assist in the identification of questions and/or issues that were not identified in the initial draft of the survey. We will also solicit guidance from participants in the focus groups regarding culturally appropriate ways (Strickland, 1999) in which to pose sensitive questions about cancer, health, and culture. Finally, during the focus groups we will include questions that address specific areas of concern to the Hopi Tribe, such as relationships between spirituality and beliefs of cancer. To ensure appropriate content within the questionnaire, we estimate the need for four focus groups of 10 participants each, based on age and gender.

Dr. Sanderson will be the primary research team member responsible for conducting the focus groups. She, along with Dr. Guy and Ms. Eddie, will act as facilitators of the focus groups. Ms. Joshweseoma will be responsible for recruiting group participants. We anticipate an amount of \$25 per individual (n=40) as incentive to participate in the two-hour session.

Recruitment Strategies: Information about the project, survey development and focus group participation will be provided to the tribal community via flyers, posters, radio announcements, newspaper articles and word-of-mouth strategies. Culturally sensitive art and wording will be taken into consideration. Issues of literacy will be discussed. Additionally, the Director of HWHP and the Hopi radio stations will publicize the project.

Reviews and Approvals: We will seek a Hopi Tribal Resolution in support of this effort upon notification of study funding. We currently have written support from Herman Honanie, former Director of the Hopi Office of Health Services and recently elected Vice-Chairman of the Hopi Tribe (Appendix E). All research materials will be developed in close collaboration with the Director of Women's Health Programs. Respect for the Hopi Tribe's cultural beliefs, practices, and privacy will be strictly monitored and enforced. All articles, monographs, or oral presentations using these tribal data will be reviewed and approved by the tribal representative prior to public dissemination. Upon issuance of the Hopi Tribal Resolution, Institutional Review Board Approval will be sought from UA and NAU for this phase of the overall study.

Data Analysis, Reporting and Dissemination: There will be three products for Year I. The first will be development of the final survey instrument to be tested and administered in Years 2 and 3 of the study. The second will be a report to the Hopi Tribe indicating the results of the survey development and focus groups. The third product will be a manuscript reporting results of the focus groups.

Analysis-Focus Groups: Audio-recordings will be transcribed; during transcription, all focus group participants will be assigned pseudonyms or unique identifiers. Transcribed data will be reviewed systematically and analyzed using a coding-categorizing technique.³² This technique is frequently used in qualitative studies and is a form of content analysis that requires arranging the data into categories which are sorted by broader themes (e.g., perceptions, knowledge, beliefs). Predetermined or emergent codes from the data are linked to these categories and used to assign meaning to the data. Both descriptive and interpretive codes will be used in this analysis. Project team members will meet regularly to discuss emergent themes, issues, and to consider modifications to the questionnaire. An acceptable degree of inter-rater reliability around themes will be established. Focus group data will be analyzed using NVivo qualitative data analysis software; QSR International Pty Ltd. Version 8, 2008, a computer package for the management and analysis of qualitative data.

Statistical Plan, Sample Size and Power: All quantitative analyses will be conducted using Stata 7.0 software (College Station, Texas, USA, 2002) and/or SAS (Cary, NC). There are no sample size/power considerations for Year I of the study.

Aim #2 (Pilot Year): To increase research capacity of NAU investigators in the field of focus group implementation and survey design.

In the early months of the pilot year, we propose to hold a two day training session in Tucson on survey development. Dr. Sanderson and Ms. Eddie from NAU and Ms. Joshweseoma from Hopi will participate along with Drs Brown, Guy and Harris from UA. Dr. Weinstein will lead the training session and will work with Drs. Brown and Guy in the development of its contents. At this training, Dr. Sanderson and Dr. Guy will share their knowledge and experience about focus groups and cognitive interviews. During these two days, we will jointly develop a strategy and detailed timeline for the creation of our survey instrument. Dr. Sanderson has a Career Development and Training Plan with an outline of her professional and academic development as a junior faculty member at NAU.

4.2 Research Design Years 2 and 3: Survey Implementation, Analysis, Reporting

Survey Design: We propose a cross-sectional survey of 300 to 600 Hopi tribal members. A random sample of eligible men and women will be selected from tribal rolls. Local interviewers will be trained in recruitment and interview technique. The survey instrument, developed during the pilot year, will be tested for feasibility and then implemented. A data entry and tracking

system will be developed. All data entry will be performed by the Hopi staff. Data analysis will be performed in collaboration between the UA, NAU and Hopi team.

Participant Selection: The population of Hopi men and women, age 18 and over enrolled in the Hopi Tribe, will be identified from tribal rolls obtained through the Office of Enrollment. A random sample of men and women, proportional to the enrollment size of the 11 Hopi villages (Polacca [Hano/Tewa], Walpi, Sichomovi], Mishongnovi, Shungaopavi, Shipaulovi, Kykotsmovi, Oraibi, Hotevilla, Bacavi, and Moenkopi) will be selected. As we have done previously, we will work with Mary Polacca and her colleagues from the Office of Tribal Enrollment to obtain this information. Trained interviewers will be provided with a list of persons to contact. Interviewers will be instructed to return on three occasions at different times of the day and week in effort to locate an eligible participant to reduce the non-participatory rate. This approach resulted in an 86% response rate in our 2006 Women's Survey. In the second year of the study, this sampling scheme will be developed in more detail.

Recruitment Strategies: We will continue the recruitment strategies successfully used in the prior Hopi Women's Study. These involved use of trained local Hopi interviewers who contacted the potential participants through home visits. All interviews were conducted in the households.

Feasibility Study: We will conduct a feasibility study to evaluate the initial survey instrument designed by the research team and modified according to focus group input. The results from feasibility study will inform the necessary modifications to the survey instrument and recruitment process. After all revisions are completed, the survey will be administered.

Training of Interviewers: Drs. Sanderson, Brown and Guy will conduct training sessions for interviewers. Topics for the training sessions will include: building a relationship for administration of a survey, recruitment and retention approaches, obtaining informed consent, understanding confidentiality, managing refusals to participate, and administering the survey. Contingent on the number of interviewer recruits, it is projected that the training will be one or two days, Ms. Joshweseoma and staff will facilitate the coordination and implementation of the training. We anticipate recruiting local public school teachers for our interview staff.

Reviews and Approvals: We will seek IRB approval of the informed consent, survey instrument and any other study materials requiring such approval prior to the feasibility study. As in Year 1, all research materials will be developed in close collaboration with the Director of Women's Health Programs. Respect for the Hopi Tribe's cultural beliefs, practices, and privacy will be strictly monitored and enforced. All articles, monographs, or oral presentations using these tribal data will be reviewed and approved by the Hopi Tribe prior to public dissemination.

Statistical Plan: All quantitative analyses will be conducted using Stata 7.0 software (College Station, Texas, USA, 2002) and/or SAS (Cary, NC). Effectiveness of recruitment and acceptability of questions to the population will be assessed through calculating response rates by age group and gender. Interviewer reliability will be assessed by repeating a small subsample of objective questions and comparing responses and missing/skipped questions across interviewers. Prevalence of specific risk factors (e.g. smoking status) will be estimated as a proportion of all responders, stratified by gender and age group. Aggregate scale measures will be created as necessary for specific domains (e.g. perception). Descriptive statistics will include mean, median, mode and standard deviations for continuous variables, such as age, and proportions for all categorical variables. Differences between and within age and gender groups will be examined through Chi-square test (categorical data) or t-tests or ANOVA (continuous data, normally distributed) or the Wilcoxon Rank Sum or Kruskal Wallis test (continuous non-parametric data). Unconditional multiple logistic regression will be used to describe patterns in the data. We will consider possible covariates such as respondent age, sex, and village of residence.

Reporting and Dissemination: Reports will be presented to the Tribe in written and oral format at the completion of Years 2 and 3 of the study.

Sample Size and Power Considerations for the Survey: We estimate that a sample size of approximately 300 Hopi enrollees of either gender is required for a 95% confidence level (alpha=.05), precision level of slightly better than +/-5.5% (margin of error) for a binomial variable with expected value of 50%. This is based on Hopi tribal enrollment data obtained directly from the Hopi Enrollment Office in May 2008. From these data we ascertain that there are approximately 14,000 persons enrolled in the Hopi Tribe, half of whom live on the Hopi reservation (n=7,000). Approximately 75% of those living on the reservation are at least 18 years old. Our goal is to achieve a precision level of 0.03 or 0.04 which will require a sample size of approximately 600 or 900 persons, respectively. Availability of funding and the implementation timeline will determine the sample size for the final population survey. Further work on proposed sample size will be done to determine specific numbers and to insure equal participation of both men and women.

Validation Study: We plan to propose in the larger project (during Year 3), a validation study to contrast the impact of in-person interviews versus telephone interviews utilized in the national surveys. This validation study will consist of a subset of items from the main survey that are then administered in different ways- by mail, by phone and as an in-person convenience survey. The purpose of this validation study is to assess whether cost-effective methods of implementation will yield results similar to those obtained through our in-person survey, our gold standard. Details of this validation study (Aim 2 for Years 2 and 3) are not presented.

Timeline (Pilot Year): We are requesting funding for the first year of a three year project. The primary focus for Year 1 is to provide survey development and focus group training to all collaborators, develop a culturally appropriate cancer-focused survey instrument to assess the knowledge, attitudes beliefs and behaviors about cancer for the Hopi Tribe and to assess the proposed survey instruments through four focus groups. The staffing and timeline has been determined to allow each of these specific aims to be met during Year 1. We also attach a proposed timeline for the entire 3 year project period. (Appendix B)

Table 2: Pilot Year Timeline

		YEAR 1 (months)			
		1-3	4-6	7-9	10-12
		9/10 -11/10	12/10- 2/11	3/11- 5/11	6/11- 8/11
	Tribal Resolution	X			
	UA/NAU IRB approvals		X	X	
Aim 1: Survey Development And Focus Group Implementation	Development	X	X	X	X
	Focus Groups			X	
	Transcription & analysis				X
	Focus Group Manuscript				X
	Tribal report				X
	Community Dissemination				X
Aim 2: Capacity Building & Training	Survey Development Training	X	X	X	X
	Focus Group training	X	X		

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PROTECTION OF HUMAN SUBJECTS

1. Risks to the Subjects

a. Human Subjects Involvement and Characteristics

Year 1 of this project, for which we currently seek funding, involves 4 focus groups. These will be conducted with approximately 20 women and 20 men who will be selected from various villages and organizations on the Hopi reservation. The focus groups will be conducted at community sites across the reservation. Participants will be members of the Hopi Tribe. This study is for the Hopi Tribe and is limited to their own tribal members, thus excluding other ethnicities and/or tribes. This study does not include “special classes of subjects” (as defined in the PHS 398: Part II, p. 13).

b. Sources of Materials

Face-to-face interviews will be conducted with Hopi men and women who participate in the focus groups. Data will also include audio tapes from the focus groups; transcriptions of the audio tapes, and notes taken by the researchers conducting the focus groups; the data will be in the form of words and narrative. Questions in the focus groups will center on the risk factor survey.

c. Potential Risks

There are no physical risks associated with the personal interviews. While there remains a minimal risk of loss of confidentiality, all personally identifiable information will be removed before transmittal of any data.

Focus group participants will sign consent forms which will be kept separated from the focus groups notes, transcriptions and reports. The consent forms will be held at the Hopi tribal office. Furthermore, all employees sign a pledge to protect confidentiality. Any paper records are kept in locked files and offices. Electronic data are protected by passwords, which are changed regularly. No personally identifying information will be released in any publications or reports, or to any other institutions.

2. Adequacy of Protection Against Risks

a. Recruitment and Informed Consent

All relevant Hopi, NAU and UA staff will have received human subjects training and certification prior to initiating any interviews or data collection.

Focus Groups: Men and women will be identified by the director of the HWHP and through community flyers. The purpose of the focus groups will be explained to the participants and all will be asked to sign a consent form or disclaimer form prior to the focus group implementation. No personally identifiable information will be maintained or recorded during the focus group sessions.

b. Maintenance of Confidentiality

No personal names will be maintained on any product from the focus groups, such as notes and/or audiotapes. No information that could lead to personal identification of participants will be reported in any of the reports or given to any non-authorized personnel.

c. Protection Against Risk

Participants in the focus groups will be provided with a list of Hopi Tribal counseling and social services if they should find themselves needing these resources after the focus groups. Trained interviewers will be given information about potential risk and a list of

resources will be given to the participants as needed. This did not occur in the previous study at Hopi; and it is unlikely to happen in this study, but all precautions will be taken to ensure protections against risk.

3. Potential Benefits of the Proposed Research to the Subjects and Others.

This research will have no direct benefit to any of the individuals who have participated in the focus groups. Participants will receive modest monetary (or equivalent) compensation for their participation time.

Summary study results are expected to be of considerable value since they will serve to finalize the survey instrument whose implementation will provide Hopi leaders with information on which to base their cancer education and prevention programs.

4. Importance of the Knowledge to be Gained

The proposed pilot lays the critical foundation for implementation of the full 3 year project. The proposed pilot will create a culturally sensitive cancer risk factor survey that, with only slight modifications, is expected to serve as a model for use with/by other Native American populations. The 3 year project will provide the Hopi Tribe with a profile of its population's knowledge, attitudes, beliefs and behaviors about cancer, thus enabling the Tribe to target interventions and education and also to apply for funding for prevention programs at the local, state and national levels.

In addition, the pilot year will provide NAU investigators with formal training on focus groups and survey development and thus enhance their capacity to do research of a similar nature with other Native American tribes/nations.

Inclusion of Women and Minorities

All primary participants in the surveys will be men and women from the Hopi Tribe. While no data will be excluded, we estimate that 98% of all household participants will be Native American/Hopi.

Inclusion of Children

The participants in the focus groups will be men and women 18 years of age and older and thus may include persons between 18 and 21. It is important to assess the KABB of these younger Hopi tribal members since effect of many risk factors, such as diabetes and smoking, manifest themselves many years later.

RESOURCE SHARING PLAN: A major issue for many Native American tribes/Nations has been misuse of their personal data and the use of research data beyond the original agreements between Tribe and university researchers. We have established a strong relationship with Hopi that is founded in mutual trust, respect and equality. Any and all results, including presentations and manuscripts, will be jointly prepared, presented and authored.

This report format should NOT be used for data collection from study participants.

Study **Cancer Risk Factors and Screening Behaviors of the Hopi Tribe**

Total Planned 40

TARGETED/PLANNED ENROLLMENT: Number of Subjects			
Ethnic Category	Sex/Gender		
	Females	Males	Total
Hispanic or Latino			
Not Hispanic or Latino	20	20	40
Ethnic Category: Total of All Subjects *	20	20	40
Racial Categories			
American Indian/Alaska Native	20	20	20
Asian			
Native Hawaiian or Other Pacific Islander			
Black or African American			
White			
Racial Categories: Total of All Subjects *	20	20	40

* The "Ethnic Category: Total of All Subjects" must be equal to the "Racial Categories: Total of All Subjects."



**NATIVE AMERICAN CANCER RESEARCH PARTNERSHIP
CAREER DEVELOPMENT AND TRAINING PLAN**

SECTION I

Priscilla R. Sanderson	NAU Co-Leader (Pilot Research Project)	02/02/10
Name	Role in Partnership	Date of Evaluation <i>(Month/Day/Year)</i>
Health Sciences and Applied Indigenous Studies	09-01-10	From: 9/1/10 To: 5/31/11
Department	Starting Date for this Position	Evaluation Period <i>(Month/Day/Year)</i>

All members of the NACRP are working toward the following general goals:

1. To initiate robust cancer research programs at NAU that will enhance career development of NAU faculty and introduce, educate, and train students in fundamentals of cancer research;
2. To create stable and long term collaboration between NAU and AZCC in cancer research, prevention, education, and community outreach; and
3. To improve the effectiveness of NAU and AZCC in conducting activities aimed at reducing the disparity in cancer incidence and mortality in Native Americans in the Southwest.

As a requirement for NCI-funded Minority Institution/Cancer Center Partnerships, all junior faculty, established faculty in new roles, postdoctoral researchers and graduate students must generate and maintain yearly Career Development Plans. The current template is based on the Academic Career Award (K07) Model. Updated plans are required for pilot and full proposal/program applications as well as our yearly noncompetitive and competitive renewal applications. Please keep this form to within 15 pages.

SECTION II – RESPONSIBILITIES and DISTRIBUTION OF EFFORT

Summarize the specific RESPONSIBILITIES for your role in the Partnership, and your overall distribution of EFFORT defined by your academic department or unit, for example in teaching, research and service (faculty) or coursework, teaching and research (students):

In the Partnership, I have two goals:

1. Introduce, educate, and train junior faculty at NAU in fundamentals of cancer research, design, and implementation (Regina Eddie, clinical assistant professor).

2. Serve as NAU co-leader of the specific pilot research: I will work with Sylvia Brown (PI of the UA portion of the proposed pilot study) to oversee progress of planning, implementation, and completion of Year One pilot research activities. These responsibilities include working with the Hopi tribe to develop an appropriate survey instrument that meets the needs of the Tribe and is solid theoretically to identify knowledge, attitudes, and beliefs of the community members around the issues of cancer in the community. I will work with Lorencita Joshweseoma as community leader of the pilot study.

My current distribution of effort for the 2009-2010 academic year is defined in my Statement of Expectations for the Department of Health Sciences and Department of Applied Indigenous Studies as Teaching (50%), Research (40%) and Service/Administration (10%).

SECTION III – MENTORS

List the individuals on your current “Mentoring Team” (one to four people) and for each mentor provide a statement describing his/her qualifications and previous experience as a mentor. Also provide information describing the nature and extent of mentoring/supervision that will occur during this period.

(1) Diane Stearns, Professor of Chemistry and Biochemistry, NACP, Northern Arizona University: **mentor for administration of NACP pilot project**, will advise Sanderson on strategies and execution of the Partnership pilot project. Dr. Stearns is the former NAU-PI for the Partnership and has successfully led NAU as the lead administrator of the program. They will meet a minimum of once a month for planning and strategies related to NACRP pilot project.

(2) Robin Harris, Professor of Epidemiology and Public Health, Zuckerman College of Public Health and Arizona Cancer Center, University of Arizona: **mentor for research**, will advise Sanderson on design and implementation of the survey research. She will also provide mentorship for obtaining R01-level research support. Dr. Harris will serve as the project advisor to both Sanderson and Brown in the proposed pilot research project. She was the principal investigator for the prior survey and evaluation studies with the Hopi Tribe and has agreed to serve as an advisor for the current project. Drs. Harris and Sanderson will correspond informally by phone and email, and participate in meetings twice a month by IITV alternating between research groups. Dr. Harris will be part of the training and consulting team meetings that are planned during Year 1 of the grant. Dr. Harris has substantial experience in conducting and reporting epidemiology teaching programs at the College of Public Health and mentor of new faculty as part of the R25 Cancer Prevention and Control Program. Dr. Harris many years of experience as a mentor of graduate students and new faculty.

(3) Octaviana Trujillo, Professor of Applied Indigenous Studies and NACP Internal Advisory Committee: **mentor for focus groups**, will advise Sanderson on preparation, implementation of focus groups, qualitative analysis, and writing results. They will meet

a minimum of once a month for planning and strategies related to the focus group in Year 1 and Years 2-3, Dr. Trujillo will provide mentorship through her involvement in the Internal Advisory Committee.

SECTION IV – PREVIOUS GOALS

Summarize the goals you set during the previous evaluation period:

(not applicable this year)

SECTION V – ACHIEVEMENTS

1. Describe the extent to which your previous SHORT-TERM GOALS were achieved over the past 12 months:

(not applicable this year)

2. Describe progress made toward your LONG-TERM GOALS over the last 12 months:

(not applicable this year)

SECTION VI – FUTURE GOALS

3. Describe your SHORT-TERM GOALS for the next 9 months (please provide measurable objectives) and describe how those goals are consistent with the aims of the NACRP:

Research Goals:

- 1) To complete the survey instrument that meets the needs of Hopi tribe in partnership with University of Arizona NACP team and Lori Joshweseoma, Hopi community leader.

Administration Goals:

- 1) Prepare and submit the non-competitive continuation for “Cancer Risk Factors and Screening Behaviors of the Hopi Tribe” to the NACP U54 Comprehensive Minority Institution/Cancer Center Partnership.

4. Describe your LONG-TERM GOALS for the next 10-36 months (please provide measurable objectives) and describe how those goals are consistent with the aims of the NACRP:**Research Goals:**

- 1) Apply for an R01-level or comparative support for colorectal cancer KABB research

Administration Goals:

- 1) Continue to build cancer research at NAU through mentoring of junior faculty (Regina Eddie and Maxine Janis).

5. How can the Partnership or your Institution/Department assist you in achieving your SHORT -TERM and LONG -TERM GOALS?**Research Goals:**

- 1) Critically review manuscripts prior to submission.
- 2) Continue to provide collaborative opportunities for research with AZCC members.
- 3) Assure that AZCC cancer prevention and control seminars are available for review by NAU faculty so that education of AZCC and cancer prevention & control issues are developed.

Administrative Goals:

- 1) Provide training for junior faculty on grant administration and budget development.

SECTION VII – SIGNATURES

Priscilla R. Sanderson, Ph.D.

Name Signature Date

Diane M. Stearns, Ph.D.

NAU Mentor Name Mentor Signature Date

Robin Harris, Ph.D.

UA Mentor Name Mentor Signature Date

Octavian Trujillo, Ph.D.

NAU Mentor Name Mentor Signature Date

Steve Palmer, Ph.D.

HS Department Chair Department Chair Signature Date

Marianne Nielsen, Ph.D.

AIS Departmental Chair Departmental Chair Signature Date

BIOGRAPHICAL SKETCH

Provide the following information for the key personnel and other significant contributors.
Follow this format for each person. **DO NOT EXCEED FOUR PAGES.**

NAME Sanderson, Priscilla Rose		POSITION TITLE Assistant Professor, Department of Health Sciences and Applied Indigenous Studies	
eRA COMMONS USER NAME			
EDUCATION/TRAINING <i>(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)</i>			
INSTITUTION AND LOCATION	DEGREE <i>(if applicable)</i>	YEAR(s)	FIELD OF STUDY
Southwestern College, Winfield, KS	BA	1983	Psychology
Oklahoma State University, Stillwater, OK	MS	1984	Psychology with an emphasis in Rehab Counseling
University of Arizona, Tucson, AZ	PhD	2005	Rehabilitation and Special Education
University of Arizona, Arizona Cancer Center, Tucson, AZ	Postdoctoral Training	2008	Cancer Prevention and Control

B. Positions and Honors.**Positions and Employment**

1984-1986	Vocational Rehabilitation Services Specialist II, State of Arizona, Department of Economic Security, Rehabilitation Services Administration, Tucson, AZ. Vocational Rehabilitation Services
1986-1992	Vocational Rehabilitation Services Specialist III, State of Arizona, Department of Economic Security, Rehabilitation Services Administration, Flagstaff, AZ.
1992-2003	Program Director, Northern Arizona University, Institute for Human Development, Arizona Center on Disabilities, American Indian Rehabilitation Research and Training Center and Capacity Building for American Indians Project, Flagstaff, AZ.
2003-2005	Outreach Coordinator, Northern Arizona University, Native American Cancer Research Partnership, Flagstaff, AZ.
2004-2008	Co-Leader Evaluation of Breast Cancer Video for Navajo Women, Northern Arizona University American Cancer Research Partnership.
2008-2008	Assistant Professor of Research (non-tenure), College of Health and Human Services, Department of Health Sciences, Flagstaff, AZ.
2004	Principal Research Specialist, Navajo NARCH Project, University of Arizona, College of Public Health, Health Promotion Sciences.
2004-2005	Consultant, Pathways Into Health Project, Northern Arizona University, Vice-Provost for Research and Graduate Studies Office, Flagstaff, AZ.
2005-2008	Research Associate, Cancer Prevention and Control Postdoctoral Fellow, University of Arizona, College of Medicine, Arizona Cancer Center
2009-present	Assistant Professor, Northern Arizona University, College of Health and Human Services, Department of Health Sciences and College of Social and Behavioral Sciences, Department of Applied Indigenous Studies (tenure-track joint appointment).

2009-present Senior Scientist, Health Disparities Improvement, Northern Arizona University, College of Health and Human Services Interdisciplinary Health Policy Institute.

Other Experience and Professional Memberships

- 1990-1992 Flagstaff Mayor's Committee on Disability Awareness. Appointed by Mayor Christopher Bavasi.
- 1992-1994 Native American Program Council. Appointed by President Eugene Hughes
- 1993-1996 Statewide Independent Living Council. Appointed by the Governor of Arizona
- 1993-1996 Advisory Panel, American Indian Disability Legislation, Montana University
- 1993-1997 Rehabilitation Leadership Council, Distance Learning Project, College of Business Administration, University of Northern Colorado and Mind Extension University
- 1994-2005 Advisory Board, Undergraduate/Graduate Rehabilitation Education, University of Arizona
- 1995-1997 President's Committee on Employment of People with Disabilities. Subcommittee on Employee Disability Concerns.
- 1995-2001 Institutional Review Board, Northern Arizona University
- 1998-1999 Post-Employment Training in Rehabilitation Administration, San Diego State University, San Diego, California; Rehabilitation Administration Certificate
- 1999-2002 Research Advisory Panel, Center for Minority Training and Capacity Building for Disabilities Research, Texas Southern University
- 1999-2004 Consulting Editor, *Journal of Rehabilitation Administration*
- 2002-2005 Native American Commission of Northern Arizona University
- 2003-2005 Co-chair, Commission for Native Americans. Appointed by President John Haeger.
- 2003-2013 Certified Rehabilitation Counselor (CRC) # 28961
- 2006-2009 Fellow, Northwest Native American Research Center for Health – Portland.
- 2009-present Native American Faculty Fellow, Native American Research and Training Center, College of Medicine, University of Arizona
- 2009-present Community Health Committee. Department of Health Sciences. College of Health and Human Services, Northern Arizona University.
- 2009-present College of Health and Human Services, Native American Academy for Student Success. Appointed by Dean Leslie Schulz, College of Health and Human Services, Northern Arizona University.
- 2009-Present Self-Study/Program Review Committee. Department of Applied Indigenous Studies, College of Social and Behavioral Sciences, Northern Arizona University.
- 2009-Present Native American Recruitment and Retention Team. Department of Applied Indigenous Studies, College of Social and Behavioral Sciences, Northern Arizona University.
- 2009-Present Curriculum Redesign Committee. Department of Applied Indigenous Studies, College of Social and Behavioral Sciences, Northern Arizona University.
- 2009-present Flagstaff Community Health Action Network (CHAN). Represent NAU Health Sciences Department

Selected Honors and Awards

- 1983 *Residence Hall Association*, Oklahoma State University Achievement Award.
- 1984 *Outstanding Young Women of America*, Sonoma Club.
- 1996 *Consortia of Administrators for Native American Rehabilitation (CANAR) Founder's Award*.

- 2001 *Mary E. Switzer Scholar*, National Rehabilitation Association-Systems Change: Emerging Service Delivery Model.
- 2002 *T.K. Bridges Practitioner Award for exceptional commitment and service to multicultural populations*, National Association of Multicultural Rehabilitation Concerns (NAMRC), National Rehabilitation Association.
- 2006 Published refereed journal article, *Breast Cancer Education for Native American Women* received the Gold Award in the Scholarly Journals, Feature Article category in the Society of National Association Publications.

B. Selected peer-reviewed publications (in chronological order).

1. Middleton, RA, Rollins, CW, **Sanderson**, PL, Leung, P., Harley, DA, Ebener, D., & Leal-Idrogo, A. (2000). Proposed professional multicultural competencies and standards. Special Issue on Multicultural Competencies. *Rehabilitation Counseling Bulletin*. PROED.
2. **Sanderson**, PL, Yazzie-King, E. (2001). Access to independent living and assistive technology for American Indians with severe disabilities. In CA Marshall (Ed.). *Rehabilitation and American Indians With Disabilities*. 2001, Athens, GA: Elliott & Fitzpatrick, Inc.
3. **Sanderson**, PL. (2001). American Indians: An overview of factors influencing health care, disability, and service delivery. In CA Marshall (Ed.). *Rehabilitation and American Indians with Disabilities*. Athens, GA: Elliott & Fitzpatrick, Inc.
4. Robinson, F., Sandoval, N., Baldwin, J., **Sanderson**, P. (2005). Breast cancer education for Native American women: Creating culturally relevant communications, *Oncology Nursing Journal*, 9(6), 689- 691.
5. Marshall, CA, **Sanderson** PR, Johnson, SA, DuBois, B., Kvedar, JC. (2006). Considering class, culture, and access in rehabilitation intervention and research. In *Handbook of Applied Disability and Rehabilitation*. Springer Publishing, Inc.
6. Leung, P., Flowers, CR, Talley, WB, & **Sanderson**, PR. (2006). Multicultural Issues in Rehabilitation and Allied Health. Aspen Professional Services.
7. **Sanderson**, PR, Teufel-Shone, N., Baldwin, J., Sandoval, N., & Robinson, F. (2010 Jan). Breast cancer education for Navajo women: A pilot study evaluating a culturally relevant video. *Journal of Cancer Education*. Online Publish
8. **Sanderson**, PR., Weinstein, N., Teufel-Shone, N., & Martinez, EM. (replying to editorial committee comments). Assessing colorectal cancer screening knowledge at tribal fairs in the Navajo Reservation. *Preventing Chronic Disease Journal*.

Completed Research Support

USDOE, OSERS, RSA Carroll (PI)
10/01/96 - 08/31/99 (\$360,000 each year)

Capacity Building for American Indians Project
Institute for Human Development (IHD), Northern Arizona University (NAU).

The goal of this project was to train federally and state recognized tribes grant writing for vocational rehabilitation services and other types of OSERS grant competition.

Role: Project Director

USDOE, OSERS, NIDRR Carroll (PI) 10/01/98 – 09/30/03 (\$600,000 each year)

American Indian Rehabilitation Research and Training Center
IHD, NAU

The goal of this project was to improve the quality of life for American Indians/Alaska Natives with disabilities through employment and independent living research, training, technical assistance and training stakeholders and individuals with disabilities.

Role: Project Director

USDOE, OSERS, RSA Carroll (PI)

10/01/99 - 08/31/02 (\$360,000 each year)

Capacity Building for American Indians Project

Institute for Human Development (IHD), Northern Arizona University (NAU).

The goal of this project was to train federally and state recognized tribes grant writing for vocational rehabilitation services and other types of OSERS grant competition.

Role: Project Director

NACRP, NAU-UA Stearns and Canfield (Co-PI) 01/01/05-05/31/06 (\$45,000)

Pilot Project: Evaluation of Breast Cancer Video for Navajo Women.

Pilot proposal included in the U54 grant that was submitted to the National Cancer Institute's Minority Institute.

The goal of this pilot study was to evaluate a culturally specific video designed to teach Navajo women about breast cancer treatment options

Role: NAU Co-Leader

NIH/NCI Alberts (PI)

12/01/05-12/31/08

R25 Cancer Prevention and Control Postdoctoral Training Fellowship

The primary goal of this training program is to prepare scientists and clinicians to conduct cancer prevention research with interdisciplinary teams.

Role: Postdoctoral Fellow

BIOGRAPHICAL SKETCH			
Provide the following information for the Senior/key personnel and other significant contributors in the order listed on Form Page 2.			
NAME Sylvia R. Brown		POSITION TITLE Research Scientist	
eRA COMMONS USER NAME (credential, e.g., agency login)			
EDUCATION/TRAINING <i>(Begin with baccalaureate or other initial professional education, such as nursing. include postdoctoral training and residency training if applicable.)</i>			
INSTITUTION AND LOCATION	DEGREE (if applicable)	MM/YY	FIELD OF STUDY
University of Pennsylvania Philadelphia, Pa	BA (cum laude)	05/69	History
University of Medicine and Dentistry of New Jersey / Rutgers, the State University of New Jersey , Piscataway/New Brunswick, NJ	MPH	5/96	Public Health/ Epidemiology
University of Medicine and Dentistry of New Jersey / Rutgers, the State University of New Jersey , Piscataway/New Brunswick, NJ	PhD	5/09	Public Health/ Epidemiology

A. Positions and Honors

Positions and Employment

1981-1993 Senior Programmer, Infomed, Princeton, NJ
 1993-1996 Research Assistant, UMDNJ Program in Public Health
 1997-2000 Research Associate, University of Arizona
 2000-2004 Project Manager and Analyst, TCE Exposure Surveillance System, El Pueblo Clinic, Tucson, AZ
 2000-pres. Statistical Analyst, Arizona Cancer Center, University of Arizona, Tucson
 2005-2007 Lead Data Analyst/Epidemiologist, Native American Cancer Research Partnership, Hopi and Navajo Breast and Cervical Cancer Screening Program, Arizona Cancer Center, University of Arizona, Tucson
 2006-2007. Consulting Epidemiologist, Southwest American Indian Collaborative Network, Tucson, AZ
 2007-pres. Analyst, health outcomes research projects, College of Pharmacy, University of Arizona, Tucson
 2009-pres. Consulting Epidemiologist/ University of Medicine and Dentistry of New Jersey
 2009 Research Scientist, University of Arizona

Honors

Phi Beta Kappa, April 1968
 Four Year Mayor's Scholarship, Univ. of Pennsylvania, 1965-69
 Delta Omega, National Public Health Honor Society, May 2009

B. Peer-reviewed publications (in chronological order).

1. Williams B, Greenberg M, **Brown S**. Determinants of perceptions of trust among residents surrounding the Savannah River Site. Environ Behav 31:354-371, 1999.

2. Williams B, **Brown S**, Greenberg M. Risk Perception in context: the Savannah River stakeholder study. *Risk Anal.* 19: 1019-1033, 1999.
3. Williams B, Vallei A, **Brown S**, Greenberg M. Frequency of use and perceived credibility of information sources and variations by socioeconomic factors among Savannah River stakeholders. *Risk: Health, Safety, and Environment* 69: 69-92, 2000.
4. Williams B, Suen H, **Brown S**, Bruhn R, de Blaquiere R, Rzasa S. Hierarchical linear models of factors associated with public participation among residents living near the U.S. army's chemical weapons stockpile sites. *J Environ Planning and Management* 44:41-65, 2001.
5. Wartenberg D, **Brown S**, Mohr S, Cragle DL, Friedlander B. Are African-American nuclear workers at lower mortality risk than Caucasians? *J Occup Environ Med.* 43:861-871, 2001.
6. Hakim IA, Harris RB, **Brown S**, Chow HH, Wiseman S, Agarwal S, Talbot W. Effect of increased tea consumption on oxidative DNA damage among smokers: a randomized controlled study. *J Nutr* 133:3303S-3309S; 2003.
7. Wartenberg D, Schneider D, **Brown S**. Childhood leukaemia incidence and the population mixing hypothesis in US SEER data. *Brit J Cancer* 90:1771-1776, 2004.
8. Hakim IA, Harris RB, Chow H-HS, Dean M, **Brown S**, Ali IU. Effect of a 4-month tea intervention on oxidative DNA damage among heavy smokers: role of glutathione S-transferase genotypes. *Cancer Epidemiol Biomarkers Prev* 13:242-249, 2004.
9. Begay RC, Goodluck C, Coe K, **Brown S**, Martin L. Hopi traditionalism and breast and cervical cancer screening. *J Native Aging Health* 2, 2007.

C. Research Support

Ongoing Research Support

1U18HS017001-01 Woosley (PI)

1/08-8/12

Source: Arizona Center for Education and Research on Therapeutics

Title: Examination of Drug-Drug Interactions

Goal: Strategies and programs to prevent harm induced by drug-drug interactions, especially those affecting women.

Role: Analyst/Epidemiologist

Novartis (contract) Chisolm-Burns (PI)

11/09-6/10

Source: Novartis Pharmaceuticals

Title: Adherence Patterns of Mycophenolate Mofetil and Mycophenolic Acid in Renal Transplant Recipients

Goal: to determine adherence patterns of Cellcept® and Myfortic® in RTRs and associated cost of care using data reported in the USRDS, which contains Medicare prescription claims data..

Role: Analyst/Epidemiologist

California Health Care Foundation Boesen (PI) 10/01/09 – 06/30/10

Source: State of California

Title: The Impact of E-Prescribing in the Northern Sierra Rural Health Network

Goal: to identify barriers to the implementation of e-prescribing in a rural and medically underserved location and to assess the impact of e-prescribing on duplicate therapies, generic drug utilization and drug-drug interactions post-implementation.

Role: Analyst/Epidemiologist

P01 CA 17094-28A2 Dorr (PI)

07/07 – 06/12

Source: NIH/NCI

Title: Therapeutic Targeting of Hypoxic and Oxidative Stress

Goal: To develop entirely new classes of cyanoaziridine-based anticancer agents with redox mechanisms of action that induce apoptosis via novel pathways. Analogs are evaluated for antitumor activity and for molecular mechanisms of action.

Role: Biostatistician for the Biometry Core

Completed Research Support (2004 to present)

3U01 CA114696-03S2 COE (PI) 09/07-04/30

Source: NIH/NCI

Title: Cancer Burden of the Hopi Tribe, Incidence and Survival

Goal: To assess the incidence and survival of cancer among enrollees of the Hopi Tribe, 1995-2005

Role: Co-PI: primary responsibility for all phases of pilot grant, including submission, coordination, implementation and dissemination. Manuscript submitted and awaiting final acceptance

Malone (PI) 06/07-07/07

Source: Arizona Health Care Cost Containment System

Title: An Analysis of Psychotropic Medication Use in Children Enrolled in the Arizona Health Care Cost Containment System.

Goal: The purpose of this study was to assess the prevalence of psychotropic medication use among children enrolled in Arizona's Medicaid system (AHCCCS).

Role: Co-investigator/Analyst

5 U54 CA096281-05 (Canfield) 05/05-5/07

Source: NIH/NCI

Title: Native American Cancer Research Partnership: Subaward – Pilot Study

Goal: To assess the effectiveness of the Hopi and the Navajo breast and cervical screening programs to reach eligible women and to ascertain, via a population survey, the barriers and incentives for Hopi women to receive timely cancer screening. Programmatic Assessments and survey implementation completed. Surveys completed/ manuscripts submitted and awaiting final acceptance.

Role: Lead Analyst/ Epidemiologist

1 UO1 CA114696 (Coe) 5/06-4/08

Source: NIH/NCI

Title: Southwest American Indian Collaborative Network (SAICN)

Goal: To develop an organizational infrastructure for comprehensive cancer care, community-based, participatory research, and community-based activities in cancer education (housed at the Inter Tribal Council of Arizona).

Role: Consultant

PR023104 (Hakim) 07/07 - 06/08

Source: DOD

Title: A Chemopreventive Trial to Study the Effects of High Tea Consumption on Smoking-related Oxidative Stress

Goal: To assess the association between tea consumption and oxidative stress among smokers and former smokers.

Role: Biostatistician

Warholak (PI)

9/07 – 2/08

Source: Saint Luke's Health Initiatives

Title: The impact of the Medicare Modernization Act on outcomes in Arizona's dual eligible (Medicare/Medicaid) residents

Goal: To examine the effect of the implementation of Medicare Part D on health care costs among participants of Arizona's Medicaid program (AHCCCS)

Role: Analyst/Epidemiologist

Completed Research Support (pre 2004)

UA-EI Pueblo Clinic Medical Surveillance System

Southeastern Arizona Tea Study (SEATS)

Arizona GIS/Environmental Epidemiology/Arsenic Project

Arizona Smoker's Hotline (ASH)

DOD Chemical Weapons Site Survey

DOD Chemical Weapons Site Follow-up Survey

Tucson Water Consumption Survey

Pediatric Alternative Medicine Survey

Risk Perception Survey among residents living in the vicinity of the Savannah River Site (SRS)

Mortality among nuclear workers employed at the Savannah River Site (SRS)

Meta-Analysis of the mortality of nuclear workers

BIOGRAPHICAL SKETCH

NAME Lori Joshweseoma (Martin)		POSITION TITLE Director	
EDUCATION/TRAINING (Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)			
INSTITUTION AND LOCATION	DEGREE (if applicable)	YEAR(s)	FIELD OF STUDY
Northern Arizona University	Bachelors	1996	Dental Hygiene
University of Arizona	MPH	2003	Public Health

Positions and Employment

- Health Educator for the Hopi Women's Health Program - 1998-2001
- Director of the Hopi Women's Health Program - 2001-present

Other Experience and Professional Memberships

- Member- Hopi Tribe, Arizona
- Hopi Health Care Center Board Member - May 2001 -May 2002
- Arizona Women's Cancer Network Board Member – 1999- 2003
- Legal Services Board Member - July 2003- 2005
- Co Chair – National Native American Board – CDC, Atlanta Georgia 2003-2004
- Board Member – Community Advisory Board Advisor – Native Circle/Spirit of Eagle Rochester Minnesota October 2005 – present

Completed Research Support:

3U01 CA114696-03S2 COE (PI) 09/07-04/30

Source: NIH/NCI

Title: Cancer Burden of the Hopi Tribe, Incidence and Survival

Goal: To assess the incidence and survival of cancer among enrollees of the Hopi Tribe, 1995-2005: Manuscript on process accepted for publication 01/29/2010 to *Public Health Reports*

Role: Hopi Collaborator/co-leader

5 U54 CA096281-05 (Canfield) 05/05-5/07

Source: NIH/NCI

Title: Native American Cancer Research Partnership: Subaward – Pilot Study

Goal: To assess the effectiveness of the Hopi and breast and cervical screening programs to reach eligible women and to ascertain, via a population survey, the barriers and incentives for Hopi women to receive timely cancer screening. Programmatic Assessments and survey implementation completed. Surveys completed/ manuscripts submitted and awaiting final acceptance.

Role: Hopi Collaborator/ co-leader

Peer-reviewed publications

Begay RC, Goodluck C, Coe K, Brown S, **Martin L.** Hopi traditionalism and breast and cervical cancer screening. *J Native Aging Health* 2, 2007

BIOGRAPHICAL SKETCH

Provide the following information for the key personnel and other significant contributors in the order listed on Form Page 2.
Follow this format for each person. **DO NOT EXCEED FOUR PAGES.**

NAME Guy, Mignonne Catherine		POSITION TITLE Assistant Research Scientist	
eRA COMMONS USER NAME (credential, e.g., agency login) MIGNONNEG			
EDUCATION/TRAINING <i>(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)</i>			
INSTITUTION AND LOCATION	DEGREE <i>(if applicable)</i>	YEAR(s)	FIELD OF STUDY
University of Arizona – Tucson	B.A.	1999	Humanities
University of Arizona – Tucson	M.A.	2009	Higher Education Sociological Theory
University of Arizona – Tucson	Ph.D.	2009	Higher Education Sociological Theory
Arizona Cancer Center – Tucson	Postdoctoral Fellow	2009	Biobehavioral and Social Sciences Research Program

A. Positions and Honors**Positions and Employment**

2002 – 2003	Instructor, University of Arizona, Africana Studies Program, Tucson, AZ
2003 – 2004	Graduate Research Associate, Social Justice Education Program, University of Arizona, Bureau of Applied Research in Anthropology, Tucson, AZ
2004 – 2005	Program Coordinator, Southwest Family Resource and Wellness Center, Tucson, AZ
2006 – 2007	Research Project Manager, University of Arizona, Center for Health Outcomes and PharmacoEconomic Research, Tucson, AZ
2006 – 2007	Research Project Manager, University of Arizona, Medication Management Center, Tucson, AZ
2007 to present	Assistant Research Scientist, University of Arizona, Center for Health Outcomes and PharmacoEconomic Research, Tucson, AZ
2007 to present	Assistant Research Scientist, University of Arizona, Medication Management Center, Tucson, AZ
2009 to present	Postdoctoral Fellow, Arizona Cancer Center, Biobehavioral and Social Sciences Research Program, Tucson, AZ

Other Experience and Professional Memberships

2001 – 2002	Representative, University of Arizona, College of Education, Strategic Planning Committee
2001 – 2002	Representative, University of Arizona, College of Education, Dean's Graduate Advisory Group
2003 – present	Member, Association for the Study of Higher Education

2003 – present Member, Association for the Study of International Higher Education
 2003 – present Member, Comparative and International Education Society
 2003 – present Member, American Association of University Women
 2007 – present Member, Arizona Rural Health Association
 2008 – present Member, American Public Health Association

Honors

1997 – 1999 Veora Erma Johnson Achievement Scholarship
 2007 University of Arizona Graduate College Final Project Award
 2009 Society for Research on Nicotine and Tobacco Scholarship

B. Selected peer-reviewed publications (in chronological order).

1. Coons S.J., **Guy M.C.** (2009). Performing bystander cardiopulmonary resuscitation (CPR) for sudden cardiac arrest: Behavioral intentions among the general adult population in Arizona. *Resuscitation*.
2. Lloyd C., Wassimi A., Weiser C., Reddick J., Scovis N., **Guy M.C.**, Boesen K. (2009). Medication therapy management (MTM) services: Attitudes and factors affecting implementation by community pharmacists. *Journal of the American Pharmacists' Association*.

C. Research Support.

Ongoing Research Support

1R01CA128638-02S1 Leischow (PI)

06/01/08 - 04/30/13

NIH/NCI

Research Supplement to Promote Diversity in Health-Related Research, Knowledge Integration in Quitlines: Networks that Improve Cessation

The goals of this study are to identify outreach and promotional strategies that have been employed which have been demonstrated (via increases in call volume) to be effective, and to identify the extent to which the strategies have reached African American and Latino smokers across various socioeconomic, gender and geographic groups. This approach further extends the goals and objectives of the parent grant in that it identifies and examines the various mechanisms for diffusion of innovations (i.e. outreach and promotion) identified as priority within the KIQNIC study.

Role: Postdoctoral Fellow

California Health Care Foundation Boesen (PI)

10/01/07 –

06/30/10

The Impact of E-Prescribing in the Northern Sierra Rural Health Network

The goals of this project are to identify barriers to the implementation of e-prescribing in a rural and medically underserved location and to assess the impact of e-prescribing on duplicate therapies, generic drug utilization and drug-drug interactions post-implementation.

Role: Co-Investigator

Completed Research Support

NASA – JSC Pelletier (PI) 12/01/07 – 06/30/09

Workplace Health and Application of Wellness Strategies

The goal of this study is the development of an instrument to assess levels of workplace stress/strain and subsequent effects on health outcomes.

Role: Co-Investigator

McKesson Boesen (PI) 03/01/08 – 06/01/08

Clinical Trial Recruitment Protocol Development

The goal of this project was to develop of a protocol for clinical trial recruitment of diabetic patients from underserved populations utilizing pharmacy claims data.

Role: Co-Investigator

Sarver Heart Center Coons (PI)

12/01/07 – 03/31/08

Performing Cardiopulmonary Resuscitation (CPR) for Sudden Cardiac Arrest: Behavioral Intentions among the General Population in Arizona

The goal of this study was to develop an instrument and complete a general population survey to assess behavioral intentions to perform CPR.

Role: Co-Investigator

Arizona Area Health Education Centers Boesen (PI) 06/20/07 – 07/30/08

Improving Access to Vulnerable Populations by Increasing the Pipeline of Highly Qualified Practitioners in Rural Populations

The goal of this study was the development of an instrument to assess individual and group characteristics of current and former (alumni) Rural Health Professions Program participants and to determine factors contributing to post-graduation practice in medically underserved areas.

Role: Co-Principal Investigator

2 U18 HS10385-04 Woosley (PI)

9/30/02 – 9/29/07

AHRQ

Center for Education and Research on Therapeutics

Project: Drug-Drug Outcomes Core

The goal of this study was to examine factors affecting the incidence of serious drug-drug interactions in the community and Veterans Affairs medical centers.

Role: Project Manager

BIOGRAPHICAL SKETCH

Provide the following information for the key personnel in the order listed for Form Page 2.
Follow the sample format for each person. **DO NOT EXCEED FOUR PAGES.**

NAME Harris, Robin Buntz		POSITION TITLE Associate Professor of Public Health	
eRA COMMONS USER NAME robinh			
EDUCATION/TRAINING <i>(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)</i>			
INSTITUTION AND LOCATION	DEGREE <i>(if applicable)</i>	YEAR(s)	FIELD OF STUDY
Mills College, Oakland, CA	B.A.	1970	Biology
School of Public Health; Univ TX; Houston, TX	M.P.H.	1973	Public Health
School of Public Health; Univ WA; Seattle, WA	Ph.D.	1986	Epidemiology
Stanford Center for Research in Disease Prevention, Stanford CA		1987	Cardiovascular epidemiology

A. Positions and Honors**Positions and Employment**

- 1972-1974 Research Assistant, Center for Demographic and Population Genetics, University of Texas Health Science Center; Houston, TX
- 1974-1977 Coordinator, Lipid Research Clinics Prevalence Study, National Heart, Lung, and Blood Institute; Bethesda, MD
- 1977-1978 Instructor, Epidemiology, University of Tehran School of Public Health; Tehran, Iran
- 1981-1989 Research Assistant and Research Associate, Stanford Center for Research in Disease Prevention, Stanford University; Stanford, CA
- 1988-1991 Research Associate, Division of Epidemiology, Stanford University, Stanford, CA
- 1991-1992 Research Assistant, University of Arizona, Tucson, AZ
- 1995-1998 Research Assistant Professor, University of Arizona, Tucson, AZ
- 1998-2003 Assistant Professor in Public Health, University of Arizona, Tucson, AZ
Director of MPH-Epidemiology Concentration, 2000-2003
- 2003-present Associate Professor in Public Health, College of Public Health, Univ AZ, Tucson, AZ
Chair, Epidemiology Graduate Program
- 2006-present Deputy Director, Skin Cancer Institute at the Arizona Cancer Center, Tucson, AZ

Other Experience and Professional Memberships

- 1991-1994 Consultant - Study of Medical Resource Utilization: Comparison of University Medical Center and Zhejiang Province, China. University Medical Center, Tucson, AZ
- 1991-1995 Consultant - Health Services Research, Cedars-Sinai Medical Center, Los Angeles, CA
- 1999- Consultant - Medical Directions, Inc. (in online medical education)
- Member, American Public Health Association, Society for Epidemiologic Research

B. Selected peer-reviewed publications

1. Wilcosky T, Harris R, Weissfeld L. The prevalence and correlates of Rose Questionnaire angina among women and men in the Lipid Research Clinics Program Prevalence Study population. *Am J Epidemiol* 1987;125:400-409.
2. Harris RB, Laws A, Reddy VM, King A, Haskell WL. Are women using postmenopausal estrogens? Community Survey. *Am J Public Health* 1990;80:1266-1268.
3. Harris RB, Weissfeld L. Gender differences in the reliability of reporting angina pectoris. *Am J Clinical Epidemiol.* 1991;44:1071-1087.
4. Bliwise DB, Harris RB, King AC, Haskell WL. Relationships between self-reported sleep times and snoring in a 50-65 year old population. *Sleep Res.* 1992;21:176.
5. Whittemore AS, Harris RB, Itnyre J, Halpern J, and the Collaborative Ovarian Cancer Group. Characteristics relating to ovarian cancer risk: collaborative analysis of 12 U.S. case-control studies. I. Methods for analyzing data from several epidemiologic studies. *Am J Epidemiol.* 1992;136:1175-1183.
6. Whittemore AS, Harris RB, Itnyre J, and the Collaborative Ovarian Cancer Group. Characteristics relating to ovarian cancer risk: collaborative analysis of 12 U.S. case-control studies. II. Invasive epithelial ovarian cancer in white women. *Am J Epidemiol.* 1992;136:1184-1203.
7. Harris RB, Whittemore AS, Itnyre J, and the Collaborative Ovarian Cancer Group. Characteristics relating to ovarian cancer risk: collaborative analysis of 12 U.S. case-control studies. III. Epithelial cancers of low malignant potential in white women. *Am J Epidemiol* 1992;136:1204-1211.
8. Whittemore AS, Harris RB, Itnyre J, and the Collaborative Ovarian Cancer Group. Characteristics relating to ovarian cancer risk: collaborative analysis of 12 U.S. case-control studies. IV. The pathogenesis of epithelial ovarian cancer. *Am J Epidemiol* 1992;136:1212-1220.
9. King AC, Harris RB, Haskell WL. Effect of recruitment strategy on types of subjects entered into a primary prevention clinical trial. *Ann Epidemiol.* 1994;4:312-320.
10. Foote J, Harris RB, Gilles M, [Ahner H](#), [Roice D](#), [Becksted T](#), [Messinger T](#), [Bunch R](#), [Bilant K](#). Physician advice and tobacco use: survey of college students. *J Am Coll Health* 1996;45:129-132.
11. Harris RB, Harris JM, Hultman J, Weingarten S. Differences in charges for treatment of foot problems between podiatrists and orthopedic surgeons. *Am J Managed Care* 1997;3:1577-1583.
12. Harris JM, Salasche SJ, Harris RB. Using the Internet to teach melanoma management guidelines to primary care physicians. *J Eval Clin Pract.* 1999;5:199-211.
13. Hakim IA, Harris RB, Ritenbaugh C. Fat intake and risk of squamous cell carcinoma of the skin. *Nutr Cancer* 2000;36:155-162.
14. Hakim I, Harris RB, Weisgerber U. Tea intake and squamous cell carcinoma of the skin: influence of type of tea beverage. *Cancer Epidemiol Biomarkers Prev.* 2000;9:727-731.
15. Hakim I, Harris RB, Ritenbaugh C. Citrus peel use is associated with reduced risk of squamous cell carcinoma of the skin. *Nutr Cancer* 2000;37:43-50.
16. Harris JM, Harris RB, Salasche S. Can Internet-based continuing medical education improve physicians' skin cancer knowledge and skills? *J Gen Intern Med.* 2001;16:50-56.
17. Foote JA, Harris RB, Giuliano A, Cartmel B. Predictors of cutaneous basal and squamous cell carcinoma among actinically-damaged adults. *Int J Cancer* 2001;95:7-11.
18. Hakim IA, Harris RB. Joint effects of citrus peel use and black tea intake on the risk of squamous cell carcinoma of the skin. *BMC Dermatology* 2001;1:3.
19. Harris RB, Griffith K, Moon TE. Trends in incidence of nonmelanoma skin cancers in Southeastern Arizona, 1985-1996. *J Am Acad of Dermatol.* 2001;45:528-536.

20. Harris JM, Salasche S, Harris RB. The internet and globalization of medical education. *BMJ* 2001;323:1106.
21. Giuliano AR, Harris R, Sedjo RL, Roe D, Baldwin S, Papenfuss MR, Abrahamsen M, Inserra P, Olvera S, Hatch K. Incidence, prevalence, and clearance of type specific human papillomavirus infections: the Young Women's Health Study. *J Infect Dis.* 2002;186:462-469.
22. Houtkooper L, Larkey L, Harris R, Steinfeld V, Hoelscher Day S, Renger R, Block L, Johnson M, Meister J, Cohen S. University-community health advancement partnerships that work. *J Higher Educ Outreach and Engagement* 2002;6:51-64.
23. Hakim IA, Harris RB, Brown S, Wiseman S, Agarwal S, Talbot W, Chow S. Effect of increased tea consumption on oxidative DNA damage among smokers: a randomized controlled study. *J Nutr.* 2003;133:3303S-3309S.
24. Harris RB, Alberts DS. Strategies for skin cancer prevention. *Int J Dermatol.* 2004;43:243-251.
25. Harris RB, Foote JA, Hakim IA, Bronson DL, Alberts DS. Fatty acid composition of red blood cell membranes and risk of squamous cell carcinoma of the skin. *Cancer Epidemiol Biomarkers Prev.* 2005;14:906-912.
26. Thomson CA, Harris RB, Craft NE, Hakim IA. The healthy volunteer effect demonstrated in smokers participating in a dietary intervention trial. *J Clinical Epidemiol.* 2005;58:378-382.
27. Clouser MC, Harris RB, Roe DJ, Saboda K, Ranger-Moore J, Duckett L, Alberts DS. Risk group, skin lesion history, and sun sensitivity reliability in squamous cell skin cancer progression. *Cancer Epidemiol Biomarkers Prev.* 2006;15:2292-2297.
28. Loescher LJ, Harris RB, Lim KH, Su Y. Thorough skin self-examination in patients with melanoma. *Oncol Nurs Forum* 2006;33:633-637.
29. Nielson CM, Harris RB, Dunne EF, Abrahamsen M, Papenfuss MR, Flores R, Markowitz LE, Giuliano AR. Risk factors for anogenital human papillomavirus infection in men. *J Infectious Diseases.* 196(8):1137-45, 2007.
30. Giuliano AR, Nielson CM, Flores R, Dunne EF, Abrahamsen M, Papenfuss MR, Markowitz LE, Smith D, Harris RB. The optimal anatomic sites for sampling heterosexual men for human papillomavirus (HPV) detection: the HPV detection in men study. *J Infectious Diseases.* 196(8):1146-52, 2007.
31. Nyitray A, Nielson CM, Harris RB, Flores R, Abrahamsen M, Dunne EF, Giuliano AR. Prevalence and Risk Factors for Anal Human Papillomavirus in Heterosexual Men. *J Infect Diseases.* 2008; 197:1676-1684, 2008.
32. Hakim IA, Chow HH, Harris RB. Green tea consumption is associated with decreased DNA damage among GSTM1-positive smokers. *J Nutr* 2008; 8: 1567S-1571S.
33. Nielson CM, Harris RB, Flores R, Abrahamsen M, Papenfuss MF, Dunne EF, Markowitz LE, Giuliano AR. Multiple-type human papillomavirus infection in male anogenital sites: prevalence and associated factors. *Cancer Epidemiol Biomarkers Prev* 2009; 18: 1077-1083.
34. Clouser, MC, Roe, DJ, Foote, JA., Harris, RB. Effect of Non-Steroidal Anti-Inflammatory Drugs on Non-Melanoma Skin Cancer Incidence in the SKICAP-AK Trial. *Pharmacoepidemiology & Drug Safety.* 2009; 18(4):276-83.

C. Research Support

Ongoing Research Support

EPA (Burgess, PI)

9/08-8/10

Modeling Dietary Contributions to Arsenic Dose and Methylation: Elucidating Predictive Linkage
The goal of this project is to use archived population-based questionnaire and biological data that describe food and water consumption histories to construct predictive models for urinary

arsenic biomarkers that can then be used as indicators of arsenic exposure and health effect outcomes.

Role: Co-investigator

NIH/NCI (Alberts, PI)

7/1998-6/2009

Chemoprevention of Skin Cancer Program Project

The overall goal of the program project is to develop safe and efficacious intervention strategies for prevention of melanoma and non-melanoma skin cancers and to develop basic science and clinical research approaches that will serve as models for chemoprevention.

Role: Co-Investigator

Completed Research Support

NCI (Hakim, PI)

6/03-5/09 ext

Chemoprevention of Lung Carcinogenesis Using Green Tea

This is a six-month randomized, double-blinded chemopreventive trial to determine if high consumption of a defined green tea product or EGCG capsule can reduce various markers of oxidative stress among patients with diagnosed chronic obstructive pulmonary disease.

Role: Co-Investigator

NIH/NCI Supplement to SPORE in Gastrointestinal Cancer (Gerner, PI) 9/04-3/07

Exploring a Potential Relationship Between Arsenic and Cancer

The goal of this project was to evaluate associations between elevated arsenic exposure and selected genetic polymorphisms that were considered to be part of carcinogenesis pathways or could potentially modulate As metabolism. The project included in-vitro studies and epidemiological studies in Arizona and Sonora, Mexico.

Role: Co-PI

NIH/NCI: Comprehensive NAU/AZCC Cancer Research Partnership 7/05-6/07

Breast and Cervical Cancer Screening Among Women on the Hopi and Navajo Reservations

This pilot study was part of the Native American Cancer Prevention Project. The overall goals were to determine effectiveness of existing breast and cervical cancer screening programs and to determine barriers and incentives for Native American women to receive timely cancer screening.

Role: Co-PI

DOD (Hakim, PI)

2/03-1/07

A Dietary Intervention to Study the Effects of High Tea Consumption on Smoking-related Oxidative Stress

This study was a phase IIb three-armed randomized, placebo controlled, double blinded tea intervention trial, comparing black and green tea to placebo, among subjects with COPD. The primary endpoints were improvement in markers of oxidative damage in DNA, lipids, and proteins.

Role: Co-Investigator

AAMC-CDC (Labiner, PI)

10/05-9/08

Prevalence of Epilepsy along the Arizona –Mexico Border

The purpose of this study is to estimate the prevalence of epilepsy in Southern Arizona, along the Mexico border. The area has a large Hispanic population with a relatively low socio-economic status.

Role: Co-Investigator

- Arizona Disease Control Res Commission (Harris, Giuliano, co-PIs) 10/02-6//05
HPV Infection in Men (HIM) Study: A Prospective Cohort Study
This research sought to determine the incidence, prevalence, and persistence of 27 type-specific HPV infections in men 15-30 years of age, residing in Southern Arizona using various definitions of HPV infection and to identify factors (e.g., sexual behavior, condom use, tobacco use) independently.
Role: Co-PI
- AAMC-CDC (Harris, Giuliano, co-PIs) 10/02-9/05
Human Papillomavirus (HPV) Detection in Asymptomatic Men
The overall goal of this project was to assess HPV infection at various anatomical sites from a sample of heterosexual men of a broad age range residing in Southern Arizona.
Role: Co-PI
- NIH/NCI (Harris, PI) 10/01-9/04
Use of GIS in Analyzing Environmental Cancer Risks as a Function of Geographical Scale
This research examined geographical variation in the association between cancer risk and environmental exposures, in particular arsenic exposure, using cancer incidence data and environmental exposure data from the State of Arizona.
Role: PI
- Arizona Disease Control Research Commission (Hakim-PI) 9/1999-6/2002
Role of High Tea Consumption in the Modulation of DNA Oxidative Damage in Smokers
This was a randomized controlled chemopreventive trial to investigate the potential beneficial effect of black or green tea drinking on oxidative DNA damage, as measured by urinary 8-OhdG. The study was conducted among cigarette smokers who did not intend to quit.
Role: Co-PI

BIOGRAPHICAL SKETCH

Provide the following information for the key personnel in the order listed on Form Page 2.
Follow this format for each person. **DO NOT EXCEED FOUR PAGES.**

NAME Weinstein, Neil D.		POSITION TITLE Research Professor	
EDUCATION/TRAINING <i>(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)</i>			
INSTITUTION AND LOCATION	DEGREE <i>(if applicable)</i>	YEAR(s)	FIELD OF STUDY
University of Wisconsin, Madison	B.S.	1966	Chemistry
Harvard University, Cambridge	Ph.D.	1972	Chemical Physics
University of California, Berkeley	Post doc	1972-	Psychology

PROFESSIONAL APPOINTMENTS

1974-1980 Assistant Professor, Department of Human Ecology, Rutgers University
 1980-1987 Associate Professor, Departments of Human Ecology & Psychology, Rutgers University
 1983 Visiting Scholar, Department of Medical Psychology, Oregon Health Sciences University

1987 Visiting Scholar, Department of Psychology, University of Arizona
 1987-2006 Professor and Professor II, Department of Human Ecology, Rutgers University
 2000-2006 Visiting & consulting scientist, Behavioral Research Program, National Cancer Institute
 2003- Associate Member, Arizona Cancer Center
 2007-2009 Research Professor, Department of Family and Community Medicine, University of Arizona College of Medicine

HONORS AND RECOGNITION

1972-1974 NIMH Postdoctoral Fellow, Dept of Psychology, University of California, Berkeley
 1989 Inaugural "Hochbaum Lecture on Health Behavior and Health Education," School of Public Health, University of North Carolina, Chapel Hill, North Carolina
 1989,1996 Elected Fellow, American Psychological Association, Division of Population and Environmental Psychology (1989) and Division of Health Psychology (1996)
 1994 Award for Sustained Research Excellence, New Jersey Agricultural Experiment Station

- 1998 First behavioral scientist appointed to the Armed Forces Epidemiological Board
1998-Expert witness on smoking risk perceptions. U.S. Federal Trade Commission & U.S. Department of Justice
- 2003 Rutgers University Trustees Award for Research Excellence

EXTRAMURAL RESEARCH SUPPORT: Robert Wood Johnson Foundation; SmithKline Beecham Pharmaceuticals; National Cancer Institute; National Institute of Mental Health; U.S. Environmental Protection Agency; National Institute of Occupational Safety and Health; New Jersey Department of Environmental Protection; New Jersey Department of Health.

CONSULTING EXPERIENCE: National Cancer Institute, Behavioral Research Program; Institute of Medicine; World Health Organization Global Program on AIDS; U.S. Centers for Disease Control AIDS Research Program; U.S. Environmental Protection Agency, Office of Radiation Protection, Radon Risk Communication Program and Office of Policy, Planning, and Evaluation; National Institute for Occupational Safety and Health; New Jersey Department of Environmental Protection, Division of Science and Research and Division of Environmental Quality; Radon Subcommittee, Indoor Air Technical Advisory Committee, American Lung Association; U.S. Department of Housing and Urban Development; U.S. Federal Trade Commission; Armed Forces Epidemiological Board; National Safety Council; U.S. Department of Justice.

EDITORIAL BOARD SERVICE: *Health Psychology Review, Journal of Environmental Psychology, Health Psychology, British Journal of Health Psychology, Journal of Applied Social Psychology*

RECENT AND/OR RELEVANT PUBLICATIONS

- Waters, E. A., Weinstein, N. D., Colditz, G. A., & Emmons, K. (2009). Explanations of side effect aversion in preventive medical treatment decisions. *Health Psychology, 28*, 201-209.
- Weinstein, N. D. (2007). Misleading tests of health behavior theories. *Annals of Behavioral Medicine, 33*, 1-10.
- Brewer, N. T., Chapman, G. B., Gibbons, F. X., Gerard, M., McCaul, K. D., & Weinstein, N. D. (2007). A meta-analysis of the relationship between risk perception and health behavior: The example of vaccination. *Health Psychology, 26*, 136-145.
- Weinstein, N. D., McCaul, K. D., Gibbons, F. X., & Gerard, M. (2007). Risk perception: Assessment and relationship to influenza vaccination. *Health Psychology, 26*, 146-151.
- Weinstein, N. D., Atwood, K., Puleo, E., Fletcher, R., Colditz, G., & Emmons, K. M. (2004). Colon cancer: Risk perceptions and risk communication. *Journal of Health Communication, 9*, 53-65/
- Emmons, K. M., Wong, M., Puleo, E., Weinstein, N. D., Fletcher, R., & Colditz, G. (2004). Tailored computer-based cancer risk communication: Correcting colorectal cancer risk perception. *Journal of Health Communication, 9*, 127-141.
- Brewer, N. Weinstein, N. D., Cuite, L., Herrington, J., & Hayes, N. (2004). Measuring risk perception and its relation to risk behavior. *Annals of Behavioral Medicine, 27*, 125-130.
- Weinstein, N. D., Slovic, P., Gibson, G., & Waters, E. (2004) Public perceptions of the illnesses caused by smoking. *Nicotine and Tobacco Research, 6*, 349-355.

- Weinstein, N. D., & Sandman, P. M. (2002). The precaution adoption process model and its application. In K. Glanz, B. K. Rimer, & F. M. Lewis (Eds.), Health Behavior and health education: Theory, research and practice (third edition)(pp. 121-143). San Francisco: Jossey Bass.
- Weinstein, N. D. (2003). Links between risk perceptions and preventive health behavior. J. Suls & K. Walls-ton (Eds.), Social psychological foundations of health and illness (pp. 22-53). Malden, MA: Blackwell.
- Waters, E., Weinstein, N. D., & Cuite, C. L. (2003). Risk Communication Bibliography. (URL <http://dccps.nci.nih.gov/DECC/riskcommbib/index.html>). Division of Cancer Control and Population Sciences, National Cancer Institute.
- Weinstein, N. D. (2000). Perceived probability, perceived severity, and health-protective behavior. Health Psychology, 19, 65-74.
- Weinstein, N. D. (1999). What does it mean to understand a risk? Evaluating risk comprehension. Journal of the National Cancer Institute, Monograph 25, 15-20.
- Weinstein, N. D. (1998). Accuracy of smokers' risk perceptions. Annals of Behavioral Medicine, 20, 135-140.
- Weinstein, N. D., Lyon, J. E., Sandman, P. M., & Cuite, C. L. (1998). Experimental evidence for stages of precaution adoption: The precaution adoption process model applied to home radon testing. Health Psychology, 17, 445-453.
- Weinstein, N. D., Rothman A., & Sutton, S. (1998). Stage theories of health behavior. Health Psychology, 17, 290-299.
- Weinstein, N. D., Rothman, A. J., & Nicolich, M. (1998). Use of correlational data to study effects of risk perceptions on precautionary. Psychology and Health, 13, 479-501.
- Sandman, P. M., Weinstein, Neil D., & Hallman, W. H. (1997). Communications to reduce risk overestimation and underestimation. Risk Decision and Policy, 2, 1-16.
- Rothman, A., Klein, W., & Weinstein, N. D. (1996). Absolute and relative biases in estimations of personal risk. Journal of Applied Social Psychology, 26, 1213-1236.
- Weinstein, N. D., Kolb, K., & Goldstein, B. D. (1996). Using time intervals between expected events to communicate risk magnitudes. Risk Analysis, 16, 305-308.
- Weinstein, N. D., Sandman, P. M., & Hallman, W. H. (1994). Testing a visual display to explain small probabilities. Risk Analysis, 14, 895-896.
- Sandman, P. M., & Weinstein, N. D. (1994). How location on a "risk ladder" affects perceived risk. Risk Analysis, 14, 35-45.
- Weinstein, N. D., & Sandman, P. M. (1993). Some criteria for evaluating risk messages. Risk Analysis, 13, 103-114.

BIOGRAPHICAL SKETCH

Provide the following information for the Senior/key personnel and other significant contributors in the order listed on Form Page 2. Follow this format for each person. DO NOT EXCEED FOUR PAGES.

NAME Regina S Eddie		POSITION TITLE Assistant Clinical Professor	
eRA COMMONS USER NAME (credential, e.g., agency login)			
EDUCATION/TRAINING (Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable.)			
INSTITUTION AND LOCATION	DEGREE (if applicable)	MM/YY	FIELD OF STUDY
Northern Arizona University, Flagstaff, AZ	BSN	May 1995	Nursing
Northern Arizona University, Flagstaff, AZ	MS	Dec 2006	Nursing

A. Positions and honors

Professional experience

2007 - Present	Assistant Clinical Professor Northern Arizona University School of Nursing
2005 - 2007	School Nurse Flagstaff Unified School Nurse
2006 - 2007	Home Health Nurse Coconino County Public Health Department
2001 - 2005	Director Public Health Nursing Winslow Indian Health Care
1996 - 2001	Public Health Nurse Winslow Indian Health Care
1995 - 1996	Clinical Nurse Phoenix Indian Medical Center

Professional memberships

Sigma Theta Tau International Honor Society
 American Public Health Association
 Arizona Public Health Association
 Registered Nurse - Arizona

Honors and Awards

Clinical Teacher of the Year 2008, School of Nursing, Northern Arizona University
 IHS Navajo Area Director's Award for Exceptional Performance 2001
 IHS Navajo Area Award for Group Exceptional Performance 1998

APPENDIX A**TABLE 1: PEER- REVIEWED ACTIVITIES: HOPI PROJECTS 2004 to 2008**

ACTIVITY	TITLE	AUTHORS	STATUS
Manuscripts	Hopi traditionalism and breast and cervical cancer screening	Begay, Goodluck, Coe, Brown, Martin	Published: <i>J Native Aging Health</i> , 2007
	Process for determining the cancer burden of the Hopi Tribe	Brown, Joshweseoma, Flood, Coe	Accepted 1/29/2010: <i>Public Health Reports</i>
	Impact of a Community-based Breast Cancer Screening Program among Hopi Women	Brown, Nuno, Joshweseoma,, Goodluck, Begay, Harris	Submitted
Presentations (Oral)	Increasing Breast Cancer Screening Rates Among Hopi Women	Brown, Harris, Martin, Nuno, Ami, Goodluck, Begay	APHA, 2008 Annual Meeting, San Diego, CA
	Ten Lessons Learned: Listening to Tribal Communities to Promote Health and Reduce Breast and Cervical Cancer	Martin, Brown, Goodluck, Begay, Harris, Canfield	The 20th Annual Native Health Research Conference ,Portland, Oregon, August 2008
	Cancer Burden of the Hopi Tribe: A Model for Collaboration	Brown, Martin, Flood	APHA, 2007 Annual Meeting, Washington DC.
Presentations (poster)	Cancer Prevention in Indian Country: An evaluation of breast cancer screening efforts of the Hopi Women's Health Program	Martin, Brown, Harris, Ami	APHA, 2007 Annual Meeting, Washington DC.

APPENDIX B: PROPOSED 3-YEARTIMELINE

		YEAR 1 (months)				YEAR 2 (months)				YEAR 3 (months)			
		1-3	4-6	7-9	10-12	13-15	16-18	19-21	22-24	25-27	28-30	31-33	34-36
		9/10 -11/10	12/10- 2/11	3/11- 5/11	6/11- 8/11	9/10 -11/10	12/10- 2/11	3/11- 5/11	6/11- 8/11	9/10 -11/10	12/10- 2/11	3/11- 5/11	6/11- 8/11
	Tribal Resolution	X											
	UA/NAU IRB approvals		X	X									
Primary Survey: Aim 1	Development	X	X	X									
	Focus Groups			X	X								
	Transcription & analysis				X	X							
	Focus Group Manuscript				X	X							
	Database development					X	X	X					
	Hire & train interviewers					X							
	Sample selection					X	X						
	Pilot or feasibility Study							X					
	Revisions							X	X				
	Conduct Survey							X	X	X			
	Data Entry							X	X	X	X		
	Quality Control							X	X	X	X		
	Data Analysis									X	X		
	Report preparation				X					X	X		
Community Dissemination				X							X	X	
Survey Manuscript preparation									X	X	X		
Validation Survey: Aim 2	Development						X	X					
	Implementation							X	X	X			
	Data Entry							X	X	X			
	Data Analysis							X	X	X	X		
	Report preparation										X	X	
Manuscript preparation											X	X	
Capacity Building & Training Aim 3	Survey Development training	X	X	X	X								
	Focus Group	X	X										
	Database Training					X	X			X	X	X	
	Analysis Training					X	X	X	X	X			

APPENDIX C



Leroy Shingoitewa, Jr.
Chairman

Herman Honanie
Vice Chairman

January 19, 2010

Sylvia R. Brown, PhD, MPH
Div of Epidemiology & Biostatistics
University of Arizona COPH
1295 N. Martin
BLDG 202A - Room A220
PO Box 245211
Tucson, AZ 85724-5211

Dear Dr. Brown,

This letter serves as permission to incorporate the data from the Hopi Cancer burden incidence and survival rates of the Hopi Tribe for the purpose of the proposal to the NACP for funding of a pilot project entitled "Cancer Risk Factors and Screening Behaviors of the Hopi Tribe."

For more information regarding the Hopi Cancer Burden Incidence and Survival project please contact me at (928) 734-1151.

Sincerely,

A handwritten signature in black ink, appearing to read "Lori Joshweseoma MPH". The signature is written in a cursive, flowing style.

Lori Joshweseoma MPH, Director
Hopi Women's Health Program

APPENDIX D



Leroy Shingoitewa, Jr.
Chairman

Herman Honanie
Vice Chairman

January 15, 2010

Sylvia R. Brown, PhD, MPH
Div of Epidemiology & Biostatistics
University of Arizona COPH
1295 N. Martin
BLDG 202A - Room A220
PO Box 245211
Tucson, AZ 85724-5211

Dear Dr. Brown,

This letter serves as an endorsement from the Hopi Women's Health program to partner with the University of Arizona and Northern Arizona University on the project entitled "Cancer Knowledge and Risk Factors of the Hopi Tribe" to determine the knowledge, attitudes, beliefs and behavior about cancer related risk factors of the Hopi people..

The ongoing partnership which has been established between the university and the Hopi Tribe has been beneficial to the Hopi Tribe. First, the collaborative effort to analyze program data was successful and the Hopi Women's Health Program was able to use this data to obtain a five year grant to provide breast and cervical cancer screening. Second, the program was able to identify key focus areas to meet the needs of the community in the area of breast and cervical cancer. In addition, the project to assess the cancer burden on Hopi allowed the community to identify which cancers need to be addressed in the community in regarding to education and screening. These projects prove the collaborative efforts between the University and the Hopi Women's Health Program is instrumental in assisting the Hopi Tribe in reducing the burden of cancer among our people.

The Hopi Tribe looks forward to collaborating with you and your team in generating information about cancer and to train staff to continue this longitudinally tracking for changes on Hopi with regard to cancer.

Sincerely,

A handwritten signature in black ink, appearing to read "Lori Joshweseoma".

Lori Joshweseoma MPH, Director
Hopi Women's Health Program

P.O. Box 123 Kykotsmovi, Arizona 86034

APPENDIX E



Sylvia R. Brown, PhD, MPH
Div of Epidemiology & Biostatistics
University of Arizona COPH
1295 N. Martin
BLDG 202A - Room A220
PO Box 245211
Tucson, AZ 85724-5211

Leroy Shingoitewa, Jr.
Chairman

Herman Honanic
Vice Chairman

Dear Dr. Brown,

I write this letter in support of the proposed project, "Cancer Knowledge and Risk Factors of the Hopi Tribe". The Hopi Women's Health Program (HWHP) has established a strong partnership with the University of Arizona and Northern Arizona University through projects that have enhanced the Hopi Women's Health Program in the area of cancer. In addition, the past projects with these partners have greatly supported the Hopi Tribe's efforts in receiving grants from the Centers for Disease Control, the Arizona State Health Department, and the Susan G. Komen Foundation.

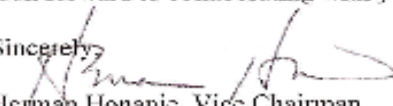
The proposed project will assist the Hopi Tribe in taking a look at the knowledge, attitudes, beliefs and behavior about cancer related risk factors of Hopi people and will train Hopi staff to longitudinally track changes on Hopi with regard to cancer.

I have great faith and confidence in our Women's Health Program staff, under the capable and competent leadership of Ms. Lori Joshweseoma, Director, that the health of our Hopi people will be enhanced through this effort. With the growing concern among Hopis regarding cancer, this project will support and enhance our ongoing efforts to raise awareness of the importance of and access to preventive cancer screening.

In addition, several programs within the Office of Health Services have had both formal and informal dialogues with the University of Arizona, the relationships have always been positive and representatives have all been very professional and trusting. A recent visit by President Shelton to Hopi stating, his vision of working with the Hopi Tribe and the University of Arizona is only a matter of the two entities coming together to work for a cause in behalf of Hopi, this project underscores his vision.

As the Vice Chairman of the Hopi Tribe, I offer my strong and favorable support of this project. We look forward to collaborating with you in your work to improve the health of our Hopi Community.

Sincerely,


Herman Honanic, Vice Chairman
The Hopi Tribe

P.O. Box 123 Kykotsmovi, Arizona 86034