OMB No. 0925-0001 and 0925-0002 (Rev. 10/15 Approved Through 10/31/2018)

BIOGRAPHICAL SKETCH

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

NAME: Bauer, Mark C

eRA COMMONS USER NAME (credential, e.g., agency login): MCBAUER

POSITION TITLE: Faculty Member, Public Health, Science Department

EDUCATION/TRAINING (Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.)

| INSTITUTION AND LOCATION | DEGREE(if applicable) | Completion DateMM/YYYY | FIELD OF STUDY |
| --- | --- | --- | --- |
| Ohio State University, OH | BA | 1971 | Anthropology (Honors) |
| Northwestern University, Evanston, IL | MA | 1973 | Anthropology |
| Northwestern University, Evanston, IL | PhD | 1983 | Anthropology |
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A. Personal Statement

Prior to my involvement in the school gardening intervention proposed here, I conducted survey research to assess gardening behaviors, needs, and readiness to change among individuals in the Navajo chapter areas where this proposed research will be conducted. One as yet unpublished finding of that survey is that gardeners in these communities consume two more servings of fruits and vegetables daily than those who are not gardening (by 24-hour dietary recall measure). An intervention to support home gardens for 30 families in these same areas has allowed piloting of pre/post measures of change in knowledge, confidence and behavior in gardening and healthy eating. This work, done in collaboration with the partners in this new proposed project (Lombard & Beresford), prepared me to participate in the evaluation of the impact of the proposed school garden project on participating families.

My ability to direct research efforts on the Navajo Nation has been established through over 35 years as a member of the Diné College faculty teaching in the Division of Science and Math. I developed a highly successful Summer Research Enhancement Program to teach public health research methods to undergraduate Navajo students and support their participation in internships in a variety of programs serving Navajo communities in areas of diabetes and cancer prevention, and promotion of wellness in general. In sixteen years this program has engaged more than 200 undergraduate American Indian students in learning and applying quantitative and qualitative research skills. Through the practicum placement of these students, I have developed trusted partnerships with tribal and IHS health programs. I have been a leader in expanding opportunities for Navajo students through course and program development in collaboration with research intensive institutions. I serve on the Navajo Nation Human Research Review Board and several Navajo Division of Health-IHS-Diné College working committees designed to yield collaborative solutions to addressing the Navajo Nation’s epidemiological and public health planning needs. I have conducted health research projects with NIH funding in areas of diabetes management and cancer screening, and with USDA funding in the area of nutrition, availability and affordability of health foods in trading posts and convenience stores on the reservation, the nutrition status of Head Start children using 24-hour dietary recall with their caregivers, and focus group research on barriers faced by parents of young children trying to provide nutritious meals to their families.

**B. Positions and Honors**

**Positions and Employment**

1981-**present** Faculty Member, Science, Mathematics and Technology, Diné College (formerly Navajo Community College), Shiprock, NM.

1983-2000 Chairperson, Math/Science Department, Diné College, Shiprock, NM.

1985 Summer Session Faculty, Northwestern University, as Assistant Director of the Field School in Cultural and Linguistic Anthropology (on the Navajo Reservation).

2004-2009 Adjunct Faculty, University of New Mexico, Public Health/Biostatistics.

**Honors**

1967-1971 Alfred P. Sloan Foundation Scholarship.

1971 Phi Beta Kappa Scholastic Honorary.

1971-1972 Northwestern University Fellowship.

1987 Award for Outstanding Faculty Member 1986-87 Navajo Community College.

2003 Recognition for commitment to Navajo Studies, Presented at the Fourteenth Annual Navajo

 Studies Conference, April 2003.

2005 Faculty of the Year, Dine College.

2010 Training Award given by the Native Research Network “to recognize the training program

 that demonstrates excellence in recruiting, retaining and training Native investigators to

 engage in Native Health Research”

2015 Faculty Member of the Year, Diné College, Award from American Indian College Fund

## Other Experiences and Professional Memberships

American Public Health Association

Navajo Nation Human Research Review Board (2006 to present)

# C. Contributions to Science

1. From my position on the faculty of Navajo Community College (now Diné College), I teamed up with medical anthropologist Anne Wright who was working in a research program on pediatric pulmonary health at the University of Arizona Medical School to execute a series of funded research projects to assess infant health and infant feeding practices on the Navajo Nation. At that time it was known that breast feeding was associated with lower rates of certain respiratory illnesses in infants. Our research established how infant feeding decisions are made by Navajo women, showed that a well-designed multi-level intervention could raise breast feeding rates, and that such an increase was associated with a significant lowering of some respiratory and gastrointestinal illnesses.

Wright, Anne and **Mark C. Bauer**. 1992. The Social Context of Navajo Infant Feeding Behaviors. In Mechanisms Regulating Lactation and Infant Nutrient Utilization. Wiley-Liss Publishing Co., New York.

Wright, A., **Bauer, M.C.**, Clark, C. & Morgan, F., Begishe, K. (1993). Cultural Interpretations and Individual Beliefs Regarding Breastfeeding Among the Navajo. American Ethnologist, 20(4), 781-796.

Wright, Anne L., Clarina Clark & **Mark C. Bauer**. (1993). Maternal Employment and Infant Feeding Practices Among the Navajo. Medical Anthropology Quarterly, 7(3), 260-80.

**Bauer, Mark C.** & Anne L. Wright. (1996). Integrating Qualitative and Quantitative Methods to Model Infant Feeding Behavior Among Navajo Mothers. Human Organization, 55(2), 183-92.

Wright, AL, **Bauer M**, Naylor A, Sutcliffe E & Clark L. (1998). Increasing breastfeeding rates to reduce infant illness at the community level. Pediatrics, 101(5):837-844.

1. Several of my research efforts have focused on health disparities driven by lifestyle and personal decisions regarding compliance with medical and public health advice in managing chronic health conditions. These projects have demonstrated how tribal college faculty working within a community can partner with researchers at universities to combine qualitative and quantitative methods to understand the demographic, cultural and behavioral issues involved that may differ from other populations that have been studied. My most extensive efforts have been in the area of diabetes management, where qualitative interviews helped to identify particular styles of family support that in subsequent quantitative work proved to be associated with improved physiologic measures of successful control. This work has informed local efforts to include family support in developing interventions for Navajo people struggling with diabetes.

Sugarman, J.R., **Bauer, M.C.**, Barber, E., Hayes, J., Hughes, J. 1993. Factors Associated with Failure to Complete Treatment for Diabetic Retinopathy Among Navajo Indians. Diabetes Care, Vol. 16, Supplement 1.

Epple C, Wright AL, Joish VN & **Bauer MC**. (2003). The Role of Active Family Nutritional Support in Navajos’ Type 2 Diabetes Metabolic Control. Diabetes Care, 26(10), 2829-34.

Cunningham-Sabo, L, **Bauer, M**, Pareo, S., Phillips-Benally, S., Roanhorse, J. & Garcia, L. (2008). Qualitative Investigation of Factors Contributing to Effective Nutrition Education for Navajo Families. Maternal and Child Health Journal, 12(Sup 1), 68-75.

Kathleen Yost (Mayo Clinic), **Mark Bauer**, Linda Garcia, Christine Hughes (Mayo Clinic), and Christi Patten (Mayo Clinic). (2016). Adapting a Cancer Literacy Measure for Use among Navajo Women. *Journal of Transcultural Nursing* 1–8.

1. My career in teaching Navajo undergraduate students at a tribal college and introducing them to research has led to the development of a summer research training program that is designed from a Navajo cultural framework, is integrated into the public health associate degree and certificate programs of the College, and has served 200 students over 16 years. The program has been a robust platform to demonstrate teaching effectiveness and to pilot new approaches, most recently to integrate concepts of individual and community *resilience* in positive asset-based approaches in the pedagogy and in the research experiences to strengthen students and contribute to the community health programs that they serve.

Garrison, Edward R. **Bauer, Mark C**., Hosley, Brenda L., Patten, Christi A. , Hughes, Christine A., Trapp, Mary A., Petersen, Wesley O., Austin-Garrison, Martha, Bowman, Clarissa N., & Veirkant, Robert A. (2010). Development and Pilot Evaluation of a Cancer-Focused Summer Research Education Program [for] Navajo Undergraduate Students. Journal Cancer Education, 25(4), 650-8. PMCID: PMC2992578

**Mark Bauer**. Connection and Community: Diné College Emphasizes Real-World Experience in Public Health. *Tribal College Journal*, Vol. 27, No.4, Summer 2016.

D. Research Support

Ongoing Research Support

NIMHD 5P20MD006872 Sanderson (PI) 8/28/12 -2/28/18

*Center for American Indian Resilience*

Exploratory Center of Excellence (P20) to advance resilience research, education and application to reduce health disparities, including enhancing summer internship programs at Diné College.

Role: Principal Investigator for Diné College subcontract from Northern Arizona University

NIMHD 2P60MD000507 Manson (PI) 8/23/12 -12/31/17

*Center for American Indian and Alaska Native Health*

Center of Excellence(60) to implement research capacity-building specific to improving the health and well-being of AI/AN people, including mentoring and training programs for undergraduates at Diné College.

Role: Principal Investigator for Diné College subcontract from University of Colorado Health Sciences

SAMHSA MCI-CBO H79SP020635 Donald Chee (PI) 09/30/14 – 09/29/2017 *Integrated HIV/AIDS & Substance Abuse Prevention for the Navajo Nation*

The project joins forces with the Navajo AIDS Network to provide culturally-appropriate substance abuse and HIV and HCV prevention services, increase SA and HIV awareness on the campuses of TCUs and their surrounding communities, and increase HIV testing among AI/AN populations.

Role: Co-PI

USDA NIFA 2015-38424-22671 Mark C Bauer (PI) 12/01/2014 – 11/30/2017

*An Intervention to Promote Navajo Gardening, Nutrition, and Community Wellness.*

Project aims to increase access to vegetables in Navajo communities through an intervention designed to promote gardening activities.

Role: PI

NSF TCUP 1H79SPO20635 Donald Robinson (PI) 09/15/2015 – 08/31/2020

*STEM 2020 for Diné College*

To design, implement, and assess new academic programs and services in STEM-related fields through place and inquiry-based approaches.

Role: Co-PI

Completed Research Support

AIHEC NARCH Project Carrie Billy (PI) 3/1/2014 – 12/31/2-16

*TCU Behavioral Health Research Network: Community-Based Behavioral health Research and Education at Diné College*

Project to engage student researchers, public health and behavioral health faculty in developing a research project to determine the health risk and protective factors for the tribal college student body and develop outreach projects to address them.

Role: Project Lead at Diné College

USDA/NIFA 2011-38424-30757 Bauer (PI) 11/01/2011 – 2/28/2014

*Navajo Gardening, Nutrition and Community Wellness*

This community-based participatory research project gathered community assessment data to plan interventions to promote wellness through gardening and nutrition in the Navajo Nation

Role: PI

NIH/NCI 1R21CA152433 Patten (PI) 11/29/2010 – 8/31/2014

*Family Cancer Literacy to Promote Mammography Screening Among Navajo Women*

Research project (R21) to determine efficacy of a family literacy approach to increasing screening rates among Navajo women.

Role: Principal Investigator for Diné College subcontract from Mayo Clinic