

THE OSAGE NATION

# <u>Food Resource Equity and</u> <u>Sustainability</u> for <u>H</u>ealth "FRESH" Study

Presentation to Intervention Research to Improve Native American Health Group National Cancer Institute, Rockville, MD May 30, 2017 Valarie Blue Bird Jernigan, DrPH, MPH Valarie-Jernigan@ouhsc.edu

#### Acknowledgement and Gratitude for our Partners



# THE OSAGE NATION



National Institute on Minority Health and Health Disparities



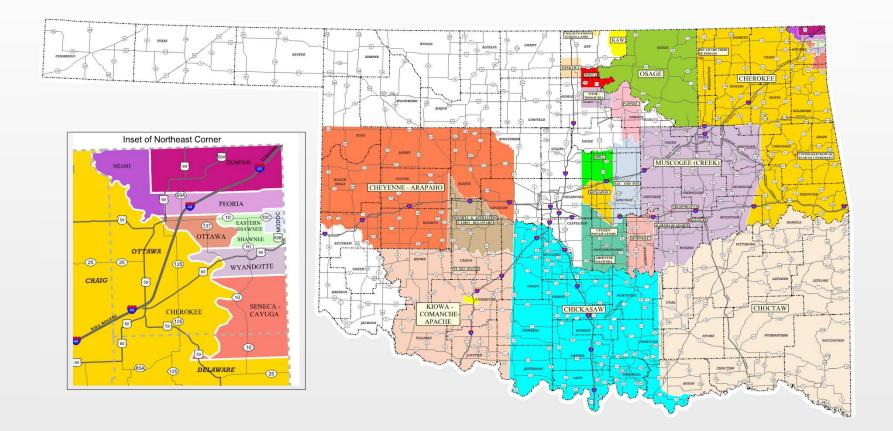
**Osage Nation** 

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Thanks to our partners for making this work happen!

## **Oklahoma Tribal Nations**





#### **Partnership History**

- Conversations with Gail Boe, MS, Director, Communities of Excellence, Osage Nation
- Osage interested in building upon Bird Creek Farm initiative (developed in 2015)
- Bird Creek Farm Goal: Create a sustainable tribal food system

**HEALTHY PEOPLE** 

 Preliminary work: Jernigan et al.
 "Assessing Feasibility and Readiness to Address Obesity through Policy in American Indian Reservations." Journal of Health Disparities Research and Practice 9.3 (2016): 168.



Finally, we have a way to do what we did 200 years ago...feed our own people. ""

- Raymond Red Corn, Osage Nation Assistant Principal Chief



## **Study Aims**

- Aim 1: Characterize the Osage reservation food environment, using both objective and perceived measures, and assess the correlation of the food environment with prevalent obesity, hypertension, and diabetes.
- Aim 2: Develop a culturally relevant, multilevel, multicomponent community gardening intervention and evaluate its efficacy in increasing vegetable and fruit intake (primary outcome) and reducing food insecurity, BMI, and blood pressure (secondary outcomes) among 250 Osage families (total n=500).
- Aim 3: Create and disseminate a Web-based multimedia manual and documentary film, and evaluate their effectiveness in increasing tribal readiness and capacity to improve tribal food environments.

#### Conceptual model of potential effects of a community farm/garden<sup>1</sup>

INTERVENTION	PROXIMAL EFFECTS	DISTAL EFFECTS
Garden Site and Gardening Activities Formal Curriculum: "Hands-On" Education in Gardening, Healthy Eating and Cooking Family Involvement in Gardening Activities	<ul> <li>Family-Level</li> <li>Exposure to fresh produce</li> <li>Positive attitudes toward eating produce</li> <li>Community-Level</li> <li>Aesthetic improvement</li> <li>New settings for youth to play and</li> </ul>	Family-Level         • Higher intake of fresh produce; potential obesity and chronic disease prevention <u>Community-Level</u> • Increased pride in community         • Sustainable fresh produce         • Community food security; food
	Interact  Family-Level  Nutrition and cooking knowledge  Knowledge of traditional growing and gathering practices	sovereignty           Family-Level           • Improved nutritional intake linked to lower obesity and chronic disease risk
	Meso-Level  Presence of families at garden  Family-Level  Families increase knowledge in areas of nutrition, food systems, and food sovereignty	Meso-Level         • Strengthening of tribal community, collective efficacy, social networks; food security; food sovereignty         Family-Level         • Changes in family consumption patterns; improved nutritional intake; household food security

<sup>1</sup>Adapted from Ozer et al. Health Education & Behavior 34.6 (2007): 846-863.

## **Progress to Date**

- Aim 1. Assessing the food environment and its relationship to health
  - Status: environmental and policy level assessments completed; individual level to be completed with Aim 2 baseline data collection

#### Aim 2. Develop culturally relevant community gardening initiative and assess its impacts on health

#### • Status:

Environmental level - food systems inventory completed; beds built and planting underway for gardening and menu sourcing

Policy – school menus programmed, sourced with local foods; cooks training developed

Individual -- Adapted child and adult curricula; communities randomized; currently under tribal and OUHSC IRB review; enrollment begins mid June



# • Aim 3. Web-based manual and documentary film

• *Status:* Filming underway

## **Challenges and Opportunities**

- Opportunities: Focus on policy, systems, environmental change championed by leadership; community is activistminded, highly engaged, strong
- **Challenges:** Little to no infrastructure with regards to health care/health systems, high staff turnover, site PI medical leave, truncated year limited "getting to know each other" process
- Strategies employed: Careful inventory of existing programs, to build upon capacity and tribal priorities, forge partnerships with diverse departments within the Nation to provide needed infrastructure support, leverage leadership support through "Executive Committee" formation, in-person meetings every 3 weeks