



## **Cherokee Nation Health Services Public Health Report – June/July 2019**

### **ACCREDITATION:**

- Public Health staff preparing for Public Health Accreditation Board (PHAB) reaccreditation in 2021:
- Strategic Plan – completed in January 2019
- Tribal Health Assessment – In process, completion date December 2019
- Tribal Health Improvement Plan – Initiation in December 2019
- Updated documentation of compliance with PHAB standards and measures – In Process
- Performance Management and Quality Improvement Plan – Initiation in January 2020
- Workforce Development Plan – Initiation in January 2020

### **MONITORING & SURVEILLANCE:**

- Completed CDC Youth Risk Behavior Survey at 100% participation (CDC sample) – expect results in Fall of 2019
- Completed Cherokee Nation Health Survey – 4,100 participants – public health team reviewed the preliminary data on July 26<sup>th</sup> – full report expected for public release in September 2019
- New report on cancer burden in the Cherokee Nation was presented to public health staff by student from University of Oklahoma Hudson School of Public Health on July 25<sup>th</sup> - full report expected for public release in September 2019
- Continue to develop and work with BHS on Opioid Use Disorder Response Plan
- Tribal Health Assessment Qualitative Project – progress
- Lynn Institute completed Stilwell community to review/collect quantitative & qualitative data:
  - 41 key-informant interviews conducted
  - 480 plus online surveys via social media
  - County comparison data completed/History and inventory of community assets completed
  - Lynn Institute staff to present preliminary findings to public health staff in early August 2019
  - Final report being drafted expected in late August 2019

### **INFORM, EDUCATE, & EMPOWER CHEROKEE COMMUNITIES**

Public Health Educators community outreach:

All Public Health Educators participate in the following activities. Highlights of individual county work are listed below:

- Wings Fitness Club- 8,370 active members Active Wings Members with a total of 4,233 participants in Wings races for 2019
- Healthy Native Race Series – 318 participants enrolled in the program with approximately 60% projected to finish with their goal amount of races completed by August
- Traditional Practices -Stickball/Marbles Presentation and Games: scheduled for each quarter at every facility/community with staff
- Healthy Native classes (DPP) – 12 classes in 2019 with 73 participants and 677.6 pounds lost – Two additional class coaches were certified in July 2019
- Smoking Cessation - ongoing by clinic/district
- School Diabetes Projects: BMI's, School Health Index, school-specific projects – planning for fall projects.

- Developing a Cherokee Nation Seed Bank and Native Plant Informational Guide
- Summer Camps – PHE’s organizing or assisting at all clinic-based camps
- Public Health Educator hired for Ochelata Clinic – first time to have staff dedicated to that clinic
- Developed digital stories in Cherokee language in partnership with Cherokee Language Master Apprenticeship Program

#### **Adair County:**

- Stilwell Open Streets on June 22, 2019 had 18 sponsors and 25 vendors with 250 participants and 116 surveys collected
- Rocky Mountain School has agreed to implement Students Working Against Tobacco (SWAT)
- Healthy retail signs given to Cherry Tree Grocery and CN Food Distribution
- Summer Cultural Day planned for Rocky Mountain School for July 31<sup>st</sup> for children grades 1<sup>st</sup>-6<sup>th</sup>
- Rocky Mountain School – hosted cultural day with basket weaving, pottery, Stickball, marbles, and blowguns and lessons on healthy eating – 17 participants and 9 volunteers
- Adair County PHE’s for TSET (Tobacco Settlement Endowment Trust) partnered with OSU HOP (High Obesity Population) to paint crosswalks, new and existing, at Stilwell Grade School and Middle School. During this project, it was noticed that a street that students cross daily to get to their afterschool program was not a 4-way stop. This issue was brought to the City Council’s attention and on July 1<sup>st</sup> at the monthly meeting it was voted to have the intersection turned into a 4-way to maximize student safety.
- Workgroups for the Adair County Community Health Coalition were held this month. During these meetings there was a debriefing of the Open Streets Event, preparation for the upcoming Freedom Run 5K, and begin setting goals for the new season. There were 6 people in attendance for this meeting. Coalition will meet again in September 2019.
- Met with Mid County Community who are trying to bring more traditional events such as food demonstrations and cooking classes as well as games for the community members. Community wants to implement a community garden open to the public. Community discussing passing policies related to healthy living at their next meeting.
- Provided a presentation for 35 CN Head start teachers regarding the importance of self-care and instruction on classroom games and calming activities.
- Met with Westville Librarian to discuss the possibilities of forming a healthy lifestyle and policy partnership.
- Sequoyah Baptist Church in Stilwell signed a Wellness Policy and are working on a Tobacco-Free policy and requested a partnership to contribute more in the community by hosting events or demonstrations for healthier lifestyles.
- Met with the Westville Town Clerk to develop a tobacco ordinance and wellness policy that was passed on July 1<sup>st</sup>, 2019 by the town council. We are working with the town to apply for funding from the TSET Community Incentive grants. Staff are assisting in the development of a wellness team and other needed policies and ordinances to be eligible for funding.
- Staff in conversations with Stilwell Mayor regarding resolutions and policies needed to apply for the TSET Community Incentive grants. The council will hear policies on August 5<sup>th</sup> regarding wellness for staff, Safe Routes to School, Complete Streets, and Farmer’s Market land use. Staff will attend the city council meeting to answer any questions in regards to proposed policies.
- Met with pediatrician at Wilma P. Mankiller Clinic to start a Wellness Program on August 14, 2019 for kids needing assistance with wellness/health.
- Met with Make-A-Wish Foundation to plan volleyball tournament for August 3<sup>rd</sup> at the Stilwell rodeo grounds.

- Started Wellness Program at Sequoyah Baptist Church with 6 people participating. They plan on having a healthy snack night and dinner to exchange recipes and ideas. Also, they would like to start walking/physical activities after church or before.
- Participated in Back Pack giveaway on July 25<sup>th</sup>, 2019 at Carson Park – did traditional games (blowguns) with 53 participants

#### **Cherokee County:**

- WWH Walking Group with 21 participants and 750 miles over 9 weeks
- Little Big Steps Walking program completed at WW Keeler Complex with 10 participants
- Two Healthy Native Classes (DPP) with a total of 16 participants
- Smoking Cessation class to begin in August 2019
- Walking Group at Hulbert City Park started meeting on Tuesdays at 530 pm on June 25<sup>th</sup> and will go through August 13<sup>th</sup>
- Traditional Foods (Blackberry Tasting) at WWH with 49 participants taste testing store-purchased vs. wild berries
- Mental Health Awareness Day at Norris Park
- Planning a downtown Tahlequah 8 week walking group co-sponsored with local community coalitions beginning in September 2019
- Hosted a blackberry tasting at the Financial Resources break room on July 2nd with wild blackberries and store bought blackberries. We had participants put a sticker by what blackberry they preferred and had 21 completed surveys.
- Hosted a Traditional Games event of Blowguns at the Mid-week Farmer's Market on July 31st. We had 10 surveys completed and lots of children participating.
- PHEs attended a walk with the Mayor and several other community partners to discuss the proposed walking trail connecting two of our city parks.
- PHEs attended OSU Opioid Epidemic Response on July 26th in Tahlequah.

#### **Muskogee County:**

- Healthy Native Program continues with 7 participants with a total weight loss of 102 lbs participating in 6-month maintenance class through December 2019. A new Healthy Native Program will begin August 14 at 5:30pm at Three Rivers Health Center in the 2<sup>nd</sup> floor conference room.
- Smoking cessation class beginning August 28, 2019 at the Honor Heights Towers in Muskogee County.
- Traditional Food activity involving organic raw vegetables at the Muskogee Farmer's Market taste testing Cherokee traditional fruits and vegetables with 65 participants.
- Walking/running group on meets at CN Three Rivers Health Center at 5:45 am with 10 participants. This will be a 9-week event meeting twice a week ending on September 19, 2019.
- Running/Walking 101 partnering with Soul 2 Sole meets at Fort Gibson High School with 23 participants.
- Grill Crazy Event at Muskogee Farmer's Market – 150 participants
- Muskogee County Turning Point – CN Public Health Educator Ben Buckskin is board member and working on Bike Share program, Food Insecurities Subcommittee, and Healthy Retail Resolution Task Force
- Planting the employee garden located at Three Rivers Health Center with 40 plus plants and 21 employee volunteers from TRHC to help with the garden for 2019.
- Provided physical activities for Project Transformation at St. Paul United Methodist Church in Muskogee with OSU Extension for 63 students.
- Muskogee Wellness Initiative was held at Muskogee County Health Department discussing tobacco sales to minors with possible increases in fines for sales to minors. Community garden group is working on a fruit tree for Muskogee Recreational Center. Healthy Retail Resolution Task Force update provided with a possible roundtable discussion in spring 2020 for healthy living in Muskogee, OK.

- Golden Rule Industries – CN Public Health Educator Ben Buckskin is Vice President of the Board of Directors. Golden Rule (GRI) Board of Director's meeting held in Muskogee. GRI has entered into an agreement with VA Compensated Work Therapy Program and will have a direct hiring link for Veterans with disabilities.
- Attended Inter-Agency Council meeting located at the Muskogee Public Library with ten different agencies represented in Muskogee County. Discussion included flood assistance, domestic abuse victim assistance and homeless citizens of Muskogee County.
- Public Health Educators, PHE supervisor, and Three Rivers Health Center dietitians met with Councilor Mike Dobbins to discuss improving employee/community wellness

#### **Sequoyah County:**

- Completed Healthy Native Class with participants losing a total of 189 pounds – next classes will be the 6 month maintenance phase
- Smoking Cessation class scheduled to start August 14<sup>th</sup>, 2019 at Redbird Smith Health Center
- Traditional Food Demonstration – group gathered Cherokee traditional plants and made Kochani greens, Stingy nettle tea, and vegetable soup with Stingy Nettle – 11 participants
- Summer Camps for youth at Cultural Center and Redbird Smith Health Center – 28 participants
- PHE has scheduled a walking/running group for August 13<sup>th</sup> – October 31, at Muldrow City Park, 8am
- Redbird Smith Health Center walking group meets at 6am Monday – Friday at clinic employee gym
- Traditional games event (Blowguns) in Gore on August 17, 2019 at back to school bash.
- Assisted the Boys and Girls Club of Sequoyah County with their monthly fundraiser.
- Partnered with the United Way and Boys and Girls Club of Sequoyah County and assisted with the "Fill the Bus" school supply drive in Sallisaw.
- Met with Ki Bois Community Action and discussed plans for the Redbird Smith 5K and Ki Bois' Back to School Roundup.
- Sallisaw Farmer's Market active on Saturday and Wednesday until Fall
- Assisted with Brushy food truck give-a-way with 100 families are given produce including honey dew, melons, nectarines, carrots, and potatoes.
- Redbird Smith Health Center Community Garden has produced the following during July:
  - Tomatoes 71.2 lb.
  - Peppers 2.4 lbs.
  - Polk salad 1.4 lbs
  - Cucumbers 55 lb.
  - Okra 1 lbs.
  - Watermelon 10 lbs.
  - Squash 7 lbs

#### **Mayes/Rogers County:**

- Healthy Native Class is starting to meet on a bi-weekly basis and the 3 participants have lost a total of 60 pounds.
- Counseled with 7 patients for smoking cessation
- Hosted Cherokee Stickball prior to the June 8<sup>th</sup> Wings race
- Summer Camps for youth held at AMO Salina Clinic with 40 participants
- Recruiting mentors for the Mayes County Fit walking/running club for September 2019.
- Rogers County Fitness completed spring session with 27 participants
- Continue work with Mayes County HOPE community organization
- Walking group to start at Salina City Park in September 2019.
- Provided physical activity for Women's Health Day at AMO Salina Clinic
- Introduced Stickball to 30 Pryor Boys and Girls Club Members North Campus.

- AMO/Salina Health Clinic hosted the Oklahoma Blood Institute with a total of 26 individuals.
- Participated in community clean-up efforts at the Salina City Park during the month of July.
- Drug Reduction Outreach Program [DROP] met in Pryor to discuss its upcoming events

#### **Delaware/Ottawa County:**

- Healthy Native classes going on at the Sam Hider Health Center and in the Kenwood Community.
- Finished a one on one smoking cessation class and the participant was successful
- Coordinated a Marble game at the Jay City Park.
- Summer Camp for youth held at Sam Hider Health Center June 19-21 with 28 participants
- NEOCCA Garden Project with Jay Club to tour facility – 70 youth in attendance
- Coordinated a Blackberry Dumplings tasting at the Sam Hider Health Center ; gathered blackberries and prepared for demonstration. Patients and staff were welcomed and the response was overwhelming.
- Head Start parent meeting discussing second-hand smoke, e-cigarettes, smoke-free cars, and smoke-free housing with parents
- Men's Health Event – cancer screening information for colorectal cancer given to 90 participants  
Attended Delaware County Community Partnerships (DCCP) in Kansas. Working on Opioid Summit and upcoming Cook's Training and donations for August 2019.
- Kenwood School resource fair – handed out Wings applications and smoking cessation, healthy eating, and skin cancer prevention materials
- Gathered blackberries and made cobbler for Cherokee Phoenix story
- Assisted with Opioid medication surveys at the Sam Hider Health Center and anyone who participated received a \$10 gift card for their time with 55 surveys completed.

#### **Craig, Nowata, Washington County:**

- Traditional Games and Practices – event on June 10 featuring stickball, Cherokee marbles, Game of Graces, blow darts, pottery, and baskets with 24 youth in attendance
- Smoking Cessation class advertised and offered starting this date. One participant in attendance so just conducted an individual session. Topics of discussion included individual readiness to stop smoking, making a plan, 3-link chain of addiction, program topics, benefits of quitting smoking, class registration, personal reasons to stop smoking, and nicotine replacement therapy options available through Cherokee Nation pharmacy formulary.
- Met with PHE for Washington County and discussed PHE Work Plans and activities, report due dates, program specifics, getting involved in the community, relationship building, and other topics
- Traditional Food demonstration – grape dumplings, skillet bread tacos, and 3 Sister's stew – 24 youth and Vinita clinic staff
- Summer Camps for youth at Vinita Health Center June 10-12 and June 19-21 with 28 youth in attendance -Cherokee Nation Communications produced a video regarding the youth camp –
- Kid's Farmer's Market hosted on June 29 with 100 plus in attendance
- Grand Nation meeting to discuss community gardens from Hope Road to alleyway behind Grand Nation and 2<sup>nd</sup> Chance Employment
- Attended Grand Nation Meeting in Vinita. ~25 in attendance from a variety of community service agencies. Topics of discussion included the importance of self-care for workers and responders.
- Craig County Local Emergency Planning Committee monthly meeting. Topic of discussion was After Action Report and Improvement Plan recommendations from the annual community drill held on June 18, 2019. ~18 in attendance from Craig County.
- Vinita Rotary Club Meeting. Average attendance of 35 community members with a variety of professional backgrounds and interests. Weekly meeting topic presentations. Networking opportunities.
- Attended Community Committee Meeting at Cherokee Nation Vinita Health Center. Representatives from Administration and Public Health Nursing also present. Discussed activities and events.

- Attended Safety Committee meeting at Cherokee Nation Vinita Health Center.
- Continued community garden maintenance at Vinita Health Center. The 3 raised bed gardens are producing nicely, and the produce is being utilized in educational classes and enjoyed as a community garden by patients and residents. Produce includes zucchini, squash, 2 kinds of peppers, a variety of different kinds of tomatoes, and cantaloupe.

### **DEVELOP & SUPPORT PUBLIC HEALTH POLICY**

- Attended National Indian Health Board (NIHB) Executive Committee meeting to discuss tribal public health infrastructure and do congressional visits with NIHB.
- Working with Seven Directions Indigenous Public Health Institute to deliver the Public Health/Health Care Delivery Integration model and the Tribal Public Health Governance Model due in Fall 2019
- Sr. Director continues to serve as the Authorized Representative for the CDC Tribal Advisory Committee – planning for summer meeting to be held in Cherokee, NC in August of 2019
- Oklahoma Strategic Tribal Alliance for Health (OSTAH) Meeting held in Tahlequah. This committee is facilitated by Comprehensive Cancer Control project and has 20 internal and community partners. Quarterly Meeting in July 2019 included discussion of the final revision of the new/updated Comprehensive Cancer Control Plan, breast and cervical screenings, HPV focus groups, School grants, Tobacco control program, and nominations for vacant workgroup chair positions. The 5 OSTAH workgroups met and reviewed goals and strategies. The workgroups consist of: Prevention, Screening, and Early Detection; Tobacco Use and Exposure; Quality of Life, Treatment and Care; Media; and Data and Evaluation.
- Meeting with OK State Representative Danny Sterling (District 27) and Representative Sherrie Conley (District 20) by request to discuss possible legislation to require physical fitness assessments for all 4th and 5th graders in Oklahoma. Rep. Sterling requested tribal input on working in schools on health programs and our impression of the legislation. Next meeting is scheduled for 8/15/19.

### **LINK CHEROKEES TO NEEDED HEALTH SERVICES**

- WIC's Caseload for June 2019:
  - Infants 1,767
  - Pregnant Women 672
  - Breastfeeding Women 252
  - Postpartum Non-BF 553
  - Children 2,980
  - TOTAL **6,224**
- WIC's Caseload for July 2019:
  - Infants 1,770
  - Pregnant Women 702
  - Breastfeeding Women 249
  - Postpartum Non-BF 557
  - Children 2,992
  - TOTAL **6,270**
- Currently WIC has five (5) open positions:
  - Regular-full time WIC Specialist position in our Three Rivers WIC Office
  - Regular-full-time Clerk III for our Vendor-administrative area
  - Regular-part time Peer Counselors for Tahlequah (2 positions)
  - Regular-full time Information Technology position for Tahlequah administrative office
- WIC staff attended several community activities in July. WIC staff set-up and handed out WIC information, education and promotional items:
  - Children Farmer's Market in Tahlequah

- Cherokee Nation Night at the Tulsa Drillers game
  - Early Childhood/Head Start Meeting in Jay
- The CCC program is potentially partnering with the Stephenson Cancer Center to bring a mobile mammography van in Washington County. The CCC program director and Stephenson Cancer Center met with Cooweescoowee clinic director and medical director to discuss bringing the mobile mammography van to Cooweescoowee clinic and offering mammograms for women in Washington County who do not qualify for the Breast and Cervical Cancer Early Detection program. The van can accommodate 140 screening mammograms in 2019-2020. Stephenson Cancer Center was awarded another year of funding from the Susan G. Komen Tulsa affiliate to provide screenings for American Indian/Alaskan Native women. Stephenson Cancer Center representative explained that the van hosts two events per year. One event would take place in the fall and the other event would take place at the first of the 2020 year.
- Breast and Cervical Cancer Early Detection (BCCEDP) June/July 2019:
  - Breast Screening – 200
  - Cervical Screening – 123
  - Program still working on quality improvement project with Wilma P. Mankiller Health Center identifying women not current for breast and cervical screening and conducting follow-up with those patients to schedule appointments and assess barriers to screening.
- Community Recreation Center:
  - Total Members: 10,537
  - Revenue: \$2,845.00
  - Total Visits: 6,182
  - Total Group Fitness: 3,148
  - Total Child Watch: 557
  - PT Bridge Program for 2019: 49 patients to date
- Community Recreation Center for July 2019:
  - Total Members: 10,652
  - Revenue: \$3,100.00
  - Total Visits: 6,452
  - Total Group Fitness: 3,396
  - Total Child Watch: 617
  - PT Bridge Program for 2019: 49 patients to date

## **EVALUATE PUBLIC HEALTH SERVICES**

- HPV vaccination project received approval for Comprehensive Cancer Control's proposal, "Perceptions and Attitudes towards HPV Vaccination among Parents of Adolescents", from CN's Institutional Review board. The Focus groups are in progress with 6 completed with 36 participants. Please see schedule of remaining groups below:
 

RSHC	20-Aug 19
SHJC	13-Aug-19
WPMHC	08-Aug 19
Vinita HC	13-Aug 19
- Community Clinical Linkages efforts have been focused on determining the effectiveness of reaching women at the food distribution centers. A 4-day project at the Tahlequah Food Distribution center engaged 77 women of which 38 have now been determined to be past due for breast or cervical screening. Processes are being devised to facilitate these women getting appointments as well as assessing for and studying barriers that may interfere with follow through. Health Systems Changes efforts are currently prioritized to the Wilma P. Mankiller Health Center. Using Cerner data, the program has identified 550 women past due for mammogram and 1600 women past due for PAP tests. A

systems approach is underway to reduce these numbers with a task team that includes Stilwell staff: Dr. Adam Sprankell, Christie Harris, Jill Eubanks, and BCCEDP staff: Dr. David Gahn, Andrea Carpitcher, and Ashley Comiford. Public Health Educators will be contacting these women to facilitate scheduling appointments and also addressing barriers that the program may overcome.

- The HPV team is partnering with Oklahoma State Dept. of Health to retrieve HPV immunization data. CDC's Comprehensive Clinical Assessment Software Application (CoCASA) data reports show HPV coverage in Cherokee Nation clinics. Reports will be utilized to pinpoint areas of strength and areas requirement improvement.
- HPV Provider Assessment Survey sent to WPMHC for staff and providers by email utilizing Survey Monkey. The survey is distributed to better understand the attitudes and knowledge surrounding Human Papillomavirus (HPV) vaccination among clinic staff and providers at the Stilwell clinic. The CN Institutional Review Board has reviewed and exempted this survey. The survey is voluntary and anonymous. The survey is designed to only take 5-15 minutes to complete. This survey aims to better understand clinical staff and providers' attitudes and perception toward Human Papillomavirus (HPV) vaccination. The survey was developed by Cherokee Nation Public Health epidemiologist Dr. Ashley Comiford, DrPH and Stilwell physician Dr. Janel Johnson, DO, MPH in collaboration with a HPV taskforce workgroup. They will use the survey results to better inform our cancer prevention programs both within our health system and in our community programs.
- Comprehensive Cancer Control program awarded supplemental dollars to assess cancer survivorship in the Cherokee Nation – the program is reviewing options for the assessment using the cancer survivorship module 14 from the Centers for Disease Control and Prevention Behavioral Risk Factor Surveillance System.
- CN Public Health surveillance and evaluation team is currently also working on evaluation of the 30 School Health Awards, preparing to administer School Health Profiles in Spring of 2020, and evaluating the CDC Traditional Practices for Wellness in Indian Country grant received by the public health department.
- The data collection phase of our Opioid Overdose Prevention in Tribal Communities grant has been completed. This is a CDC funded grant designed to strengthen capacity for Tribal public health. The surveys were administered in four Cherokee Nation counties that have been hardest hit by the opioid epidemic due to high rates of opioid-involved mortality. We surveyed 200 community members and asked them about their views on the opioid epidemic, how it has impacted their community, and how it has impacted people close to them. The survey also assessed knowledge of current treatments for opioid use disorder and gauged awareness of current public health approaches that have been effective in tackling the opioid epidemic. Data from these surveys will be analyzed in the coming weeks, and the results will be used to develop actionable public health interventions in these high-risk counties.

#### **PUBLIC HEALTH RESEARCH HIGHLIGHT June/July 2019:**

##### **P20 Project:**

Dr. Ashley Comiford, CN Public Health Epidemiologist, while performing normal surveillance and evaluation duties also participates in important public health research to inform our work in the Cherokee Nation. Dr. Comiford is a Cherokee citizen from Foyil, Oklahoma. This collaborative project between Cherokee Nation and the University of Oklahoma Health Sciences Center aimed to evaluate electronic cigarette (e-cigarette) use among American Indian smokers and assess smoking after an 18-month follow-up period to see if e-cigarette use at baseline affected cigarette consumption or cessation.

Therefore, the specific aims of our observational cohort study were to:

1. Describe baseline prevalence and patterns of e-cigarette use among adult American Indian smokers in the Cherokee Nation, including reasons for e-cigarette use such as desire to quit smoking, duration and

intensity of e-cigarette use, preferred nicotine concentration, flavors, and vapor device characteristics. Hypothesis: Vaping will be more common than reported in other smoking populations.

2. Assess baseline characteristics associated with dual use of e-cigarettes and smoking. Hypotheses: E-cigarette users will be younger, more often female, more desirous of quitting smoking, and use fewer cigarettes per day than non-users. Prevalence of vaping will not differ by level of nicotine dependence.
3. Examine whether baseline biomarkers of tobacco constituents differ between dual users of e-cigarettes and cigarettes compared to cigarette-only users. An exploratory sub-aim is to assess the feasibility of urine collection to measure NNAL on a subsample of participants. Hypotheses: The degree of constituent exposure will be directly associated with degree of e-cigarette substitution for cigarettes. Greater substitution will confer lower levels of exposure to the toxicant carbon monoxide, with no difference in markers of nicotine.
4. Reassess vaping and smoking after 18 months. Hypotheses: The prevalence of use of e-cigarettes will increase over time. Use of e-cigarettes will predict the following outcomes at 18 months: fewer cigarettes smoked per day, less nicotine dependence, lower levels of harmful constituents, but not smoking cessation.

This collaborative has resulted in several poster and oral presentations, as well, as several publications. Additionally, it has resulted in additional funding for another pilot project. Below are a list of presentations and publications that have resulted from this project:

#### Professional Poster Abstracts and Presentations:

1. Comiford A.L. (presenter), Rhoades D.A., Dvorak J.D., Ding K., Mehta, T., Wagener T.L., Spicer P., Doescher M.P. (2019, February). *Potentially Reduced Tobacco Product Use Among American Indian Smokeless Tobacco Users: Impact on Smokeless Tobacco Cessation Behaviors and Tobacco Exposure Biomarkers*. Poster presentation presented at the 2019 Annual Stephenson Cancer Center Cancer Research Symposium: Oklahoma City, OK.
2. Rhoades D.A. (presenter), Comiford A.L., Dvorak J., Ding K., Driskill L., Hopkins M., Spicer P., Wagener T.L., Doescher M.P. (2019, February). *Factors associated with dual use of electronic cigarettes among adult American Indians who smoke: a Cherokee Nation cohort study*. Poster presentation presented at the 2019 Annual Stephenson Cancer Center Cancer Research Symposium: Oklahoma City, OK.
3. Rhoades D.A. (presenter), Comiford A.L., Dvorak J., Ding K., Driskill L., Hopkins M., Spicer P., Wagener T.L., Doescher M.P. (2018, November) *Factors associated with dual use of electronic cigarettes among adult American Indians who smoke: a Cherokee Nation cohort study*. Poster presentation at the Association of American Cancer Researchers Science of Cancer Health Disparities Conference: New Orleans, LA.
4. Comiford A.L. (presenter), Rhoades D.A., Dvorak J.D., Ding K., Mehta, T., Wagener T.L., Spicer P., Doescher M.P. (2018, October). *Cigarette and PREPs use among American Indian Smokeless Tobacco Users*. Poster presentation presented at the 2018 National Summit on Smokeless Tobacco Prevention, Sacramento, CA.
5. Comiford, A.L. (presenter), Rhoades, D.A., Spicer, P., Ding K., Dvorak, J.D., Driskill, L., Wagener T.L., Doescher, M.P. (2018, July) *Electronic cigarette and tobacco exposure biomarkers among American Indian smokers*. Poster presentation presented at the 2018 CRCHD Partnership to Advance Cancer Health Equity (PACHE) Program Meeting, Rockville, MD.
6. Comiford, A.L. (presenter), Rhoades, D.A., Spicer, P., Ding K., Dvorak, J. D., Driskill, L., Wagener T. L., Doescher, M.P. (2018, April) *Electronic cigarette and tobacco exposure biomarkers*

among American Indian smokers. Poster presentation presented at the 2018 Tribal Public Health Conference, Norman, OK.

7. Rhoades D.A. (presenter), Comiford, A.L., Dvorak J., Ding K., Hopkins M., Wagener T., Spicer P., Doescher M.P. (2018, February). *Current and past electronic cigarette use among adult American Indians who smoke: A Cherokee Nation cohort study*. Poster presented at Society for Research on Nicotine and Tobacco 24th Annual Meeting, Baltimore MD.

8. Rhoades D.A. (presenter), Comiford, A.L., Dvorak J., Ding K., Hopkins M., Wagener T.L., Spicer P., Doescher M.P. (2018, February). *Electronic cigarette use among American Indian dual smokers and vapers*. Poster presented at Society for Research on Nicotine and Tobacco 24th Annual Meeting, Baltimore MD.

9. Comiford, A.L., Rhoades, D.A., Ding K., Dvorak, J.D., Wagener, T.L. (presenter), Doescher, M.P. (2017, March). *Vaping status and tobacco exposome biomarkers among a cohort of American Indian smokers*. Poster presented at Society for Research on Nicotine and Tobacco 23rd Annual Meeting, Florence, Italy.

### **Professional Oral Presentations**

1. Rhoades D.A. (presenter), Comiford A.L., Dvorak J., Ding K., Driskill L., Hopkins M., Spicer P., Wagener T.L., Doescher M.P. (2018, November). *Factors associated with dual use of electronic cigarettes among adult American Indians who smoke: a Cherokee Nation cohort study*. Oral presentation presented at the Association of American Cancer Researchers Science of Cancer Health Disparities Conference: New Orleans, LA.

2. Comiford, A.L. (presenter), Rhoades, D.A., Ding K., Dvorak, J.D., Driskill, L., Wagener T. L., Spicer, P., Doescher, M.P. (2018, April). *Electronic cigarette and tobacco exposure biomarkers among American Indian smokers*. Oral presentation presented at the 2018 Tribal Public Health Conference, Norman, OK.

3. Comiford, A.L. (presenter), Rhoades, D.A., Ding K., Dvorak, J.D., Wagener, T.L., Doescher, M.P. (2017, January). *Vaping status and tobacco exposome biomarkers among a cohort of American Indian smokers*. Oral presentation at Annual Stephenson Cancer Center Cancer Research Symposium: Oklahoma City, OK.

### **Publications with Brief Results/Conclusions**

1. Comiford, A.L., Rhoades, D.A., Dvorak, J. D., Ding K., Mehta, T., Wagener T.L., Spicer, P., Doescher, M.P. (2019). *Potentially reduced exposure tobacco product use among American Indian smokeless tobacco users: Associations with cessation behaviors and tobacco exposure biomarkers*. (Manuscript under review in the Public Health Reports Journal)

a. While e-cigarettes may be associated with attempts to quit smoking in some contexts, this study suggested that smokeless tobacco users are not using e-cigarettes or Snus to quit smokeless tobacco use. However, smokeless tobacco users who also used e-cigarettes or Snus were more likely to use other tobacco products, including cigarettes, than those who did not use e-cigarettes or Snus. Thus, these products may also be associated with using multiple tobacco products at the same time. Using multiple tobacco products at the same time may require targeted intervention.

2. Rhoades D.A., Comiford A.L., Dvorak J.D., Ding K., Hopkins M., Spicer P., Wagener T.L., Doescher M.P. (2019). *Perceptions of Smoking and Vaping on Weight Control among Adult American Indians who Smoke*. *J Community Health*. In press. doi: 10.1007/s10900-019-00694-x

a. Few people believed that smoking or vaping helps to keep weight down. Almost one-half of the people who took part did not know if vaping helps or not. Compared to never vapers, people who ever vaped thought that vaping helps keep weight down more often.

3. Rhoades D.A., Comiford A.L., Dvorak J.D., Ding K., Driskill L., Hopkins M., Spicer P., Wagener T.L., Doescher M.P. (2019). *Dual Versus Never Use of Electronic Cigarettes among American Indians who Smoke*. *Am J Prev Med*. In press. doi:10.1016/j.amepre.2019.04.006.

a. Compared with never users, dual users were younger, more often reported history of depression and family history of smoking-related disease, had lower harm perceptions of e-cigarettes or vapor and more often perceived e-cigarettes as cessation aids and as less harmful than cigarettes. Dual users were less often uncertain/unknown about e-cigarette benefits or harms and more often reported a likelihood to quit smoking, prior attempt to quit smoking ever or in the past year. Cigarette consumption and cotinine levels did not differ between groups. Dual users more often tried other nicotine products and more often lived with a vaping partner/spouse.

4. Comiford, A.L., Rhoades, D.A., Spicer, P., Ding K., Dvorak, J.D., Driskill, L., Wagener T.L., Doescher, M.P. (2018). *E-cigarettes and Tobacco Exposure Biomarkers among American Indian Smokers*. Am J Health Behav, 42(6), 101-109.

a. To our knowledge, this is the first study to characterize e-cigarette use among American Indian adults who smoke. More than 63% of our study population reported use of e-cigarettes either currently or in the past. The data from this study show that current dual users of e-cigarette and cigarettes were more likely to report a quit attempt in the past 12 months and that they were more likely to indicate intentions to quit smoking when compared to cigarette-only users. However, cigarette consumption did not vary by e-cigarette use status. Further, there were no statistically significant differences in confidence to quit smoking, or nicotine levels by e-cigarette use status. The association between e-cigarette use and previous quit attempts and intentions to quit smoking may indicate smoking cessation readiness. Inquiring about current e-cigarette use may help clinicians and public health professionals identify American Indians who intend to quit smoking.

5. Rhoades, D.A., Comiford, A.L., Dvorak J.D., Ding K., Driskill, L.M., Hopkins A.M., Spicer, P., Wagener, T.L., Doescher, M.P. (2019). *Dual versus Never Use of E-cigarettes among American Indians who Smoke*. Am J Prev Med. (electronically published ahead of print).

a. Dual users perceived e-cigarettes as less harmful than cigarettes and more as cessation aids than cigarette-only users did, but cigarette consumption did not differ between groups. Whether e-cigarettes will reduce smoking-related disparities among American Indian people remains undetermined.

#### Conclusions:

While we are still evaluating the outcomes of our 18-month follow-up study, our data suggests that e-cigarette users may be more likely to show interest in smoking cessation. Additionally, those who use e-cigarettes may be more likely to use multiple tobacco products. While it is unclear if e-cigarette use leads to smoking cessation, inquiring about e-cigarette use during clinical visits could open avenues for engaging smokers in discussions of existing evidence-based smoking cessation interventions. Finally, consideration for multiple tobacco use should be considered with e-cigarette users.

#### OTHER:

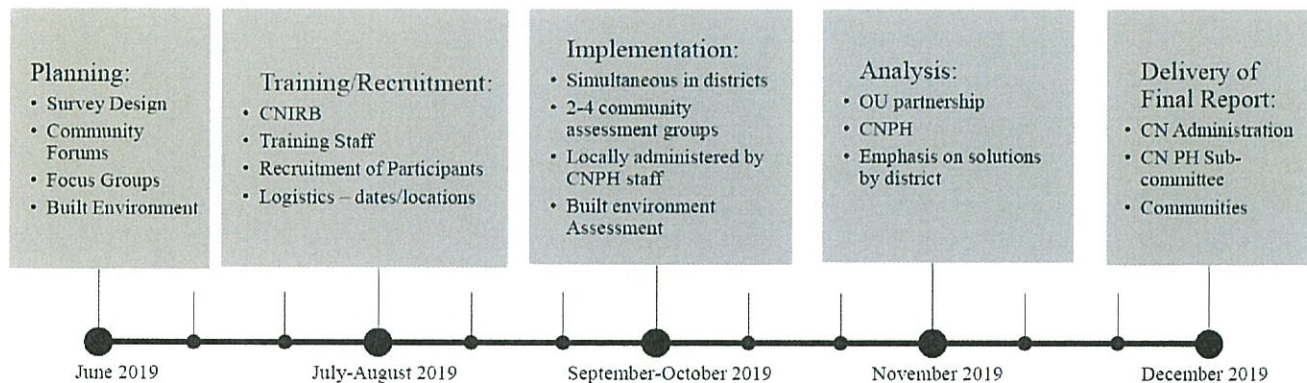
- Review of Council Public Health Subcommittee Workgroup on Physical Activity : (see timeline below)
  - Local council outreach to physical activity outlets for possible partnerships
  - Reviewed best practices and evidence-based strategies for increasing physical activity
  - Discussed various options for localized programming including (i.e. gym memberships, local facility development, etc.)
  - Determined that local options by district would need to be determined based on both quantitative and qualitative data collection (focus groups, community forums, key informant interviews)
  - Public Health program will work with external partners to do an assessment that includes both quantitative data and qualitative feedback from communities with the objective of identifying specific community needs and differences.
  - Budget requests for funding by district will be informed by the above assessment – original ideas in subgroup included requesting funding for assessment

- Attached is a summary of the assessment proposal including timelines and assessment design
- While the assessment is in progress Public Health will expand availability and eligibility of the Healthy Native class and all available physical activity options in communities



## CNPH Community Physical Activity Assessment

### Community Perceptions, Attitudes, and Built Environment



Assessment Partner: Paul Spicer, PhD, Center for Applied Social Research  
Department of Anthropology, University of Oklahoma

### CNPH Community Physical Activity Assessment Progress Update:

- Dr. Brady Garrett, Epidemiologist, Cherokee Nation Public Health is project lead
- Survey design is completed and pending Cherokee Nation Institutional Review Board approval
- Logistics – dates/location by district in progress with plans to begin September 2019
- Based on review of desired outcomes and discussion with Dr. Spicer, the project will use survey methodology and convenience sampling. We believe this will yield a more community participation for a more thorough description of the different communities. Identified Cherokee communities will be priority for data collection.
- Survey methodology has accounted for a variety of access so there are minimal barriers to participation
- Ground assessment of the environment (exercise areas, sidewalks, playgrounds, schools, Churches, speed limits, roadway conditions, bike lanes, topography, community building, etc.) will be conducted by the University of Oklahoma Gibbs College of Architecture led by Dr. Bryce Lowery, Assistant Professor of Regional and City Planning