

Tribal Health  
Improvement Process  
(THIP)  
Summary Report  
2015-2017

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## Introduction

The Eastern Band of Cherokee Indians (EBCI) Tribal Health Improvement Plan 2015-2017 (THIP), ጐጐጐ ጐጐጐጐጐ (Os-da a-ye-lv-i, “good health or good body”), was the first long-term, systematic effort to address public health problems based on the results of the first Tribal Health Assessment. This report summarizes the results of the 2015-17 THIP process.

To read more about ጐጐጐ ጐጐጐጐጐ, the 2015-17 THIP:

- Go to <http://www.cherokee-hmd.com/pdfs/THIPFINAL2015.pdf> or
- Email [thip@nc-chokeee.com](mailto:thip@nc-chokeee.com) or
- Call 359-6180 and request a copy of the THIP and this report.



## Acknowledgments and Gratitude

The THIP was a long-term, systematic effort to address public health problems facilitated and supported by the EBCI Public Health and Human Services Division (PHHS) and included a wide variety of stakeholders:

Cherokee Boys Club	Office of Tribal Planning
Cherokee Cancer Support Group	Swain County High School
Cherokee Central Schools	Tribal Council
Cherokee Community Wellness Team	Tribal Executive Office
Cherokee Healing and Wellness Coalition	Tribal Information Technology
Cherokee Indian Hospital Authority (CIHA)	Tribal Legal
Analenisgi Behavioral Health	Tsali Manor
Cherokee Preservation Foundation	Western Carolina University
Tribal Education and Recreation Division	Centers for Disease Control Public Health Associate Program (PHAP)
Dora Reed Center, Cherokee Tribal Child Care	Youth and elder community members
NC State University Cooperative Extension	Western North Carolina Health Network
Junaluska Leadership Council	

PHHS is deeply grateful for the support of all these community agencies.

The THIP Team leaders deserve a special thanks for their dedication and persistence throughout the 3-year process:

Jan Lambert, Analenisgi—Depression  
Doug Trantham, Analenisgi—Substance Abuse  
Robin Bailey-Callahan, Cherokee Choices, and Dr. Rick Bunio, CIHA—Diabetes

PHHS has been particularly fortunate to participate in the Centers for Disease Control and Prevention (CDC) Public Health Associates Program (PHAP). Alannah Tomich and Zach Roach, PHAPs assigned to PHHS, gave invaluable support to the process.

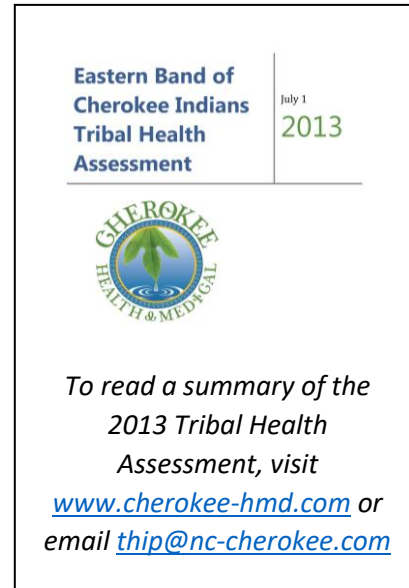
Most of all, PHHS is grateful to the Cherokee community for the valuable input and partnerships, and for allowing the PHHS Team to provide service to the community.

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*Thank you for all you do for the health of the community!*

## What is the Tribal Health Improvement cycle?

Many factors influence the health and well-being of a Tribal community, and many agencies and individuals have a role to play in responding to public health needs. The Tribal Health Improvement cycle is an ongoing process to measure, analyze, prioritize, implement, and evaluate factors and actions important to the health of the Tribal community. PHHS is the lead organization in conducting a Tribal Health Assessment (THA) and a Tribal Health Improvement Plan as part of providing the 3 Core Functions of Public Health. These functions include assessment, policy development, and assurance. The first step involves PHHS using a systematic process of collecting data, involving the community, to analyze and prioritize the health needs of the community every 5 years; this is the Tribal Health Assessment. Next, a community team is convened to use the THA data to help identify health priorities that will be addressed in the Tribal Health Improvement Plan (THIP). Partners go to work on the identified priorities using Results Based Accountability (RBA), a method to track and measure accountability, actions, and results. Lastly, the team evaluates the THIP outcomes and uses the information to start the improvement cycle over again. PHHS has completed the 2018 THA and is in the process of re-convening a multi-stakeholder team to begin the second iteration of the THIP.



The priority issues in the 2015-17 THIP were **diabetes**, **depression** and **substance abuse**. These priorities were chosen by the THIP Team that included youth, elders, Tribal Government representatives, partnering organizations, and community members. Though there were many health issues in the community, the THIP Team used the 2013 THA data and a collaborative process to choose the three priorities.

## How did the THIP Team work?

For three years, the THIP Team, along with the THIP priority issue teams worked together to:

- Identify the top priority health issues for the whole community
- Choose the priorities to concentrate on as a community-wide team
- Use both quantitative (statistical) and qualitative (opinions, thoughts, observations) data to define the issues and solutions, both from inside the Tribe (primary) and from outside sources (secondary)
- Research best practices and data that applied to Native communities
- Determine “what success looked like” and create goals, objectives, strategies, and activities to attain success
- Find and engage the partners to achieve the goals and objectives
- Monitor the progress of the efforts of THIP Team, issue teams, and partners

The THIP Team met quarterly to review and discuss the progress of the three teams and the overall progress of the THIP. In addition, a THIP Steering Committee comprised of PHHS, CIHA, and Analenisgi leadership helped guide the overall work of the THIP and disbursed mini-grants to help THIP projects such as Cherokee Choices Summer Camp, sobriety celebrations sponsored by Analenisgi, and Cherokee Culture Days in Snowbird. Various resources were used to organize and inspire work. For a list of these resources, see Attachment 1.

The THIP's work was shared with Tribal Health Board and Tribal Council as it progressed, and PHHS met with Community Clubs to perform the community themes and strengths assessment.

## Why did the THIP Team choose these three issues?

- ✓ Diabetes is one of the greatest health threats to the Eastern Band of Cherokee Indians. Approximately 25% of the population that use the Cherokee Indian Hospital Authority are diagnosed with diabetes. Left untreated, or poorly managed, it can lead to other serious health conditions. These conditions include kidney failure, amputation, and increased risk for cardiovascular disease, including heart attack and stroke.
- ✓ Substance abuse diagnoses and mortality in the EBCI community have risen significantly, and drug and alcohol withdrawal and related conditions are the top admitting diagnoses at CIHA.
- ✓ Depression is one of the top diagnoses within Cherokee Indian Hospital (CIHA), where over 90% of EBCI members go for their primary health care. Depression is a serious condition often occurs with another health concern, such as diabetes or substance abuse problems. In 2011, 13.4% of CIHA clients were diagnosed with mood disorders, predominantly depression, and AI/AN in WNC (primarily EBCI members) had a higher average number of days when their mental health was not good compared to other populations. Within Indian Country, people who have depression sometimes also have diabetes or substance abuse problems.

For details and data on these issues in EBCI, see the following Priority Issue discussions and the [2015-17 THIP](#).

## What is in this report?

This report lists the three health priorities with a brief description of the issue and what the THIP Team did to address the issues. The 3 THIP Teams (issue teams) developed a set of goals, objectives, activities, and performance measures to address the identified priority. These are listed and explained in each priority issue section for Diabetes, Substance Abuse, and Depression.

You will see that some of the Objectives, Activities, and Performance Measures were more

measurable than others. The THIP Team discovered that defining issues posed various challenges, such as how to clearly define the expected change and also how to measure it. Since development of the THIP is an iterative process, PHHS will challenge ourselves with each subsequent version to improve the measurements—always toward building a healthier community.

## How can you use this report?

Partners and community members can use the THIP to identify their own priorities and choose strategies to help improve Tribal health. It may be a useful resource in grant writing or helping to develop and expand organizational partnerships.

In addition, the successes and challenges of the 2015-17 THIP process will provide a foundation for the implementation of the next cycle of Tribal Health Improvement, which will begin after the 2018 Tribal Health Assessment is complete.

Please use the THIP as a resource for your agency, documentation of our partnership, and evidence of the progress made during the 2015-2017 cycle. We've enjoyed the collaborative partnership and look forward to working with you to improve the health of our community.

To participate in the THIP, please contact PHHS at [thip@nc-chokeee.com](mailto:thip@nc-chokeee.com).

## Priority Issue: DEPRESSION

Depression in EBCI has been associated with a long history of social, economic and political injustices including forced relocation, assimilation and many broken treaties. Over time, this historical trauma has led to major concerns often seen with depression, including lower life expectancy, higher poverty rate, suicide rate 1.5 times higher than the national average, the opioid epidemic, school truancy, and a higher rate of psychological distress. Depression has been one of the top diagnoses within CIHA, with 13.4% of EBCI clients diagnosed with mood disorders, predominantly depression, compared to 9% in the IHS Nashville Area. In addition, between 2006 and 2014, AI/AN behavioral health visits in the 5-county area that includes EBCI Tribal lands rose almost 900%. Intentional self-harm by firearm comprised 2% of total deaths of AI/AN in the 5-county area. Depression is often present in people who have other health concerns, such as diabetes and substance abuse.

Research regarding the prevalence of depression--how many people in the population have been diagnosed with depression--was difficult to find in the past. Now, we have access to more data, including specifically within the EBCI community. Several studies of different American Indian/Alaska Native (AI/AN) communities have found prevalence of depression ranging from 10-30% of all people in the population, and as noted above, the incidence in EBCI is 13.4%. Compare this rate to 6.9% within the U.S. population aged 18 years or older, and it is very concerning.

Across the US, the treatment of depression has been difficult because of stigma and a lack of effective treatments. People struggling with depression may think that they should not let others know how they are feeling or what their diagnosis is. They are often left to work through the depression themselves. Today, many programs are working to help people feel comfortable seeking treatment, and to enable them to get their treatment despite any difficulties they might have with transportation or paying for care. The EBCI has made a concerted effort to support the treatment of mental health conditions by allocating resources to programs and new facilities, such as Analenisgi, Kanvwotiyi, and a demonstrated commitment to build a crisis stabilization unit. As of 2017, many more Tribal community members are receiving treatment than in the past.

### Highlights from the 2013 Tribal Health Assessment (THA)

- 13.4% of the EBCI population had been diagnosed with a type of mood disorder. (Nashville area: 9%)
- Recent data within the THA found that there were 965 behavioral health visits by AI/AN in Indian health care delivery systems in the 5-county Contract Health Services Delivery Areas (CHSDA).
- Intentional self-harm by discharge of firearm made up 2% of deaths of AI/AN from 2003-2010 in the 5-county CHSDA that includes EBCI.

## THIP Depression Team Process

According to the Indian Health Service (IHS):

"About 1 in 20 [AI/AN] adults experience major depression in a given year. Depression and anxiety disorders may affect heart rhythms, elevate blood pressure, and alter blood clotting. Depression can also lead to elevated insulin and cholesterol levels. Depression or anxiety may result in chronically elevated levels of stress hormones such as cortisol and adrenaline. Depression also frequently increases the risk of suicidal behavior. The risk for suicide linked with depressive disorders is significantly increased compared to the general population. Screening for depression is the first step to identifying patients who need help and follow up."

In addition, there tends to be a stigma with depression--it can be socially hard to say one has depression or is seeking treatment for it. However, **depression is both preventable and treatable.**

In the 2013 Tribal Health Assessment, depression (diagnosed by a healthcare or behavioral health provider) was higher in EBCI than in the IHS Nashville Area Tribes as a whole (13.4% vs. 9%). A lower percent of (AI/AN) in WNC said that they could always or usually get needed social or emotional support. And between 2006 and 2010, the number of visits by AI/AN in WNC to behavioral health providers doubled.

Child abuse can lead to post-traumatic depression, and anxiety disorders, illicit drug use, alcoholism, sex and food addictions, and suicide. In WNC in 2012, (AI/AN) made up 10% of the child population but accounted for 14% of substantiated child abuse reports. Depression can affect pregnant and post-partum women, but in EBCI in 2011 the rate was about one-third of the statewide rate in a similar time period.

One of the data "gaps" the THIP Team identified early on was that we did not have good information from the youth and elders in the community. The THIP led to giving the Youth Risk and Resiliency Survey (YRRS) to middle and high school students at CCS for the first time--a survey of students' risk factors, risky behaviors, and ways that they develop strength and confidence. This data belongs to CCS, which has been developing a plan in conjunction with the School Board to address some of the issues identified in the YRRS, including depression and associated behaviors or problems. CCS will do the YRRS every two years to measure progress in a number of dimensions.

During the 2015-17 THIP period, the national opioid epidemic was sweeping through EBCI, and as has been mentioned, depression is commonly a companion to substance abuse. Also, during this period, CIHA began its universal screening for depression. Not long before the THIP process began, Analenisgi became part of CIHA and behavioral health staff were integrated into the primary care clinics. Analenisgi also increased staff and programs, including substance abuse treatment and support. PHHS began a re-organization to develop an integrated Public Health and Human Services Department in 2013, and the Family Safety and Family Support functions made more help available to individuals and families touched by depression. Human Services has worked closely with CIHA and Analenisgi to coordinate and improve services for people with depression.



It was very difficult for the Depression Team to grapple with how familiar the Tribal community was with the concept and diagnosis of depression, or of its wide effects on health. This is very difficult to measure. At the end of the THIP process, the team was still not sure of how to measure community awareness of depression or how to increase it. The Depression Team quickly moved to getting data from the CIHA/ Analenisgi client population, elders, and youth to determine the burden of depression in the community and how it relates to other diseases and conditions such as those listed above. Then the various partners moved to address depression in their clients through existing and new initiatives, such as depression screening at CIHA and a behavioral classroom at CCS.

Very early in the THIP process, CIHA began universal screening for depression in clients in the clinics and Analenisgi. Depression screening contributes data on depression prevalence and helps Analenisgi encourage those with depression to increase awareness, for themselves and their families, and to seek treatment. Analenisgi, CIHA, and PHHS services also help identify community members outside the clinics who may have depression, increase their awareness, and seek treatment. The striking increase in visits in 2015 to Analenisgi and CIHA for behavioral health including depression, and the accompanying inclusion in treatment of many more EBCI members, indicates that screening plus increased service availability can enable more community members to begin to deal constructively with their depression and gain support.

CCS gave the Youth Risk and Resiliency Survey (YRRS) to middle and high school students in 2016, which did not ask about awareness of depression, but did ask about symptoms and behavioral issues associated with depression such as truancy, bullying, and sleep issues. At the end of the THIP process, PHHS found results of an elder survey given at Tsali Manor that will give further information on elders and depression.

Over the years, there have been a number of convenings of elders to communicate Cherokee values and traditions, particularly to clinicians who serve Cherokee clients and may not be Cherokee themselves, or may be Cherokee and not be deeply steeped in Duyugdv, SGEØ, “right path.” Some activities that have been successful have been:

- Resuming the Elders-Clinicians gatherings sponsored by CIHA that ended a few years before the THIP process began
- PHHS sponsorship of the annual Elders’ Medicine Walk
- Cherokee Preservation Foundation’s work in expressing and disseminating the Seven Cherokee Core Values
- Community participation in activities such as the Drama, Warriors of AniKituhwa, community events
- Cherokee Choices summer camp
- Cherokee Choices Annual Stress and Wellness Retreat

## THIP Depression Team Results

DEPRESSION: Measures	2015	2016	2017	COMMENTS
TOTAL number of behavioral health visits for all ages during the 3 year period	↑ 7,592	↓ 5,746	↑ 6,325	This gives a baseline for all behavioral health visits to Analenisgi.
Number of behavioral health visits for depression (either presenting complaint or diagnosis)	1,158	2,964	3,480	This shows how many of the total visits were for depression.
5% increase in behavioral health visits for depression	64.36%	- 24.31%	10.08%	Though they decreased in 2016, the overall increase was far greater than the goal.
% of patients at CIHA that are screened for depression using an evidence-based screening tool	72.60%	74.10%	64.80%	This data is for CIHA & Analenisgi combined. It is unclear why it decreased from 2016 to 2017.
% patients at CIHA & Analenisgi who screened in for depression and who were referred for follow-up services	15.40%	16.60%	[data not available]	There was a small increase in referrals for treatment.
% patients at CIHA & Analenisgi screened for substance abuse	n/a	n/a	65%	This screening was begun in 2016-17.

### Summary of Successes During the 2015-17 THIP: Depression

- Increased screening, referral, and treatment of depression at CIHA and Analenisgi
- Integration of Behavioral Health staff into primary care clinics at CIHA to emphasize that emotional and physical factors are both critical to good health
- Improved communication and coordination between PHHS, CIHA, Analenisgi, and CCS
- The establishment of Family Safety and Family Support in PHHS, which has brought adult and child protective services, social work services, and foster care under Tribal control, and has aligned these services with support for families such as food distribution, emergency pantry, burial funding support, and energy support
- Establishment of the Youth Risk and Resiliency Survey (YRRS) every two years at CCS; questions on depression and resilience will assist CCS to identify and refer students with depression issues
- Elders' Medicine Walks
- Elders-Clinicians Gatherings

- Cherokee Choices Summer Camp attendee surveys to screen for depression and related issues
- Increased attendance at Cherokee Choices Annual Stress and Wellness Retreat with instruction in stress management and self-care

## Priority Issue: SUBSTANCE ABUSE

The story behind substance abuse<sup>1</sup> in EBCI and other Native American communities is complex and has developed from the psychological impact of a history of economic and social hardships. Substance abuse has become a serious threat to the American Indian/Alaska Native (AI/AN) community. For example, alcoholism mortality rates are 514% higher among AI/AN populations than in the general population. Of the user population at CIHA, opioid dependence and drug withdrawal are the top two admitting diagnoses (Table 1), and the top newly diagnosed substance abuse cases at CIHA were opioids, alcohol, and stimulants.

A major issue associated with regulating substance abuse is the availability of up-to-date, quality information. It is important to have accurate data that reflect trends within the general public and within Indian Country. According to Substance Abuse and Mental Health Services Administration (SAMHSA), in 2012 AI/AN had an overall higher rate of alcohol consumption than any other ethnic group within the United States. However, among those 12-25 years old, the prevalence of alcohol consumption, binge drinking, and heavy consumption is consistently lower within AI/AN populations. In contrast, data demonstrates that the majority of Tribal members who abuse other substances are the youth and young adults younger than 30. This suggests that the majority of alcoholism occurs later in life (26+ years old) for AI/AN communities.

[EBCI PHHS](#), [CIHA](#) and the [Nashville Area Tribal Epidemiology Center](#) have been working hard over the past 10 years to collect and maintain information on rates of substance abuse in the EBCI community. That's because statistics that describe substance abuse in the nation might not be the same for substance abuse in EBCI. In addition, Tribal Council, CIHA, and the Cherokee Healing and Wellness Coalition formed a task force in 2014 to make recommendations to address substance abuse in the community, so this THIP Team built on their work.

### Highlights from the 2013 Tribal Health Assessment

- During fiscal year 2012, 1,530 CIHA patients were recorded with at least one drug-related diagnosis code.
- Within the United States, American Indians/Alaska Natives consistently have the highest rate of smoking and tobacco use at 35.8% compared to 29.5% for whites and 27.3% for blacks in 2010.
- According to the 2011 WNC Healthy Impact Survey, within western North Carolina, AI/AN also show the highest rate of smoking (41%) compared to other races (27% among blacks, 20% among whites).

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<sup>1</sup> At the time of the THIP's initiation, the term used was "substance abuse." Currently, the term of choice is "substance use disorder" or "substance misuse." This document maintains the terminology in use during the THIP.

**Table 1**

**Top Ten Admitting Diagnoses at Cherokee Indian Hospital Authority for 2014** (Indian Health Service RPMS, CIHA)

<b>Admitting Diagnosis</b>	<b>Number for Year</b>	<b>% Increase or Decrease From 2013</b>
1. Opioid Dependence (addiction to painkillers or sleeping pills)	60	-23.1
2. Drug Withdrawal	50	-29.6
3. Pneumonia	33	-29.8
4. Type 2 Diabetes without complications uncontrolled	20	11.1
5. Alcohol Intoxication	17	13.3
6. Alcohol Withdrawal	15	15.4
7. Cellulitis of leg	14	-6.7
8. Drug Dependence	13	160
9. Urinary Tract Infection	11	-21.4
10. Chest Pain	11	-15.4

Source: RPMS 10.3.16

**Table 2****Newly Diagnosed Substance Abuse Cases 2013-2015**

EBCI (User Population)						
Substance	2013		2014		2015	
	#	%	#	%	#	%
Alcohol	55	23.6%	56	22.8%	77	24.5%
Opioids	87	37.3%	98	39.8%	88	28.0%
Hallucinogens	1	0.4%	1	0.4%	1	0.3%
Cocaine	7	3.0%	0	0.0%	1	0.3%
Cannabis	40	17.2%	16	6.5%	21	6.7%
Barbiturates	12	5.2%	4	1.6%	15	4.8%
Stimulants	31	13.3%	71	28.9%	111	35.4%
Total	233		246		314	

Source: RPMS 10.3.16

During fiscal year 2014, 1,741 patients at CIHA had at least one drug-related diagnosis code--a 57% increase between 2001-2014. The 2012 Community Health Survey showed significant concerns among community members about drug and alcohol use and the availability of treatment locally for withdrawal and recovery.

Tobacco use continues to be a significant substance use issue. Nationally, AI/AN consistently have the highest rate of smoking and tobacco use at 35.8%, compared to 29.5% for whites and 27.3% for African Americans in 2010. In WNC, AI/AN men and women in 2012 both had much higher smoking rates than overall rates for men and women in NC (AI/AN men: 38.7%, AI/AN women: 42.5%; overall NC men: 24.5%, women 19.2%). There was a lack of clear data for tobacco use specific to EBCI and of consistently available programs to help smokers quit tobacco.

**THIP Substance Abuse Team Process**

The THIP Substance Abuse Team felt that cultural identity is essential in addressing substance abuse. Since this is also critically important in addressing depression, the Depression Team collaborated closely with the Substance Abuse Team in convening a Cultural Identity Task Force. The request for the Task Force was to ask Tribal elders how best to incorporate Tribal cultural and traditional aspects in facing and improving issues with substance abuse. When the Task Force met, the THIP Teams learned that CIHA had hosted a series of dialogues between elders and clinicians in the past, but that because of a grant expiration, these gatherings had been discontinued. The THIP Team took on resuming these dialogues and began to host a series of Elders-Clinicians Gatherings, including continuing an annual Medicine Walk, to increase communication on respecting traditions and culture in addressing substance abuse. This was particularly timely because of the approval for CIHA to establish  $\text{ᏍᏍᏅᏍᏁ}$ , Kanvwotiyi, a

residential substance abuse treatment center in the Snowbird Community. CIHA staff planned to include Cherokee culture and traditions in both the facility and programming at the new center.

Analenisgi underwent expansion after becoming part of CIHA, and also has incorporated Cherokee culture and traditions into its substance abuse programs, including the Recovery Center, annual Rally for Recovery, and Kanvwotiyi. In addition, TERO (EBCI Tribal Employment Rights Office) also has incorporated these values into the Mothertown Project, which assists Tribal members in their recovery. Thus several programs within EBCI have woven Cherokee tradition into services that address substance abuse, using guidance from elders and other community members.

### THIP Substance Abuse Team Results

SUBSTANCE USE: Measures	2015	2016	2017	COMMENTS
Number of behavioral health visits for substance use disorder (all ages)	13150	13239	10482	This includes alcohol and other substances.
Number of products available to patients that inform them about depression	n/a	n/a	n/a	Handouts, videos, etc.
% of patients at CIHA & Analenisgi diagnosed with substance abuse disorder who participated in some substance abuse disorder treatment	1%	4.50%	6.40%	Any treatment, internal or external, any number of times - Alcohol and Substance Use clinic
% increase in numbers of patients participating in substance use treatment	30.00%	11.90%	0.05%	
% increase in those participating in treatment who maintain 90 days sobriety after treatment	n/a	n/a	n/a	Data was not available. Analenisgi began to collect data toward the end of the THIP process.
% of total deaths of enrolled members related to substance use	149 total deaths. 19 had substance use issues. <b>12.79%</b>	148 total deaths. 23 had substance use issues. <b>15.54%</b>	138 total deaths. 23 had substance use issues. <b>13.77%</b>	The data is from death certificates and does not state whether the substance use had direct, indirect, or no impact on their deaths.

## **Summary of Successes During the 2015-17 THIP: Substance Abuse**

- Convening the “Cultural Identity Task Force” led to the resumption of Elders-Clinicians Gatherings to enable Tribal elders to communicate directly with clinicians in a team setting and discuss health issues.
- The work of the Substance Abuse Team lent support and momentum to the establishment of Kanvwotiyi, ᏊᏍᏗᏪᏪ, “the place where one is healed,” EBCI’s residential treatment center in Snowbird.
- Substance abuse was added to CIHA clinic screening to help identify clients with substance abuse issues and connect them with services.
- Cherokee Central Schools implemented or increased substance abuse prevention programming.



## Priority Issue: DIABETES

Diabetes is a relatively new disease in Indian Country. Within the last century, the American Indian/Alaska Native (AI/AN) diabetes populations have seen a substantial increase in the number of members diagnosed with diabetes. Since first being identified within AI/AN communities in the early 1940s, diabetes is now considered one of the most important health threats within Indian Country and affects roughly three million AI/AN people.

Within CIHA, Type 2 diabetes mellitus (T2DM) is consistently one of the top five admitting diagnoses. In 2014, CIHA saw an 11.1% increase in admitting diagnosis of T2DM over the previous year.

Today, American Indian/Alaska Natives have the highest age- adjusted prevalence of diabetes among all U.S. racial and ethnic groups at 16.1%. There has been a 110% increase in the number of AI/AN young adults aged 15-19 years old with diabetes from 1990 to 2009. This means that the number of AI/AN ages 15-19 with this disease has more than doubled.

Why has diabetes grown at a more rapid rate among Tribal communities? Scientists think it may be because of a combination of issues. Some of these are age, family history, weight, nutrition, socioeconomic status, historical trauma and inactivity.

Diabetes is a serious disease with potentially life-threatening consequences for the person who has it. It also has consequences for that person's family and friends. They worry about the person taking care of themselves. They worry about complications. And they pay—with their time and money. It also has an effect on the Tribe, because people with diabetes are at high risk for many serious conditions including heart and circulatory disease, stroke, kidney failure, amputations, blindness, nerve damage, skin conditions, hearing problems, digestive problems, sexual function problems, and Alzheimer's disease (dementia).

### Highlights from the 2013 Tribal Health Assessment

- According to CDC's Racial and Ethnic Approaches to Community Health Survey conducted in 2012, 83.7% of individuals surveyed within Jackson and Swain counties who were of Native American descent were found to be overweight or obese.
- 60% of persons aged 65+ had diabetes
- Age-adjusted diabetes prevalence within EBCI was 24.9%, compared to 22.6% in the Nashville area.
- Diabetes is the 4th leading cause of death at CIHA.

## THIP Diabetes Team Results

DIABETES: Measures	2015	2016	2017	COMMENTS
Number of persons who use recreation centers at least once/ week	n/a	n/a	n/a	Data not available
% of persons enrolled in DEEP who complete DEEP	n/a	52%	55%	DEEP is the Diabetes Empowerment Education Program.
Number of persons newly diagnosed with T2DM	65	139	146	These are persons with an A1c lab test within the year of greater than 6.5. This increase could be due either to more people developing T2DM or more people who already had T2DM being screened and detected.
% middle & high school youth that meet 60 min of moderate to vigorous physical activity/ day	n/a	n/a	MS: 89.06% HS: 80.27%	This data is for Cherokee Central Schools from the 2016 YRRS.
% adults that meet 150 min of moderate physical activity/ week	n/a	n/a	n/a	Data not available, but 32.25% of respondents to the Community Health Survey said that they are concerned they do not get enough exercise.
% of persons with Type 2 Diabetes with A1c <8	67.88%	69.61%	62.43%	There was a small decrease in persons who had good diabetes control over the 3 years.

### Summary of Successes During the 2015-17 THIP: Diabetes

- The majority of persons with Type 2 diabetes enrolled in the Diabetes Education Empowerment Program (DEEP) completed the program.
- The great majority of middle and high school students at CCS get the recommended level of physical activity.
- Cherokee Choices Summer Camp identified children at risk of T2DM, taught them healthy activities and nutrition, and provided access to behavioral health services.
- Cherokee Choices Stress and Healing Arts Retreats provided self-care and healthy behavior education and experiences.

## CONCLUSION

The 2013 Tribal Health Assessment (THA) and 2015-17 Tribal Health Improvement Process (THIP) completed the first community health improvement cycle in EBCI. The process had wide-ranging buy-in and participation from community members, Tribal and partner organizations, and had demonstrable results and successes. The THIP Team leaders and members attempted for three years to initiate and contribute to improvement in the health of the EBCI community using data, professional expertise, personal experience, and respect for Cherokee culture and tradition.

The THIP process did not work in a vacuum. The many programs and services that serve the Tribal community continued to do their great work every day, and the THIP endeavored to support and augment them. Part of the THIP's success was the discovery and strengthening of relationships among partners and their alignment toward health improvement. Significant organizational change, such as change in Tribal administration and divisional re-organization affected the process. CIHA opened its new hospital and Kanvwotiyi, the new residential treatment center in Snowbird, and Analenisgi became part of CIHA and opened the Recovery Center in Cherokee. During all these changes and more, the THIP continued its mission.

There were also many lessons learned. The THIP Team learned that it can be challenging to create goals, objectives, and activities that are clearly measurable and that are achievable in a relatively short time period. Keeping interest and participation of volunteer participants remained a challenge. Also, it was clear that the priority areas, like a Cherokee basket, are woven together in an intricate pattern that can be challenging to understand, and that many other community health issues also continue to demand attention and action. Participants were highly aware of the influence of historical grief and trauma and adverse childhood experiences on health. The next iteration of the health improvement process will address these challenges, and the 2015-17 THIP will provide a strong foundation to face them.

## **ATTACHMENT 1:**

### **Resources Used in Conducting the 2015-17 THIP**

- MAPP, Mobilizing for Action through Planning and Partnership, a framework to increase participation and representation of the whole community in health improvement. MAPP resources included:
  - 2012 Community Health Survey
  - 2013 THA narrative
  - Community Themes and Strengths Assessment
  - Forces of Change Assessment
  - PHHS's Local Public Health System Assessment
  
- Healthy People 2020
  
- CIHA RPMS data, the IHS-based hospital data system
  
- The 2012 Regional Health Assessment led by WNC Health Network
  
- USET Tribal Epidemiology Center (TEC)
  
- Red Star Innovations organizational self-assessment tool