The California Tribal Epidemiology Center (CTEC) was established in 2005 to assist in collecting and interpreting health information for American Indians/Alaska Natives (AIAN) in California. CTEC receives core funding from the Indian Health Services and operates on other grants and contracts to provide a full complement of staff. Our mission is to improve American Indian health in California to the highest level by engaging American Indian communities in collecting and interpreting health information to establish health priorities, monitor health status, and develop effective public health services that respect cultural values and traditions of the communities.

Director’s Message

Happy New Year! I hope that you enjoyed a wonderful holiday season with friends and family.

At CTEC we have been busy finalizing several documents about California American Indian/Alaska Native (AIAN) health statistics. Since our last newsletter, we uploaded the AIAN Statewide Community Health Profile to the CTEC website and developed drafts of Indian Health Program (IHP)-specific Community Health Profiles. The IHP-specific profiles will be finalized and provided to health programs by March 2016. CTEC also finalized a summary report of the California Tribal Behavioral Risk Factor Community Survey (CTBRFCS), which includes descriptive health statistics that CTEC collected from nearly 1000 California AIAN in 2012-13. Finally, CTEC completed a fact sheet about AIAN race misclassification rates in California Department of Public Health case-based STD surveillance data. All finalized reports can be found at the following website: www.crihb.org/ctec-reports/

The current issue of the CTEC newsletter features information about how to interpret the adult Body Mass Index (BMI) statistic and the association between high BMI scores and obesity. According to the data on page 2, approximately 81% of California AIAN adults over the age of 20 years old have a self-reported BMI classification that is considered to be overweight or obese.

As described on page 3, approximately 19% of California AIAN children aged 11 and under and 35% of California AI youth aged 12-17 years old have an age-calculated BMI that is considered to be overweight or obese.

This issue of the CTEC newsletter also includes a program spotlight of the Redding Rancheria Tribal Health Center’s “5-2-1-0 Program,” which focuses on obesity prevention as a means of lowering diabetes rates for youth, families, and communities.

I look forward to hearing your comments about obesity prevalence and prevention as well as your recommendations for future CTEC newsletters.

Wishing you all the best,

Maureen Wimsatt, PhD, MSW
Director, California Tribal Epidemiology Center
Body Mass Index (BMI) is a measure of an adult’s weight to height. Although it is not a direct measure of body fat, a BMI classification is sometimes used to identify adults who are overweight or obese and/or those who might have excess body fat. Excess body fat can be associated with chronic health issues, such as Type 2 diabetes, heart disease, bone and joint problems, and sleep apnea.

California AIAN Adult BMI Classification in Relation to Weight Perception

Data from the same survey indicated that California AIAN adult weight perceptions did not always naturally align with self-reported BMI classifications.

- Among California AIAN adults who perceived themselves to be underweight (n=26), 15.4% had a self-reported BMI classification of underweight, 34.6% had a self-reported BMI classification of normal weight, 19.2% had a self-reported BMI classification of overweight, and 30.8% had a self-reported BMI classification of obese.

- Among California AIAN adults who perceived themselves to be about the right weight (n=306), 1.6% had a self-reported BMI classification of underweight, 24.3% had a self-reported BMI classification of normal weight, 35.3% had a self-reported BMI classification of overweight, and 39.0% had a self-reported BMI classification of obese.

- Among California AIAN adults who perceived themselves to be overweight (n=471), 1.3% had a self-reported BMI classification of underweight, 11.4% had a self-reported BMI classification of normal weight, 26.1% had a self-reported BMI classification of overweight, and 61.1% had a self-reported BMI classification of obese.

- Additional research is needed to understand how weight perception influences actual BMI classification in AIAN communities.

### Calculated BMI Score and Weight Category

Now use your adult BMI score from Step 4 (above) to determine what weight category you are in. According to our example, Leotie is classified as “overweight” with her BMI score of 26.93.

**BM Calculation For Adults Over 20 Years Old**

1. Multiply your height in inches by 0.025.
2. Multiply your weight in pounds by 0.45.
3. Divide the answer from Step 1 by the answer from Step 2.
4. Divide the answer from Step 3 by 185. (This number is your BMI score.)

**Step 1:**

\[
\text{Height (in inches)} \times 0.025
\]

**Step 2:**

\[
\text{Weight (in pounds)} \times 0.45
\]

**Step 3:**

\[
\frac{\text{Step 1}}{\text{Step 2}}
\]

**Step 4:**

\[
\frac{\text{Step 3}}{185}
\]

*Example:* Leotie is 40 years old and 65 inches tall and weighs 158 pounds.

**Step 1:**

\[
65 \times 0.025 = 1.625
\]

**Step 2:**

\[
158 \times 0.45 = 71.1
\]

**Step 3:**

\[
\frac{1.625}{71.1} = 0.023
\]

**Step 4:**

\[
\frac{0.023}{185} = 0.000125
\]

Based on these calculations, Leotie’s BMI score is 26.93, which places her in the overweight category.

**BMI Weight Category**

- BMI Below 18.5: Underweight
- 18.5 ≤ BMI ≤ 24.9: Normal Weight
- 25.0 ≤ BMI ≤ 29.9: Overweight
- BMI ≥ 30.0: Obese

The CTEC team is dedicated to improving health outcomes in AIAN communities by addressing weight-related health issues. If you are concerned about your BMI or weight, consider speaking with a healthcare professional for personalized advice on maintaining a healthy weight.
INFORMATION ABOUT CTEC

CTEC Membership

CTEC member tribes and health programs can request data-related technical assistance once a data sharing agreement is in place between CTEC and the tribe or tribal health program. Data sharing agreements allow CTEC to access health information, which can be used to monitor local or regional AIAN health status and to evaluate the needs of member tribes and tribal health programs.

Find CTEC data sharing agreement forms online at www.crihb.org/services-2/ If you have questions about CTEC data sharing agreements or want to submit a signed agreement, please contact us by email at: epicenter@crihb.org.

CTEC PROJECT UPDATES

California Tribal Behavioral Risk Factor Community Survey (CTBRFCS): CTEC staff completed a report summarizing the CTRFCS which was administered to 973 AIAN in California in 2012-2013. The CTRFCS summary report reviews self-reported current health status, health care and screenings, health conditions, and health behaviors of California AIAN.

Community Health Profiles: CTEC staff finalized a statewide AIAN Community Health Profile, which included updated statistics about a variety of California AIAN health behaviors and disease rates. In December 2015, CTEC staff drafted 29 Community Health Profiles for Health programs in California.

Good Health and Wellness in Indian Country (GHWC) Evaluation: CTEC staff attended monthly meetings to discuss how to include culturally appropriate measures into the evaluation plans of grantees. Furthermore, upon GHWC grantee request, staff provided technical assistance about data analysis, graphs, and tables.

Methamphetamine and Suicide Prevention Initiative (MSPI) and Domestic Violence Prevention Initiative (DVPI) Technical Assistance: The MSPI/DVPI technical assistance project kicked-off in October 2015. CTEC staff arranged phone conferences with MSPI/DVPI grantees and will continue to provide technical assistance to seven MSPI/DVPI grantees.

Record Linkage Project: CTEC’s concern about race misclassification of AIAN led to collaboration with the California Department of Public Health and the Indian Health Service to identify AIAN race misclassification in case-based Sexually Transmitted Diseases (STD) surveillance data. Findings from the record linkage revealed a 58% rate of AIAN race misclassification in California case-based STD surveillance data.

Robert Wood Johnson Foundation Emergency Management Project: CTEC staff continued a study with California tribes about cross-jurisdictional sharing in emergency management services. Over 75% of tribes across the state completed an interview for the project.

Diabetes Data Quality Improvement (DDQI): CTEC staff sent out a web-based quality improvement needs assessment to SDPI grantees. The responses helped CTEC staff determine the types of training and technical assistance that the SDPI grantees would like to receive about improving the quality of diabetes data entered into the Indian Health Service National Data Warehouse.

Staff Training and Presentations: CTEC staff participated in training for Epi Data Mart, NVivo statistical software, and SAS statistical software. Additionally, staff gave presentations to two CTEC member Tribal Health Programs about CTEC history, projects, and how to request technical assistance.

AIAN CHILD AND YOUTH BMI RATES

For children and youth, BMI is age- and sex-specific. Healthcare professionals use clinical charts and calculations to determine the child’s or youth’s BMI classification, which is described in a corresponding percentile score. This way of scoring BMI classification is used for children and youth aged 2 to 19 years old.

California AIAN Child and Youth BMI Rates

Among California AIAN children aged 11 years old and under, nearly 19% (CI: 9.3-28.5) had an age-calculated BMI classification in the 85th percentile or higher. Children with age-calculated BMI classifications in the 85th percentile or higher are considered to be overweight or obese.1

Children and youth with a higher BMI are more likely to have a higher BMI as an adult. Therefore, prevention strategies aimed at lowering BMI are essential to ensure a healthy future for today’s youth. To read about an example of a community intervention program for AIAN children and youth, see the “Program Spotlight” on page 4-5 in this newsletter.

ENCOURAGING CHILDREN TO EAT HEALTHY FOODS

A fun way to encourage children to eat healthy foods is to encourage them to “eat the rainbow.” This means they would pick fruits and vegetables to make their plates the color of the rainbow. This helps their bodies get a complete range of vital nutrients. Look at the table below (“What’s Under the Rainbow?”) to get ideas for healthy foods your child can eat. 1

What’s Under the Rainbow? 1

<table>
<thead>
<tr>
<th>Color</th>
<th>Foods</th>
<th>Possible Nutrients</th>
<th>Supports</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red</td>
<td>Apples, Tomatoes, Strawberries</td>
<td>Lycopenne, Vitamin C, Folate</td>
<td>Heart, health, memory</td>
</tr>
<tr>
<td>Orange/ Yellow</td>
<td>Carrots, Mango, Pumpkin</td>
<td>Beta-carotene, Vitamin A</td>
<td>Healthy eyes, immune functions</td>
</tr>
<tr>
<td>Green</td>
<td>Broccoli, Cucumbers, Spinach</td>
<td>Chlorophyll, Vitamin K, Omega-3</td>
<td>Healthy bones, healthy teeth</td>
</tr>
<tr>
<td>Blue/Purple</td>
<td>Dark beans, Eggplant, Blueberries</td>
<td>Anthocyanin, Flavonoids</td>
<td>Memory and healthy aging</td>
</tr>
<tr>
<td>White</td>
<td>Ginger, onions, mushrooms</td>
<td>Flavonoids</td>
<td>Good cholesterol levels</td>
</tr>
</tbody>
</table>

Note: Be sure to pick “rainbow” foods with naturally occurring colors. Don’t choose foods with artificial colors like some popsicles, gummy snacks, or sodas. 1

Citations:

Page 3
HEALTHY LIFESTYLE TIPS

There are many different changes you can make to help maintain a healthy weight and reduce BMI. These tips will help promote a healthy lifestyle for you, your family, your friends, and your community.

Everyone Can:
⇒ Look for Ways to Sneak in Exercise. If you watch T.V., do quick exercises during commercial breaks. You can do jumping jacks, sit-ups, push-ups, or run in place. If you work out during the entire commercial break, it will give you about 15 total minutes of exercise in an hour-long program. Additionally, when you run errands or go to work, park in the farthest parking spot and take the stairs instead of the elevator.
⇒ Eat Fruits and Vegetables. Make grocery shopping a fun family event! Have children help select new fruits and vegetables to try. Aim to eat one new fruit or vegetable per month.
⇒ Drink Water. Eliminate soda from your diet and replace it with water. You can add lemon or cucumber to the water to make it more flavorful.

Communities Can:
⇒ Build a community garden. Consumption of vegetables can help protect against weight gain. Building a community garden ensures access to fresh vegetables for the community.
⇒ Create exercise groups. Regular physical activity helps reduce body fat. Start a running or bicycling group to encourage physical fitness and mutual support.
⇒ Make walkable areas. Create footpaths or sidewalks to encourage more walking.

Redding Rancheria Tribal Health Center 5-2-1-0 Program

By Elizabeth Hunter, RN, BSN
Redding Rancheria Tribal Health Center, (530) 225-6803

The Redding Rancheria Tribal Health Center (RRTC) is a tribal health facility located in Redding, CA, providing comprehensive health services to AIAN patients residing in the western two-thirds of Shasta County and all of Trinity County. The Redding Rancheria consists of the Yana, Wintu, and Pit River tribes. The RRTC provides medical, dental, pharmacy, behavioral health and community health outreach services. The Community Health department of the RRTC is a team comprised of a diabetes educator, a Pharm D case manager, a registered dietician, two registered nurses, a data coordinator, and a patient transporter.

In addition, the Community Health department is to provide culturally sensitive, quality, comprehensive diabetes self-management and preventative programs to meet the needs of our patients. Our team works together to empower our patients and the community through health promotion and diabetes-related education and services.

In 2012, our tribal leadership came to us expressing a desire for our team to create programs and services with a focus on diabetes prevention in our community. We began to look at the prevalence of obesity in the youth that we serve and found that 54% of our youth were above a healthy weight placing them at greater risk for the development of diabetes and other health conditions.

Since that time, our team has worked to develop and implement programs targeting youth and their families with an emphasis on screening at risk youth for diabetes and providing education and support to live a healthy lifestyle.

To convey a unified health message to our families, we adopted the simple and effective health message of the nationally recognized childhood obesity prevention program, 5-2-1-0 Let’s Go. The 5-2-1-0 message encourages the daily practice of the following health habits: eating at least 5 fruits and vegetables, reducing screen time to less than 2 hours, completing 1 or more hours of physical activity, and consuming 0 sugary beverages daily.

Did You Know?

Over 75% of AIAN adults in California (n=914) indicated doing some form of physical activity or exercise in the past month.1 The top five forms of reported activities were:2

⇒ Walking
⇒ Playing basketball
⇒ Running
⇒ Bicycling
⇒ Gardening

It may be helpful to promote these activities in your community to inspire people to exercise!

Citations:
2 California Tribal Behavioral Risk Factor Community Survey (2012-2013)

In 2015 we began to turn our focus to providing wellness and health related education to the family unit instead of just targeting youth with the classes and interventions we planned. We began to host quarterly “Family Wellness” events where a fun activity such as rock climbing, skating, or swimming was offered. We also implemented quarterly “Family Cooking Demonstrations”. These events and cooking demonstrations have been well attended and provided a fun opportunity for the delivery of valuable education and resources for incorporating healthier habits.

Not only did this approach prove more successful in our attendance to classes and events (average of 40-65 attendees), but research also indicates that targeting the family as a unit provides greater adherence and motivation for exercise, healthy eating, and lifestyle changes. Family gym memberships were offered to families actively participating in our programs. Families enjoyed trying new activities and classes at the gym. One family of four began an exercise regime that included early morning workouts at least 4 days a week as well as switching to a much healthier plant based diet. Through these interventions our data shows that 54% of youth that are active in our Family Wellness program have had a decrease in BMI, 52% have had an improvement in HbA1c and 66% have met both nutrition and activity goals set at the start of 2015.

A primary goal for our work has been to focus on building relationships with youth and their families as well as building strong collaborations with all departments within our health center to maximize the impact of the interventions and prevention activities we offer. We feel honored to serve our tribe, our patients and our community by providing targeted programs to support a healthier lifestyle for our youth and families and we are committed to continue to promote health and ultimately decrease the incidence of obesity and diabetes in our population.

three days a week at our health center to provide an opportunity for youth to be active as well as to decrease screen time. The classes included a variety of activities centered on developing skills in strength, agility, balance and creativity. In addition we offered a monthly youth cooking class taught by our registered dietician. Youth attending classes assisted in the preparation of a healthy dish, and at each class a new fruit and/or vegetable was highlighted. This brought exposure to nutrient rich foods that participants may not have experienced before.

In addition, the Redding Rancheria Tribal Health Center (RRTC) is a tribal health facility located in Redding, CA, providing comprehensive health services to AIAN patients residing in the western two-thirds of Shasta County and all of Trinity County. The Redding Rancheria consists of the Yana, Wintu, and Pit River tribes. The RRTC provides medical, dental, pharmacy, behavioral health and community health outreach services. The Community Health department of the RRTC is a team comprised of a diabetes educator, a Pharm D case manager, a registered dietician, two registered nurses, a data coordinator, and a patient transporter. The mission of the Community Health department is to provide culturally sensitive, quality, comprehensive diabetes self-management and preventative programs to meet the needs of our patients. Our team works together to empower our patients and the community through health promotion and diabetes-related education and services.

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The 5-2-1-0 message is reinforced at medical appointments and at our youth classes and events. We began hosting afterschool exercise classes, (continued on page 5)