It Takes a Village:

Effective Approaches to Child Nutrition in Indian Country

Kelli Begay, MS MBA RDN
Kickapoo, Seminole, Muscogee Creek
Nutrition Consultant
Where do we begin?
## Snapshot: Native Youth Today

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population</td>
<td>There were over 2.1 million American Indians and Alaska Natives (AI/AN) under the age of 24 living in the US. (2010 US Census)</td>
</tr>
<tr>
<td>Education and Schooling</td>
<td>90% of all AI/AN students attend public schools (National Indian Education Association Statistics)</td>
</tr>
<tr>
<td>School Attendance</td>
<td>8% attend schools administered by the Bureau of Indian Affairs (National Indian Education Association Statistics)</td>
</tr>
<tr>
<td>Graduation Rate</td>
<td>The national graduation rate for AI/AN high school hovers around 79% in comparison to over 94% for white students. (Childstats.gov)</td>
</tr>
<tr>
<td>Suicide Rate</td>
<td>Suicide is the 2nd leading cause of death – 2.5 times the national rate – for AI/AN youth in the 15 to 24 age group. (CDC)</td>
</tr>
<tr>
<td>Poverty Rate</td>
<td>The poverty rate among AI/ANs in 2014 was 28.8%, and more than one in three AI/AN children live in poverty. (2010 US Census)</td>
</tr>
</tbody>
</table>
The Pair of ACEs

Adverse Childhood Experiences

Maternal Depression

Physical & Emotional Neglect

Emotional & Sexual Abuse

Divorce

Substance Abuse

Mental Illness

Domestic Violence

Incarceration

Homelessness

 Violence

Adverse Community Environments

Poverty

Poor Housing Quality & Affordability

Discrimination

Community Disruption

Lack of Opportunity, Economic Mobility & Social Capital

Child Nutrition
First 1,000 Days
Nutrients and Development

- Brain requires specific nutrients during development
- Needs change depending on phase

(Blair, 2016)
Early Childhood
Ages 2–5

- Children quadruple their birth weight by age 2
- Between ages 2 and 5, children gain an average of 4.5 to 6.5 lbs and grow 2.5 to 3.5 inches per year
- As growth rates decline during early childhood, children’s appetites decrease, and the amount of food they consume may become unpredictable

Source: Bright Futures: Nutrition, 3rd Edition
Early Childhood

- Obesity prevalence has risen from 5% to more than 12% among US children ages 2 to 5
- Iron deficiency and iron-deficiency anemia are common in children, especially children from families with low incomes
- Children with special health care needs may have nutrition concerns

Source: Bright Futures: Nutrition, 3rd Edition
Parents are responsible for what, when, and where their child eats.

Children are responsible for deciding whether to eat and how much.
Middle Childhood
Ages 5–10

- Slow, steady rate of physical growth
- Common nutrition concerns during middle childhood include the following:
  - Decrease in consumption of milk and milk products
  - Increase in consumption of sweetened beverages, especially soft drinks
  - Limited intake of fruits and vegetables
  - Higher consumption than recommended of foods high in fat, especially saturated and trans fats
  - Rise in overweight and obesity
  - Increase in body image concerns

Source: Bright Futures: Nutrition, 3rd Edition
Adolescence
Ages 11-21

- Early adolescence (ages 11 to 14)
  Includes pubertal and cognitive changes
- Middle adolescence (ages 15 to 17)
  A time of increased independence and experimentation
- Late adolescence (ages 18 to 21)
  Make important personal and vocational decisions

Source: Bright Futures: Nutrition, 3rd Edition
Adolescence
Ages 11–21

This stage is the most dynamic period of human development!

### Table 2. Estimated Calorie Requirements (in kilocalories) for Each Gender and Age Group at 3 Levels of Physical Activity

<table>
<thead>
<tr>
<th>Gender</th>
<th>Age (years)</th>
<th>Sedentary&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Moderately Active&lt;sup&gt;b&lt;/sup&gt;</th>
<th>Active&lt;sup&gt;c&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>9–13</td>
<td>1,600</td>
<td>1,600–2,000</td>
<td>1,800–2,200</td>
</tr>
<tr>
<td></td>
<td>14–18</td>
<td>1,800</td>
<td>2,000</td>
<td>2,400</td>
</tr>
<tr>
<td></td>
<td>19–30</td>
<td>2,000</td>
<td>2,000–2,200</td>
<td>2,400</td>
</tr>
<tr>
<td>Male</td>
<td>9–13</td>
<td>1,800</td>
<td>1,800–2,200</td>
<td>2,000–2,600</td>
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<tr>
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<td>2,400–2,800</td>
<td>2,800–3,200</td>
</tr>
<tr>
<td></td>
<td>19–30</td>
<td>2,400</td>
<td>2,600–2,800</td>
<td>3,000</td>
</tr>
</tbody>
</table>

<sup>a</sup>Sedentary means a lifestyle that includes only the light physical activity associated with typical day-to-day life.

<sup>b</sup>Moderately active means a lifestyle that includes physical activity equivalent to walking about 1.5 to 3 miles per day at 3 to 4 miles per hour, in addition to the light physical activity associated with typical day-to-day life.

<sup>c</sup>Active means a lifestyle that includes physical activity equivalent to walking more than 3 miles per day at 3 to 4 miles per hour, in addition to the light physical activity associated with typical day-to-day life.

Source: Bright Futures: Nutrition, 3<sup>rd</sup> Edition
Common nutrition concerns during adolescence include the previous concerns noted in Middle Childhood and the following:

- Increase in eating disorders, body image concerns, dieting, and unsafe weight-loss methods
- Prevalence of iron-deficiency anemia (in females) and hyperlipidemia
- Food insecurity among adolescents from families with low incomes

Source: Bright Futures: Nutrition, 3rd Edition
## Older Children/Adolescents

<table>
<thead>
<tr>
<th>Desired Outcomes for the Child</th>
<th>Educational/Attitudinal</th>
<th>Behavioral</th>
<th>Health</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Understands that healthy eating behaviors and regular physical activity are crucial to growth, development, and health</td>
<td>Consumes a variety of healthy foods</td>
<td>Maintains optimal nutrition to promote growth and development</td>
</tr>
<tr>
<td></td>
<td>Understands the importance of eating a variety of healthy foods and how to increase food variety</td>
<td>Makes healthy food choices at and away from home</td>
<td>Achieves nutritional and physical well-being, without signs of iron-deficiency anemia, undernutrition, obesity, eating disorders, dental caries (tooth decay), or other nutrition-related problems</td>
</tr>
<tr>
<td></td>
<td>Understands the importance of a healthy diet consisting of 3 meals per day and 1 to 2 snacks as needed</td>
<td>Engages in at least 60 minutes of physical activity on most, and preferably all, days of the week</td>
<td>Achieves and maintains a healthy body weight and positive body image</td>
</tr>
<tr>
<td></td>
<td>Understands the physical, emotional, and social benefits of physical activity and how to increase physical activity level</td>
<td>Watches television or plays computer or video games no more than 1 to 2 hours of quality programming a day</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Understands that people come in unique body sizes and shapes, within a range of healthy body weights</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Bright Futures: Nutrition, 3rd Edition
# Older Children/Adolescents

| Role of the Family | Understands physical changes that occur with growth and development | Understands the relationship between nutrition and short- and long-term health | Understands children’s eating behaviors and how to increase the variety of healthy foods they eat | Understands the importance of a healthy diet consisting of 3 meals per day and snacks as needed | Provides a positive role model: practices healthy eating behaviors, engages in regular physical activity, and promotes a positive body image | Provides a variety of healthy foods at home, and limits the availability of high-sugar and high-fat foods, especially those high in saturated and trans fats | Eats meals together regularly to ensure optimal nutrition and facilitate family communication | Provides opportunities for the child to participate in meal planning and food preparation | Uses nutrition programs and food resources if needed | Engages in regular physical activity with the child |
|--------------------|---------------------------------------------------------------------|-----------------------------------------------------------------------------|---------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
|                    |                                                                      |                                                                             |                                                                                 |                                                                                 |                                                                                                                                 |                                                                                                                                 |                                                                                                                                 |                                                                                                                                 |                                                                                                                                 |                                                                                                                                 |                                                                                                                                 |

Source: Bright Futures: Nutrition, 3rd Edition
Sugar-Sweetened Beverages

JUICE

- Juice should not be given to infants younger than 6 months
- After age 6 months, provide 100% fruit juice in a cup instead of a bottle and limit it to 4 to 6 oz per day

Other Sugar-Sweetened Beverages
(Fruit drinks, Soft drinks, Sports drinks, Sweet tea)

- Drinking unlimited amounts of beverages high in sugar are at increased risk for:
  - dental caries (tooth decay)
  - minor infections
  - experiencing loose stools and diarrhea
- Sugar-sweetened beverages contain “empty calories” taking up space in the stomach

Source: Bright Futures: Nutrition, 3rd Edition
Body Image

- Avoid criticizing about his or her size or shape
- Focus on traits other than appearance when talking with children
- Talk to children about how the media affects his or her body image
- Be a good role model—avoid criticizing your own size or shape or that of others
Issue: Access to Nutritious Foods
Food Deserts

Limited access to supermarkets, supercenters, grocery stores, or other sources of healthy and affordable food
Getting the Right Nutrition

Children may live in families who do not have a consistent and dependable supply of healthy food.

Food insecurity is when households have difficulty providing enough food for all of their members at some time during the year due to a lack of resources.

Avoid hunger by getting cheaper foods that have little to no nutritional value which lends itself to inadequate nutrients for normal growth and development.
What happens when someone is experiencing food insecurity?

They…

- Are at greater risk for being emotionally distressed
- Eat less expensive foods which are often unhealthy
- Have little choice over what kinds of food to buy or receive for free, making it difficult or impossible to eat balanced meals
- Have periods when they don’t eat, then overeat when food is available
Health Impacts of Food Insecurity: Children & Adolescents

- Chronic health/behavior issues (Rose-Jacobs, 2008)
- Asthma (Mangini, 2015)
- Iron-deficiency anemia (Eicher-Miller, 2009 and Skalicky, 2006)
- Greater chance of being hospitalized (Cook, 2013)


Health Impacts of Food Insecurity: Children & Adolescents

- Greater developmental risk (Rose-Jacobs, 2008)
- Low birth weight (Laraia, 2010)
- Higher anxiety and depression (Whitaker, 2006)
  - Suicide in adolescents (Alaimo, 2002)


Understanding Food Insecurity

More Likely to Occur:

• End of the month
  • SNAP or income may have run out (Mabli, 2014)
• Holiday seasons
• Birthdays, life-cycle rituals
• Feast Days
• Ceremonies
• Summer or holiday breaks – kids out of school (Mabli, 2014)
• Seasonal bills
• Periods of illness resulting in competing housing and medical costs (Mabli, 2010)


Food Insecurity Assessment

Read each statement and ask your client if the statement is often true, sometimes true, rarely true, or never true.

- Within the past 12 months, we worried whether our food would run out before we got money to buy more.
- Within the past 12 months, the food we bought just didn’t last and we didn’t have money to get more.

If the response is “often true” or “sometimes true” to either statement, they likely have food insecurity.
# Addressing Food Insecurity: A Toolkit for Pediatricians

## Prepare

- **Educate and train** staff on food insecurity and the need for universal screening.
- **Follow** AAP’s recommendation to screen at scheduled check-ups or sooner, if indicated.
- **Incorporate** food insecurity screening into the institutional workflow.
- **Show** sensitivity when screening for food insecurity.

## Screen

Use the AAP-recommended Hunger Vital Sign:™

1. “Within the past 12 months, we worried whether our food would run out before we got money to buy more.”
   - often true  - sometimes true  - never true  - don’t know/refused

2. “Within the past 12 months, the food we bought just didn’t last and we didn’t have money to get more.”
   - often true  - sometimes true  - never true  - don’t know/refused

Patients screen positive for food insecurity if the response is "often true” or “sometimes true” for either or both statements.

Document and code the administration and results of screening in medical records.

## Intervene

- **Administer** appropriate medical interventions per your protocols.
- **Connect** patients and their families to the federal nutrition programs and other food resources.
- **Document and track** interventions in medical records.
- **Support** advocacy and educational efforts to end childhood food insecurity.

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For more information, visit:  
http://www.frac.org/aaptoolkit
Youth-Led Projects

- The Pollination Project – Community Garden Native Youth Outreach
  Azelya Yazzie’s outreach project focuses on helping Native American youth in California to learn how to grow and cook their own traditional foods.

- Black Mesa Water Coalition (BMWC)
  - Formed as a student-led group in 2001 and has since evolved into an intergenerational organization based in Flagstaff, AZ
  - BMWC directs food production and educational programs on a thirteen-acre community farm to help address the immediate and long-term needs of Navajo and Hopi communities
  - Food First 2018 Food Sovereignty Prize Honoree

Program Components
1. Classroom curriculum – nutrition and physical activity
2. Foodservice component – healthy snacks and meals
3. Professional development training
4. Family engagement and events
5. Partner with a community grocery store
6. Healthcare providers: partner with local pediatricians, WIC offices, etc. to provide consistent messaging around nutrition and physical activity.
Approaches in Tribal Communities

John Hopkins Center for American Indian Health
- Family Spirit
- Feast for the Future

www.feastforthefuture.org
National Native Youth Efforts
The Chickasaw Nation’s food delivery research project funded by the USDA.

This home-delivered food project is for Pre-K to 12th grade students who receive free school meals at school districts within the Chickasaw Nation.

- Each month, caregivers can choose the food kit they want for each student in their household.
- Orders can be made through the website or by calling the Packed Promise staff.
- Orders are delivered to their doorstep.
- A bonus $15 FRESH check is also included with orders – used to buy fresh and/or frozen fruits and veggies at WIC approved grocery stores within the Chickasaw Nation, or at Chickasaw Nation approved local farmers’ markets.

www.packedpromise.com
Updated IHS Nutrition Resource
Use your plate as a guide to help you eat in a healthy way!

1. Fill half of your plate with vegetables.
2. Fill the other half of your plate with a grain/starch and a protein.
3. Add a side of fruit.

Pictured here:
- Mixed berries
- Cooked spinach
- Baked squash with peppers and herbs
- Steamed wild rice
- Baked deer meat with sage
- Water

Remember:
- Stay active
- Drink water
- Use a 9-inch plate

Notes:

www.ihs.gov/diabetes
More Ideas for My Native Plate

Ways to Add Variety to Meals and Snacks

Vegetables and Fruits

Tips
- Stock up on fresh, frozen, and canned vegetables and fruits.
- Keep fruits and vegetables on hand for snacking.
- Plan some meals around a vegetable main dish, such as a stir fry stew, or soup.
- Enjoy fruit as a dessert.

Examples
Vegetables: Wild greens, tomatoes, carrots, leafy greens, zucchini, avocados, broccoli, green beans, cucumbers, onions, peppers, okra
Fruits: Berries, melons, apricots, peaches, citrus fruits, bananas, apples, pears

Proteins

Tips
- Choose fish, beans, lentils, eggs and nuts more often to cut down on meat.
- Instead of a beef patty for your burger, try a veggie, black bean, turkey, soy, or bison patty.
- Grill, stew, or bake meat instead of deep frying.
- If milk upsets your stomach, try yogurt, lactose free milk, or soy milk.

Examples
Animal proteins: Fish, wild game, bison, poultry, mutton, beef, pork, eggs
Plant proteins: Beans, lentils, nuts, nut butters, seeds, tofu, soy products
Dairy proteins: Milk, lactose free milk, yogurt, cheese, cottage cheese

Grains and Starches

Tips
- Choose whole grain foods, such as whole wheat breads, corn tortillas, oatmeal, and wild or brown rice.
- Try whole wheat flour instead of white flour.
- Add wild or brown rice to main dishes, such as a stir fry stew, or soup.
- Bake or roast potatoes instead of deep frying.

Examples
Grains: Pastas, breads, crackers, rice, oats, quinoa, barley, cereals, tortillas, flour, cornmeal
Starchy vegetables: Potatoes, corn, green peas, winter squash

www.ihs.gov/diabetes
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- NETWORK with other grantees and clinicians
- SHARE best practices
- SHOWCASE their successful work in AI/AN communities

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More info coming soon. Visit diabetesinindiancountry.com
Thank You

kelli.begay@ihs.gov

Thank You