Arizona Developmental Disabilities Planning Council℠

ASU Morrison Institute for Public Policy
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The Obesity Epidemic:

Its Disparate Impact on People with Disabilities

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Growing numbers of poverty and nutrition studies indicate that malnutrition can derive from overnutrition[1] and obesity. And in Arizona, the adult obesity rate is high and trending upwards. Since 1990, the obesity rate has grown 163%. The obesity rate is calculated by body mass index (BMI), which measures the relationship (or ratio) of weight to height. Adults with a BMI of 25 to 29.9 are considered overweight, while individuals with a BMI of 30 or more are considered obese. The overall Arizona obesity rate in 2014 is 28.9%; including persons who are overweight raises that percentage to 64%.[2]

These findings are magnified among people with disabilities. The obesity rate for people without disabilities grew from 22% in 2010 to 24% in 2013; for people with disabilities, the obesity rate increase over these same years went from 33% to 38.5%.[3] In effect, obesity rates among Arizonans with disabilities are 62.5% higher than Arizonans without disabilities, mirroring the national disparity average (Figure 1).

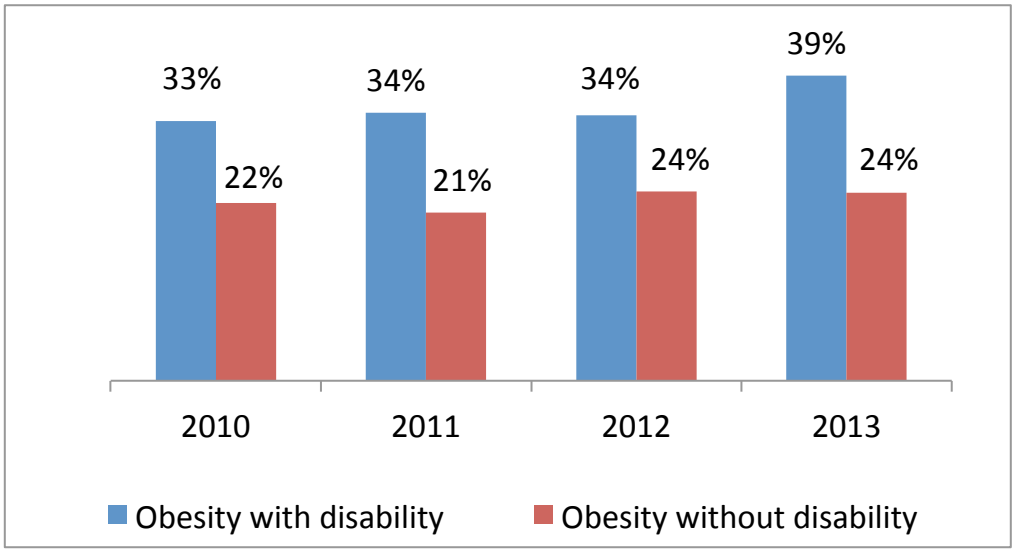

Figure 1. Obesity Percentages With and Without Disabilities in Arizona, 2010 – 2013

Adults with mobility limitations and intellectual or developmental disabilities (I/DD) are at the greatest risk for obesity, and the problem starts early. Of U.S. children between the age of 10 and 17, 20% of those with disabilities are obese compared with only 15% of children without disabilities.[4] Consequently, Arizona also had the seventh-highest child obesity rate (19.8%) in the country in 2011.[5]

According to the Centers for Disease Control (CDC), being overweight or obese may impose greater limitations on daily activities and increase the risk of negative health conditions among people with disabilities, including:

- Coronary heart disease
- Type 2 diabetes
- Cancers (endometrial, breast, and colon)
- High blood pressure
- Lipid disorders (high total cholesterol, high levels of triglycerides)
- Stroke
- Liver and gallbladder disease
- Sleep apnea and respiratory problems
- Osteoarthritis (degeneration of cartilage/bone within a joint)
- Gynecological problems (abnormal periods, infertility)

Obesity can also contribute to a disability. Obese pregnant women have a greater risk of complications that affect the health of the mother and fetus, including gestational diabetes, stillbirth, and/or congenital anomalies.[6] In Arizona, more than one-half of pregnant women are overweight or obese.[7] Obesity during pregnancy can increase the long-term risks for the child, including obesity, heart disease, and hypertension[8].

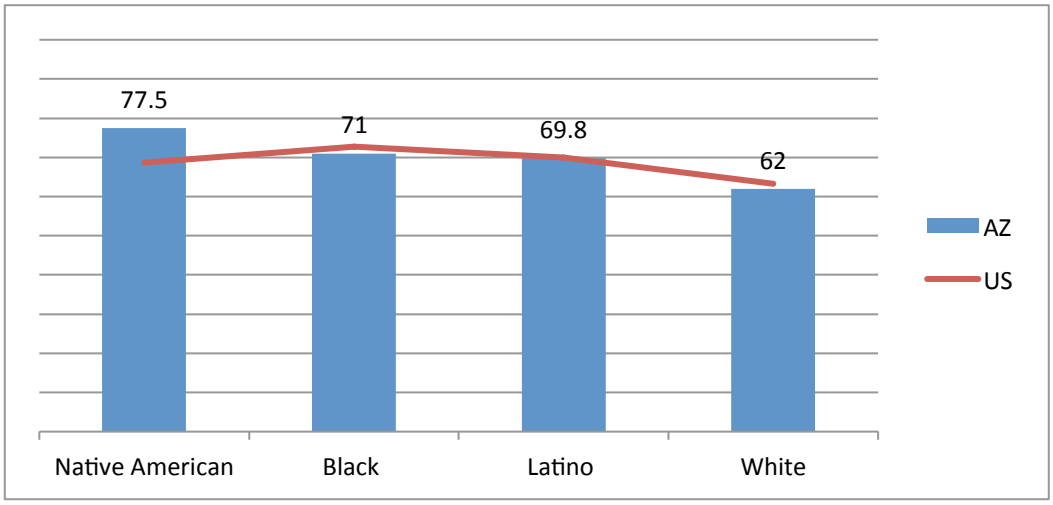

Figure 2. Overweight and Obesity Percentages by Race/Ethnicity, 2014

Recognizing this critical problem, the Arizona Department of Health Services (ADHS) developed the Empower Program in 2010 (http://azdhs.gov/prevention/nutrition-physical-activity/empower/index.php). This voluntary public health program supports licensed Early Childhood Education facilities' efforts to empower young children to grow up healthy by applying ten different strategies, such as providing one hour of physical activity a day, limiting fruit juice, serving family-style meals, and providing monthly oral health education.[9] Participating facilities receive a 50% discount for child care licensing fees.

Today, the Empower Program reaches more than 200,000 children in licensed early care and education facilities throughout Arizona. It has won numerous awards for being a best practice; most recently, the program received the Association of Maternal and Child Health Programs (AMCHP) National Best Practice Award.

Poverty and Ethnic Disparities

Figure 2 shows ethnic disparities among individuals who are overweight or obese are more pronounced in Arizona when compared to national averages. While every group struggles with obesity, there are higher rates among Native Americans, Blacks, and Latinos when compared to Whites - Native Americans post the highest percentage (77.5%), which is significantly higher than the national average for this group (68.6%).[10]

But recent research demonstrates race and ethnic differences disappear when poverty is taken into the equation.[11] For example, advocates point to the unavailability of fresh and healthy food among Native Americans, many of whom are located one to two hours away from the nearest health center.[12] Studies have also found lower income neighborhoods with a higher proprtion of minorities have fewer supermarkets (or longer distances to markets) but more fast food restaurants.[13] It is no surprise that higher percentages of racial and ethnic minorities living in poverty with restricted access to healthy food choices have higher overweight/obesity rates (Table 1).

Race/Ethnicity	% Families Below Poverty Level
White Alone	6.9
Native American	**33.3**
Black	19.8
Two or More Races	15.9
Pacific Islander	16.7
Hispanic or Latino	**25.0**
Asian Alone	10.1

Table 1 Arizona Percentage of Families by Race/Ethnicity below Poverty Level, 2009-2013

If certain eating behaviors are required to reduce chronic disease and promote health, then some communities will continue to have disparities in critical health outcomes unless there is increased access to healthy food.

Combatting the Poverty-Obesity Link

Project Healthy Schools is a curriculum-based program in Michigan aimed at curbing obesity in middle schoolers. Kids learn about nutrition, but they also get healthier menus and vending options at school. Students at first complained about salad carts and yogurt in the cafeteria, but over time, they became popular items. The most dramatic improvements in obesity in only three months are among low-income students. These findings highlight that intervening in communities with few resources can improve health outcomes. **(www.projecthealthyschools.org/)**

Best Practices

Federal initiatives recognize the disability/non-disability disparity in nutrition and health outcomes. The Center for Disease Control (CDC) has published nutrition and exercise recommendations to help confront obesity among people with disabilities.[14] Healthy People 2020 targets obesity among people with disabilities as a key factor affecting their health and well-being and makes recommendations to remove community structural barriers that impede their ability to interact with the environment.[15] Despite these measures, obesity rates among people with disabilities continue to climb. Therefore, it is crucial that individuals, family members, professionals, and state and local policy makers have a better understanding of the unique circumstances facing people with disabilities, so that policy recommendations are more targeted and inclusive. Some best practices follow.

(1) **To promote physical activity, some cities and towns develop "Complete Streets" policy.** These policies incorporate safe and convenient walking and bicycling facilities into transportation projects; improves conditions and opportunities for walking, bicycling; integrates walking and bicycling into transportation systems; and provide safe and convenient facilities for each of these activities. The ultimate goal is that pedestrians, bicyclists, motorists, wheelchair-users, and transit riders of all ages and abilities will be able to safely, conveniently and easily use roads, sidewalks, bike paths, transit and rails to get to their destination. Phoenix's "Reinvent PHX" initiative includes a collaborative project with the city, Arizona State University, St. Luke's Health Initiatives and local organizations to support development of the city's light rail system. Projected benefits include increased access to nutritious foods, opportunities to incorporate walking and biking into everyday life and urban design features to increase public safety.

(2) **Provide education and supports to people with disabilities, families, and caregivers.** Symptoms of under- or over-nourishment are generally detectable before they are diagnosed by health care providers, and the symptoms can mostly be addressed through individual and household level dietary interventions. In Arizona, the majority of individuals with I/DD live with their families. Overextended family members and care workers who cook for the individual may have only time to make pre-prepared or processed foods. Persons who live in community residences may have little influence over the type of foods served. Meals served in a residence often reflect foods the consumers and staff have grown accustomed to preparing and eating over the years. Limited cooking skills and nutritional awareness of staff members also may serve as barriers to healthy diets in a community residence.

As opposed to buying fast food daily, individuals, family members, and care workers can be taught proper nutrition guidelines and how to stretch a budget making simple, healthy meals.

- Day programs and independent living centers also offer cooking classes for individuals with disabilities; however, family members and personal attendants are not necessarily included in these programs.
- The Arizona Nutrition Network (AzNN) (http://www.eatwellbewell.org/) is a public and private partnership led by the ADHS Bureau of USDA Nutrition Programs (http://www.eatwellbewell.org/). The AzNN provides common nutrition messages using the Dietary Guidelines for Americans and ChooseMyPlate.gov to persons who are SNAP participants or whose income falls within the eligible guidelines for the SNAP program.
- MyPlate (Figure 3) is one simple and accessible way to teach individuals, families, and caregivers about nutrition. MyPlate replaces the food pyramid and offers a visualization of what a balanced and healthy meal should look like. The website shown below provides examples of how to eat healthy.

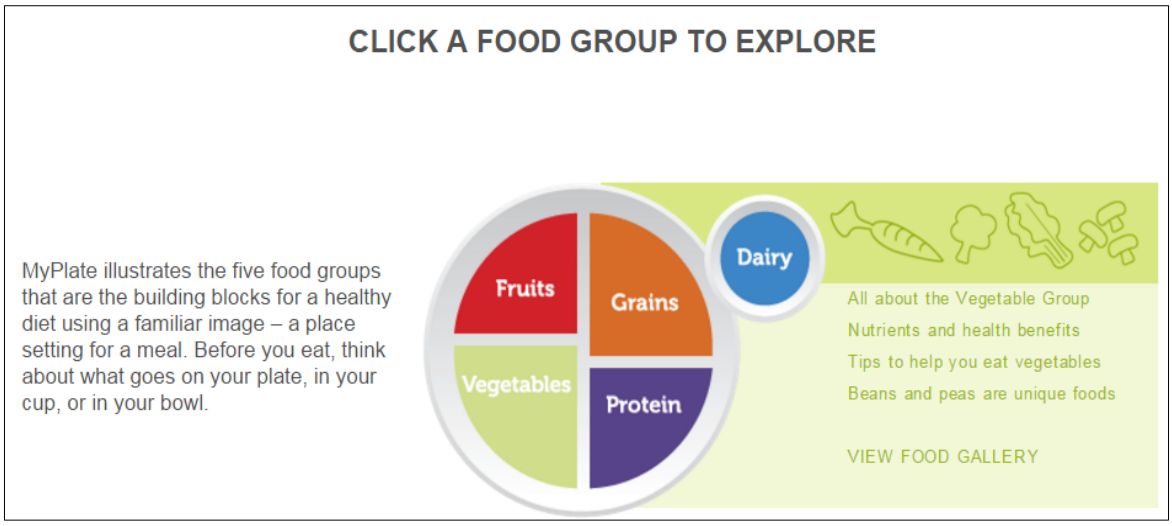

Figure 3. MyPlate, http://www.choosemyplate.gov/

Conclusion

Regardless of the approach, integrated efforts including primary physicians, nutrition professionals, case managers, therapists, direct care workers, providers, family members, and people with disabilities are crucial to achieve dietary and nutrition goals. Malnutrition among people with disabilities is an outcome of physical, behavioral, environmental, and social factors. These complex problems require collaborative and innovative approaches so that all people, regardless of disability, have the opportunity to lead as healthy and active a lifestyle as possible.

NOTES

[1] Overnutrition is defined as when the amount of nutrients exceeds the amount required for normal growth, development, and metabolism.
[2] http://stateofobesity.org/files/stateofobesity2015.pdf
[3] Annual Disability Statistics Compendium. http://www.disabilitycompendium.org/
[4] CDC, Disability and Obesity. http://www.cdc.gov/ncbddd/disabilityandhealth/obesity.html. Childhood obesity is defined as a BMI at or above the 95th percentile for children of the same age and sex.
[5] Retrieved from http://healthyamericans.org/assets/files/TFAH2013FasInFatReportFinal%209.9.pdf
[6] Leddy, M. A., Power, M. L., & Schulkin, J. (2008). The impact of maternal obesity on maternal and fetal health. Reviews in obstetrics and gynecology, 1(4), 170.
[7] Center for Disease Control and Prevention. Nutrition, Physical Activity and Obesity: Data, Trends and Maps. Retrieved from http://nccd.cdc.gov/NPAO_DTM/LocationSummary.aspx?statecode=94. The national average of overweight or obese pregnant women is 53.7% and it is 53.4% in Arizona.
[8] Ibid.
[9] http://azdhs.gov/documents/prevention/nutrition-physical-activity/empower/resources-policies/empower-guidebook.pdf
[10] KCMU (Kaiser Family Foundation) analysis of the Centers for Disease Control and Prevention (CDC)'s Behavioral Risk Factor Surveillance System (BRFSS) 2014 Survey Results.
[11] Rogers, Eagle, Sheetz, Woodward, Leibowitz, et al. (2015, November 12). The Relationship between Childhood Obesity, Low Socioeconomic Status, and Race/Ethnicity: Lessons from Massachusetts. Child Obesity, 11(6):691-5. doi: 10.1089/chi.2015.0029. Rogers R1, Eagle TF1, Sheetz A2, Woodward A2, Leibowitz R2, Song M3, Sylvester R1, Corriveau N1, Kline-Rogers E1, Jiang Q1, Jackson EA1,4, Eagle KA1,4.
[12] Blanton, Tom, October 16, 2015, Cronkite News, "Native Americans in Arizona had nation's highest obesity and overweight rates." http://medicalxpress.com/news/2015-10-native-americans-arizona-nation-highest.html
[13] Baker EA, Schootman M, Barnidge E, Kelly C. The role of race and poverty in access to foods that enable individuals to adhere to dietary guidelines. Prev Chronic Dis [serial online] 2006 Jul [date cited]. Available from: URL: http://www.cdc.gov/pcd/issues/2006/jul/05_0217.htm.
[14] http://www.cdc.gov/ncbddd/disabilityandhealth/obesity.html
[15] http://www.healthypeople.gov/2020/topics-objectives/topic/disability-and-health

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