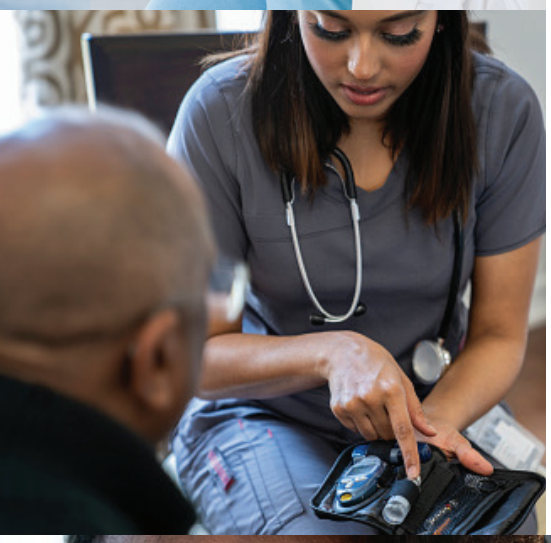
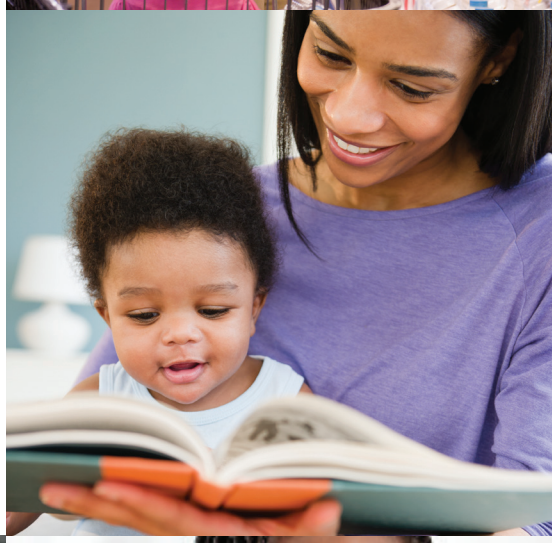



Diabetes Among African Americans/ Blacks in the United States

Cigna®




Part 1: An Overview

Part 1: An Overview

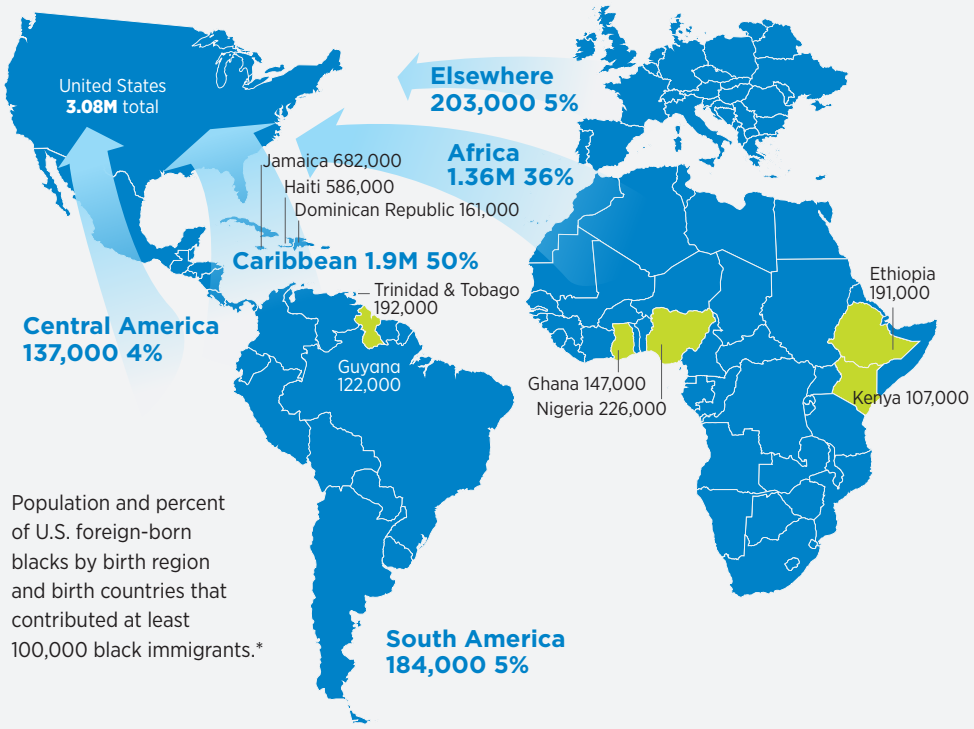
This is the first module of a three-part series on African Americans (and other descendants of Africa) living with diabetes in the United States. The goal of this series is to raise awareness of health inequities and provide population facts, cultural insights and potential solutions to assist health care providers in taking concrete actions to close African American/Black health disparities.

This module explores the cultures, spirituality, beliefs and perspectives around health, illness, and treatment along with other parallel facts. Thank you for participating in this training. We invite you to implement this information into your practice and share learnings with colleagues.

Presented by the African American/Black Enterprise Resource Group in partnership with the Health Equity Council, Consumer Health Engagement, and Clinical Program & Operations.

Population & Statistics

For society, health disparities translate into worsened health outcomes, higher health care costs, lost work productivity, and premature death. For African Americans/Blacks in the United States, health disparities are far too common, impacting quality of life, longevity, economic opportunities, and injustices.



Population and percent of U.S. foreign-born blacks by birth region and birth countries that contributed at least 100,000 black immigrants.*

THREE DIASPORAS

BLACK/AFRICAN AMERICAN
13.4% of the United States population, in 2019

IMMIGRANTS FROM AFRICA
39% of the overall foreign-born population

IMMIGRANTS FROM THE CARIBBEAN
49% of all foreign-born Blacks in the United States in 2016

In 2017, African Americans were **twice as likely** as non-Hispanic whites to die from diabetes.[53]

In 2016, non-Hispanic Blacks were **2.3 times more likely** to be hospitalized for lower-limb amputations as compared to non-Hispanic whites.[53]

In 2016, non-Hispanic Blacks were **3.5 times more likely** to be diagnosed with end-stage renal disease as compared to non-Hispanic whites.[53]

In the latest National Health and Nutrition Examination Survey data, the obesity estimate for African Americans/Black is **13.8** percent versus **9.3** percent] for whites. Immigrants are not included in the census. The primary modifiable biological risk factor for diabetes in the African American/Black community is obesity.[7]

*Pew Research Center tabulations of the 2013 American Community Survey (1% IPUMS)

PERSPECTIVES ON
health, illness and treatment

Perspectives on health, illness and treatment

Diabetes is a global health epidemic. Although this is the case, there are differences in the health, manifestation of illness, and treatment of diabetes in the various diasporas.

In Africa, the health of a person with diabetes is affected by lack of education, low income, poor access to care, and the fact that many patients are asymptomatic.[27] Afro-Caribbeans with poorly managed diabetes may have a lack of education, low income status, and have limited access to care as well.[16, 21]

Treatment for those living in the United States is more progressive than other countries. Diabetes management consists of proper diet and exercise; prescription pills such as Metformin, a non-insulin injectable; and administration of insulin. However, treatment for Africans and Afro-Caribbeans is sometimes not as progressive.[1, 12, 16] Due to lack of medication availability, medication adherence, and knowledge of diabetic management, they tend to experience more amputations.[11]

Within the three diasporas there is a belief that natural medical treatment is preferred over Western medicine practices, but the source of this belief is unknown.[3, 32, 37] Some of the reasons may be related to one or more of the following: limited access to care, mistrust of health care providers based on historical interactions, concerns with self-efficacy to manage personal health, or lower health literacy.[37]

Natural or alternative medicine may be more commonly utilized with older generations as opposed to younger generations and with first-generation Americans versus subsequent generations.[3]

However, all beliefs should be assessed when creating treatment plans for each patient.

Home remedies are an often overlooked component of health management among African Americans/Blacks. Remedies are commonly used with the belief that they will improve blood glucose levels.[32,37]

Common remedies:*

- **Prayer**
- **Special teas from leaves and roots**
- **Herbal supplements****
  - moringa, thyme, fenugreek
  - black seed, garlic, linseed
  - ginger, damakese, mustard
  - rue, green tea, pound-cake bush
  - cerasee, king of the forest, bird pepper
- **Rubs, root preparations**
- **Apple cider vinegar/regular vinegar**
- **Lemon juice**
- **Coconut water**

For more information on diabetes management for customers please click here.

*May differ by subculture due to familiarity with herbs, roots, or products

**Use of these herbs with antidiabetic prescriptions could potentially lead to serious toxic effects due to herb-drug interactions

SPIRITUALITY

Spirituality

Religion and spirituality is an important component to how African-Americans/Blacks view themselves and manage their health. Those who believe in a higher power may identify with practicing a specific religion or spirituality.[26] Religion usually includes prayer, meditation, organized worship, and connecting with others in the religious community.[4,25] Spirituality is not as defined but helps with perspectives on the nature of reality, life, and death.[48]

Both usually focus on God or other superior beings that will provide strength to cope with daily challenges.[30] For example, some apply their faith in partnership with God by acknowledging and fully participating in the process of managing diabetes.[25,30]

On the other hand, others see their higher power as being solely responsible for the health outcome and choose a passive approach with respect to the actions needed to help manage the condition.[48,35] A commonly held belief is that if the disease is not "claimed" it will not manifest in the body.[48]

Patients turn to religion/spirituality when facing difficult medical decisions.[48] There are those who believe that prayer[30], scripture reading and faith are forms of treatment. Religion/spirituality may play a role in what type of treatment will be selected, when treatment is applied, or which lifestyle choices will be implemented.[4,25] Moreover, its impact is also observed in dietary selections, medication adherence, modesty, and times of treatment (as it could interfere with scheduled prayer.)[19,48]

When we think about African Americans/Blacks addressing diabetes, cultural competency is key. It is the ability of providers to deliver care that address the holistic needs of the person. Holistic treatment includes the whole person (mind, body, and spirit).[18] Patient satisfaction is important in nurturing provider-patient relationships and can have an effect on patient outcomes.

Did you know?

The following questions have been adapted from the FICA Spiritual History Tool and can be used as a means to identify spiritual practices and beliefs.[39]

› F - Faith and belief

Do you consider yourself spiritual or religious? Is spirituality something important to you? Do you have spiritual beliefs that help you cope with stress/difficult times?

› I - Importance

What importance does your spirituality have in your life? Has your spirituality influenced how you take care of yourself, your health? Does your spirituality influence you in your healthcare decision making?

› C - Community

Are you part of a spiritual community? Communities such as churches, temples, and mosques, or a group of like-minded friends, family, or yoga can serve as strong support systems for some patients.

› A - Assess and Address

How would you prefer that I address these types of issues in your healthcare? Would you like to incorporate this information in your treatment plan?

Assessing for spiritual and religious practices is beneficial in understanding the lens through which the patient views life.

BARRIERS TO HEALTH CARE

Barriers to health care

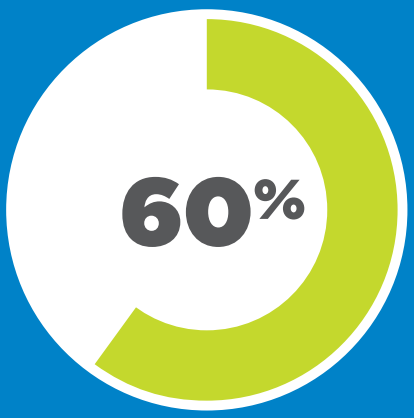
Challenges to providing care can be attributed to problems associated with a patient's health care treatment and social determinants of health.[20] This includes the shortage of hospitals and clinics within a location, including shortages of health care staff, as well as the lack of providers of color.[24]

The health care system is challenged by biases of the individual provider and their delivery of care to African-Americans/Blacks. Barriers include, but are not limited to:[13,36]

- **Provider knowledge of African American/ Black traditional diets and customs**
- **Poor communication between patient and provider**
- **Lack of trust from the patient due to insensitive bodily and verbal cues from the provider**
- **Social determinants of health:**
  - Lower levels of education
  - Lower socioeconomic status
  - Food insecurity/poor diet
  - Access to appropriate care
  - Cost of care (even among the insured)
  - Access to transportation
  - Cultural/spiritual beliefs
  - Adequate housing and safety
  - Community context (Discrimination)

In 2018, African Americans were 60% more likely to have been diagnosed with diabetes by a physician compared to non-Hispanic whites. They are also more likely to suffer complications from the disease.

U.S. Health and Human Services Office of Minority Health[53]



Percentage of diagnosed cases of diabetes by physicians

Non-Hispanic White Americans

African-Americans

For more information on diabetes management for physicians and clinicians please click here.

SOCIOECONOMIC IMPACT ON HEALTH AND NUTRITION

Socioeconomic impact on health and nutrition

Low socioeconomic status (SES) can affect an individual's ability to manage their health conditions. "Socioeconomic factors, particularly when it comes to education and income, are key contributors to diet-related disparities; in fact, it has been suggested that the effects of socioeconomic status on disparities are stronger than those of race and ethnicity."[45] (Satia, J. 2009, pg. 3)

African American/Black communities often consume diets rich in saturated fats and refined sugars, and otherwise low in quality (i.e., high in fried foods, organ meats, processed meats, high-fat dairy, added fats, eggs/egg dishes, bread, and sugar-sweetened beverages).[26,38] Below are a few examples and explanations of how SES affects the African American/Black community as it relates to managing diabetes.

Level of education[34]
This impacts knowledge of dietary recommendations and which foods are healthy versus unhealthy; this limits their ability to make healthy, informed decisions. In addition, low health literacy may impact treatment adherence.

Marketing campaigns targeting lower income populations[44]
Often, succumbing to the selection of high-calorie foods or empty calorie snacks is a matter of their availability and convenience. It is not helpful that unhealthy food marketing campaigns and advertisements are aimed at African American/Black communities.

Limited income[47]
A lack of financial resources can limit ability to afford medications, therefore increasing the risk that medications will not be taken as prescribed. Many may try to stretch medications and supplies for diabetes as it can be very expensive, especially if they are insulin dependent.

Psychosocial factors[9,41,49]
These factors may affect dietary intakes, and consequently increase chronic disease risk. In one study, high self-efficacy (defined as confidence in one's ability to do a certain behavior) was associated with higher fruit and vegetable and lower fat consumption. The relationship between diet and disease is correlated with healthy dietary intakes, as in high self-rated health, knowledge of dietary recommendations, strong social support (from family members and/or friends) and familiarity with nutritional guidelines.

High cost/lack of availability of healthy foods[36,51,54]
There can be struggles with purchasing foods often recommended by health professionals due to lack of healthy foods being available in their area or healthy foods being very expensive. This is often due to a practice called redlining. It is the systematic denial of various services by federal government agencies, local governments, and the private sector, either directly or through the selective raising of prices in the neighborhood they live in. Some may have to rely on food banks or kindness from others to help them eat from day to day; therefore, they have no choice in what they eat.

STRESSORS AFFECTING HEALTH AND WELL-BEING

Stressors affecting health and well-being

Stress can affect your body's blood glucose levels in two ways: It can increase hormones that may cause blood sugars to go up, and/or it can cause you to change the way you take care of yourself.[8,50] African Americans/Blacks report higher levels of stress compared to white counterparts due to the following five most common stressors: occupation, finances, relationships, racial bias, and violence. The most impactful of these is finances (specifically low socioeconomic status).[34] African Americans/Blacks often report higher numbers of stressful events and have greater negative outcomes to life stressors than white counterparts across all five stressors.[33,55] Older adults report stressors relating to multigenerational caregiving and acculturative stress more than younger adults.[31,33,49,51]

There are certain psychological factors that are predictors of health outcomes. Anger, anxiety, depression, and hostility are all factors that have been prospectively linked to higher all-cause mortality rates.[42,51] However due to held social norms or ideals, these psychological factors are often not discussed within the African American/Black community.[36,43]

With all things considered, it is very important to inquire about levels of stress, types of stressors, and perceived barriers.[49] Many times it may not be about patient's unwillingness to comply; it may be about what they are facing within their environment that may hinder progress.[33,43,49]

Discrimination in health care

An African American/Black patient may have their guard up when discussing health matters due to the residual effects of slavery and discrimination toward African Americans/Blacks throughout history.[36] Perceptions of racism and classism previously encountered in health care settings, as in cases like the Tuskegee Experiment, Henrietta Lacks, and Serena Williams childbirth experience, are associated with lack of patient-provider trust and communication in future medical encounters. This also includes personal histories of patients regarding provider bias via verbal discussions, body language, display of lack of respect, and perceived discomfort and/or disinterest in their health and well-being.[12,29]

Racial discrimination is often disguised as a microaggression. These microaggressions are brief, intentional or unintentional verbal and non-verbal behavioral expressions that communicate hostile, derogatory, or negative racial slights and insults to the oppressed target person or group.[28] Microaggressions hinder the patient-provider relationship when providers make incorrect judgements and assumptions about their lifestyles.[28] Even when patients change providers, previous experiences may affect new patient-provider relationships.[24,51]

The most common types of discrimination and racism reported by African American/Black patients were:[24,28]

- **Feeling that a provider was not listening to them**
- **Seeing patients of other races being treated differently**
- **Being treated with less respect than others**
- **Not allowing them to ask questions**
- **Making assumptions of culture and level of education**

This highlights the need for better cultural competency training of health care providers on listening to African Americans/Blacks, being aware of their verbal and non-verbal bias interactions, and allowing the patients the opportunity to voice their concerns.[20] By doing this, the patient may feel like the provider truly cares, respects them, and has a genuine concern about their health.[6] Letting the patient play an active role in developing their treatment plan shows respect and acknowledges cultural differences.[29] By assessing the patient's provider history and needs, providers will be better able to understand and give proper resources needed to improve their health.[40]

MEDICATION ADHERENCE

Medication adherence

Medication non-adherence costs the United States at least **$170 billion** annually and can lead to growing rates of mortality and morbidity.[2] Medication adherence is a means to manage chronic health conditions and saves the lives of many.[14] Increasing medication adherence from **50%** to **100%** among people living with diabetes reduces rates of hospitalization by **23.3%**. As mistrust of the medical industry has been an issue even dating back to the Tuskegee syphilis experiment, medication adherence remains a barrier in the African American/Black community.[46] While there are many reasons medication regimens may not be followed, three major concerns regarding medication adherence are:[46]

- **General concerns about medication, including side effects and potential harm**
- **Disbelief in medical diagnosis and perception of illness**
- **A lack of access to medications and education about them**

Concerns of side effects

Some African Americans/Blacks may dislike the idea of having to rely on medications due to fears that they may become dependent or even addicted to them.[47] Becoming dependent or addicted to medications is considered to be a sign of illness. Some may believe the medications are making them more ill and are causing other medical problems.[46,47]

Disbelief in diagnosis and illness

Some African Americans/Blacks are more likely to minimize the role of medication to manage health or don't believe medication is necessary; or, once they see a positive change in biometrics, they think they are cured and don't have to take it anymore.[46]

Education and access to medicine

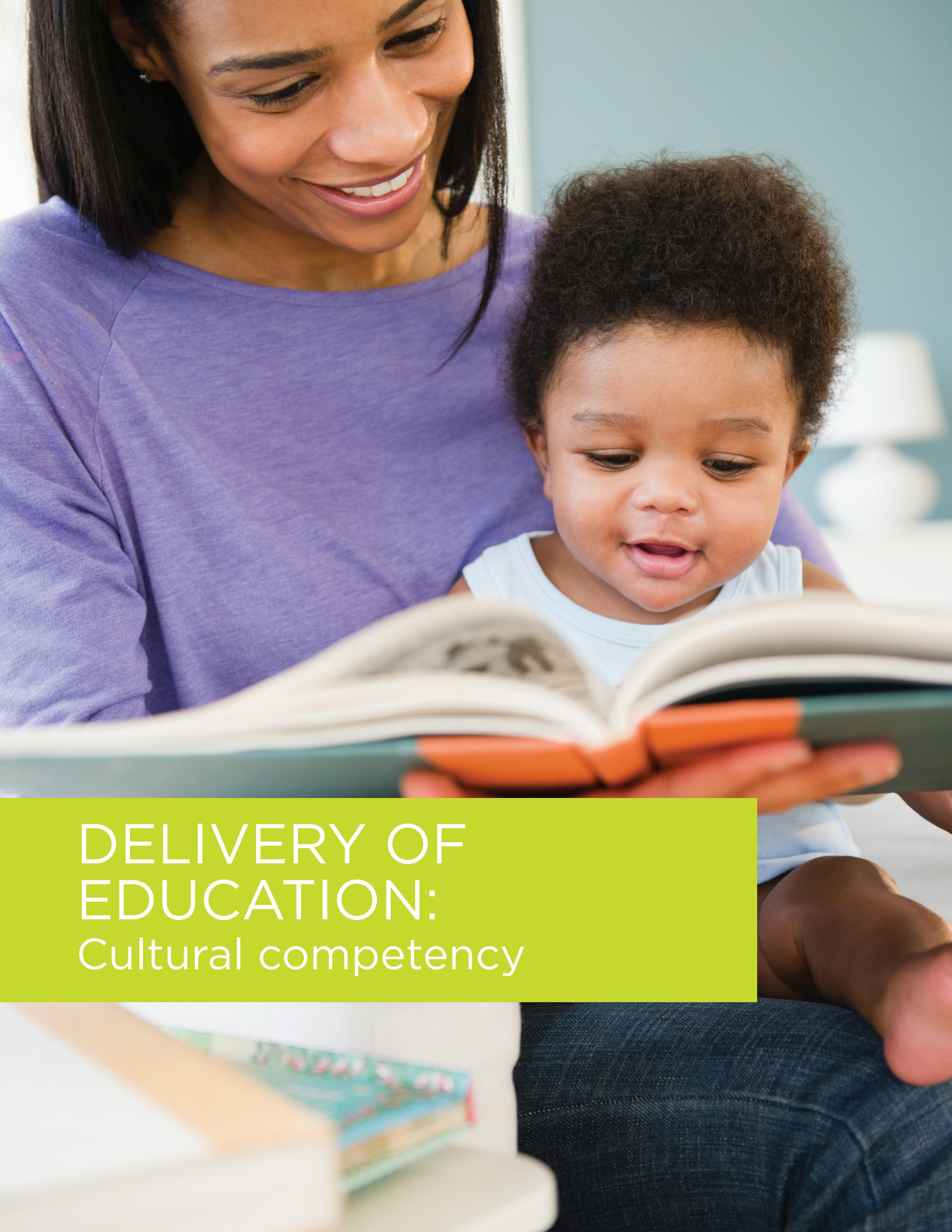
Health literacy (the degree to which individuals have the capacity to obtain, process, and understand basic health information needed to make appropriate health decisions) is a barrier to medication adherence.[38] Those with lower health literacy rates are less likely to be an active participant in treatment decision-making and less likely to take medications.[47] Culturally competent diabetes education courses, including clinically trained peer-lead interventions, have been shown to be effective in helping people with lower literacy rates improve health outcomes.[46] Older African Americans/Blacks in underserved communities are more likely to be affected by several chronic health conditions, have higher rates of polypharmacy, (simultaneous use of multiple drugs to treat a single ailment or condition) and medication duplication, and have potentially inappropriate medication.[2,48]

Did you know?

Alternative medicine in the African American community may be a form of certain African religions like Yoruba, Igbo, and other traditions. For African Americans/Blacks alternative medicine stemmed from not having access to medical treatments during slavery. The family matriarch had a given role and responsibility to gain knowledge of roots and administer home remedies.

Professional medical care required formal payment, making it inaccessible to the poorer members of society who had to turn to "the old wives." Within this niche, medical knowledge was passed from generation to generation in the informal "old wives" network. These women in a community would be called upon when the head of a poor household fell ill or a woman began childbirth.

Unlike doctors and other medical professionals, the expertise of these women was rarely compensated. The "old wives" tradition and expertise in herbalism, botany, minerals and the human body have been passed down and maintained throughout the early 1900s and even today.[17]



DELIVERY OF EDUCATION:
Cultural competency

Delivery of education: Cultural competency

A culturally competent diabetes education program will address the needs of African American/Black communities in health literacy, awareness, and self-management of diabetes.[8] Communication between patient and provider is highly encouraged to build trust.[5] Cultural competency and awareness are methods in which providers learn to protect and advocate for their patients.[5] To increase effectiveness of patient education, providers should challenge themselves to increase their knowledge and awareness, encourage dialogue, and complete cultural competency trainings.[7] Patients who are engaged with their health treatment have less anxiety about treatment options, gain better understanding of their health, and are inspired to inquire about their health.[5,6,11]

- **Assess any barriers to the patient's understanding of education and/or material shared.** Let the patient share how much they already know about the condition and how they perceive it. This may provide insight on literacy level and acceptance of learning more about the condition.[46,48]
- **Practice health literacy skills with them to ensure they understand.** (For example, have them read food labels and medication slips); you can also share or send visuals that may highlight key medical terminology in diabetes care for better understanding.[2,23,47]
- **Offer a thorough dietetic evaluation with a registered dietician (RD) or a certified diabetes care and education specialist (CDCES),** preferably with a professional who is familiar with the cultural background. This can be done at the time of initial diagnosis (prediabetes or diabetes) and on an ongoing basis as needed.[22,52]
- **Be mindful of environmental conditions they live in, access to health care, and level of support (personal or professional) by administering screenings and assessments regarding these concerns.** Community health workers at local hospitals and community centers can also serve as a level of support.[13]
- **Explore the challenges they face when it comes to acquiring the tools needed to manage their condition.** This will be helpful in determining your patient's needs.[7,38]

Compared to those with proficient health literacy, adults with low health literacy experience

4X higher health care costs[7]

6% more hospital visits

and longer hospital stays **(up to 48 hours longer)**[7]

1. Aspray, T. J., & Unwin, N. (2001). Diabetes in sub-Saharan Africa. Advances in experimental medicine and biology, 498, 21–26. https://doi.org/10.1007/978-1-4615-1321-6_4.
2. Bazargan, M., Smith, J., Yazdanshenas, H., Movassaghi, M., Martins, D., & Orum, G. (2017). Non-adherence to medication regimens among older African-American adults. BMC geriatrics, 17(1), 163. https://doi.org/10.1186/s12877-017-0558-5.
3. Bell, R. A., Quandt, S. A., Grzywacz, J. G., Neiberg, R., Altizer, K. P., Lang, W., & Arcury, T. A. (2013). Patterns of Complementary Therapy Use for Symptom Management for Older Rural Adults with Diabetes. Journal of evidence-based complementary & alternative medicine, 18(2), 10.1177/2156587212463070. https://doi.org/10.1177/2156587212463070.
4. Boltri, J. M., Davis-Smith, Y. M., Zayas, L. E., Shellenberger, S., Seale, J. P., Blalock, T. W., & Mbadinuju, A. (2006). Developing a Church-Based Diabetes Prevention Program With African Americans. The Diabetes Educator, 32(6), 901–909. https://doi.org/10.1177/0145721706295010.
5. Campinha-Bacote J. (2009). A culturally competent model of care for African Americans. Urologic nursing, 29(1), 49–54.
6. Center for Health Care Strategies. (2013, October). What is Health Literacy? Retrieved from Center for Health Care Strategies, Inc. http://www.chcs.org/media/CHCS_Health_Literacy_Fact_Sheets_2013.pdf.
7. Centers for Disease Control and Prevention (CDC). National Center for Health Statistics (NCHS). National Health and Nutrition Examination Survey Data. Hyattsville, MD: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, [2017-2018][https://www.cdc.gov/nchs/products/databriefs/db360.htm].
8. Cherrington A, Martin MY, Hayes M, Halanych JH, Wright MA, Appel SJ, et al. Intervention mapping as a guide for the development of a diabetes peer support intervention in rural Alabama. Prev Chronic Dis 2012;9:110053. DOI: http://dx.doi.org/10.5888/pcd9.110053.
9. Chlebowy, D. O., & Garvin, B. J. (2006). Social support, self-efficacy, and outcome expectations: impact on self-care behaviors and glycemic control in Caucasian and African American adults with type 2 diabetes. The Diabetes educator, 32(5), 777–786. https://doi.org/10.1177/0145721706291760.
10. Cigna. Healthwise Index. Stress and Diabetes. 2017. https://www.cigna.com/assets/docs/sites/hwedmaterials/pdf/abq5594.pdf.
11. Cook CB, Ziemer DC, El-Kebbi IM, et al. Diabetes in urban African-Americans. XVI. Overcoming clinical inertia improves glycemic control in patients with type 2 diabetes. Diabetes Care1999;22:1494–500.
12. Diabetes Foundation Report on Insulin Requiring in Sub-Saharan Africa (From 2002-2004 Data: International Insulin Foundation) London: 2006. http://www.access2insulin.org/uploads/4/9/1/0/4910107/iif_full_final.pdf.
13. Davidson MB. Effect of nurse-directed diabetes care in a minority population. Diabetes Care2003; 26:2281–7.
14. Encinosa WE, Bernard D, Dor A. Does prescription drug adherence reduce hospitalizations and costs? The case of diabetes. Adv Health Econ Health Serv Res. 2010;22:151-73. doi: 10.1108/s0731-2199(2010)0000022010. PMID: 20575232.
15. Evans, M. K., Rosenbaum, L., Malina, D., Morrissey, S., & Rubin, E. J. (2020). Diagnosing and Treating Systemic Racism. The New England journal of medicine, 10.1056/NEJMe2021693. Advance online publication. https://doi.org/10.1056/NEJMe2021693.
16. Ferguson, T. S., Tulloch-Reid, M. K., & Wilks, R. J. (2010). The epidemiology of diabetes mellitus in Jamaica and the Caribbean: a historical review. The West Indian medical journal, 59(3), 259–264.
17. Fitzgerald, Colin (2016). African American Slave Medicine of the 19th Century. Undergraduate Review, 12, 44-50. Available at: https://vc.bridgew.edu/undergrad_rev/vol12/iss1/10.
18. Ford, M. E., Tilley, B. C., & McDonald, P. E. (1998). Social support among African-American adults with diabetes. Part 1: Theoretical framework. Journal of the National Medical Association, 90(6), 361–365.
19. Goode, P. (2017). Diabetes Disparities in African Americans. Journal of Health Disparities Research and Practice, 10(4), 61-66.
20. Glover, L. M., Bertoni, A. G., Golden, S. H., Baltrus, P., Min, Y. I., Carnethon, M. R., Taylor, H., & Sims, M. (2019). Sex differences in the association of psychosocial resources with prevalent type 2 diabetes among African Americans: The Jackson Heart Study. Journal of diabetes and its complications, 33(2), 113–117. https://doi.org/10.1016/j.jdiacomp.2018.11.005.
21. Gulliford, M. C., Mahabir, D., & Rocke, B. (2004). Diabetes-related inequalities in health status and financial barriers to health care access in a population-based study. Diabetic medicine: A journal of the British Diabetic Association, 21(1), 45–51. https://doi.org/10.1046/j.1464-5491.2003.01061.x.
22. Han, H. R., Nkimbeng, M., Ajomagberin, O., Grunstra, K., Sharps, P., Renda, S., & Maruthur, N. (2019). Health literacy enhanced intervention for inner-city African Americans with uncontrolled diabetes: a pilot study. Pilot and feasibility studies, 5, 99. https://doi.org/10.1186/s40814-019-0484-8.
23. Harmon, B. E., Boushey, C. J., Shvetsov, Y. B., Ettienne, R., Reedy, J., Wilkens, L. R., Le Marchand, L., Henderson, B. E., & Kolonel, L. N. (2015). Associations of key diet-quality indexes with mortality in the Multiethnic Cohort: the Dietary Patterns Methods Project. The American journal of clinical nutrition, 101(3), 587–597. https://doi.org/10.3945/ajcn.114.090688.
24. Hausmann LR, Hannon MJ, Kresevic DM, Hanusa BH, Kwoh CK, Ibrahim SA. Impact of perceived discrimination in healthcare on patient-provider communication. Med Care. 2011;49(7):626-633. doi:10.1097/MLR.0b013e318215d93c.
25. Holt, C. L., Clark, E. M., Debnam, K. J., & Roth, D. L. (2014). Religion and health in African Americans: the role of religious coping. American journal of health behavior, 38(2), 190–199. https://doi.org/10.5993/AJHB.38.2.4.
26. Howard, G., Cushman, M., Moy, C. S., Oparil, S., Muntner, P., Lackland, D. T., Manly, J. J., Flaherty, M. L., Judd, S. E., Wadley, V. G., Long, D. L., & Howard, V. J. (2018). Association of Clinical and Social Factors With Excess Hypertension Risk in Black Compared With White US Adults. JAMA, 320(13), 1338–1348. https://doi.org/10.1001/jama.2018.13467.
27. International Diabetes Federation. 5 2011. IDF Diabetes Atlas.
28. Kanter, J.W., Rosen, D.C., Manbeck, K.E. et al. Addressing microaggressions in racially charged patient-provider interactions: a pilot randomized trial. BMC Med Educ 20, 88 (2020). https://doi.org/10.1186/s12909-020-02004-9.
29. Lee, A. A., Piette, J. D., Heisler, M., Janevic, M. R., & Rosland, A. M. (2019). Diabetes self-management and glycemic control: The role of autonomy support from informal health supporters. Health psychology : Official journal of the Division of Health Psychology, American Psychological Association, 38(2), 122–132. https://doi.org/10.1037/hea0000710.
30. Levin J, Chatters LM, Taylor RJ. Religion, health and medicine in African Americans: implications for physicians. J Natl Med Assoc. 2005;97(2):237-49.
31. Mayberry, L. S., & Osborn, C. Y. (2014). Family involvement is helpful and harmful to patients' self-care and glycemic control. Patient education and counseling, 97(3), 418–425. https://doi.org/10.1016/j.pec.2014.09.011.
32. Meshesha, S. G., Yeshak, M. Y., Gebretekle, G. B., Tilahun, Z., & Fenta, T. G. (2020). Concomitant Use of Herbal and Conventional Medicines among Patients with Diabetes Mellitus in Public Hospitals of Addis Ababa, Ethiopia: A Cross-Sectional Study. Evidence-based complementary and alternative medicine : eCAM, 2020, 4871459. https://doi.org/10.1155/2020/4871459.

33. Myers HF, Hwang W-C. Cumulative psychosocial risks and resilience: A conceptual perspective on ethnic health disparities in late life. In: Anderson NA, Bulatao RA, Cohen B, editors. National Research Council, Critical Perspectives on Racial and Ethnic Differences in Health in Later Life. Washington, DC: The National Academies Press; 2004. Committee on Population, Division of Behavioral and Social Sciences and Education.
34. National Research Council (US) Panel on Race, Ethnicity, and Health in Later Life; Bulatao RA, Anderson NB, editors. Washington (DC): National Academies Press (US); 2004.
35. Nazareth M, Richards J, Javalkar K, Haberman C, Zhong Y, Rak E, et al. Relating Health Locus of Control to Health Care Use, Adherence, and Transition Readiness Among Youths With Chronic Conditions, North Carolina, 2015. Prev Chronic Dis 2016;13:160046. DOI: http://dx.doi.org/10.5888/pcd13.160046.
36. Noonan, A. S., Velasco-Mondragon, H. E., & Wagner, F. A. (2016). Improving the health of African Americans in the USA: An overdue opportunity for social justice. Public health reviews, 37, 12. https://doi.org/10.1186/s40985-016-0025-4.
37. Owusu, S., Gaye, Y. E., Hall, S., Junkins, A., Sohail, M., Franklin, S., Aung, M., & Jolly, P. E. (2020). Factors associated with the use of complementary and alternative therapies among patients with hypertension and type 2 diabetes mellitus in Western Jamaica: a cross-sectional study. BMC complementary medicine and therapies, 20(1), 314. https://doi.org/10.1186/s12906-020-03109-w.
38. Pettey, C. M., McSweeney, J. C., Stewart, K. E., Cleves, M. A., Price, E. T., Heo, S., & Souder, E. (2016). African Americans' Perceptions of Adherence to Medications and Lifestyle Changes Prescribed to Treat Hypertension. SAGE open, 6(1), 10.1177/2158244015623595. https://doi.org/10.1177/2158244015623595.
39. Puchalski, C., & Romer, A. L. (2000). Taking a spiritual history allows clinicians to understand patients more fully. Journal of palliative medicine, 3(1) 129-137.
40. Rees, C. A., Karter, A. J., & Young, B. A. (2010). Race/ethnicity, social support, and associations with diabetes self-care and clinical outcomes in NHANE. The Diabetes educator, 36(3), 435–445. https://doi.org/10.1177/0145721710364419.
41. Richards Adams, I. K., Figueroa, W., Hatsu, I., Odei, J. B., Sotos-Prieto, M., Leson, S., Huling, J., & Joseph, J. J. (2019). An Examination of Demographic and Psychosocial Factors, Barriers to Healthy Eating, and Diet Quality Among African American Adults. Nutrients, 11(3), 519. https://doi.org/10.3390/nu11030519.
42. Rozanski A, Blumenthal J, Kaplan J. Impact of psychological factors on the pathogenesis of cardiovascular disease and implications for therapy. Circulation. 1999;99:2192–2217.
43. Rutledge, P. M., Montgomery, A. J., Lott, S. M., McGee, Z. M., & Burns, D. M. (2019). The Relationship Between Family Support, Self-Care, and Health Outcomes in Selected African-American Females with Type 2 Diabetes. Journal of National Black Nurses' Association : JNBNA, 30(2), 1–9.
44. RWJF Program Results Report – The Marketing of Unhealthy Food and Beverages in African-American Communities.
45. Satia JA. Diet-related disparities: understanding the problem and accelerating solutions. J Am Diet Assoc. 2009;109(4):610-615. doi:10.1016/j.jada.2008.12.019.
46. Shiyanbola, O. O., Brown, C. M., & Ward, E. C. (2018). "I did not want to take that medicine": African-Americans' reasons for diabetes medication nonadherence and perceived solutions for enhancing adherence. Patient preference and adherence, 12, 409–421. https://doi.org/10.2147/PPA.S152146.
47. Sleath, B., Carpenter, D. M., Blalock, S. J., Davis, S. A., Hickson, R. P., Lee, C., Ferreri, S. P., Scott, J. E., Rodebaugh, L. B., & Cummings, D. M. (2016). Development of a new diabetes medication self-efficacy scale and its association with both reported problems in using diabetes medications and self-reported adherence. Patient preference and adherence, 10, 1003–1010. https://doi.org/10.2147/PPA.S101349.
48. Spruill, I. J., Magwood, G. S., Nemeth, L. S., & Williams, T. H. (2015). African Americans' Culturally Specific Approaches to the Management of Diabetes. Global qualitative nursing research, 2, 2333393614565183. https://doi.org/10.1177/2333393614565183.
49. Strom, J. L., & Egede, L. E. (2012). The impact of social support on outcomes in adult patients with type 2 diabetes: A systematic review. Current diabetes reports, 12(6), 769–781. https://doi.org/10.1007/s11892-012-0317-0.
50. Tang, T. S., Brown, M. B., Funnell, M. M., & Anderson, R. M. (2008). Social support, quality of life, and self-care behaviors among African Americans with type 2 diabetes. The Diabetes educator, 34(2), 266–276. https://doi.org/10.1177/0145721708315680.
51. Taylor, Jamila (2019) Racism, Inequality, and Health Care for African Americans,"The Century Foundation, accessed June 20, 2020, https://tcf.org/content/report/racism-inequality-health-care-african-americans/?agreed=1.
52. Two Feathers, J., Kieffer, E. C., Palmisano, G., Anderson, M., Sinco, B., Janz, N., Heisler, M., Spencer, M., Guzman, R., Thompson, J., Wisdom, K., & James, S. A. (2005). Racial and Ethnic Approaches to Community Health (REACH) Detroit partnership: improving diabetes-related outcomes among African American and Latino adults. American journal of public health, 95(9), 1552–1560. https://doi.org/10.2105/AJPH.2005.066134.
53. U.S. Department of Health and Human Services. (2019). Diabetes and African Americans. Retrieved from Office of Minority Health: https://www.minorityhealth.hhs.gov/omh/browse.aspx?lvl=4&lvlid=18.
54. Wang, Y., & Chen, X. (2011). How much of racial/ethnic disparities in dietary intakes, exercise, and weight status can be explained by nutrition- and health-related psychosocial factors and socioeconomic status among US adults?. Journal of the American Dietetic Association, 111(12), 1904–1911.
55. Williams D. R. (2018). Stress and the Mental Health of Populations of Color: Advancing Our Understanding of Race-related Stressors. Journal of health and social behavior, 59(4), 466–485. https://doi.org/10.1177/0022146518814251.

Together, all the way.®

Cigna®