

Breaking Barriers:
Combatting Diabetic
Amputations in
Communities of Color



People of Color (POC) bear the heaviest burden of diabetes-related amputations, a stark reflection of health disparities. This comprehensive eBook delves into the reasons behind this trend, and its far-reaching impacts on minority communities. **Read on to...**

Explore the disproportionate prevalence of diabetic amputations among communities of color.

.....

Examine the factors that contribute to this disparity.

.....

Discover strategies, insights, and resources to help.





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Introduction

Picture a time when you effortlessly ran and played in the yard with your children. Now, you find yourself using a wheelchair, observing them from a distance. No longer able to drive yourself to the store, you rely on others to do your grocery shopping. The simple act of kneeling to work in a garden becomes nonexistent. This is the harsh reality faced by individuals living with complex diabetes who have undergone amputations.

Tragically, this outcome is all too common, especially in communities of color.

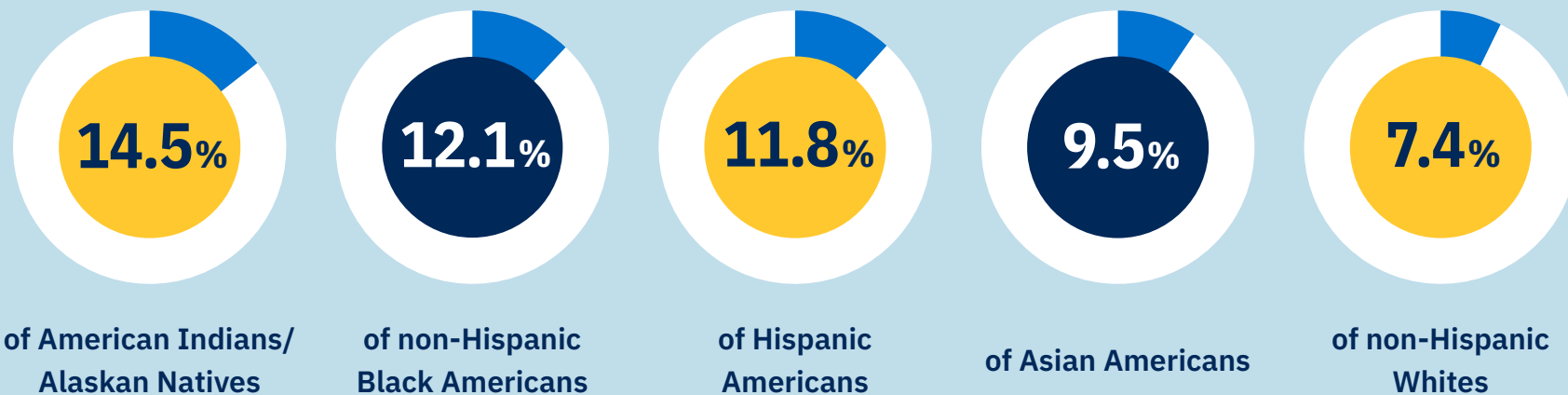
Minorities experience more diabetes-related amputations, highlighting the disproportionate impact.

Every hour, about 14 people living with complex diabetes in the U.S. lose part or all of a lower limb.¹ Most of these people are Black, Hispanic, or Native American. About 50% of these individuals—a majority of whom are non-White—will be dead within five years because of the health and mental challenges associated with losing a limb from diabetes.²



Diabetes is the leading cause of lower extremity amputations (LEA), and is heavily concentrated in communities of color.³

Diagnosed diabetes in adults by race/ethnicity⁴



CHAPTER 1:

Why It's Important To Discuss Diabetic Amputations in Communities of Color

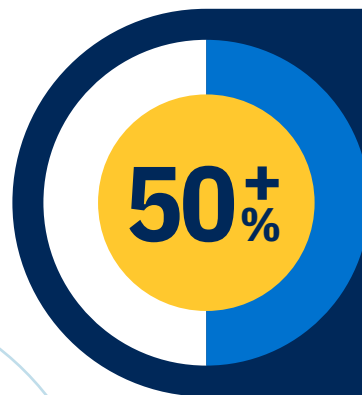
Amputations are rising in America, and communities of color are at the center of this crisis. They are the hardest hit by the impact of LEAs, amplifying an urgent call for action.



Roughly 154,000 people with diabetes undergo an amputation annually.⁵ Up to 80% of non-traumatic lower limb amputations result from diabetes.⁵ Shockingly, the five-year survival rate for someone with an amputation is lower than that of individuals with coronary artery disease, breast cancer, or colorectal cancer.⁵ It is terrifying to consider that the survival rate following an often preventable diabetic amputation is lower than some significant life-threatening diseases.

Amputation rates differ by race, highlighting healthcare outcome disparities. This unfortunate reality reveals that factors like skin color, socioeconomic status, and geographic location can influence the probability of undergoing limb amputation.

Amputating limbs because of complex diabetes is traumatic and brutal. It harkens back to the grim realities of Civil War-era medicine. Such practices should not be the go-to solution in a modern healthcare system, primarily when they affect 14 individuals every hour, daily. Shockingly, communities of color experience this concerning issue far too often.



Over half of those with a major amputation because of a diabetic foot ulcer (DFU) will not survive beyond 5 years.⁶

CHAPTER 2:

The Challenge of Diabetic Amputations in **Minority Communities**

For too long, the consequences of complex diabetes have disproportionately plagued minority communities across the U.S. The impact of many past policies, practices, and laws still lingers, influencing economic inequalities and health disparities for racial and ethnic minorities.⁷ We see the result in rising rates of type 2 diabetes amongst those exposed to structural racism⁷, but also through the higher reports of LEA in adults from minority communities.⁵ DFU is the primary reason for limb loss in minorities with complex diabetes, and typically precedes 80% of amputations.⁵



Diabetes-related amputations hit communities of color the hardest

Minorities face a higher risk of diabetes-related amputations because of factors like poverty, limited access to care, and underlying social determinants of health (SDoH). These disparities can make it challenging for minorities to receive timely and effective diabetes treatment, increasing their amputation risk.

Overall, minorities had the highest diabetes incidence amongst racial groups from 2011 to 2016, according to a study using population-based survey data from the U.S. National Health and Nutrition Examination Survey. Black Americans, Hispanic Americans, and Asian Americans have the highest diabetes prevalence, at 20.4%, 22.1%, and 19.1%, respectively.⁸

While some of this prevalence is related to biological factors and diet, these disparities are also often linked to socioeconomic factors, such as income inequality, education gaps, and limited access to healthy food.⁹ Minority populations also tend to develop diabetes at a younger age, leading to a higher risk of complications, including amputations.¹⁰ These SDoH can significantly impact an individual's risk of developing diabetes, as well as the management and outcomes of the condition.



What leads to a diabetic amputation?

Unmanaged diabetes raises blood sugar levels, damaging blood vessels. This reduces oxygen and nutrients to limbs, increasing infection risk and slowing wound healing. If untreated, infections can lead to limb amputation.



From ulcers to amputations: a steep decline in mobility

Ulcers lead to amputations through an escalating cycle of complications. A DFU is challenging, but its progression to an amputation is traumatic and life-altering. With repeated occurrences, mobility diminishes, further complicating health outcomes.



The silent threat: DFUs and the risk of amputation

Up to one-third of the half billion people with diabetes worldwide will develop a diabetic foot ulcer (DFU) over the course of their lifetime. Over half of DFUs will develop an infection. Of these, 17% will require an amputation.⁶

Unveiling the hidden influencers: exploring the impact of SDoH

SDoH are the underlying factors influencing an individual's health, such as the conditions in the environments where people are born, live, learn, work, play, worship, and age.¹¹ They can affect various health, functioning, and quality-of-life outcomes and risks. These factors are often outside a person's control and can vary greatly depending on their location.

Regarding diabetes care, considering SDoH is especially important for minorities because they often face greater social barriers to accessing high-quality healthcare. For example, some minority communities may have limited access to healthy foods or safe places for physical activity due to poverty or lack of resources in the area. Without addressing these underlying issues, individuals in these communities may not be able to manage their diabetes adequately and could be at higher risk for complications like heart disease, stroke, and LEAs.

Disproportionate impact:
likelihood of diabetes-related
amputations by race/ethnicity⁵

Native
Americans

2x

Black
Americans

4x

Hispanic
Americans

1.5x



Examples of how **SDoH** impact diabetes care



Access to healthy foods

Limited access to grocery stores with healthy food increases the risk of health conditions, such as heart disease, diabetes, and obesity. This can also lower life expectancy compared to those with access to nutritious foods.



Transportation availability

People who do not have reliable transportation or cannot drive may not make necessary medical appointments.



Insecure or unsafe housing

Unstable housing makes it harder to practice self-care, stick to self-management routines, afford diabetes medications and supplies, and maintain a healthy diet.¹²



Education quality

Research shows that higher income, education, and occupational grades are linked to a lower likelihood of developing type 2 diabetes or its complications.¹²



Racism and discrimination

Research shows a clear link between racism and mental and physical health outcomes. Experiences of racism can impact diet, compounded by social prohibitions that limit addressing racism. This can lead to anger and frustration that affect disease management.^{7,13}



Income level

Studies indicate that individuals with income below the federal poverty level (FPL) are more susceptible to diabetes. Difficulty in affording and accessing healthy food, healthcare resources, and diabetes-related medication is more likely.¹⁴



Access to care

For patients living far from healthcare facilities, accessing providers, specialists, and emergency services can be burdensome, especially if they cannot travel or afford gas or time away from work.

The burden of diabetes for Black Americans

Diabetes has a deep and far-reaching impact on the Black community. Black Americans have a higher likelihood of developing diabetes compared to White Americans. This could be attributed to the barriers they may face in accessing the help and resources to reduce their risk of developing the condition.¹⁶ According to the Centers for Disease Control and Prevention (CDC), Black Americans are almost twice as likely as White Americans to be diagnosed with diabetes.¹⁷ Additionally, Black Americans are twice as likely to die from diabetes-related causes, such as heart attack or stroke.¹⁸

Furthermore, Black Americans with diabetes are also more likely to experience serious health complications like blindness, kidney failure, and limb amputation due to diabetes-related illnesses.¹⁹ This is particularly concerning given that Black Americans account for only 13% of the population in the U.S., yet are 60% more likely to have diabetes than White Americans. They are almost three times as likely to be hospitalized for diabetes-related complications. They are more than twice as likely to undergo diabetes-related leg or foot amputation. And they are more than three times as likely to have end-stage kidney disease.²⁰

These statistics show just how devastating this chronic illness can be for Black Americans, making it essential to increase awareness and access to preventive care to reduce its impact on this community.



DFUs are the No.1 cause of limb loss in minority individuals with diabetes.¹⁵

| By the numbers

In the U.S., Black American adults are nearly

2x

as likely as white adults to develop type 2 diabetes.¹⁷

In 2019, Black Americans were

2x

as likely as White Americans to die from diabetes.¹⁸

In 2019, Black Americans were

2.5x

more likely to be hospitalized with diabetes and associated long-term complications than White Americans.¹⁸

Fighting amputation: a personal story of resilience and empowerment

Every 3 minutes and 30 seconds in the United States, a limb is amputated because of diabetes.⁵ More alarmingly, 85% of these amputations are preventable.⁵

Tyrone McCray is a rare example of someone living with diabetes who was able to prevent amputation. It's an incredible feat, particularly when Black Americans experience diabetes-related amputations at four times the rate of White Americans.²²

After Tyrone was diagnosed with type 2 diabetes, he had diabetic foot complications that required surgery. His podiatrist had been helping him manage his foot health, but his problems escalated. His foot swelled. He noticed a blister on his toe, then an ulcer developed on the sole. The ulcer persisted, causing discomfort.

A trip to the ER resulted in an unexpected solution from his care team.



“I cried when they told me I would lose my leg,” Tyrone recalled.

Tyrone was shocked when an unfamiliar—and unsympathetic—surgeon told him he would have to amputate his leg from the knee down because an infection had spread. What he thought would be a manageable procedure became a life-changing event.

He worried about his job, which required him to be on his feet. He hadn’t arranged for short- or long-term disability. Not only that, but he and his wife would need to rethink their timeframe for having children. Despite so much to consider, he felt unconsidered.

He was upset by the surgeon’s lack of empathy and insistence on a significant life-altering procedure. At one point, the surgeon pushed Tyrone to consider partial foot amputation. However, Tyrone firmly declined, stating, “Absolutely not. Not today.”

Tyrone realized he had to advocate for himself. He turned to a trusted healthcare provider.

“I had faith in my [podiatrist] to do the surgery, and I trust him with my health,” he explained.

In addition to Tyrone’s unwavering advocacy, his podiatrist’s guidance and commitment helped him recover from the ulcer that almost cost him his leg.

“I can see how most Americans who don’t have a support system would have let that happen,” he said. “Luckily, I had a good support system and a strong will.”

Tyrone’s inspiring story sheds light on the challenges faced by individuals with diabetes as they navigate systemic obstacles and a complex disease. It’s a reminder of the empowering impact advocacy, support, resources, and education can have on patient outcomes.

The burden of diabetes for Native Americans

Indigenous communities face significant health disparities, including higher rates of diabetes, DFUs, and LEAs. In fact, Native Americans have the highest diabetes rates among all racial groups in America, at 14.5%⁴. They are also typically at increased risk for amputation and are 2 times more likely to experience diabetic complications.

“Native Americans have a greater chance of being diagnosed with diabetes than any other racial group,” says Dr. Janet Simon, executive director of the New Mexico Podiatric Medical Association and a podiatric physician who has served Native Americans in New Mexico for nearly 30 years. “Massive challenges related to poor access to care, a growing healthcare provider shortage issue, and long-standing lack of prioritization specific to identifying patient challenges—like lack of transportation or homelessness—only further compound an already dire situation that is leaving far too many Native Americans living with diabetes without the care and support they deserve.”

“Native Americans have a greater chance of being diagnosed with diabetes than any other racial group.”





Explore more on Native Americans' patient experiences by downloading this patient research report: *"Why Are Native Americans Losing Limbs Faster Than Others Living With Diabetes?"*

The impact of this problem on overall health is tremendous. Diabetes is also the most significant cause of kidney failure for Native Americans. This same population is at a greater risk of developing peripheral arterial disease (PAD) and experiencing an LEA. Remarkably, previous peer-reviewed studies have shown that the occurrence of LEAs among Native Americans with diabetes can be up to 160 times higher than those without diabetes.²²

It is crucial to address the needs of this vulnerable population with solutions that consider their individual, environmental, and healthcare requirements.

| By the numbers

Nearly

1 out of 6



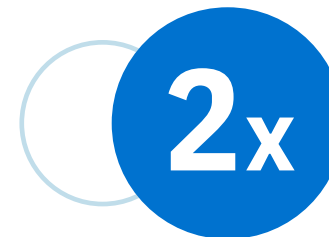
Native Americans
have diabetes.²³

American Indians and
Alaska Natives experience the



among all U.S. racial
and ethnic groups.²³

Native Americans are

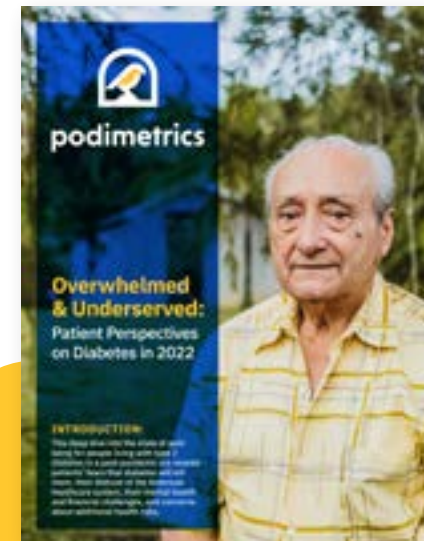


more likely to
experience diabetes-related
complications.²⁴

The burden of diabetes for Hispanic Americans

Type 2 diabetes is a serious health issue that affects many Hispanics in the United States, often leading to a range of physical and financial burdens. It is disproportionately prevalent among Hispanic populations, with higher poverty rates, limited access to healthcare services, and cultural barriers contributing to the problem.

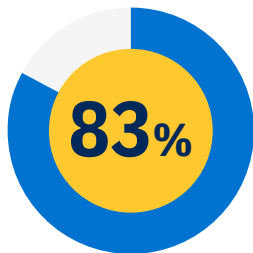
These issues can lead to serious complications for those affected, such as kidney failure and vision loss. Hispanic Americans are disproportionately affected by type 2 diabetes, which can burden individuals, families, and communities immensely. Individuals may experience a decreased quality of life due to the need for frequent doctor's visits and expensive treatments. Families must make difficult decisions concerning healthcare costs that can significantly reduce their financial stability. Diabetes prevalence is also linked to SDoH that disproportionately impact Hispanic Americans.



Explore more on patient experiences, especially Hispanic Americans', by downloading this patient research report: *"Overwhelmed and Underserved: Patient Perspectives on Diabetes in 2022."*

By the numbers

Hispanic Americans
have nearly



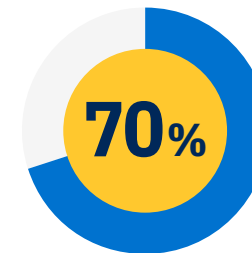
more amputations
associated with diabetes
than Black Americans and
White Americans.²⁵

Hispanic
Americans are



**more likely to suffer an
amputation**, compared
with non-Hispanic White
Americans.⁴

Hispanic Americans are
more than



**more likely to be diagnosed
with diabetes**, compared
with adult non-Hispanic White
Americans.²⁶

CHAPTER 3:

Crucial Insights for Healthcare Providers, Health Plans, and Patients

Healthcare providers, health plans, and patients should be equipped with helpful insights to guide them towards making informed decisions, enhancing health outcomes, narrowing the racial health disparity gap, and improving equal access to healthcare.





HEALTHCARE PROVIDERS

If you're helping a patient manage diabetes care...

To address patients' unique challenges and provide meaningful, compassionate care, it is crucial to consider the SDoH that impact each individual and their community. In this Q&A, Dr. Rosemay Michel, DPM, FACPM, FFPM RCPS, an officer of the American College of Podiatric Medicine, shares valuable insights. She is an active committee member of the American Board of Podiatric Medicine (ABPM), a residency program evaluator for the Council of Podiatric Medicine, and a consultant to The University of Texas Rio Grande Valley School of Podiatric Medicine.

Q: What should clinicians be asking patients with chronic conditions to better understand their SDoH-related challenges?

Clinicians should ask their patients about family background, where they live, where they grew up, lifestyle, family life, housing situation, and type of employment. Also, it is important to try to ask about their cultural norms, values, beliefs, and certain behaviors. Responses to these questions will help guide clinicians regarding caring for patients of a specific population, group, and/or cultural background.

Q: What should an SDoH-first approach to care actually look and feel like for a patient?

The approach should be casual, caring, respectful, and nonjudgmental. Patients should feel truly respected, not judged, and comfortable freely sharing their backgrounds and experiences. A provider from a similar background is often the most favorable choice, and best able to identify and relate to the patient's needs.

I am reminded of providers in the Indian Health Service, a comprehensive healthcare system for federally recognized American Indians and Alaska Natives in the U.S. The system is authorized to utilize an Indian Preference hiring policy in order to encourage qualified candidates of Native descent to apply.

Q: With clinicians more overburdened than ever, how can they best prioritize SDoH in today's shortened care visits and beyond?

It is imperative that providers make the time to “park by the bedside,” which helps assure patients that the provider is interested in hearing their concerns and will take the time to do so without distractions. Another opportunity is to have nurses ask leading questions during a patient’s intake — this helps open the door for meaningful discussion with the provider.

My personal approach is to ask patients where they are from and typically strike up a conversation about their hometown and their background. I find this puts most patients at ease.



For more insights, dive into a detailed Q&A with Dr. Michel.

Read now →

 HEALTH PLANS

If you're helping a patient pay for diabetes care...

Health plans should understand that patients facing diabetic amputations require a high level of care and support. It is important to ensure that they are given access to the latest treatments and technologies and the necessary resources to manage their condition and its complications. Health plans should be aware that the cost of diabetic amputations can be significant, and it is important for them to provide coverage for both preventive care and treatment options. A single lower-limb amputation can cost over \$100,000, and lower-extremity complications cost over \$100 billion annually.^{6,29}

Diabetic foot ulcers are so costly, they're more expensive than the five most costly forms of cancer.⁶

Amputations are also cyclical, much like diabetic foot ulcers. 19% of patients with diabetes will suffer another amputation within one year after their first surgery, while nearly 37% will do so within five years.²⁷ This only compounds the toll on patients, and their out-of-pocket costs for each procedure.

Health plans should strive to create an environment of support for these patients by providing information about support networks, educational programs, and lifestyle changes that can help improve outcomes.

To understand more about rippling effects of DFUs and their costs, download this comprehensive eBook: *"The Big Diabetes Complication That's Flying Under the Radar."*



 PATIENTS

How to maximize a 15-minute care visit

Patients living with diabetes can optimize their care visits for better care and advice. Maximizing a 15- to 30-minute appointment enhances diabetes management, reduces long-term health risks, and empowers patients. Here are some tips to make every minute count.²⁸

- 1 Be prepared with questions.** Don't be afraid to ask questions to understand your diabetes, all the things that impact it, and how to manage it. Patients can say, 'I have some questions. Can I ask them now, or should I wait?'
- 2 Share any concerns.** It's more important to spend the limited time getting into more specifics tailored to you and how you can better manage your diabetes. Examples include:
 - Discuss symptoms or discomfort (i.e. numbness in your feet at night or side effects from medications).
 - Explore interest in trying new medications.
 - Discuss the appropriateness of implementing technology into diabetes care routine.

- 3 Interrupt your doctor if needed.** If you don't understand something, ask for a simplified explanation to help you grasp the information better.
- 4 Select your top two to three questions or concerns.** While a list of items can help you remember what to talk about, you may run out of time, prioritize your most crucial topics to ensure they are addressed.
- 5 Share questions in advance if possible.** If accessible, use the patient portal to communicate concerns before your appointment. This helps healthcare providers understand your priorities and refer you to the appropriate specialist or provider if necessary.
- 6 Ask your doctor or your health care team what resources they recommend.** For example, the American Diabetes Association is useful for patient information and support.
- 7 Get barefoot.** Remove your shoes and socks while waiting for your doctor in the examination room to ensure a foot examination is performed during your appointment.

CHAPTER 4:

Conclusion

POCs bear a disproportionate burden of diabetes-related amputations, highlighting persistent health disparities. These disparities have extensive impacts on minority communities, affecting individuals, families, communities, and society as a whole. Therefore, it is crucial to address these disparities head-on. We must ensure that everyone, regardless of race or ethnicity, has the opportunity for a healthy and fulfilling life.



Amputations are rising in the United States—154,000 people with diabetes undergo amputation yearly. And up to 80% of lower limb amputations result from diabetes.

It's ridiculous to think that battlefield-style amputations are still considered routine for managing diabetic foot complications, a condition affecting over 10% of the population and rising.

The disproportionate impact of diabetic amputations on racial and ethnic minorities warrants urgent attention. It's not just about fairness or equality, but a matter of life and death. These amputations are excruciating, traumatic, and drastically reduce quality of life, potentially leading to premature death. The five-year mortality rate after amputation is twice the rate for all reported cancers, at 31%.⁵

Healthcare providers, health plans, healthcare advocates, health agencies, and policymakers must address these disparities and find solutions: improving access to culturally appropriate diabetes education and care, investing in community resources for prevention, and advocating for policy changes that tackle systemic inequality.





At the core of this issue lies a fundamental truth: every person, regardless of race or ethnicity, deserves the chance to live a healthy, fulfilling life. By confronting racial disparities in diabetes outcomes and working towards meaningful solutions, we can turn this truth into reality.

Diabetes resource roundup: empowering communities for amputation prevention

- 1** **The African American Diabetes Association (AADA)** is a national nonprofit organization seeking to educate African Americans and the public about diabetes.
- 2** **Asian American Diabetes Initiative (AADI)** provides education, research, and outreach to enhance the quality of life and health outcomes for Asian Americans living with diabetes.
- 3** **The National Indian Council on Aging** assists American Indian and Alaska Native elders with preventing or effectively managing diabetes through technical assistance, training, materials and information.
- 4** **The Joslin Diabetes Center Latinx Program** offers quality and culturally appropriate care for Latino individuals with diabetes. Patients learn about diabetes types, effective management, and prevention of complications.
- 5** **Diabetes Basics**, the CDC's resource on diabetes.
- 6** **The Amputation Prevention Alliance**, an initiative that aims to tackle the distressing issue of racial and ethnic minority communities facing disproportionately high rates of diabetes-related amputation and deaths.



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