

# Renal Consult

## How the IHS Reduced Kidney Disease in the Highest-risk Population

Alaska is a vast state—larger than Texas, Montana, and California combined. It is also home to the highest percentage of American Indian (AI) and Alaska Native (AN) persons in the United States. These two populations—collectively referred to as Native Americans—have been served by the Indian Health Services (IHS) since it was established through the Snyder Act of 1921, in response to the dismal health conditions of the indigenous tribes in this country.<sup>1</sup> Across the US (not only in Alaska), the IHS has partnered with AI/AN peoples to decrease health disparities in a culturally acceptable manner that honors and protects their traditions and values.

The IHS—which in 2016 comprised 2,500 nurses, 750 physicians, 700 pharmacists, 200 PAs and NPs, and 280 dentists, as well as nutritionists, diabetes educators, administrators, and other professionals—has made huge advances in decreasing health disparities in their populations. Among them: decreased rates of tuberculosis and of maternal and infant deaths.

However, life expectancy among Native Americans remains four years shorter than that of the rest of the US population. This disparity can be traced to three recalcitrant factors: unintentional injuries, liver disease, and diabetes.

The IHS practitioners decided to tackle diabetes with a multipronged approach. And what they achieved is astonishing.

### WHAT THEY DID

Worldwide, diabetes is the most common cause of kidney failure; identifying patients with diabetes and early-stage chronic kidney disease allows for aggressive treatment that can slow progression to kidney failure and dialysis.

The IHS providers knew when they decided to tackle the problem of diabetes in

the AI/AN population that the incidence was 16%—and the rate of diabetes leading to kidney failure in this population was the highest for any ethnic group in the US.<sup>2,3</sup> And yet ...

From 1996 to 2013, the rate of diabetes-related kidney failure among Native Americans dropped by 54%.<sup>3</sup> Yes—the group of patients with the highest percentage of diabetes diagnoses has had the greatest improvement in prevention of kidney failure.<sup>4</sup>

Some of the clinical achievements that contributed to this significant change include

- Increased use of ACE inhibitors or angiotensin receptor blockers (ARBs) (from 42% to 74% over a five-year period)
- Reduced average blood pressure among hypertensive patients (to 133/76 mm Hg)
- Improved blood glucose control (by 10%)
- Increased testing for kidney disease among older patients (50% higher than the rest of the Medicare diabetes population).<sup>3</sup>

### HOW THEY DID IT

This is not rocket science. The IHS staff integrated both population- and team-based approaches to achieve a more impressive decrease than ever could have been expected. In retrospect, perhaps this success should not come as such a surprise—many religious beliefs held by Native Americans focus around society, communal harmony, kinship, and cooperation.

The population health approach focused on promoting the wellness of the entire community and connecting people to local resources, including healthy food, transportation, housing, and mental health

This month's column was authored by

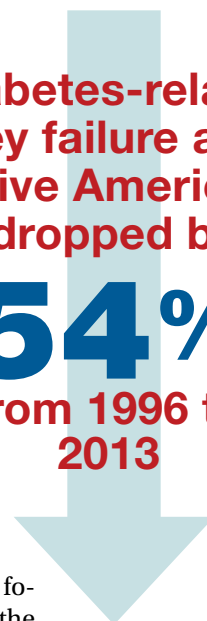
**Mandy E.**

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**Diabetes-related kidney failure among Native Americans dropped by**

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The National Kidney Foundation Council of Advanced Practitioners' (NKF-CAP) mission is to serve as an advisory resource for the NKF, nurse practitioners, physician assistants, clinical nurse specialists, and the community in advancing the care, treatment, and education

of patients with kidney disease and their families. CAP is an advocate for professional development, research, and health policies that impact the delivery

of patient care and professional practice. For more information on NKF-CAP, visit [www.kidney.org/CAP](http://www.kidney.org/CAP). Renal Consult is edited by **Jane S. Davis, CRNP, DNP**, a member of the *Clinician Reviews* editorial board, who is a nurse practitioner in the Division of Nephrology at the University of Alabama at Birmingham and is the communications chairperson for the National Kidney Foundation's Council of Advanced Practitioners (NKF-CAP); and **Kim Zuber, PA-C, MSPS, DFAAPA**, a semi-retired PA who works with the American Academy of Nephrology PAs and is a past chair of the NKF-CAP.

care. In the team approach, IHS medical experts implemented strategies to improve patient education, community outreach, care coordination, health outcome tracking, and access to a wide variety of health care providers.<sup>3,5</sup>

In a place like Alaska—where the northernmost city, Barrow, is more than 700 miles (two hours by plane) from Anchorage, and the southeastern Annette Island is more than 1,000 miles (six hours by plane) from the capital—this can be an especially challenging prospect. To reduce travel burden for rural patients, the IHS sponsors a diabetes team that travels from village to village. Nephrology services are not included in these field visits, however, so the kidney team relies heavily on telehealth. This requires extensive clinic staff coordination, as well as equipment and knowledgeable

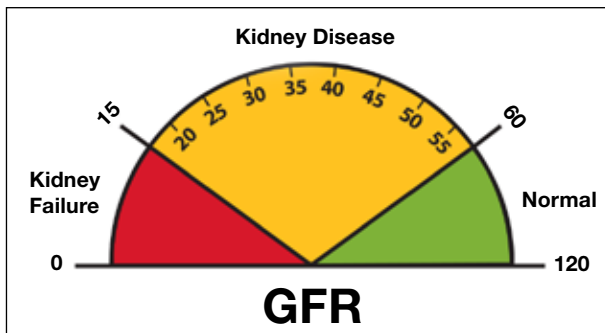
information systems support teams.

Other challenges require educational and logistical solutions. As noted, the use of ACE inhibitors and ARBs increased through the IHS's efforts—and contributed to the delayed progression of diabetic kidney disease—but those additional prescriptions necessitate patient education. Understanding of these medications can be limited; many rural patients trust that when the bottle is empty, their practitioner has treated and cured their disease—mistakenly believing that no refills are needed. And even when the need to continue the prescription is understood, rural clinics may have difficulty tracking appointments and prescriptions written by providers at specialty clinics in Anchorage, making ongoing refills an issue.

The necessary dietary changes can also be difficult for AI/AN populations. For example, in rural Alaska, tap water may not be safe to drink, and soda costs less than bottled water. Fresh produce is expensive and has often begun to spoil by the time it reaches local stores. The Native villagers often prefer their usual diets of gathered berries, fish, and red meat from subsistence hunting, making implementation of dietary changes difficult.

However, as the success of the IHS initiative shows, challenges can be met and overcome by practitioners who see a need, formulate a solution individualized to the circumstance, and think outside the box. One of the keys is developing a trusting relationship with patients. Another is to recognize informational needs and utilize available resources to educate patients. For

### Explaining Kidney Function



Visual representations of kidney function are helpful in explaining the nature and course of disease; the National Kidney Disease Education Program uses this “gas gauge” illustration to demonstrate glomerular filtration rate.

Source: National Kidney Disease Education Program.

example, visual representations of kidney function tend to be helpful in explaining the nature and course of disease; the National Kidney Disease Education Program uses an illustration similar to a gas gauge to demonstrate glomerular filtration rate (which would otherwise seem abstract and hard to understand for some patients; see page e12).<sup>6</sup> When you understand your patient population and their needs, it makes addressing the challenging aspects of health care and prevention easier.

## CONCLUSION

The results that the IHS achieved should serve as an example for all Americans with diabetes and their health care providers. We must be open to delivery of care via different approaches and practitioners in order to successfully help patients of different backgrounds and circumstances. This is the individualization of care that we hear so much about.

In 2016, the costs of caring for the kidney failure population were greater than the

entire budget of the NIH. By aggressively identifying and treating patients at risk for kidney failure, we can slow disease progression—saving society money, but more importantly allowing our patients many more years of life free from the constraints of dialysis. —**MET, RB**

## REFERENCES

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