

Notice of Funding Opportunity (NOFO) – Workforce Improvement Project (WIP)

Building Capacity and Increasing Awareness of Chronic Kidney Disease (CKD) in U.S. Territories and Freely Associated States to Assess and Improve CKD Testing and Care Coordination Among At-Risk Populations

Application Deadline: March 5, 2021

Funded by:

CDC's National Center for Chronic Disease Prevention and Health Protection (NCCDPHP)

Purpose:

An increasingly integrated health system requires health professionals who are prepared to practice, deliver, and integrate clinical and/or public health services across boundaries for the betterment of the public's health. Workforce Improvement Projects (WIPs) provide a way for CDC to partner with academia on non-research, applied public health activities that better prepare health professionals and strengthen public health workforce capacity.

Summary:

This notice announces the availability of funding from the Centers for Disease Control (CDC) for a Workforce Improvement Project (WIP). This funding opportunity is available to members of the health associations that are currently funded by the "CDC's Collaboration with Academia to Strengthen Public Health Workforce Capacity," including the Association of American Medical Colleges (AAMC). The award issued through this funding announcement will be managed by the CDC National Center for Chronic Disease Prevention and Health Prevention (NCCDHP).

National Public Health Workforce Strategic Priority Areas:

- Increase the capability of the existing workforce
- Strengthen systems and capacity to support the workforce

Project Focus Area:

Diabetes

Available Project Funding

\$85,000 (for one award, including direct and indirect costs)

Anticipated Project Period

One year (July 1, 2021 – June 30, 2022)

Application Deadline

Completed application packets must be submitted to CDC@aamc.org by **11:59 p.m. ET on March 5, 2021**.

Project Description

Project Statement:

In the United States, diabetes is a leading cause of kidney disease and kidney failure. Having kidney disease also increases risk for heart disease and stroke, heart failure, and premature death. Diabetes care guidelines recommend annual kidney disease testing in people with diabetes (1). Specific blood and urine tests that measure the level of creatinine in the blood and the level of albumin in the urine are used to diagnose people with CKD. However, more than half (55%) of Medicare beneficiaries (aged 66 or older) with diabetes or with diabetes and hypertension—which increases the likelihood of developing CKD—were not tested for albuminuria in 2018. Among Medicare beneficiaries with CKD, diabetes, and hypertension, for whom urine albumin testing is very important and clearly indicated to monitor CKD progression and cardiovascular disease management, about 50% were not tested (2). Among US adults aged 20 or older with diabetes and advanced CKD, 4 in 5 were not aware of having CKD (3). The suboptimal rates of CKD testing and awareness are of particular concern. Without proper identification and treatment, people with CKD are at increased risk of progressing to kidney failure. The proportion receiving care from a kidney doctor (i.e., nephrologist) at least 1 year before developing kidney failure was about 40% in Hawaii, about 10% in Guam and in the Commonwealth of the Northern Mariana Islands (CNMI), and less than 5% in American Samoa (4).

Need for the Project:

Diabetes and kidney failure disproportionately affect populations in the 5 US territories and 3 freely associated states. Three US territories —American Samoa, the CNMI, and Guam—are in the Pacific Ocean; two US territories —Puerto Rico and the US Virgin Islands— are in the Caribbean Sea. The 3 freely associated states —the Federated States of Micronesia, the Republic of the Marshall Islands, and the Republic of Palau— are in the Pacific Ocean.

In 2016, the age-adjusted percentage of adults aged 18 or older with diagnosed diabetes was 13.7% in Puerto Rico, 11.9% in the US Virgin Islands, and 11.3% in Guam compared with the median for all US states of 9.5% (5).

In American Samoa, Guam, and the CNMI, from 2007 to 2016, the rate of new cases of kidney failure was about 1,000 per million population (pmp), nearly 3 times the rate in US whites (4). The rate was higher in Guam (about 1200 pmp) and the CNMI (about 1080 pmp), and lower in Hawaii (640 pmp) and American Samoa (450 pmp). More than 70% (range: 71.3% - 76.1%) of new cases of kidney failure in American Samoa, Guam, Hawaii, and the CNMI were attributed to diabetes (4). In Puerto Rico, the rate of new cases of kidney failure in adults aged 18 or older was about 2000 per million diabetic population in 2010 (6).

Treatment for kidney failure is very costly. In 2018, Medicare spending for hemodialysis was nearly \$54,000 per person per year in Puerto Rico, about \$83,000 per person per year for Native Hawaiians/Pacific Islanders, and nearly \$100,000 per person per year for patients with diabetes (2).

However, blood sugar and blood pressure control have been shown to lower the risk for kidney failure from diabetes and may prevent additional health problems such as heart disease. In diabetic kidney disease, medications such as angiotensin-converting enzyme (ACE) inhibitors or angiotensin II receptor blockers (ARB), which reduce albuminuria in addition to lowering blood pressure, have been shown to slow CKD progression. Despite well-documented health and socioeconomic disparities, rates of new cases of kidney failure from diabetes among American Indians and Alaska Natives (AIANs) have decreased substantially by more than 50% since 1996 (7,8). This decline followed implementation by the Indian Health Service (IHS) of public health and population management approaches to diabetes care accompanied by improvements in clinical care such as increased CKD testing, ACE/ARB use, and blood pressure control. These approaches implemented by the IHS can serve as a model to other health care systems serving at-risk populations, including those in the Pacific and the Caribbean. A decrease in kidney failure from diabetes in these populations following the example of the IHS experience would result in fewer new cases and contribute to leveling or lowering total Medicare expenditures for kidney failure. In 2019, the HHS Office of the Assistant Secretary for Planning and Evaluation released an analysis of outcomes of IHS grantees estimating the potential cost savings between \$174–\$520 million from the reduction during 2006–2015 of approximately 2,256–2,602 cases of kidney failure from diabetes in AIANs (9).

In 2019, the Kidney Disease Improving Global Outcomes organization recommended that CKD screening coupled with risk stratification and treatment should be implemented immediately in high-risk persons and that this should ideally occur in primary or community care settings with tailoring to the local context (10).

Target Population:

Health departments and Ministries of Health and their nursing staff, physician assistants, diabetes educators, case managers, data managers, community health workers, and other healthcare providers in the U.S. territories and in freely associated states. The applicant will work with at least one jurisdiction to demonstrate strategies and activities that could then be replicated in other jurisdictions.

Key Outcomes:

- Increased knowledge and awareness among providers of diabetes and hypertension as major risk factors for CKD and kidney failure.
- Improved provider-patient communication and patient awareness of CKD.
- Expand network of partners to amplify current initiatives on risk factor reduction and patient care management.

- Established or enhanced clinical decision tools to improve identification of people with diabetes and CKD.
- Increased referrals to primary care and specialty care (e.g., nutrition counseling, nephrology, cardiology).

Contribution to the Public Health Workforce:

- Increase workforce capacity and awareness to 1) increase CKD testing in at-risk groups, 2) improve diabetes care coordination, and 3) promote risk factor reduction for CKD and kidney failure.
- Provide opportunities to establish partnerships for collaboration and to build upon related initiatives.
- Increase education and training to integrate CKD testing and management with diabetes and hypertension control efforts, in collaboration with nursing staff, physician assistants, diabetes educators, case managers, data managers, community health workers, and other healthcare providers.
- Provide opportunities for building community partnerships to address the social determinants of health, e.g., food insecurity, in support of CKD prevention in people with diabetes or hypertension.

Awardee Strategies and Approaches

- Provide education and training to integrate CKD testing, prevention, and management with diabetes and hypertension control efforts, focusing on testing people with diabetes for kidney disease and monitoring kidney health and kidney disease as part of routine diabetes care.
- Establish partnerships with academic institutions, primary care associations or medical societies to work in collaboration with Ministries of Health, or health departments, Social Services, and other community-based organizations in promoting CKD testing and coordinating appropriate care and services.
- Synergize activities with other related initiatives, such as the Non-communicable Disease Collaborative and the Learning Collaborative to Improve Blood Pressure Control from the Association of State and Territorial Health Officials.
- Work with multi-disciplinary healthcare teams to develop and implement tools and strategies to identify people with diabetes, promote CKD testing, and link CKD testing results with diagnostic coding and referrals to primary and specialty care (e.g., nutrition counseling, nephrology, cardiology).

CDC Staff Activities

CDC staff will act as consultants for this project, providing technical assistance and guidance and fostering collaborations with other CDC internal and external partners. Awardees will receive support from CDC subject matter experts, as needed, to ensure successful program execution.

Requirements for reporting:

- Number of trainings performed including numbers of providers reached by type of provider.
- Number of providers/patients reporting knowledge and awareness of diabetes as a risk factor for CKD.
- Number and description of partnerships established or enhanced to improve CKD testing and care coordination in people with diabetes or hypertension.
- Assessment and documentation of protocols for CKD testing and diabetes care coordination for local review and action.
- Number and type of tools (e.g., alerts, reminders, algorithms, workflows) implemented to promote CKD testing and referrals for people with diabetes and/or hypertension.
- Number of people with diabetes or hypertension identified to have CKD.
- Number and types of referrals, e.g., nutrition counseling, nephrology, cardiology, for patients with or at risk of CKD.

Special Eligibility Requirements

- Organizations that can establish partnerships with academic institutions in the US territories and freely associated states.
- Organization must demonstrate experience integrating the social determinants of health in care coordination at the community level.
- Applicant should demonstrate experience working with high risk populations in low resource areas.
- Applicant should demonstrate ability and experience working with multi-disciplinary and allied professional healthcare teams, including case managers, nutritionists, dietitians, diabetes educators, pharmacists, and community health workers.

Application Instructions

Budget Information for Non-Construction Programs – Complete [SF-424A](#).

(You may wish to review [CDC's Budget Preparation Guidelines](#) for examples and templates to assist in developing a proper budget.)

Budget Justification – Line item narrative justification for the total amount requested. (This will be in addition to the pages in the Project Narrative.)

Project Abstract – A project abstract is not required.

Project Narrative - Applicants should structure their project narrative (with headers and subheaders) as indicated in the Review Criteria section below, and address each of the sections in the full WIP description. The project narrative should meet these criteria:

- Maximum of 15 pages (budget will not count as part of the project narrative)

- Font size: Times New Roman 12 points
- Double spaced with one-inch margins
- Number all narrative pages; not to exceed 15 pages
- PDF file format

Review Criteria

Approach (40 points) - see “Project Description” above

- Statement of the problem/need (5 points)
- Purpose of the project and Outcomes (5 points)
- Strategies and Activities (10 points)
- Collaborations (10 points)
- Target populations (10 points)

Workplan and Evaluation (30 points)

- Including assessment of current protocols for CKD testing and appropriate referrals in people with diabetes or hypertension.

Organizational Capacity (30 points)

- Experience developing tools for quality improvement processes in clinical settings (5 points)
- Experience in knowledge transfer in low resource settings (10 points)
- Experience developing and expanding partnerships to achieve stated goals (5 points)
- Experience implementing process and outcome evaluation (5 points)
- Experience working with multi-disciplinary healthcare teams (5 points)

Other Information

- [Chronic Kidney Disease Change Packet](#)
- [Hypertension Control Change Package](#)
- [Vital Signs Fact Sheet](#)

Contact

Please visit the [AAMC Workforce Improvement Projects web page](#) for more information. You may address questions to CDC@aamc.org.

References

1. American Diabetes Association. Microvascular Complications and Foot Care: *Standards of Medical Care in Diabetes—2020*. Diabetes Care 2020 Jan; 43(Supplement 1): S135–S151. https://care.diabetesjournals.org/content/43/Supplement_1/S135.
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3. Centers for Disease Control and Prevention. Chronic Kidney Disease Surveillance System—United States. Website. <https://nccd.cdc.gov/ckd/Default.aspx>.
4. Xiang J, Morgenstern H, Li Y, Steffick D, Bragg-Gresham J, Panapasa S, Raphael KL, Robinson BM, Herman WH, Saran R. Incidence of ESKD Among Native Hawaiians and Pacific Islanders Living in the 50 US States and Pacific Island Territories. *Am J Kidney Dis*. 2020 Sep;76(3):340-349.e1. doi: 10.1053/j.ajkd.2020.01.008.
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8. Burrows NR, Zhang Y, Hora I, Pavkov ME, Sheff K, Imperatore G, Bullock AK, Albright AL. Sustained Lower Incidence of Diabetes-Related End-Stage Kidney Disease Among American Indians and Alaska Natives, Blacks, and Hispanics in the U.S., 2000–2016. *Diabetes Care*. 2020 Sep;43(9):2090-2097. doi: 10.2337/dc20-0495.
9. Department of Health and Human Services; Office of the Assistant Secretary for Planning and Evaluation. Issue Brief Office of Health Policy. The Special Diabetes Program for Indians: Estimates of Medicare Savings, 2019. https://aspe.hhs.gov/system/files/pdf/261741/SDPI_Paper_Final.pdf
10. Kidney Disease Improving Global Outcomes (KDIGO). KDIGO Controversies Conference on Early Identification & Intervention in CKD. https://kdigo.org/wp-content/uploads/2019/08/KDIGO-Early-Identification-Intervention-in-CKD-Scope_Final.pdf