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B. CHRONIC KIDNEY DISEASE IN AGRICULTURAL COMMUNITIES IN CENTRAL AMERICA: PROGRESS REPORT

Background

1. In the past two decades, Central America has witnessed a growing number of cases of people with chronic kidney disease (CKD) who die from it. A type of CKD has been observed among those cases whose etiology is unrelated to the most common causes of the disease, diabetes mellitus and hypertension. This type of nontraditional chronic kidney disease, or kidney disease of nontraditional or still unknown etiology (hereinafter CKDnT) is more common than in the Region of the Americas as a whole and is on the rise. El Salvador has disseminated the results of its 2015 National Survey of Chronic Noncommunicable Diseases in the Adult Population (ENECA, Spanish acronym), which revealed a CKD prevalence of 12.6 per 100,000 populations and a CKDnT prevalence of 3.8 per 100,000 population. In Guatemala, the CKD prevalence rates obtained from the database of the Health Management Information System (SIGSA, Spanish acronym) for the period 2008-2015 show a 75% increase, with a rate of 4 per 100,000 population in 2008 and 7 in 2015, together with an 18% increase in mortality. In 2013, during the 52nd Directing Council, the Member States of the Pan American Health Organization (PAHO) approved the concept paper *Chronic Kidney Disease in Agricultural Communities in Central America* through Resolution CD52.R10. In 2015, the Directing Council took note of report CD54/INF/5, and the Director of the Pan American Sanitary Bureau (PASB) pointed out that, despite the work that had been done, few concrete results had been obtained to address the problem of chronic kidney disease in young people of working age. This document describes the progress made since the last progress report (1-4).

Update on progress achieved

2. During the period in question, the Central American countries (Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, and Panama) made progress developing and implementing action plans aimed at strengthening local capacity to provide a comprehensive response to CKDnT in the most affected municipalities (whose combined population in El Salvador, Guatemala, Honduras, and Panama, is approximately 4,073,769). In El Salvador, the agricultural areas of San Miguel and Usulután are being

addressed; in Guatemala, the departments of Escuintla, Quetzaltenango, Petén¹, and Chimaltenango; in Nicaragua, the municipality of Chinandega²; and in Panama, the provinces of Coclé, Chiriquí, and Veraguas, where renal clinics have been set up. In addition, during that same period, the Director of PASB approved an interprogrammatic project with a total budget of US\$ 1 million³. Some 70% of those resources were allocated to provide direct support to countries, with a focus on the most affected communities.

3. The countries made progress in developing policy options and tools to improve interventions involving care for people living with CKD/CKDnT. El Salvador began drafting dialysis and kidney transplantation protocols. In 2016, the Panamanian Society of Nephrology prepared clinical practice guidelines for CKD prevention, diagnosis, and management. At the regional level, PAHO, in coordination with the Latin American Society of Nephrology and Hypertension (SLANH), launched the online course Prevention and Management of Chronic Kidney Disease⁴ in 2016 through the Virtual Campus for Public Health (VPHC); as of March 2017, 5,000 physicians from Central America and Mexico had registered for the course. Furthermore, during the Subregional Meeting of the PAHO/WHO Strategic Fund for the Central American countries and the Dominican Republic⁵, a course on CKDnT prevention and management was held for teams at the first level of care to promote use of the Strategic Fund to improve access to medicines and supplies for noncommunicable diseases, including CKDnT (5, 6).

4. The countries made progress in strengthening epidemiological, occupational, and environmental surveillance and registry systems, with emphasis on CKDnT. El Salvador has identified 148 municipalities with high case numbers and will start keeping records on stage-5 patients receiving dialysis in the five Ministry of Health (MoH) hospitals that provide this service. It will also conduct a study to determine the demand for medicines and supplies. Guatemala has prepared protocols for sentinel surveillance and renal dialysis and transplantation registry—instruments that are useful for epidemiological surveillance. It has also developed a CKDnT registry system in Escuintla, Chimaltenango, Quetzaltenango, and Petén. Honduras, in turn, has a virtual platform for registering CKD patients undergoing renal replacement therapy. Panama is conducting a preventive health census with support from the Society of Nephrology, with the objective of training general practitioners in the detection of people with kidney disease. The Preventive Health Census was conducted in 10 provinces, two districts, 13 health regions, three government institutions, and four penitentiaries. Also, through coordination with the National Institute of Statistics and Census, detailed information is obtained on causes of deaths, permitting geospatial analysis of CKDnT mortality. During the period in question, PAHO concluded consultations with national authorities, academics, and WHO Collaborating Centers for the ICD-10 to reach agreement on the definitions of a clinical

¹ This is the largest department in Guatemala and has the highest risk of CKDnT.

² This municipality had a population of 134,720 in 2015.

³ Unless otherwise indicated, all monetary figures in this document are expressed in U.S. dollars.

⁴ Course launched on 14 July 2016.

⁵ This subregional meeting was held in Nicaragua from 26 to 28 April 2017.

case of CKDnT, a suspected and probable case, and a selection algorithm for optimizing the registry of deaths from that cause (7).

5. The countries improved their mechanisms for advocacy and intersectoral action. El Salvador, through its Ministry of Health (MINSAL), formed a national CKD commission, chaired by the Vice Minister of Health, in coordination with the Ministry of Agriculture and Livestock (MAG) and the National Health Forum (FNS) in its capacity as social participation entity. Guatemala formed a National Technical Advisory Commission to monitor the plan's activities; its members included the Guatemalan Association of Nephrology (AGN), the Health, Work, and Environment Program (SOA-SALTRA-USAC), the Guatemalan Social Security Institute (IGSS), the CDC-Central America, and PAHO. Panama formed a multidisciplinary intersectoral team to study CKDnT and define prevention and control activities. It is also preparing informative instructional materials to educate family members and the general public about ways of preventing the disease.

6. At the regional level, the "Regional Research Agenda for Addressing Chronic Kidney Disease of Nontraditional Etiology in Central America"⁶ was defined. Generic CKDnT research protocols are being developed to ensure the harmonization and quality of research in epidemiological studies in the Region. In addition, a systematic review of studies on the association between agricultural chemicals and CKDnT was conducted, identifying more than 20 studies of uneven (often poor) quality. El Salvador has disseminated the results of the 2015 National Survey on Chronic Noncommunicable Diseases in the Adult Population (ENECA) and is working on a secondary analysis of the CKD database (8).

Action Necessary to Improve the Situation

7. Based on the progress and challenges faced by the countries with respect to CKDnT, the following is recommended:

- a) Strengthen local capacity for a comprehensive response to CKDnT in affected municipalities, implementing local plans for preventing and managing the disease and boosting response capacity at the first level of care for the identification and monitoring of people at risk, early detection, and integrated management of CKD, diabetes, and hypertension. Furthermore, provide training for personnel (health teams, employers, workers, etc.) and include relevant risk factors for CKD/CKDnT in municipal or local management.

⁶ Consultations on this instrument with the countries are currently under way. The document summarizes the work of an online survey to identify research priorities for addressing CKDnT. The purpose of the survey is to conduct a systematic evaluation of the literature in the databases of different international organizations, identifying the key actors in the research conducted in the Central American countries and publications of CKD research agendas over the past five years.

- b) Develop policy options, tools, and technical support to improve interventions involving care for people living with CKD/CKDnT, including the standardization and implementation of guidelines for the care of patients with CKD/CKDnT, use of the Strategic Fund to cut costs and improve access to medicines, and implementation of supply management guidelines.
- c) Strengthen epidemiological, occupational, and environmental surveillance, along with registry systems, with emphasis on CKDnT, through the application of the case definition for epidemiological surveillance of CKD and capacity-building to improve dialysis and transplant registry systems and preventive occupational and environmental intervention registries.
- d) Promote advocacy and intersectoral action for CKDnT prevention, including the mapping of actors and work with civil society, patient organizations, family members, trade associations, unions, and medical associations, as well as the review and development of legal frameworks to protect workers' health in relation to occupational diseases, especially CKDnT.
- e) Strengthen communication strategies for disseminating research findings and raising the alert about CKDnT as an occupational disease and implement the regional research agenda.

Action by the Executive Committee

- 8. The Executive Committee is requested to take note of this report and formulate the recommendations it deems pertinent.

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