BMJ Global Health

Institutions, crisis and type 2 diabetes policy in Venezuela

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To cite: Gomez EJ. Institutions, crisis and type 2 diabetes policy in Venezuela. *BMJ Global Health* 2022;**7**:e007174. doi:10.1136/bmjgh-2021-007174

Handling editor Seye Abimbola

Received 29 September 2021
Accepted 19 April 2022

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ABSTRACT

In a context of economic, political and humanitarian crisis, ensuring effective type 2 diabetes self-care management services in Venezuela has been an ongoing public health challenge. Repeated shortfalls in access to medicine, healthcare workers and food scarcity have hampered the ability of patients with diabetes to effectively manage their condition and receive the healthcare support that they deserve. With respect to methodology, the author relied on qualitative research methods, with a focus on in-depth document analysis. Primary and secondary document data sources were used through a systematic key word search in online search engines and library databases. While one may attribute these challenges in Venezuela to ongoing economic, political and humanitarian crisis, this article combines this perspective with health systems and institutional challenges that appear to have perpetuated and in fact worsened Venezuela's diabetic situation. Specifically, a weakened healthcare system, fragmentation in diabetic primary care services and corruption in a context of ongoing humanitarian crisis have contributed to these ongoing challenges. Within humanitarian and political crisis conditions, future research on type 2 diabetic treatment and self-care management may benefit from combining perspectives in political science institutional theory and public health systems analysis to explain why governments in these settings continue to fall short of providing effective and equitable diabetic care.

Summary box

- ⇒ Despite the increased awareness of Venezuela's diabetes epidemic, we know less about the intersection of political, social and humanitarian crisis and type 2 diabetes care.
- ⇒ This article suggests that while a context of political, social and humanitarian crisis may challenge a government's ability to provide effective type 2 diabetes services, we need to combine this perspective with an analysis of the design of bureaucratic institutions and malfeasance within government.
- ⇒ Findings from this article may also provide new insights for clinical practitioners in Venezuela on how they can work with the central government on improving the design of primary care institutions.
- ⇒ This article also underscores the importance of conducting interdisciplinary analysis that brings together political scientists, public health and medical experts to evaluate type 2 diabetes policy in Venezuela and other low-income and middle-income countries.

INTRODUCTION

Similar to several emerging economies in Latin America, in recent years Venezuela has seen a steady increase in non-communicable diseases. Changes in dietary patterns, lifestyles, increased food scarcity and the consequential decrease in access to nutritious foods have contributed to a rise in overweight and type 2 diabetes. Amidst burgeoning type 2 diabetic cases, the country continues to be hampered by ongoing economic, political and humanitarian crisis, as well as a general decrease in government commitment to strengthening the public healthcare system.

In this article, the author explores the relationship between crisis, institutions and the provision of type 2 diabetes self-care management services in Venezuela. Specifically, the author examined the role of public health institutions and their ability to adapt to ongoing needs of patients with diabetes in a context of ongoing crisis. This article claims that ongoing shortcomings in the government's provision of type 2 diabetic self-care management services reflects three challenges. First, the debilitating impact of political, economic and humanitarian crisis on decreased health systems capacity to provide these services. Second, the bureaucratic fragmentation of primary care diabetic services. And third, the incentives that this context generates for health officials to engage in corrupt activity instead of focusing on strengthening the provision of diabetic services. Therefore, the author finds that understanding and explaining Venezuela's ongoing type 2 diabetes challenges in self-care management require that we combine the effects of political, economic and humanitarian crisis with an analysis of bureaucratic institutions and policymaker's incentives to pursue effective health policy reform in a context of uncertainty and despair.

Research for this study relied mainly on analysis of primary and secondary document

data sources. Major online search engines and databases, such as *Google*, *Google Scholar*, *PubMed* and *Web of Science*, were used with 'key word' search terms focused on Venezuela, type 2 diabetes, self-care management, health systems and policy. With respect to the inclusion criteria, documents were selected for analysis if they were peer-reviewed journal articles, credible policy articles, reports and media news articles providing an in-depth analysis of either Venezuela's type 2 diabetes situation, policy or political context. Documents that either did not provide a thorough analysis or that were from questionable publication sources were not selected. The case of Venezuela was chosen for two primary reasons: first, the high prevalence of type 2 diabetes in a context of ongoing political, economic and humanitarian crisis; and second, the dearth of knowledge on the interaction between political and humanitarian crisis and type 2 diabetes self-care management in Venezuela. Epidemiological data on the blood glucose levels of patients with diabetes were also obtained from the WHO online Global Health Observatory Data Repository, which was accessed online in July 2021. The research conducted for this article started in August 2020 and concluded in July 2021. Ethical consent was not required for this research because no individuals in Venezuela, or elsewhere, were interviewed for this study. Finally, none of the research questions and measurable outcomes for this study were influenced by patients' priorities, experiences and preferences. As mentioned previously, no patients were involved in the research design for this study.

INSTITUTIONS AND DIABETES SELF-CARE MANAGEMENT

Understanding the political and health systems challenges of providing type 2 diabetes self-care management services in low-income and middle-income countries (LMICs) is a new area of scholarly research.[1] With respect to health systems and type 2 diabetes policy, several studies have addressed issues such as bureaucratic incapacity (eg, lacking sufficient resources—eg, financial and technical[2 3]; an insufficient level of primary care personnel and provider education,[3] and the government's need to address provider emotions and attitudes with respect to treatment while defining their roles and responsibilities).[4 5] However, we know less about how ongoing economic, political and humanitarian crisis, the fragmentation of primary care institutions, health officials' preferences and behaviours interact to challenge the provision of type 2 diabetic self-care management services.

In this article, the author addresses this lacuna in the literature in several ways. First, the author underscores the ongoing challenges of primary care institutional fragmentation in providing diabetic self-care management services. However, the author combines this institutional approach with an analysis of ongoing political, economic and humanitarian crisis and its harmful effects on Venezuela's healthcare system, as well as how these crisis situations perpetuate health officials' preferences to refrain from providing effective diabetic services. Indeed, while political crisis has in the past provided opportunities and incentives for healthcare reform in Venezuela and other Latin America countries,[6] the author's research suggests that ongoing crisis conditions can generate health official incentives to not only refrain from improving state capacity in providing diabetic services but also to personally benefit from weak state capacity through the squandering of medicine and resources. The author's research on Venezuela therefore suggests that adequately understanding why governments are both unwilling and incapable of improving type 2 diabetes self-care management services requires a more comprehensive approach that takes context, institutions and bureaucratic interests more seriously.

In the next section, the author provides a brief description of the current state of type 2 diabetes in Venezuela. The author highlights the historical and current epidemiological situation and the contributing factors to the nation's diabetes situation.

TYPE 2 DIABETES IN VENEZUELA

Within the past several decades, the number of patients with type 2 diabetes has burgeoned in Venezuela. According to Nieto-Martínez *et al*,[7] there were an estimated 1.7 million persons with type 2 diabetes in the nation. Worse still, Nieto-Martínez *et al* (p. 1334) note that the "…prevalence of uncontrolled T2D (A1C>7%) [for patients undergoing treatment] in Venezuela is 76%, one of the highest in Latin America."[7] A more thorough and up-to-date epidemiological picture of Venezuela's type 2 diabetic situation is nevertheless constrained by the absence of national population health statistics provided by the government.[8] Moreover, according to Contreras *et al* (p. 320), the *Ministry of People's Power for Health* only provides "… extemporaneous publications and do not correspond to a national diabetes detection plan in the country."[8] Data obtained by Contreras *et al* (p. 320) note that, "For the year 2010, the population prevalence figures for DMT2 in Venezuela ranged from 5.1% to 6.0%, representing an absolute value of between 1 470 500 and 1 730 000 cases/year.'[8] Contreras *et al* (p. 320) also referred to a study by Whiting *et al* (2011) where he claims that in 2011, in Venezuela, "… the number of DMT2 cases aged between 20 and 79 years … was 1 764 900, for a prevalence consistent with WHO criteria of 10.39% …,"[8] while Contreras *et al* (2020, p. 320) also noted a study by Nieto *et al* (2017) claiming "…that 12.4% of Venezuelans over the age of 20 have diabetes, and the prevalence has increased from 6.0% in 2010 to 12.4% in 2017."[8]

In recent years, the diabetic community's ability to successfully control its blood glucose level does not appear as successful. Ideally, the blood glucose of a patient with diabetes should be "…between 4 and 7 mmol/L" (Editor, 2019, p.1). As figure 1 illustrates, however, the WHO

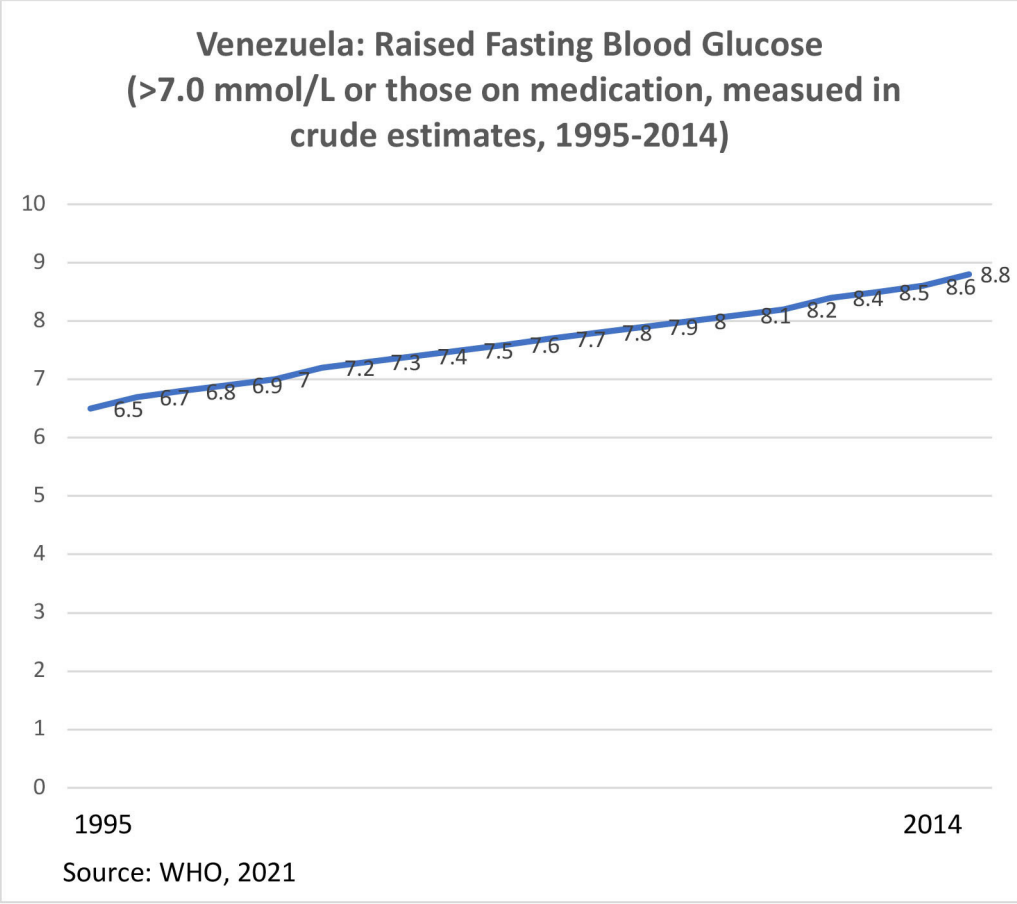

Figure 1 Venezuela's Raised Fasting Blood Glucose Situation.

(2021) reports that Venezuela has consistently scored above 7 since the year 2000, at which point it reached 7.2, increasing to 8.8 in 2014 (WHO, 2021). This seems to suggest that patients with diabetes have not been able to adequately control their blood sugar levels.

Unlike other countries in Latin America, however, the nutrition transition does not appear to have contributed to this rise in type 2 diabetes in Venezuela. In fact, researchers find that Venezuelans have not consumed Western-based foods as frequently as other nations, such as sodas, ultra-processed foods, with citizens instead appearing to consume more basic food staples.[9] Surveys found that in mainly urban areas, Venezuelans have primarily enjoyed the consumption of coffee, arepa and cheese, and that the consumption of Western-based foods—though others find are certainly present—[7] has been low.[9]

The government's food policies also appear to be contributing to Venezuela's challenging diabetic situation. Specifically, the government's food subsidies have fuelled the mass consumption of products exhibiting price controls, making them affordable, but high in carbohydrates, sugars and fat.[10] In a context of food scarcity, unemployment and poverty, consuming these foods has been much more appealing for many Venezuelans, while vegetables and fruits are increasingly scarce and more expensive.[10] Some were of the view that the government's price controls were "…inadvertently creating a generation of overweight Venezuelans prone to diabetes and hypertension" (Wilson, p. 1).[10]

Finally, overweight and obesity has also been a risk factor associated with the rise of type 2 diabetes. According to some estimates, by 2015, roughly 70 per cent of the population was overweight and approximately 40 per cent were obese.[10]

THE CHALLENGE OF DIABETES SELF-CARE MANAGEMENT

With the number of persons with type 2 diabetes increasing, ensuring that patients have access to effective diabetic self-care management services and knowledge has been important. However, several challenges have emerged with ensuring that these outcomes can be achieved.

One reoccurring problem has been reliable access to medication for self-care treatment. In fact, researchers find that there is often a shortage of diabetic medicine and that they are high in prices.[11] With the costs for medications high, persons with diabetes have been inconsistent with their treatment and have not had a chance to effectively control their condition.[11 12] In other instances, due to fear of not having sufficient access, persons with diabetes have had to purchase more than their share of medication in stores.[12] However, the lack of access to

medicine in general, as well as medical diagnostics and hospital equipment, has been further compounded by the recent economic and political crisis. In this context, persons with diabetes have tried to obtain medication from elsewhere, at times travelling to neighbouring Colombia to obtain medicine.[11]

Nevertheless, some type 2 medications appear to be more available in Venezuela. For example, a medication that is commonly used among persons with diabetes to manage blood glucose levels is Metformin. Nieto-Martínez *et al*[7] found that due to price controls imposed by the government that the price for this medication is low and that it is popular in the country. But at the same time, this medication is poorly prescribed by the medical and even non-medical professionals, while also being self-prescribed by persons with diabetes.[7] In this context, NGOs (Non-Governmental Organizations) have been asked to step in and help to provide diabetic services.[12] Furthermore, research by Nieto-Martínez *et al*[7] finds that prediabetes screening is troubled by a dearth of available biochemical testing examinations for pre-diabetics.

Yet another challenge has been the lack of adequate preparation that public healthcare workers have to provide diabetic self-care management services. Indeed, there is an ongoing need to provide training, such as increased knowledge and education, for nurses and community healthcare workers providing services to patients with diabetes.[13]

HEALTH SYSTEMS INSTITUTIONS AND POLICY RESPONSE

But what accounts for these ongoing challenges in diabetes self-care management services? While one may easily blame the state of political, economic and humanitarian crisis generating a weakened policy response, the author finds this approach to be insufficient on its own. Instead, the author combines this emphasis on contextual crises with its effects on the overall healthcare system, the design and fragmentation of bureaucratic primary care institutions providing diabetic services, and, in a context of ongoing crisis, health officials' incentives to take advantage of this situation for personal gain.

Crisis and health systems challenges

In recent years, political and economic crisis has had a negative effect on Venezuela's healthcare system. Shortly after his election into office in 1998, the late President Hugo Chávez promised to provide universal access to healthcare as a right for all citizens, going so far as to enshrine this principle into his new constitution.[14] At the time, Chávez also established an agreement with Cuba to provide cheap oil in exchange for Cuban doctors, medicines and training throughout the country.[14] However, under Chávez, Venezuela's overall healthcare system soon began to experience challenges. First was the nation's deteriorating economic situation, further complicated "…by exchange rate controls, which led to a shortage of the foreign currency needed to import equipment, food, and medicines" (*The Lancet*, p. 1331).[14]

Yet another challenge during this period was a high level of institutional turnover. Chávez's administration witnessed a total of "…13 different [health] ministers, most of whom served less than a year" (Wilson, p. 1).[15] In fact, *The Lancet* medical journal in 2018 reported that the country had 17 health ministers within the past 20 years.[14] Moreover, according to Wilson,[15] Chávez's successor, President Nicolás Maduro, had as of 2015 "… already appointed four health ministers in his first two years of office" (Wilson, p. 1).[15] And with respect to human resources, Wilson (2015) claims that in 2007, the country had "… more than 70 000 doctors" (ibid, p. 1).[15] But "Since then, 13 000 physicians have left the country," with "…more than half—some 7600—worked in the country's public health sector" (ibid, p. 1).[15]

Since Maduro's entry into office, political and humanitarian crisis has continued, establishing a context that is difficult for improving Venezuela's healthcare system. Arguably, the genesis of the current political crisis stemmed from the disputed 2018 presidential election, which the political opposition contested,[16] and which Maduro won but was construed as illegitimate by the opposition parties within the National Assembly.[17] Based on what is stated in the Venezuelan constitution, in this context, the president of the National Assembly could step in as the interim President, who at the time was Juan Guaidó,[17] of the *Popular Will* political party. Declaring himself president, with strong backing from the international community, Maduro and his supportive National Constituent Assembly opposed Guaidó's proclamation.[17] Guaidó tried to obtain the support of the military but ultimately fell short of achieving this objective.[17] To this day, Maduro has maintained his presidency and arguably his political power. Maduro's control was further solidified when in January 2021, the socialist party obtained majority control over the National Assembly, which Guaidó previously headed and which the political opposition had control over.[18] The National Assembly is now led by Maduro's former chief of staff, Jorge Rodriguez.[18]

Analysts see no resolution and end to the country's situation and suffering.[19] Some claim that Maduro has not focused on fixing the economy but instead retaining his political power, failing to address the underlying structural changes needed to salvage the economy, and that this context has contributed to ongoing food shortages, malnutrition and supply shortages.[19] In this context, the country's healthcare system has suffered.[19]

While the economy continues to deteriorate, Venezuela's humanitarian crisis deepens. Amidst ongoing food shortages, insufficient employment, low wages and lack of access to healthcare, in recent years citizens have fled the country, which decreased somewhat during the COVID-19 lockdown, but increase again later.[19] Indeed, it is these conditions, as well as enduring violence, death and the repression of political opponents (which often includes jailing, illegal detentions and human rights

violations) that have contributed to the country's migration crisis.[20] Neighbouring Colombia appears to be the primary receptor of migrants from Venezuela.[20]

Bureaucratic design and context

Nevertheless, in addition to crisis, it is also important to note that institutions matter. In Venezuela, the institutional context and policies in response to type 2 diabetes, and other diseases, have been challenging. With respect to primary care services, the bureaucratic system appears to be highly fragmented. While the Ministry of Popular Power for Health is responsible for providing primary healthcare services for diabetics, there are also separate systems that in essence duplicate the government's policy efforts. As Nieto-Martínez *et al* maintain,[13] the following public sector institutions provide primary care services: the Ministry of Popular Power for Health, the Institute of Social Security (Ministry of Education), Venezuelan Institute of Social Security, State Health Departments and even the Social Security Division of the Armed Services. Furthermore, Nieto-Martínez *et al* claim that about 15 state governments have 40 diabetes care units[13]; moreover, these units provide diabetic care and information on prevention.[13] These diabetic units also conduct research and disseminate information to the local community.[13]

The central government is also directly involved in providing primary care services through its social missions, which focus on providing care in poorer areas.[13] As Nieto-Martínez *et al* explain,[13] a good example of this effort is the joint programme that Venezuela created with Cuba in 2003, namely, the *Misión Barrio Adentro*.[7] Through this programme, several primary care centres were provided throughout the country, staffed by Cuban doctors, and directed by their own staff.[7] Nieto-Martínez nevertheless claims that this situation contributed to the fragmentation of Venezuela's healthcare system, and that "… the physical and administrative separations between the Cuban medical mission and ordinary public health services could compromise broad implementation of tDNA"—[transcultural Diabetes Nutrition Algorithm, which is a culturally sensitive approach to implementing diabetes management, facilitating the application of medical nutrition therapy services in different countries] (p. 1337).[7]

State actor preferences and corruption

Finally, yet another challenge has been health officials' reluctance to improve the public health system and instead take advantage of it for personal gain. As Wilson points out,[15] when the public complains about the poor healthcare treatment that they receive, the government views health ministers as the scapegoat. This context generates uncertainty and motivates these officials to profit from the system.[15] Indeed, Wilson (p. 1) states that "Uncertain of when their tenures will end, ministers work quickly to enrich themselves."[15] Moreover, according to Wilson (p. 1), who interviewed an anonymous minister within the government, "The result is that there is a constant pilfering of supplies and medicines. The ministry may buy the medicines, but they are then resold to private clinics and doctors by corrupt ministry officials …. [consequently] Many medicines, such as insulin, aspirin, antibiotics, and blood pressure drugs, are scarce."[15] Policy analysts note that critical medicines often disappear and that, according to some media sources, there are allegations of corruption that, in turn, hamper the distribution of medications.[21] Furthermore, González claims that some of these medications are needed to treat diabetes and other chronic health conditions, such as heart disease.[21] Worse still, patients in this context are often forced to bring their own medical supplies, medications and even food when going to hospitals.[21]

GOING BEYOND CRISIS: THE IMPORTANCE OF POLITICS AND INSTITUTIONS

The author's analysis of the Venezuelan government's response to its ongoing type 2 diabetes situation and provision of self-care management services has revealed several lessons. Government failure to provide effective self-care management services should not only be attributed to ongoing political, economic and humanitarian crisis situations. The context of crisis can therefore no longer be the primary scapegoat. While crisis conditions have certainly introduced several healthcare challenges, the author has argued that just as important is combining this perspective with the importance of institutional design, specifically the fragmentation of government primary care diabetic services, and the incentives that a deteriorating healthcare system provides for health officials to engage in corrupt behaviour. In this context, it seems that health officials will not have the motivation needed to remain in office and to work with other government officials in helping improve the provision of diabetic self-care management services. Given this situation, future researchers may also consider a 'Health in All' policy approach to highlighting these intergovernmental challenges and future needs. Such an approach could emphasise the need for several government sectors, from health to the office of the presidency and other government branches, to work together in integrating health into decision-making and committing to the provision of equitable public health policies benefitting the entire population.[22] This approach could also underscore the reasons why health and non-health sectors in Venezuela are perhaps unwilling to collaborate and work towards this goal in the area of diabetes policy.

Furthermore, in this situation, civil society and international NGOs can play an important role in meeting diabetic self-care management needs. However, ongoing political crisis and specifically the Maduro administration's resistance to international medical assistance and humanitarian aid[21] challenges these non-state actors' ability to provide support to persons with diabetes. Convincing the government to change its views on this situation will be an arduous task. In this situation, the

international community, such as through the WHO or the Pan-American Health Organisation (PAHO), can help in pressuring the Maduro administration into allowing international NGOs to play a more important role in the provision of diabetic self-care management services. In 2017, Maduro appeared more receptive to the United Nation's (UN) advice on increasing access to medicine by working with the UNDP (United Nations Development Programme), although no concrete action has been taken thus far, while emphasising the importance of international health cooperation and assistance.[23] Therefore, the time may be ripe for Maduro to pay more attention to the UN and possibly its recommendation that he take the work of NGOs more seriously.

Future research will also need to provide more attention to the interests and motivations of healthcare officials within government. Why is the Maduro administration failing to invest in ensuring healthcare official's autonomy and stability within government, safeguarding them from public criticism? How is presidential and political party gridlock, that is, between the ruling and opposition political parties, generating few incentives to provide more support to health officials? More research needs to be done in this area.

Several methodological limitations nevertheless hampered the author's ability to conduct research in Venezuela. First and foremost is the dearth of in-depth scholarly publications, policy reports and government-provided public data on Venezuela's type 2 diabetes situation. In large part, the absence of these data reflects the government's unwillingness to release official information and perhaps be interviewed by researchers. As mentioned earlier, for several years, the government has not released data on the prevalence of type 2 diabetes, therefore leaving the scholarly community in the dark with respect to not only disease prevalence but also the diabetic community's ability to control their glucose level. As mentioned earlier and as provided in figure 1, it seems that the only official data available on diabetic blood glucose levels are currently provided by the WHO.

Finally, the author's research reveals a need for public health researchers and political scientists to work together in unravelling the political and institutional contexts shaping the provision of diabetic self-care management services. This is a new area of scholarly research,[1] one that not only provides alternative insights for policymakers and those providing recommendations to the government, but also information that can hold government officials accountable for their actions. As Venezuela's political, economic and humanitarian crisis persists, more effort will be needed to establish interdisciplinary scholarly teams that can help address these issues. Insights from Venezuela's crisis situation may also provide policy recommendations to other LMICs that are consistently impaired by crisis situations, institutional and political instability, and where improved diabetic self-care management services are consistently in need.

CONCLUSION

Venezuela's ongoing political, economic and humanitarian crisis situation continues to pose several challenges to the government's ability to ensure the effective provision of diabetic self-care management services. While enduring political, economic and humanitarian crisis poses several challenges, a more adequate explanation of this policy situation requires an analysis of the effects of crisis on Venezuela's healthcare system, the fragmentation of primary care institutions, and how this context generates incentives for health officials to engage in corrupt behaviour rather than striving to improve state capacity in providing these services. Venezuela's deteriorating diabetic situation can benefit from explanations that take politics and institutions more seriously, in turn, providing an approach that provides alternative insight into explaining why persons with type 2 diabetes are not receiving adequate self-care management services.

Contributors EJG is the sole author for this article and conduct all the research and analysis. The author attempted to find colleagues from Venezuela conducting research on this topic but was unfortunately unable to secure a coauthor due to the sensitive political nature of the topic.

Funding The author has not declared a specific grant for this research from any funding agency in the public, commercial or not-for-profit sectors.

Competing interests None declared.

Patient consent for publication Not applicable.

Provenance and peer review Not commissioned; externally peer reviewed.

Data availability statement Data are available in a public, open access repository.

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