

Social Factors and Their Effect on Diabetic Patients in Puerto Rico Post Hurricane Maria

Hurricane Maria's impact on the island of Puerto Rico in September 2017 was devastating, affecting negatively its physical and social environment. It severely impacted social factors associated with influencing the health outcome of diabetic patients in Puerto Rico such as income, education, housing, and healthcare access. The role that these social factors play on the health of patients with this chronic illness on the island is important to understand in order to improve health outcomes..

After Hurricane Maria, Puerto Rico's revenue was severely affected, leading to a [\\$43 billion loss](#) in just a little more of a year following the catastrophe. This loss was attributed to the collapse of the electrical system, and the negative impact on the commerce and service sectors. The economic loss was severe alongside low socioeconomic conditions of almost half, or [46% of Puerto Rico's residents](#) with incomes below the federal poverty level. Recent research finds that over a third or 34% of adults on the island state experiencing fair to poor health, with a high prevalence of diabetes. Indeed, Hurricane Maria provoked an increase in diabetes of at least [10 percent](#) in the patient population in Puerto Rico.

In an interview with Dr. Wendy Matos, the executive director of the University of Puerto Rico's faculty practice plan, [she expressed](#) that the lack of doctors profoundly influenced the increase in the incidence of diabetes in the island. Dr. Matos explained that due to the severe economic impact of Hurricane Maria on insurance companies in Puerto Rico, medical care providers stopped getting paid. Medical clinics have been limited from reopening after the hurricane, and therefore, many medical providers left Puerto Rico, leaving a severe shortage of specialists.

Diabetic patients in Puerto Rico have been adversely affected by the disruptions to the education system. Post-hurricane Maria, most schools closed due to lack of electricity, plumbing, and teachers or because they were needed as shelters. Moreover, [recent research shows](#) that a total of 265 or 24% of public schools closed due to Hurricane Maria's impact. As a result, education access in Puerto Rico has been continuously declining, negatively influencing the prevalence of diabetes among its residents. Education allows individuals to gain the required knowledge to take care of their bodies. The closure of schools and the continuous decline in the

school population in Puerto Rico is likely to prevent future generations from obtaining the appropriate knowledge of diabetes prevention and treatment.

Another social factor that impacted the development and advancement of diabetes in Puerto Rico post-hurricane Maria was housing. Following the hurricane, essential tasks such as daily medications, eating habits, self-monitoring of blood sugar levels, and clinic visit attendance were significantly affected due to housing instability. The management of these components, which keeps diabetes under control, became challenging, if not impossible, for diabetic patients in Puerto Rico. It was [reported](#) 666 diabetes deaths during September and October 2017, which was 46 percent higher than the average value for the same period two years before. This increase was because people were unable to utilize the necessary medical equipment, such as insulin. After all, they were not able to refrigerate them, and some had difficulty maintaining special dietary requirements.

Hurricane Maria left many of Puerto Rico's residents without access to healthcare. After the hurricane, Puerto Rico's [physicians stated](#) that diabetes with ketoacidosis had been one of the leading health issues among their patient population. Diabetes ketoacidosis is a diabetic complication where the body releases an excess amount of blood acids, better known as ketones. Previous [research indicates](#) an increase in diabetes ketoacidosis of at least 10 percent in the population of Puerto Rico post-hurricane Maria, mainly due to the lack of access to healthcare. Moreover, [previous studies indicate](#) a 31 percent increase in deaths due to diabetes, which could have been avoided with proper health care.

Funding for Medicaid was problematic after Hurricane Maria. A report by *Treatment Plans for Diabetes Management During Hurricane Maria in Puerto Rico* indicated that about 1.4 million diabetic patients in the island obtained Medicaid, but funding was limited and in need of more substantial increases. As a result, many hospitals were unable to provide the necessary care to diabetic patients, and [71% of pharmacies](#) were not able to reopen and process required medications. Lack of proper Medicaid funding made it difficult for diabetic patients to obtain prescriptions, such as insulin, as the costs of medical care and the price of medications increased after Hurricane Maria. The health care system in Puerto Rico did not have enough resources to treat diabetic patients, leading to poor health management of medical care for diabetic patients.

The continuous decline of income, education, housing, and healthcare access seems to have a significant influence on the high incidence of diabetes complications and mortality rates among diabetic patients. Thus, social factors must be adequately addressed by the government and health institutions to efficiently enhance the health outcomes of diabetic patients in Puerto Rico. Health care professionals must emphasize the influence of social determinants of health on diabetes to develop appropriate plans to treat and manage the health of diabetic patients after a natural disaster, such as Hurricane Maria.

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