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Reemergence of Chikungunya in the Americas

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Chikungunya epidemics have been affecting human health around the globe since their first documentation in the late 1700's. The vector borne virus spreads through the Aedes aegypti and Aedes albopictus mosquitoes and typically causes severe joint pains, fever and rash. A vaccine remains absent and there are no specific medications to aid recovery, leaving the population on its own to relieve the symptoms. Chikungunya was absent in the Americas for almost 200 years, but recently has had a troubling reemergence in those areas despite the disease spreading mosquitoes having always resided in the area. The concern is why these mosquitoes are suddenly carrying and spreading this disease, after its two century dormancy. With the sudden outbreak, Chikungunya cases for affected countries in the Americas have been collected and correlated with temperature and precipitation for the period 2013-2017. Temperature and precipitation data five years prior to the sudden epidemic are also compared with the disease cases, to look at conditions leading up to the outbreak. This information will allow for future prediction of outbreaks in countries prone to Chikungunya virus.