

Did vaccine inequity lead to the second wave of COVID-19 infections in Trinidad and Tobago?

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Trinidad and Tobago (T&T) is a Small Island Developing (twin) State in the Caribbean with a population of 1.3 million and an illegal immigrant pool, some of whom are documented and with an unknown but likely substantial number of unrecorded persons. Of significance is that the island's north-western tip is located off the South American mainland and is less than 7 miles (11 Km) from the coast of Venezuela.

The island's public health system has struggled to cope with a second wave of infections in the COVID-19 Pandemic. This second wave started in April 2021 and continuing to date was characterised by a much larger number of infections and deaths than the first wave in 2020–2021. A commonly espoused opinion is that this new experience is attributable to the detection of the P1 variant (originally detected in Brazil) which was identified in 38% of samples sequenced between the periods December 2020 to April 2021.¹

In May 2020, Trinidad and Tobago was very favourably ranked in a COVID-19 Government Response Tracker (OxCGRT-University of Oxford)² in a study looking at criteria such as case control: test, trace and isolate; management of imported cases and community understanding.

After such a good rating how did this island state arrive at the current situation with over 900 deaths coupled with the attendant significant economic and social fallout? There have been a number of hypotheses proffered:

1. Pandemic Fatigue with relaxation of measures
2. The Easter vacation period
3. The impact of the P1 variant
4. The lack of border control from illegal migrants
5. The lack of vaccines

Summary box

- ▶ Small Island Developing State should not be reliant on single source supply chains. Subtle inequities can result in underserved health systems.
- ▶ Vaccine inequity mirrors other sociopolitical global inequities.
- ▶ Acquisition of vaccinations requires global diplomacy and multilateral negotiation.
- ▶ Impaired vaccination rollout against COVID-19 can result in accelerated population health consequences.
- ▶ It is possible that countries that are suboptimally vaccinated pose a threat to wealthy countries which are well vaccinated.

This article seeks to take look at the hypothesis relating to vaccine availability and administration.

By the end of June 2021, Trinidad and Tobago had vaccinated approximately 15% of its adult population with at least 1 dose of a WHO approved vaccine with the world average at that time being 24%. Of interest, only five countries in the Caribbean region (Sint Maarten, Turks and Caicos, Curacao, Aruba and the Cayman Islands) had been able to vaccinate more than 50% of their population with the first dose.

While the UK administered its first vaccine on 8 December 2020, Trinidad and Tobago first gained access to vaccines via a donation of 2000 vaccines from the Government of Barbados, from an Indian Government gift to that island of 80 000 vaccines on 10 February 2021.

What Vaccine Procurement Strategy did T&T use?

1. Bilateral talks between the government and vaccine manufacturers.
2. Diplomatic negotiations for vaccine donations, in some cases obtaining vaccines from other smaller Caribbean islands

Table 1 T&T success to date in the procurement of vaccines

Type of vaccine	Number of vaccines received	Facility/country through which the vaccines were received	Date and time the vaccines were received
AstraZeneca	2000	Donated from the Government of Barbados	10 February 2021
AstraZeneca	40 000	Donated by the Government of India	13 April 2021
AstraZeneca	9000	Donated by the Government of Bermuda to Trinidad and Tobago	24 May 2021
AstraZeneca	6000	Donated from the Government of St. Vincent	27 May 2021
AstraZeneca	10 000	Donated from the Government of Grenada	30 May 2021
AstraZeneca	33 600	COVAX facility	30 March 2021
AstraZeneca	33 600	COVAX facility	10 May 2021
Sinopharm	100 000	Donated by the Government of the People's Republic of China ⁴	19 May 2021
Sinopharm	200 000	Purchased from China ^{5 6}	14 June 2021
Sinopharm	800 000	Purchased from China ⁷	13 July 2021

which had not been able to use their stocks before expiration of the product.

3. Joining the COVAX platform, a facility which was expected to provide coverage for 33% of the population
4. Joining the African Medical Supplies Platform from which T&T would be expected to obtain 800 000 vaccines.

To date, Trinidad and Tobago has been able to procure 67 200³ vaccines from COVAX and with WHO approval of the Sinopharm Vaccine this country was able to procure an additional 1 100 000 vaccines, the date and quantum of vaccines received are summaries in [table 1](#). A further 167 000 vaccines were obtained via gifts. Prior to the spike in May 2021, T&T only had 75 600 vaccines which would have been used to vaccinate 37 800 persons or just about 3% of the population. Of note, 55% of the vaccines came from donations.

These data clearly show that procurement of vaccines by an independent Small Island Developing State is very difficult such that there was a lack of vaccines prior to the second wave of infection. As the major Public Health Agency in this Region, it is important that the WHO undertakes to address and to develop systems to deal with this apparent inequity of vaccine supply when compared with highly developed countries. Failure to do this and to ensure a level playing field could easily lead to globally felt knock on effects such as:

1. Increasing and sustained morbidity and mortality
2. Further deterioration of social and economic systems
3. Stigmatisation of citizens as they try to enter countries which may not recognise the AstraZeneca (Serum Institute of India) or the Sinopharm vaccines.
4. Strained health systems with the load of the pandemic such that during the majority of days of the second wave the hospitals were over 75% occupancy and the intensive care unit at 100% on many days.

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REFERENCES

- 1 Ministry of Tourism. Who we are- welcome to Trinidad and Tobago, 2021. Available: <http://tourism.gov.tt/profile/Welcome-to-Trinidad-and-Tobago> [Accessed 3 Aug 2021].
- 2 Sambrano C. Oxford ranks T&T high on ability to end lockdown. *Guardian* [internet], 2020. Available: <https://www.guardian.co.uk/news/oxford-ranks-tt-high-on-ability-to-end-lockdown-6.2.1107389.1175591e0b> [Accessed 03 Aug 2021].
- 3 Pan American Health Organization. Trinidad and Tobago receives second shipment of COVID-19 vaccines through the COVAX facility. Available: <https://www.paho.org/en/news/12-5-2021-trinidad-and-tobago-receives-second-shipment-covid-19-vaccines-through-covax> [Accessed 03 Aug 2021].
- 4 Lindo, Paula. Sinopharm vaccines arrive in Trinidad and Tobago, 2021. *Newsday* [internet]. Available: <https://newsday.co.tt/2021/05/19/sinopharm-vaccines-arrive-in-trinidad-and-tobago/> [Accessed 03 Aug 2021].
- 5 Government of the Republic of Trinidad and Tobago. 200,000 who Approved Sinopharm vaccines arrive in Trinidad and Tobago. Available: <http://www.news.gov.tt/content/200000-who-approved-sinopharm-vaccines-arrive-trinidad-and-tobago#.YQrMF-oXY0M> [Accessed 03 Aug 2021].
- 6 Government of the Republic of Trinidad and Tobago. Correction re: COVID-19 vaccines received from Barbados. Available: <http://www.news.gov.tt/content/correction-re-covid-19-vaccines-received-barbados#.YQrJcOoXY0M> [Accessed 03 Aug 2021].
- 7 Lindo, Paula. [UPDATED] 800,000 vaccines arrive in Trinidad and Tobago, 2021. *Newsday* [internet]. Available: <https://newsday.co.tt/2021/07/13/800000-vaccines-arrive-in-trinidad-and-tobago/> [Accessed 03 Aug 2021].