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## Comparing self-reported rates of hypertension during the Vanuatu COVID-19 vaccination rollout (2021 – 2022) with the 2011 WHO Vanuatu country profile hypertension statistics

Christopher Gauthier-Coles<sup>1</sup>, Gibson Ala<sup>2</sup>

<sup>1</sup>Australian Volunteer Program, Port Vila, Vanuatu. <sup>2</sup>Ministry of Health, Port Vila, Vanuatu

### Abstract

**Background:** Hypertension, defined by WHO as having systolic blood pressure of  $\geq 140$ mmHg and/or having diastolic blood pressure of  $\geq 90$  mmHg, is a leading cause of death across the world. Over one-quarter of Vanuatu's adult population are estimated to have hypertension. Approximately 85% of people living with hypertension are unaware they have the condition. Left undetected, hypertension can lead to development and exacerbation of other conditions such as kidney disease and cardiovascular disease.

**Methods:** Here we evaluate self-reporting of hypertension among COVID-19 vaccine recipients between 25 and 64 years of age and compare with WHO statistics, to better understand the level of under-reporting of hypertension in Vanuatu. Vanuatu's electronic immunization registry (EIR) for COVID-19 was used to extract data. The registry collected demographic and other health-related information of COVID-19 vaccine recipients such as underlying conditions including hypertension. This information was self-reported and reviewed by a medical officer. We extracted, de-identified, aggregated a total of 102,358 adult registrations (aged between 25 and 64 years) and analyzed the rate of self-reported hypertension and compared these figures with WHO's most recent hypertension fact sheet (2011).

**Results:** Out of these, 3,329 (3.3%) reported having high-blood pressure, significantly different from the 28% estimated by WHO. Therefore 88% of vaccine recipients suffering from hypertension were unaware or did not report their condition during their pre-vaccination medical assessment. The rate of under-reporting was greatest among 25-34 years (96%) and lowest among people 55-64 years (81%). Self-reported rates of hypertension also varied widely between provinces with the highest rate in Shefa province (4.3%) and the lowest rate in Torba province (1.4%).

**Discussion:** Self-reported rates of high-blood pressure among vaccine recipients is in line with WHO statistics published in 2011. Work is required to increase detection, including training of health care workers and risk communication messages.