

Framework used in the analysis

Our analysis was guided by a conceptual framework adapted from the Input-Process-Output Model to examine how control strategies are shaped, operationalized, and lead to different outcomes in countries that employing different response strategies. The inputs consist of factors that influence strategic choices and actions of decision-makers. The process refers to the specific public health interventions implemented by the countries in response to COVID-19, which can be categorized into four groups: population-based, case-based and border control measures.¹ The population-based interventions, such as face masking, social distancing, and personal hygiene, target the public to curb community transmission. The case-based interventions include case detection, contact tracing of confirmed cases, isolation, and surveillance of cases. Border control measures, such as travel restrictions for travellers from high-risk countries or mandatory quarantine requirements, are essential to prevent the introduction of imported cases to the community. Community engagement refers to the involvement and participation of individuals and groups for delivery of services and supporting the uptake of control measures. Since evidence highlights the need of community engagement interventions, such as building partnerships with local leaders, working along with community to tailor the messages, and behaviour change campaigns depending on their needs, during public health emergencies for building trust among the communities and improving compliance to public health interventions, community engagement is included in the framework as an important component of countries' responses. Finally, the impact of response strategies is reflected in the Outputs construct of the framework, as the performance of countries in the first year of the pandemic, the updated situation, and the benefits and trade-offs of each strategy were summarised.

¹ Ng T-C, Cheng H-Y, Chang H-H, et al. Comparison of estimated effectiveness of case-based and population-based interventions on COVID-19 containment in Taiwan. *JAMA internal medicine* 2021