

Memo

COVID-19 vaccines for arrivals to Aotearoa New Zealand: COVID-19 Vaccine Technical Advisory Group (CV TAG) Recommendations

Date:	29 September 2021
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From:	Dr Ian Town, Chief Science Advisor
For your:	Information

Purpose of report

1. This memo summarises the COVID-19 Vaccine Technical Advisory Group's (CV TAG) recommendations on COVID-19 vaccination requirements for people arriving to the country and entering managed isolation and quarantine (MIQ) for 14 days. These recommendations are made as a part of a first step in the phased introduction of vaccination requirements at the border.

Background and context

- CV TAG has previously provided advice on COVID-19 vaccination requirements for Border Workers, recognising that enhanced protection against infection was needed due to their individual occupational risk profile but also the broader public health benefit through reducing viral infection and onward transmission. Details of recommendation are provided in Appendix 1.
- 3. Other jurisdictions have implemented COVID-19 vaccination requirements at the border. For example, Canada requires those entering to have received the full series of a vaccine or a combination of vaccines accepted by the Government of Canada (Pfizer, Moderna, AstraZeneca, Janssen) and to have received the last dose at least 14 days before arrival. The EU states that if member states accept proof of vaccination to waive travel restrictions, they should in principle lift restrictions on non-essential travel for travellers who have received the last recommended dose of a vaccine approved by the European Medicines Agency (EMA), at least 14 days before arrival.
- 4. As part of the continual improvement approach to reduce the risk of COVID-19 entering the community, the Government has signalled it wants to look at vaccination requirements for arrivals to New Zealand.



- 5. In the short term, imposing a vaccination requirement on inbound travellers (in addition to testing and managed isolation and quarantine (MIQ) for 14 days) has been proposed as a first step in the phased introduction of vaccination requirements at the border. A Cabinet paper is being prepared on this proposal, which will need to include a recommendation on the vaccination requirements to enter MIQ (and therefore Aotearoa New Zealand).
- 6. There are currently 22 COVID-19 vaccines worldwide approved for use by at least one government or other authority (Appendix 2).
- 7. The COVID-19 vaccines currently provisionally approved by Medsafe for use in New Zealand are Pfizer, Janssen, and AstraZeneca. However, not every country has at least one of these vaccines approved and available for use. As of 17th September 2021, 26 of 193 countries had no approval for Pfizer, Janssen, or an AstraZeneca formulation. These 26 countries include, for example, China, Russia and Syria (Appendix 2).
- 8. Medsafe considers that the authorities listed below have robust approval processes and conduct thorough assessments of applications for new medicines. They follow similar international standards and guidelines in their assessments to Medsafe. This allows Medsafe to rely on their assessments and approval to facilitate abridged evaluations of new medicine applications in New Zealand submitted via the abbreviated application pathway. The Medsafe recognised authorities are:[1]
 - a. The Australian Therapeutic Goods Administration (TGA)
 - b. The United States Food and Drug Administration (FDA)
 - c. Health Products and Food Branch of Health Canada
 - d. Medicines and Healthcare products Regulatory Agency (MHRA), in the United Kingdom
 - e. European Medicines Agency (EMA) (centralised procedure only)
 - f. EU member states (decentralised or mutual recognition procedure only)
- 9. Medsafe recognised authorities have approved a number of COVID-19 Vaccines for Emergency Use. These are Pfizer, Janssen, AstraZeneca, and Moderna. The countries where these vaccines are approved are shown in Appendix 2.
- 10. The COVID-19 Policy team have consequently sought CV TAG advice on COVID-19 vaccination requirements for people arriving to the country and entering managed isolation and quarantine (MIQ) for 14 days.

Recommendations

- 11. CV TAG met on 7, 14 and 21 September 2021 to consider recommendations regarding COVID-19 vaccines for people arriving to Aotearoa New Zealand.
- 12. CV TAG noted that:
 - a. officials are preparing a proposal for the Minister for COVID-19 Response to take to Cabinet that would impose a pre-entry requirement from 1 November 2021, that all (non-New Zealand citizen) arrivals by air are fully vaccinated.
 - b. under this proposal all arrivals would still undergo testing and 14 days MIQ, which will continue to be the key line of defence.



- c. this is being proposed as an additional precautionary measure to further reduce the risk of COVID-19 entering the New Zealand community (and until New Zealand achieves high vaccination coverage).
- d. there are significant ethical and equity issues given that most people have no choice about which vaccine they receive, and many countries still have poor access to vaccines and low vaccination rates.
- e. while the effectiveness varies across the different vaccine products, any vaccine is better than no vaccine.
- f. new recommendations will be needed if requirements around MIQ on entry to Aotearoa New Zealand change. This is due to different considerations around requirements of vaccines without MIQ as the key line of defence.
- g. updated recommendations will likely be needed if there are changes to the approved COVID-19 vaccination schedules in New Zealand.

13. CV TAG recommends that:

- a. a full primary course of vaccination with any of the 22 COVID-19 vaccines approved by at least one government or authority (or an approved combination of those vaccines in their origin country) with the last dose at least 14 days before arrival would be acceptable for entering MIQ for 14 days, given that testing and MIQ would provide the key line of defence. Vaccination should be documented in the manner that the origin country provides.
- b. an exemption process should be put in place for those who require an exemption on humanitarian grounds, because they are below the approved age for COVID-19 vaccination in their origin country, or for other similar reasons.
- c. those aged 12 years or over who enter the country with a full primary course of vaccination, but with a vaccine that is NOT one of those approved by a Medsafe-recognised authority should be offered an additional dose of Pfizer vaccine as soon as possible after entry to New Zealand (and at the latest as they leave MIQ). This should occur at least 28 days after the last dose, with no upper limit on time since the last dose.
- d. those who enter the country, are aged 12 years or over, and have received no doses of any of the 22 COVID-19 vaccines, should be offered a full course of Pfizer vaccine as soon as possible after entry to New Zealand (and at the latest receiving the first dose as they leave MIQ).
- e. those who enter the country, are aged 12 years or over and have received an incomplete primary course of any of the 22 COVID-19 vaccines (whether approved by a Medsafe-recognised authority or not), should be offered an additional dose of Pfizer vaccine as soon as possible after entry to New Zealand.
 - i. This should occur at least 28 days after the most recent dose of COVID-19 vaccine, with no upper limit on time since the last dose.
 - ii. If the interval since the most recent dose allows, vaccination with Pfizer should be offered to people while in MIQ or at the latest as they leave MIQ.



- iii. If the interval since most recent dose does not allow vaccination on or before leaving MIQ, a future vaccination booking should be offered as they leave MIQ at the latest.
- 14. CV TAG will continue to monitor all relevant information (including vaccine efficacy data against emerging variants of concern and emerging evidence on the duration of immunity) and will update their recommendations as further evidence becomes available.

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Dr lan Town Chief Science Advisor and Chair of the COVID-19 Vaccine Technical Advisory Group



References

- 1. Medsafe, *New Zealand Regulatory Guidelines for Medicines*, in *Part A: When is an application for approval of a new or changed medicine required?*, Medsafe, Editor. 2014, Medsafe: Medsafe. p. 132.
- 2. Gross, R., et al., *Heterologous ChAdOx1 nCoV-19 and BNT162b2 prime-boost vaccination elicits potent neutralizing antibody responses and T cell reactivity.* medRxiv, 2021: p. 2021.05.30.21257971.
- 3. Borobia, A.M., et al., *Reactogenicity and Immunogenicity of BNT162b2 in Subjects Having Received a First Dose of ChAdOx1s: Initial Results of a Randomised, Adaptive, Phase 2 Trial (CombiVacS).* SSRN, 2021.
- 4. Liu, X., et al., Safety and immunogenicity of heterologous versus homologous prime-boost schedules with an adenoviral vectored and mRNA COVID-19 vaccine (Com-COV): a single-blind, randomised, non-inferiority trial. The Lancet, 2021.



Appendix 1: Previous CV TAG recommendations for Border Workers

CV TAG has previously provided advice on COVID-19 vaccination requirements for Border Workers, recognising that enhanced protection against infection was needed due to their individual occupational risk profile but also the broader public health benefit through reducing viral infection and onward transmission. CV TAG noted that:

- a. Data are still emerging on the efficacy of heterologous vaccine schedules from approved and recognised vaccines in New Zealand's portfolio, however initial results show that mixing vaccine doses is associated with a low incidence of adverse effects and could provide an improved immune response through increased anti-spike antibody titres and neutralising antibodies.[2-4]
- b. Protection against symptomatic infection is of enhanced importance for work at the Border. Extensive data has emerged showing high efficacy and effectiveness against symptomatic infection after two doses of the Pfizer, AstraZeneca, or Moderna vaccines in Phase 3 clinical trials and large post-marketing studies. There is strong evidence that the Janssen vaccine (the single-dose, adenovirus vector vaccine) provides a high degree of protection against moderate and severe disease from COVID-19, however there are fewer data on the efficacy or effectiveness against symptomatic infection, especially in the context of the Delta variant of SARS-CoV-2, and the immune response appears to be lower.

On this basis, CV TAG recommended for Border Workers that:

- c. A full course of vaccination with a COVID-19 vaccine recognised by Medsafe or a Medsafe recognised authority provides sufficient protection from COVID-19 for work at the Border, with the exception of the Janssen vaccine as a single dose schedule.
- d. A 'booster' dose of the Pfizer vaccine should be administered for Border workers who have only received a single dose of the Janssen vaccine, due to the higher risk of SARS-CoV-2 infection for Border work, and the need for enhanced protection against infection among Border Workers
- e. If a worker is in New Zealand and has an incomplete vaccination with a vaccine recognised by Medsafe or a Medsafe recognised authority, they should complete their vaccination by receiving one dose of the Pfizer vaccine. This should occur at least 21 days after the first dose of the Pfizer vaccine, or at least 28 days after the first dose of AstraZeneca or Moderna. There is no upper time limit on time for when that dose can be administered.
- f. Border workers who have received a partial or complete course of vaccine with a COVID-19 vaccine not approved by Medsafe or a Medsafe recognised authority, should also receive one dose of the Pfizer vaccine.



Country	n vaccines	Only Medsafe recognised	Medsafe recognised plus others	No Medsafe recognised	Pfizer	AZ	IIS ZY	Janssen	moderna	Sinovac	Sinopharm (beijing)	Novavax*	moderna (takeda)	Gamaleya (sputnik)	Gamaleya (sputnik light)	Sinopharm	Cansino	Bharat biotech	Zydus cadila	anhui zhifei	minhai	shifa	FBRI	chumakov	khazakstan ribsp	medigen	CIGB
"Approved" by Medsafe recognised authority					yes	yes	yes	yes	yes																		
Afghanistan	1	1					х																				
<u>Australia</u>	4	1			х	x		x	х																		
<u>Austria</u>	4	1			х	х		х	х																		
Barbados	1	1					х																				
<u>Belgium</u>	4	1			х	х		х	х																		
<u>Bermuda</u>	2	1			х	х																					
<u>Bhutan</u>	2	1					х		х																		
Bosnia and Herzegovina	2	1			х	x																					
<u>Botswana</u>	4	1			х	x	х		х																		
<u>Bulgaria</u>	4	1			х	х		х	х																		
Burkina Faso	1	1				х																					
Cabo Verde	2	1			х		х																				
<u>Canada</u>	5	1			х	х	х	х	х																		
<u>Central</u> <u>African</u> Republic	1	1				x																					
Costa Rica	2	1			х	x																					
Côte d'Ivoire	2	1				х	х																				
<u>Croatia</u>	4	1			х	х		х	х																		

Appendix 2: Vaccines authorised/approved in each country



Country	n vaccines	Only Medsafe recognised	Medsafe recognised plus others	No Medsafe recognised	Pfizer	AZ	IIS ZY	Janssen	moderna	Sinovac	Sinopharm (beijing)	Novavax*	moderna (takeda)	Gamaleya (sputnik)	Gamaleya (sputnik light)	Sinopharm	Cansino	Bharat biotech	Zydus cadila	anhui zhifei	minhai	shifa	FBRI	chumakov	khazakstan ribsp	medigen	CIGB
<u>Cyprus</u>	4	1			х	х		х	х																		
<u>Czechia</u>	4	1			х	х		х	х																		
Democratic Republic of the Congo	1	1				x																					
<u>Denmark</u>	3	1			х			х	х																		
<u>Dominica</u>	1	1					х																				
<u>Estonia</u>	4	1			х	х		х	х																		
<u>Eswatini</u>	1	1				х																					
<u>Ethiopia</u>	1	1					х																				
Faroe Islands	3	1			х			х	х																		
<u>Fiji</u>	2	1				х			х																		
<u>Finland</u>	4	1			х	х		х	х																		
France	4	1			х	х		х	х																		
<u>Germany</u>	4	1			х	х		х	х																		
<u>Greece</u>	4	1			х	х		х	х																		
<u>Greenland</u>	2	1			х				х																		
<u>Grenada</u>	2	1				х	х																				
<u>Guinea-</u> <u>Bissau</u>	1	1				x																					
<u>Haiti</u>	2	1				х			х																		
<u>lceland</u>	4	1			х	х		x	х																		
Ireland	4	1			х	х		x	х																		
<u>Israel</u>	2	1			х				х																		
<u>Italy</u>	4	1			x	x		x	x																		



Country	n vaccines	Only Medsafe recognised	Medsafe recognised plus others	No Medsafe recognised	Pfizer	AZ	AZ SII	Janssen	moderna	Sinovac	Sinopharm (beijing)	Novavax*	moderna (takeda)	Gamaleya (sputnik)	Gamaleya (sputnik light)	Sinopharm	Cansino	Bharat biotech	Zydus cadila	anhui zhifei	minhai	shifa	FBRI	chumakov	khazakstan ribsp	medigen	CIGB
Jamaica	2	1				х	х																				
Kosovo	1	1				х																					
<u>Kuwait</u>	4	1			х	х		х	х																		
<u>Latvia</u>	4	1			х	х		х	х																		
<u>Lesotho</u>	1	1				х																					
<u>Liberia</u>	1	1				х																					
Liechtenstein	4	1			х	х		х	х																		
Lithuania	4	1			х	х		х	х																		
Luxembourg	4	1			х	х		х	х																		
Madagascar	1	1					х																				
<u>Malawi</u>	1	1				х																					
<u>Malta</u>	4	1			х	х		х	х																		
<u>Monaco</u>	1	1			х																						
<u>Nauru</u>	1	1				х																					
<u>Netherlands</u>	4	1			х	х		х	х																		
New Zealand	3	1			х	х		х																			
<u>Norway</u>	3	1			х			х	х																		
Papua New Guinea	2	1				x		x																			
Poland	4	1			х	х		х	х																		
Portugal	4	1			х	х		х	х																		
<u>Qatar</u>	2	1			х				х																		
Republic of Korea	4	1			x	x		x	x																		
Romania	4	1			х	х		х	х																		



Country	n vaccines	Only Medsafe recognised	Medsafe recognised plus others	No Medsafe recognised	Pfizer	AZ	AZ SII	Janssen	moderna	Sinovac	Sinopharm (beijing)	Novavax*	moderna (takeda)	Gamaleya (sputnik)	Gamaleya (sputnik light)	Sinopharm	Cansino	Bharat biotech	Zydus cadila	anhui zhifei	minhai	shifa	FBRI	chumakov	khazakstan ribsp	medigen	CIGB
<u>Rwanda</u>	3	1			х	х			х																		
Saint Kitts and Nevis	1	1					x																				
Saint Lucia	1	1					х																				
Sao Tome and Principe	1	1				x																					
Saudi Arabia	3	1			х	х			х																		
Singapore	2	1			х				х																		
<u>Slovakia</u>	4	1			х	x		x	x																		
<u>Slovenia</u>	4	1			х	х		х	х																		
South Sudan	1	1				х																					
<u>Spain</u>	4	1			х	х		х	х																		
<u>Sudan</u>	1	1				х																					
<u>Suriname</u>	1	1					х																				
<u>Sweden</u>	4	1			х	х		х	х																		
<u>Switzerland</u>	3	1			х			х	х																		
<u>The</u> <u>Bahamas</u>	1	1					x																				
<u>Tonga</u>	1	1					х																				
<u>Uganda</u>	1	1				х																					
United Kingdom of Great Britain and Northern Ireland	4	1			x	x		x	x																		
United States of America	3	1			x			x	x																		



Country	n vaccines	Only Medsafe recognised	Medsafe recognised plus others	No Medsafe recognised	Pfizer	AZ	AZ SII	Janssen	moderna	Sinovac	Sinopharm (beijing)	Novavax*	moderna (takeda)	Gamaleya (sputnik)	Gamaleya (sputnik light)	Sinopharm	Cansino	Bharat biotech	Zydus cadila	anhui zhifei	minhai	shifa	FBRI	chumakov	khazakstan ribsp	medigen	CIGB
<u>Vatican</u>	1	1			х																						
<u>Yemen</u>	1	1				х																					
Zambia	2	1				х		х																			
<u>Albania</u>	4		1		х	х				х				х													
<u>Angola</u>	4		1			х					х			х	Х												
Antigua and Barbuda	2		1				x							x													
<u>Argentina</u>	7		1		х	х	х			х	х			х			х										
<u>Armenia</u>	3		1			х				х				х													
<u>Azerbaijan</u>	4		1		х	х				х				х													
<u>Bahrain</u>	6		1		х		х	х			х			х	Х												
Bangladesh	7		1		х		х	х	х	х	х			х													
<u>Belize</u>	2		1			х					х																
<u>Benin</u>	2		1			х				х																	
Bolivia (Plurinational State of)	3		1				x				х			x													
<u>Brazil</u>	7		1		х	х	х	х		х	х			х													
Brunei Darussalam	4		1		x	x			x		х																
Cambodia	3		1			х				х	х																
<u>Chile</u>	6		1		х	х		х		х				х			х										
<u>Colombia</u>	5		1		х	х		х	х	х																	
Dominican Republic	3		1		x	x				x																	
Ecuador	5		1		х	х				х				х			х										



Country	n vaccines	Only Medsafe recognised	Medsafe recognised plus others	No Medsafe recognised	Pfizer	AZ	IIS ZY	Janssen	moderna	Sinovac	Sinopharm (beijing)	Novavax*	moderna (takeda)	Gamaleya (sputnik)	Gamaleya (sputnik light)	Sinopharm	Cansino	Bharat biotech	Zydus cadila	anhui zhifei	minhai	shifa	FBRI	chumakov	khazakstan ribsp	medigen	CIGB
Egypt	6		1			х	х	х		х	х			х													
El Salvador	3		1		х	х				х																	
<u>Gambia</u>	2		1			х					х																
<u>Georgia</u>	4		1		х	х				х	х																
<u>Ghana</u>	4		1			х	х	х						х													
<u>Guatemala</u>	3		1			х			х					х													
<u>Guyana</u>	4		1			х					х			х				х									
Honduras	3		1				х		х					х													
Hong Kong	2		1		х					х																	
Hungary	8		1		х	х	х	х	х		Х			х			х										
<u>India</u>	7		1			х	х	х	х					х				х	х								
Indonesia	7		1		х	х		х	х	х	х						х										
Iran (Islamic Republic of)	5		1			х					х			х				х				x					
Iraq	4		1		х	х					х			х													
<u>Japan</u>	3		1		х	х							х														
<u>Jordan</u>	4		1		х	х					х			х													
<u>Kenya</u>	4		1			х			х		х			х													
<u>Lebanon</u>	4		1		х		х				х			х													
<u>Libya</u>	5		1		х	х		х	х					х													
<u>Malaysia</u>	7		1		х	х		х	х	х	х						х										
<u>Maldives</u>	6		1		х		х	х	х		х			х													
<u>Mali</u>	2		1			х								х													
Mauritius	5		1			х					х			х	х			х									



Country	n vaccines	Only Medsafe recognised	Medsafe recognised plus others	No Medsafe recognised	Pfizer	AZ	IIS ZY	Janssen	moderna	Sinovac	Sinopharm (beijing)	Novavax*	moderna (takeda)	Gamaleya (sputnik)	Gamaleya (sputnik light)	Sinopharm	Cansino	Bharat biotech	Zydus cadila	anhui zhifei	minhai	shifa	FBRI	chumakov	khazakstan ribsp	medigen	CIGB
<u>Mexico</u>	9		1		х	х		х	х	х	х			х			х	х									
<u>Mongolia</u>	6		1		х	х			х		х			х	х												
<u>Morocco</u>	4		1			х	х				х			х													
<u>Myanmar</u>	2		1				х							х													
<u>Namibia</u>	3		1				х				х			х													
<u>Nepal</u>	5		1				х			х	х			х				х									
<u>Nicaragua</u>	3		1				х							х	х												
<u>Niger</u>	2		1			х					х																
<u>Nigeria</u>	7		1		х	х	х	х	х		х			х													
<u>North</u> Macedonia	4		1		х	х					х			x													
<u>Oman</u>	4		1		х	х				х				х													
Pakistan	7		1		х	х			х	х	х			х			х										
Panama	4		1		х	х				х				х													
Paraguay	6		1		х	х				х	х			х				х									
<u>Peru</u>	3		1		х	х					х																
Philippines	10		1		х	х		х	х	х	х			х	х	х		х									
Republic of Moldova	3		1		х	х								x													
Saint Vincent and the Grenadines	5		1		x		x	x	x					x													
<u>Senegal</u>	2		1			х					х																
<u>Serbia</u>	4		1		х	х					х			х													
<u>Seychelles</u>	4		1				х		х		х			x													
Sierra Leone	2		1			х					х																



Country	n vaccines	Only Medsafe recognised	Medsafe recognised plus others	No Medsafe recognised	Pfizer	AZ	AZ SII	Janssen	moderna	Sinovac	Sinopharm (beijing)	Novavax*	moderna (takeda)	Gamaleya (sputnik)	Gamaleya (sputnik light)	Sinopharm	Cansino	Bharat biotech	Zydus cadila	anhui zhifei	minhai	shifa	FBRI	chumakov	khazakstan ribsp	medigen	CIGB
Solomon Islands	2		1				x				х																
<u>Somalia</u>	2		1				х				х																
South Africa	4		1		х		х	х		х																	
<u>Sri Lanka</u>	5		1		х		х			х	х			х													
<u>Taiwan</u>	3		1			х			х																	х	
<u>Tajikistan</u>	2		1			х				х																	
Thailand	6		1		х	х		х	х	х	х																
Timor-Leste	2		1			х				х																	
<u>Togo</u>	3		1			х	х			х																	
Trinidad and Tobago	3		1		х		х				х																
<u>Tunisia</u>	6		1		х	х		х		х	х			х													
Turkey	3		1		x					х				х													
<u>Ukraine</u>	4		1		х		х	х		х																	
United Arab Emirates	5		1		x	х			х		х			х													
<u>Uruguay</u>	3		1		х	х				х																	
<u>Uzbekistan</u>	3		1			х								х						х							
<u>Vanuatu</u>	2		1			х					х																
Viet Nam	6		1		х	х		х	х		х			х													
West Bank	4		1		х				х					х	х												
Zimbabwe	5		1					х		х	х			х				х									
<u>Algeria</u>	1			1										х													
<u>Belarus</u>	3			1							х			х	Х												



Country	n vaccines	Only Medsafe recognised	Medsafe recognised plus others	No Medsafe recognised	Pfizer	AZ	AZ SII	Janssen	moderna	Sinovac	Sinopharm (beijing)	Novavax*	moderna (takeda)	Gamaleya (sputnik)	Gamaleya (sputnik light)	Sinopharm	Cansino	Bharat biotech	Zydus cadila	anhui zhifei	minhai	shifa	FBRI	chumakov	khazakstan ribsp	medigen	CIGB
<u>Cameroon</u>	2			1							x			x													
<u>Chad</u>	1			1							x																
<u>China</u>	6			1						х	Х					x	х			х	x						
<u>Comoros</u>	1			1							х																
<u>Congo</u>	1			1											Х												
<u>Cuba</u>	2			1							х																x
<u>Djibouti</u>	1			1										Х													
<u>Equatorial</u> <u>Guinea</u>	1			1							x																
<u>Gabon</u>	2			1							х			x													
<u>Guinea</u>	1			1										x													
Kazakhstan	4			1						х				х	Х										x		
<u>Kyrgyzstan</u>	4			1							Х			Х	Х										х		
Lao People's Democratic Republic	3			1						x	x			x													
<u>Mauritania</u>	1			1							x																
<u>Montenegro</u>	2			1							х			x													
Mozambique	1			1							x																
Puerto Rico	0			1																							
Republic of the Congo	2			1							x			x													
<u>Russian</u> <u>Federation</u>	4			1										x	х								x	x			
San-Marino	1			1										x													



Country	n vaccines	Only Medsafe recognised	Medsafe recognised plus others	No Medsafe recognised	Pfizer	AZ	AZ SII	Janssen	moderna	Sinovac	Sinopharm (beijing)	Novavax*	moderna (takeda)	Gamaleya (sputnik)	Gamaleya (sputnik light)	Sinopharm	Cansino	Bharat biotech	Zydus cadila	anhui zhifei	minhai	shifa	FBRI	chumakov	khazakstan ribsp	medigen	CIGB
Syrian Arab Republic	1			1										x													
<u>Turkmenistan</u>	2			1										х									х				
<u>United</u> <u>Republic of</u> <u>Tanzania</u>	1			1						x																	
Venezuela (Bolivarian Republic of)	3			1							x			x	x												

Source: https://covid19.trackvaccines.org/trials-vaccines-by-country 17 September 2021

* Novavax included in table although not approved/authorised in any country