

Vacinas para prevenção de Covid-19

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1. Introdução

De acordo com a Organização Mundial da Saúde (OMS), até 16 de março de 2022, a Covid-19 foi registrada como causa da morte de cerca de 6.047.653 pessoas no mundo. Dessas, 655.078 aconteceram em território brasileiro [OMS 2022]. Os sintomas incluem, mas não se limitam a dispneia, tosse, febre, anosmia e fadiga. Os indivíduos diagnosticados com Covid-19 podem permanecer assintomáticos ou, para os mais graves, entrar em falência respiratória e morrer [Esquivel-Valerio 2021].

Todos os países tentaram implementar diferentes medidas de controle da disseminação do vírus, como distanciamento social, uso de máscaras faciais e quarentenas [Tetteh 2021]. Diferentes estratégias de tratamento também foram testadas como o remdesivir e seus análogos, a cloroquina e a hidroxicloroquina, ivermectina, anakinra, biológicos, anti-inflamatórios e corticoides, flavonoides e ervas medicinais [Han 2021].

Os riscos de reinfeção e o surgimento de novas variantes impulsionou a corrida por uma vacina que possa estimular uma proteção rápida, eficaz e segura. As possíveis vacinas desenvolvidas variam em antígenos, adjuvantes, tempo de ação e via de aplicação. Algumas têm como foco a proteína SARS-Cov-2 S1, mRNA, vetor do adenovírus e a recombinação de subunidades de nanopartículas [Milota 2021].

Dentre todas as vacinas elaboradas por diferentes laboratórios e aprovadas pela OMS e pelos órgãos específicos de saúde de cada país, cerca de 10.712.423.741 doses já foram aplicadas [OMS 2022]. Assim, faz-se necessário identificar as vacinas que têm sido elaboradas pelos diferentes laboratórios e centros de pesquisa no mundo para facilitar a compreensão sobre a disponibilidade de tipos, doses e marcas de cada uma.

2. Objetivo

Identificar e sumarizar as características das vacinas desenvolvidas por qualquer país ou tipo de laboratório (público ou privado) para Covid-19 no contexto da pandemia.

3. Pergunta estruturada

Quais vacinas estão sendo desenvolvidas para prevenção de Covid-19 no mundo?

4. Estratégia de busca e elegibilidade

Foi realizada busca sensível nas bases de registros de ensaios clínicos clinicaltrials.gov e WHO-ICTRP (**Tabela 1**. Estratégia de busca) (data da busca: 14 de janeiro de 2022). Para fins do objetivo deste sumário, foram considerados apenas protocolos de ensaios clínicos randomizados que avaliaram alguma vacina para Covid-19, para qualquer variante, feita de qualquer material, sem limite de doses ou componentes ou idade dos participantes para aplicação.

Tabela 1. Estratégias de busca

Base de dados	Estratégia de busca
Clinicaltrials.gov	#Condition: "COVID-19" OR (COVID 19) OR "COVID19" OR (COVID-19 Pandemic) OR (SARS-CoV-2 Infection) OR "SARS-CoV-2" OR (COVID-19 Virus Infection) OR (Coronavirus Disease 2019) OR (2019 nCoV Infection) OR (COVID-19 Virus Disease) OR (2019 Novel Coronavirus) #Intervention: Vaccines OR Vaccine OR vaccination
WHO ICTRP	#Condition: "COVID-19" OR (COVID 19) OR "COVID19" OR (COVID-19 Pandemic) OR (SARS-CoV-2 Infection) OR "SARS-CoV-2" OR (COVID-19 Virus Infection) OR (Coronavirus Disease 2019) OR (2019 nCoV Infection) OR (COVID-19 Virus Disease) OR (2019 Novel Coronavirus) #Intervention: Vaccines OR Vaccine OR vaccination

5. Seleção dos estudos, extração e apresentação dos dados

Dois autores selecionaram os protocolos de ensaios clínicos de forma independente através da plataforma Rayyan (Ouzzani 2016).

Através de um formulário padronizado, foram extraídos os seguintes dados de cada estudo incluído:

- Número de registro
- País
- População
- Tipo de imunizante
- Desfecho principal

- Órgão financiador

Os dados obtidos estão apresentados de forma narrativa e através de tabela.

6. Resultados

Foram identificadas 1.035 referências através das estratégias de busca (14 de janeiro de 2022). Deles, foram encontrados 460 protocolos de ensaios clínicos testando esquemas vacinais para Covid-19. Uma amostra aleatória de 100 protocolos foi selecionada para fins deste sumário.

Registro	Participantes	Vacina	Desfecho primário	Financiamento
ACTRN126210 00882820 Austrália	84 participantes Entre 18 e 69 anos	IVX-411	Reações locais e sistêmicas até sete dias após a dose de reforço	Icosavax Inc.
NCT04324606 Reino Unido	1.090 participantes 18 a 55 anos	ChAdOx1 nCoV-19	Número de casos com PCR positivo	University of Oxford
NCT04341389 China	508 participantes 18 a 60 anos	Ad5-nCoV	Ocorrência de reações adversas	Institute of Biotechnology, Academy of Military Medical Sciences, PLA of China
NCT04350931 Egito	900 participantes Acima de 18 anos	Vacina BCG	Estimativa da incidência de casos confirmados de Covid-19	Ain Shams University
NCT04384549 França	1.120 participantes Acima de 18 anos	Vacina BCG	Incidência de casos confirmados de Covid-19	Assistance Publique - Hôpitaux de Paris
NCT04414267 Grécia	301 participantes Acima de 50 anos	Vacina BCG	Resultado positivo do questionário sobre sintomas respiratórios relacionados a Covid-19	Hellenic Institute for the Study of Sepsis
NCT04436276 Estados Unidos e Bélgica	1.085 participantes Acima de 18 anos	Ad26.COVS.S (JNJ-78436735; Ad26COVS1)	Número de participantes com eventos adversos até sete dias após a vacinação	Janssen Vaccines & Prevention B.V.

NCT04447781 Coreia	160 participantes Entre 19 e 64 anos	INO-4800 1mg/dose + CELLECTRA® 2000	Incidência de eventos adversos	International Vaccine Institute
NCT04449276 Alemanha e Bélgica	280 participantes Entre 18 e 60 anos	CVnCoV	Número de participantes com eventos adversos Grade 3 ou qualquer evento adverso sério após pelo menos 24 horas da vacinação	CureVac AG
NCT04470427 Estados Unidos	30.000 participantes Acima 18 anos	mRNA-1273	Número de participantes com diagnóstico de Covid-19 após 14 dias da segunda dose	ModernaTX, Inc.
NCT04480957 Singapura	106 participantes 21 a 80 anos	ARCT-021 (mRNA)	Incidência e severidade de eventos adversos	Arcturus Therapeutics, Inc.
NCT04495933 Austrália	216 participantes Acima de 18 anos	MF59 adjuvante SARS-CoV-2 Sclamp 5mcg	Frequência de eventos adversos	The University of Queensland
NCT04498247 Estados Unidos, Austria e Belgica	263 participantes Acima de 18 anos	V591	Porcentagem de participantes com pelo menos um evento adverso	Merck Sharp & Dohme Corp.
NCT04505722 Estados Unidos, Argentina, Brasil, Chile, Colombia, México, Peru, África do Sul	44.325 participantes Acima de 18 anos	Ad26.COVS.S (JNJ-78436735 ; Ad26COVS1)	Número de participantes com diagnóstico confirmado de Covid-19	Janssen Vaccines & Prevention B.V.
NCT04510207 Barein, Egito, Jordânia, Emirados Árabes	45.000 participantes Acima de 18 anos	SARS-CoV-2 inativado (Vero cell)	Incidência de casos de Covid- 19 confirmado após duas doses	China National Biotec Group Company Limited
NCT04515147 Panamá e Peru	674 participantes Acima de 18 anos	CVnCoV (mRNA)	Número de participantes com evento adverso	CureVac AG
NCT04522089 Taiwan	70 participantes Entre 20 e 60 anos	AdimrSC-2f	Eventos adversos	Adimmune Corporation
NCT04527081 Japão	30 participantes Entre 20 e 65	AG0302- COVID19	Incidência de eventos	AnGes, Inc.

	anos		adversos	
NCT04533399 África do Sul	4.400 participantes 18 a 84 anos (HIV)	SARS-CoV-2 rS/Matrix-M1 Adjuvant (NVX- CoV2373)	Diagnóstico confirmado de Covid-19	Novavax Bill and Melinda Gates Foundation
NCT04534803 Estados Unidos	Sem cálculo de amostra Acima de 70 anos	Vacina BCG	Redução da severidade dos casos confirmados de Covid-19	Harvard Medical School (HMS and HSDM)
NCT04536051 Brasil	10.300 participantes Acima de 18 anos	ChAdOx1 nCoV-19 doses diferentes	Diagnóstico confirmado de Covid-19	University of Oxford
NCT04540185 Estados Unidos e Nova Zelândia	3.600 participantes Acima de 18 anos	Vacina da Poliomelite (oral) + NA-831 30 mg (capsula)	Número de participantes com diagnóstico confirmado de Covid-19 após 14 dias da segunda dose	NeuroActiva, Inc.
NCT04564716 Bielorrussia	100 participantes Entre 18 e 60 anos	Gam-COVID- Vac	Diagnóstico confirmado de Covid-19 após seis meses da primeira dose	Gamaleya Research Institute of Epidemiology and Microbiology, Health Ministry of the Russian Federation
NCT04566770 China	481 participantes Acima de 6 anos	Ad5-nCoV	Eventos adversos	CanSino Biologics Inc.
NCT04583995 Reino Unido	15.000 participantes 18 a 84 anos	SARS-CoV-2 rS + NVX- CoV2373	Diagnóstico confirmado de Covid-19	Novavax
NCT04591184 Canadá	36 participantes 18 a 95 anos	VAX-001	Eventos adversos	Entos Pharmaceutical s Inc.
NCT04611802 Estados Unidos, México e Porto Rico	33.000 participantes Acima de 12 anos	SARS-CoV-2 rS + Matrix-M1 Adjuvant	Diagnóstico confirmado de Covid-19	Novavax Inc.
NCT04614948 Estados Unidos, Bélgica, Brasil, Colômbia, França, Alemanha, Filipinas, África do Sul, Espanha, Reino	31.836 participantes Acima de 18 anos	Ad26.COVS.2.S (JNJ-78436735; Ad26COVS1 VAC31518)	Número de participantes com diagnóstico confirmado de Covid-19	Janssen Vaccines & Prevention B.V.

Unido				
NCT04639466 Estados Unidos	189 participantes Entre 18 e 55 anos	Vacina sintética MVA-based SARS-CoV-2	Incidência de eventos adversos	National Cancer Institute (NCI)
NCT04640402 China	960 participantes 18 a 85 anos	Vacina recombinante de COVID-19 (Sf9 cells) Diferentes doses e regimes	Média geométrica de anticorpos	Jiangsu Province Centers for Disease Control and Prevention
NCT04641481 Índia	25.800 participantes 18 e 99 anos	BBV152 (SARS-CoV-2 inativado)	Diagnóstico confirmado de Covid-19	Bharat Biotech International Limited
NCT04646590 China, Equador, Indonésia, Paquistão, Uzbequistão	28.904 participantes Acima de 18 anos	Vacina recombinante de coronavirus (célula CHO), 0.5mL/vial, contendo 25 µg NCP-RBD de proteína.	Número de casos graves de Covid-19 após 14 dias da vacinação	Anhui Zhifei Longcom Biologic Pharmacy Co., Ltd.
NCT04649151 Estados Unidos	3.732 participantes Entre 12 e 17 anos	mRNA-1273	Número de participantes com reações adversas	ModernaTX, Inc
NCT04652102 Argentina, Bélgica, Colômbia, República Dominicana, Alemanha, México, Holanda, Panamá, Peru e Espanha	39.693 participantes Acima de 18 anos	CVnCoV (CV07050101)	Número de participantes com diagnóstico confirmado de Covid-19	CureVac AG
NCT04656613 Russia	1.000 participantes Acima de 18 anos	Sputnik V	Identificação de anticorpos específicos	Gamaleya Research Institute of Epidemiology and Microbiology, Health Ministry of the Russian Federation
NCT04668339 Estados Unidos e Singapura	600 participantes Acima de 18 anos	ARCT-021	Porcentagem de participantes com eventos adversos	Arcturus Therapeutics, Inc.
NCT04672395 Bélgica, Brasil, Colômbia,	22.000 participantes Acima de 18	CpG 1018/Alum- adjuvante +	Número de participantes com diagnóstico	Clover Biopharmaceuti cals AUS Pty

Republica Dominicana, Alemanha, Nepal, Panamá, Filipinas, Polônia, África do Sul	anos	SCB-2019	confirmado de Covid-19	Ltd
NCT04673149 Coreia	345 participantes Entre 19 e 65 anos	GLS-5310	Incidência de eventos adversos	GeneOne Life Science, Inc.
NCT04674189 Alemanha	2.351 participantes Acima de 18 anos	CVnCoV	Número de participantes com eventos adversos graves	CureVac AG
NCT04679909 Estados Unidos	92 participantes Entre 18 e 55 anos	AdCOVID	Porcentagem de participantes com eventos adversos	Altimmune, Inc.
NCT04683224	7.320 participantes Acima de 18 anos	UB-612	Incidência de eventos adversos locais	Vaxxinity, Inc.
NCT04684446 Russia e Bielorrussia	10 participantes Acima de 18 anos	AZD1222 + rAd26-S	Taxa de seroconversão após 29 dias da segunda dose	R-Pharm AstraZeneca
NCT04690387 Indonésia	27 participantes Acima de 18 anos	AV-COVID-19	Incidência e severidade de eventos adversos	Aivita Biomedical, Inc.
NCT04695652 Taiwan e Vietnã	3.854 participantes 20 a 65 anos	MVC-COV1901 (proteína S como adjuvante)	Incidência de eventos adversos em 28 dias após a segunda dose	Medigen Vaccine Biologics Corp.
NCT04702178 Canadá	72 participantes Acima de 18 anos	COVAC-2	Ocorrência de eventos adversos	University of Saskatchewan
NCT04713553 Estados Unidos	1.530 participantes 12 a 50 anos	BNT162b2 + BNT162b2.B.1.351	Média geométrica dos níveis de anticorpos	BioNTech SE
NCT04715997 Coreia	170 participantes Entre 18 e 55 anos	GX-19N	Incidência de eventos adversos	Genexine, Inc.
NCT04747821 Brasil	27.711 participantes Acima de 18 anos	COVID-19 inativado produzido pela Sinovac	Incidência de diagnósticos confirmados de Covid-19 após a segunda dose	Butantan Institute
NCT04756323	1.000	SARS-CoV-2	Taxa de	Beijing Minhai

China	participantes Acima de 18 anos	inativado Doses diferentes	anticorpos neutralizadores de SARS-CoV-2	Biotechnology Co., Ltd
NCT04758273 China	180 participantes Acima de 18 anos	SARS-CoV-2 inativado	Incidência de eventos / reações adversas	Beijing Minhai Biotechnology Co., Ltd
NCT04764422 Tailândia	460 participantes 18 a 75 anos	NDV-HXP-S	Frequência de relatos de eventos adversos após a primeira dose	Faculty of Tropical Medicine, Mahidol University
NCT04773067 Taiwan	3.877 participantes Entre 12 e 85 anos	UB-612	Média geométrica de anticorpos para SARS-CoV-2	Vaxxinity, Inc.
NCT04790851 China	1.133 participantes Acima de 18 anos	COVAX+IIV4; COVAX+PPV23	Taxa de seroconversão contra coronavírus	China National Biotec Group Company Limited
NCT04796896 Estados Unidos e Canadá	13.275 participantes 6 meses a 11 anos	mRNA-1273	Número de participantes com eventos adversos	ModernaTX, Inc.
NCT04798677 Espanha	90 participantes Acima de 18 anos	Vacina Influenza + suplemento dietético	Mudança na resposta imune aguda	AB Biotek
NCT04811664 Estados Unidos	37.500 participantes 18 a 29 anos	Moderna COVID-19	Diagnóstico positivo para Covid-19	National Institute of Allergy and Infectious Diseases (NIAID)
NCT04813796 Estados Unidos	106 participantes Entre 18 e 55 anos	mRNA-1283	Número de participantes com reações adversas	ModernaTX, Inc.
NCT04816019 Reino Unido	54 participantes 18 a 55 anos	ChAdOx1 nCov-19 (intranasal)	Ocorrência de sinais e sintomas de Covid-19	University of Oxford
NCT04816669 Estados Unidos	629 participantes Entre 18 e 55 anos	BNT162b2	Porcentagem de participantes relatando eventos adversos	BioNTech SE & Pfizer
NCT04822025 Taiwan	420 participantes 65 anos ou mais	MVC-COV1901	Incidência de eventos adversos	Medigen Vaccine Biologics Corp.
NCT04830800 Vietnã	420 participantes	COVIVAC (produzida por	Número e severidade dos	Institute of Vaccines and

	18 a 75 anos	IVAC) com ou sem o adjuvante CpG1018	eventos adversos	Medical Biologicals, Vietnam
NCT04833101 China	120 participantes Acima de 18 anos	Ad5 vetorial recombinante	Incidência de eventos adversos após sete dias de vacinação	Jiangsu Province Centers for Disease Control and Prevention
NCT04847102 Indonésia e México	28.000 participantes Acima de 18 anos	SARS-CoV-2 mRNA	Incidência de casos confirmados de Covid-19	Walvax Biotechnology Co., Ltd. Abogen Biosciences Co. Ltd. Yuxi Walvax Biotechnology Co., Ltd.
NCT04852705	28.000 participantes Acima de 18 anos	SARS-CoV-2 inativado (Vero Cells)	Incidência de casos confirmados de Covid-19	Shenzhen Kangtai Biological Products Co., LTD
NCT04863638 China	4.400 participantes Acima de 3 anos	SARS-CoV-2 inativado (Vero Cells) Doses diferentes	Média geométrica dos anticorpos	China National Biotec Group Company Limited
NCT04864561 Estados Unidos	4.679 participantes Acima de 12 anos	VLA2001 + AZD1222	Média geométrica dos anticorpos	Valneva Austria GmbH
NCT04869592 China	3.580 participantes Acima de 3 anos	SARS-CoV-2 recombinante (CHO cell)	Incidência e severidade de qualquer reação adversa após 30 minutos da aplicação da vacina	National Vaccine and Serum Institute, China
NCT04904471 Indonésia, Quênia, México e Filipinas	40.000 participantes Acima de 18 anos	COVID-19 recombinante (Sf9 cells)	Diagnóstico confirmado de Covid-19	WestVac Biopharma Co., Ltd.
NCT04916886 China	2.016 participantes 6 a 59 anos	Ad5-nCoV	Média geométrica dos anticorpos	CanSino Biologics Inc.
NCT04927936 Holanda	432 participantes Entre 18 e 65 anos	Janssen	Determinação de anticorpos pelo IgG	Erasmus Medical Center
NCT04942405 Turquia	1.290 participantes Entre 18 e 55	TURCOVAC	Diagnóstico confirmado de Covid-19	Health Institutes of Turkey

	anos			
NCT04949490 Alemanha	137 participantes Acima de 18 anos	BNT162b2s01	Proporção de participantes com pelo menos um evento adverso sério	BioNTech SE
NCT04951388 Taiwan	399 participantes 12 a 18 anos	MVC-COV1901	Incidência de eventos adversos	Medigen Vaccine Biologics Corp.
NCT04953078 Tailândia	48 participantes Entre 18 e 75 anos	SARS-CoV-2 Vax 1	Frequência de eventos adversos sérios	Baiya Phytopharm Co., Ltd.
NCT05007080 Argentina, Brasil, Colombia, India, México, Filipinas, África do Sul e Tailândia	3.300 participantes 12 a 17 anos	Ad26.COVS.S (Ad26COVS1, VAC31518, JNJ-78436735)	Número de participantes com eventos adversos após sete dias da primeira dose	Janssen Vaccines & Prevention B.V.
NCT05007496 Indonésia	145 participantes Acima de 18 anos	AV-COVID-19	Resposta imune induzida pela célula T	Aivita Biomedical, Inc.
NCT05011526 Paraguai	1.020 participantes Acima de 18 anos	AZD1222 (ChAdOx1 nCoV-19)	Média geométrica de anticorpos	Medigen Vaccine Biologics Corp.
NCT05012787 África do Sul e Ucrânia	300 participantes Acima de 18 anos	CpG 1018/Alum- adjuvante SCB- 2019	Porcentagem de participantes com eventos adversos	Clover Biopharmaceuti cals AUS Pty Ltd
NCT05037097 Estados Unidos e Singapura	72 participantes Entre 21 e 80 anos	ARCT-165	Porcentagem de participantes com eventos adversos	Arcturus Therapeutics, Inc.
NCT05047445 África do Sul	40 participantes 18 a 59 anos	COVIDITY (intradermal): 2 doses de SCOV1 + 2 doses de SCOV2	Relatos de eventos adversos	Scancell Ltd
NCT05047770 Estados Unidos	1.546 participantes Acima de 18 anos	HZ/su + mRNA- 1273 dose extra	Concentração de anticorpos expressa pela média geométrica entre os grupos	GlaxoSmithKlin e
NCT05067933 Estados Unidos	896 participantes 18 a 75 anos	VXA-CoV2-1.1- S (tablete oral)	Taxa de sintomas coletados via diário	Vaxart
NCT05079633	220	Vacina	Média	National Taiwan

Taiwan	participantes Entre 20 e 69 anos	produzida pela Moderna (mRNA 1273) + vacina produzida pela Medigen (MVC COV1901)	geométrica de anticorpos	University Hospital
NCT05091307 Estados Unidos, Bélgica e Polônia.	1.680 participantes Acima de 18 anos	Ad26.COVS.S (VAC31518 e JNJ-78436735)	Média geométrica de anticorpos após 28 dias da vacinação	Janssen Vaccines & Prevention B.V.
NCT05097053 Taiwan	200 participantes Entre 20 e 64 anos	ChAdOx1- nCov-19 + MVC-COV1901	Média geométrica de anticorpos	Taoyuan General Hospital
NCT05102643 China	30 participantes Entre 18 e 55 anos	Vacina de DNA SARS-CoV-2	Ocorrência de eventos adversos	The University of Hong Kong
NCT05104489 Indonésia	240 participantes Entre 18 e 60 anos	AdimrSC-2f	Incidência de eventos adversos cl clinicamente relevantes	Adimmune Corporation
NCT05115019	550 participantes Acima de 18 anos	Vacina RUTI® (vacina da tuberculose inativada pelo calor)	Redução da taxa de pacientes de acordo com a OMS após 30 dias da vacinação	PT. Innovative Pharma Solutions
NCT05112848	360 participantes Entre 18 e 65 anos	NVX-CoV2373	Número de participantes com eventos adversos	Novavax
NCT05125926	100 participantes Acima de 18 anos	LYB001	Eventos adversos	Yantai Patronus Biotech Co., Ltd.
NCT05137236 Estados Unidos	420 participantes Acima de 18 anos	mRNA-1283	Número de participantes com reações adversas	ModernaTX, Inc.
NCT05144139 Laos	640 participantes Acima de 18 anos	COVID-19 mRNA	Eventos adversos locais ou sistêmicos	Stemirna Therapeutics
NCT05148871	2.000 participantes Acima de 18 anos	Spikogen/Cova x-19	Média geométrica de anticorpos	Vaxine Pty Ltd
NCT05155982 Canadá	48 participantes Acima de 18 anos	COVAC-1	Ocorrência de eventos adversos	Vaccine and Infectious Disease Organization,

				University of Saskatchewan
NCT05160766 Alemanha	600 participantes Acima de 75 anos	Comirnaty (vacina BioNTech/ Pfizer BNT162b2) Spikevax (vacina Moderna mRNA-1273) Vaxzevria (vacina Astra Zeneca ChAdOx-1-S)	Resposta imunológica após a terceira dose	University of Cologne
NCT05162482 Paquistão	1.680 participantes Acima de 18 anos	BIBP (CNBG, Sinopharm) + CanSinoBIO	Anticorpos IgG	Aga Khan University Hospital
NCT05181709 Estados Unidos	35 participantes 19 a 59 anos	NDV-HXP-S Doses diferentes; Formas de aplicação diferentes	Número de reações adversas locais ou sistêmicas	Icahn School of Medicine at Mount Sinai
RBR-5d758t9 Brasil	300 participantes acima de 60 anos	ChAdOx1- S/nCoV-19 (vacina CoronaVac)	Incremento da resposta imune	Instituto do Câncer Brasil (Ribeirão Preto)
RPCEC000003 46 Cuba	132 participantes 19 a 54 anos	CIGB-66	Eventos adversos clínicos	Center for Genetic Engineering and Biotechnology (CIGB)
RPCEC000003 59 Cuba	48.000 participantes 19 a 80 anos	CIGB-66	Número de participantes com diagnóstico confirmado de Covid-19	Center for Genetic Engineering and Biotechnology (CIGB)

Os protocolos selecionados planejam a inclusão de um total de 624.124 participantes. O menor estudo incluirá apenas 10 participantes (NCT04684446) e o maior estudo incluirá 48.000 participantes (RPCEC00000359). Em 73 protocolos a população incluída será de pessoas maiores de 18 anos. Sete protocolos incluirão crianças a partir de 12 anos, dois protocolos incluirão crianças a partir de 6 anos e outros dois, crianças a partir de 3 anos. Um protocolo incluirá apenas crianças entre seis meses e 11 anos.

Vinte e quatro estudos foram registrados nos Estados Unidos e 12 na China. O Brasil registrou sete dos 100 protocolos selecionados, três em parceria com a Janssen, dois com a Sinovac, um com Oxford e um com a farmacêutica Clover.

Foram encontrados 13 protocolos avaliando vacinas de mRNA, oito protocolos com vacinas de vírus inativado e cinco protocolos com vacinas recombinantes. Quanto às vacinas mais registradas, cinco protocolos registraram a vacina Ad26.COVS.2.S; foram encontrados quatro protocolos para as vacinas MVC-COV1901, BCG e ChAdOx1 nCov-19; foram encontrados três protocolos para as vacinas AZD1222, Ad5-nCoV e NVX-CoV2373.

Os desfechos primários mais avaliados pelos protocolos serão eventos adversos (citado em 48 dos 100 protocolos), 16 protocolos avaliarão como desfecho primário o diagnóstico de Covid-19 após a vacinação e 16 protocolos avaliarão a média geométrica de anticorpos.

A realização de múltiplos estudos com baixo tamanho amostral deve ser evitada, principalmente para questões de prevenção de novas infecções como o caso de vacinas para Covid-19. A quantidade e heterogeneidade de estudos encontrados evidencia o investimento sem precedentes no desenvolvimento de vacinas para enfrentamento da pandemia.

Os resultados desse sumário podem ser utilizados para demonstrar para profissionais da saúde, pacientes e decisão a complexidade e amplitude do desenvolvimento de vacinas, além de servir como referência para a identificação de referências de estudos para avaliações mais intrincadas de vacinas específicas.

7. Conclusões

Foram encontrados mais de 400 protocolos registrados avaliando diferentes combinações de esquemas vacinais para a prevenção de Covid-19. Foi possível observar certa homogeneidade entre os desfechos planejados pelos protocolos (eventos adversos), porém foi possível observar grande variedade nas vacinas estudadas pela amostra de protocolos selecionada.

Considerando a data da busca deste sumário e sua finalização, mais 618 protocolos foram registrados nas bases de dados. Espera-se que mais estudos e sínteses de evidências, principalmente incluindo populações menores de 18 anos, sejam realizados e que as evidências sobre a eficácia das vacinas para Covid-19 tornem-se

cada vez mais robustas, disseminando informações mais coerentes para a comunidade científica e população geral.

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