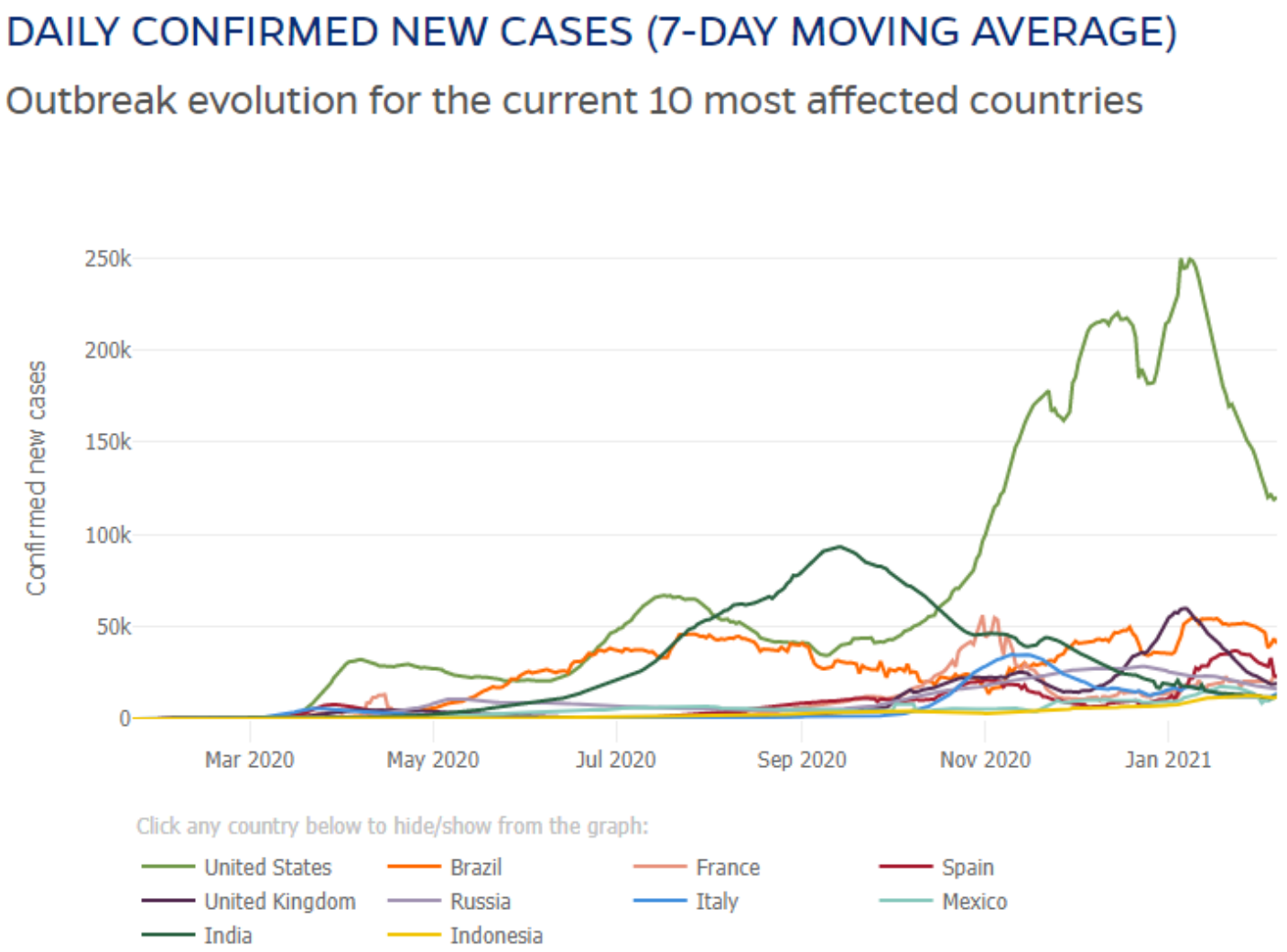
COVID VACCINE UPDATE FOR PRIMARY CARE

10 FEBRUARY 2021

CURRENT EPIDEMIOLOGY

- Global: 106.8M cases worldwide, >2.3M deaths
- Australia: VIC – Holiday Inn evolving situation
- NSW: Last locally-acquired case 16 January. Sewage negative. Expanded program of returned traveller testing at Day 16

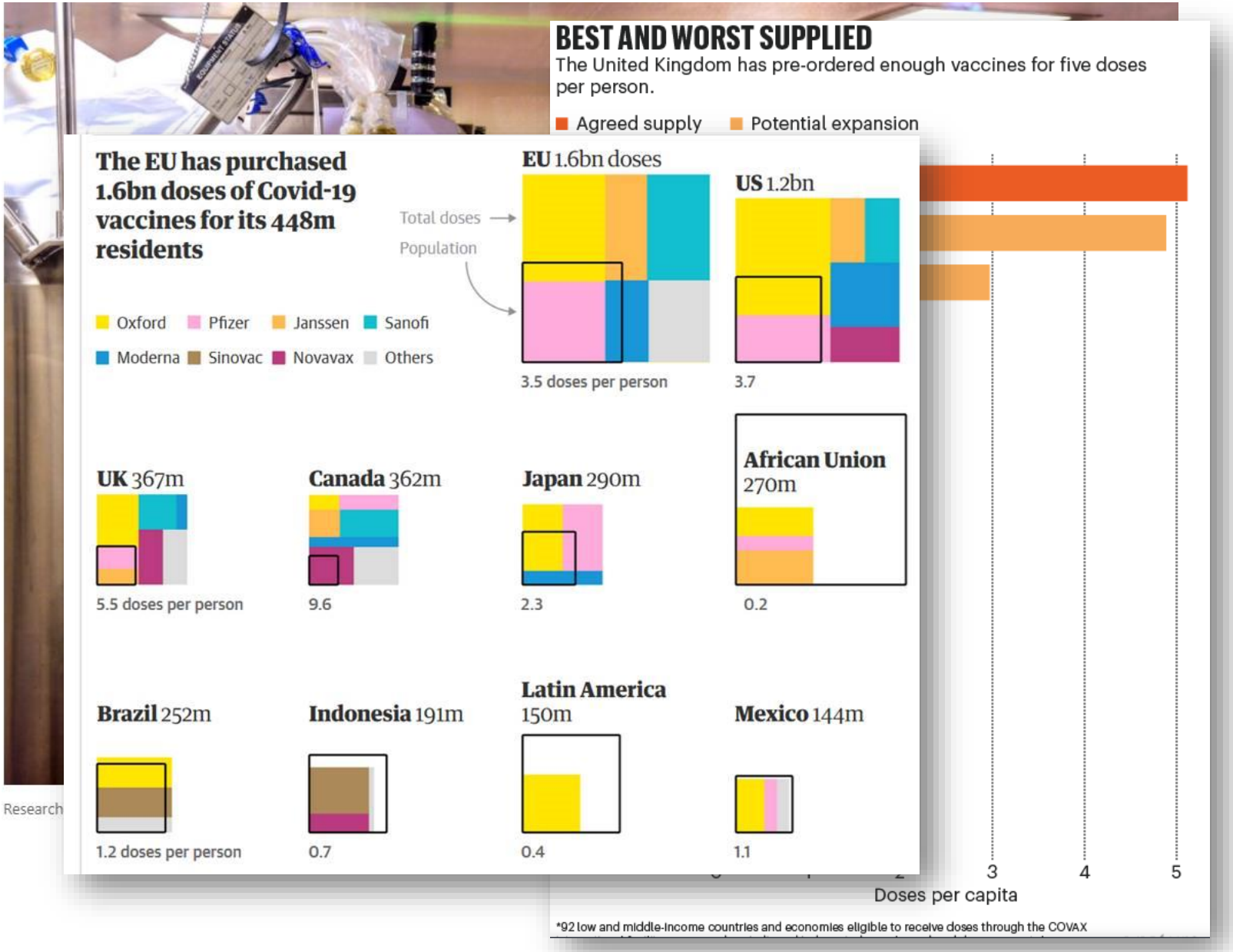


VARIANTS OF CONCERN

Lineage	Countries reporting	Characteristics
B.1.1.7	**UK** (Sept 2020) and 62 other countries	• Potential increased transmissibility • Potential increased disease severity • In vitro studies suggest neutralisation by vaccine-induced antibodies may be **slightly** diminished
B.1.351	**S. Africa** (Dec 2020) and 25 other countries	• Potential increased transmissibility • Potential increased disease severity • In vitro studies suggest neutralisation by vaccine-induced antibodies may be **moderately** diminished • Prelim reports of 'minimal protection' by AZ vaccine against mild-moderate COVID-19
P.1	**Brazil** (Dec 2020) & 6 other countries	• In vitro testing pending

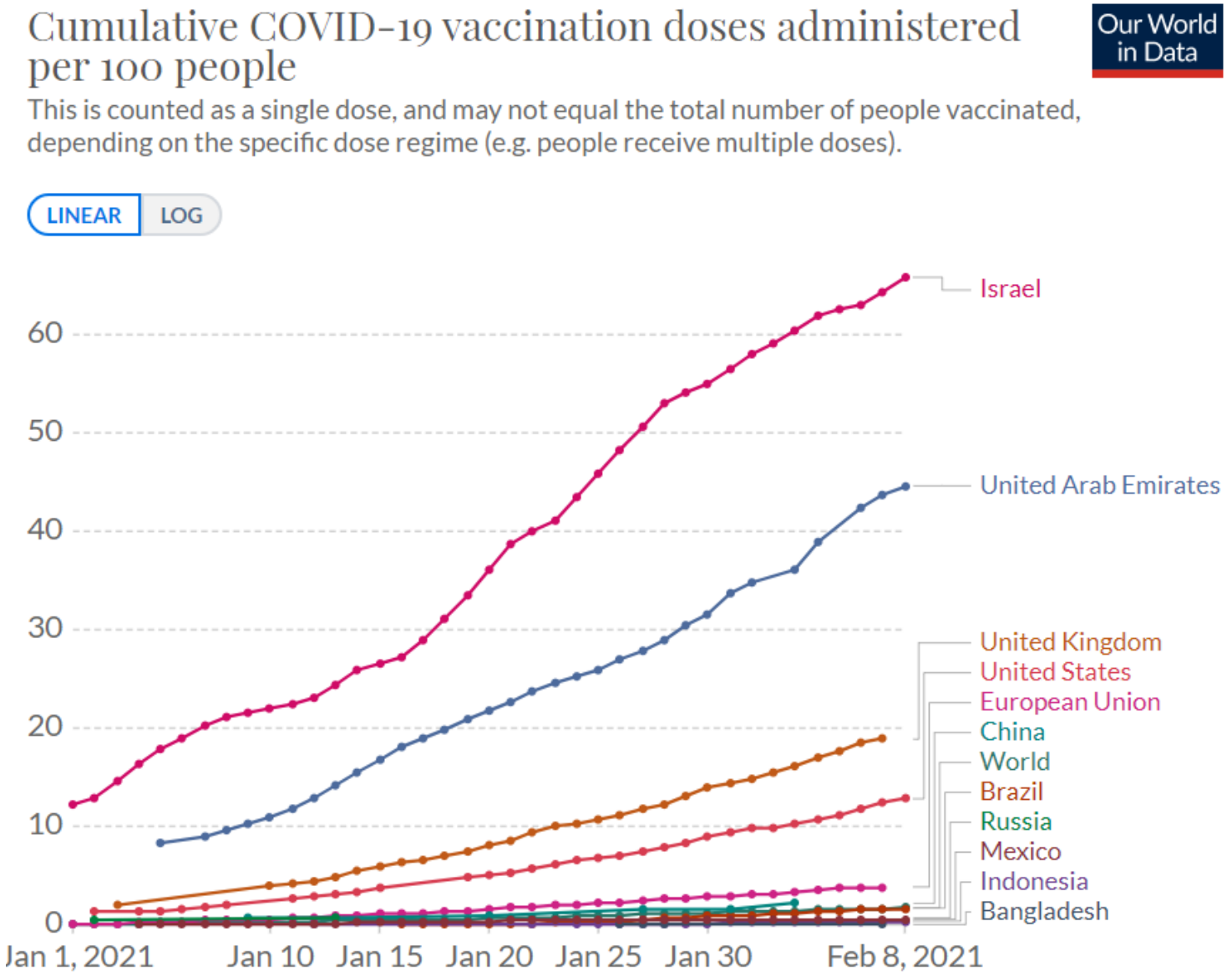
VACCINE DEVELOPMENT LANDSCAPE

- Over 200 candidate vaccines in development
- 4 vaccines with Phase 3 trial data published in peer-reviewed literature

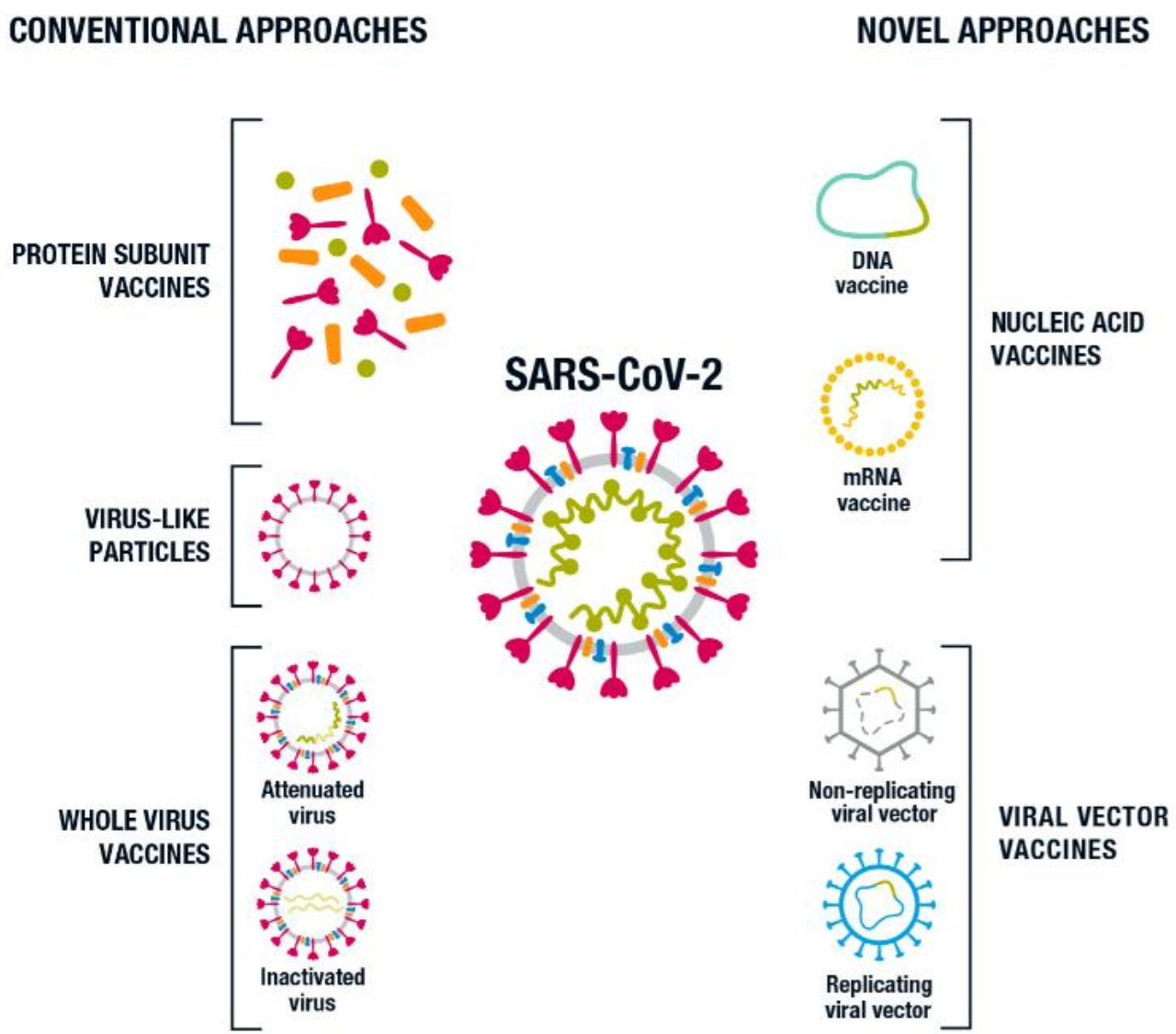


GLOBAL VACCINE ROLLOUT

- >128M vaccine doses administered worldwide



VACCINOLOGY



AUSTRALIAN VACCINE CANDIDATE COMPARISON

	Pfizer/BioNTech BNT162b2 (Comirnaty)	Oxford/Astra-Zeneca AZD1222
Type	mRNA	Viral vector
Storage	-80°C to -60°C	2°C to 8°C
Dosing schedule	2 doses, 21-42 days apart	2 doses, ?28 days- >12 weeks
Efficacy		
Symptomatic COVID-19	95%	70.4% (62.1%-90% depending on schedule)
Severe COVID-19	88.9% after Dose 1	100%
SARS-CoV-2 infection	Unknown	39.5%(Std. Dose)-55.7%(LowD/StdD)**
Adverse effects	Acceptable safety profile. Anaphylaxis 11/million doses, No specific risk to elderly following Norway investigation.	Acceptable safety profile. Less evidence of effectiveness in older age group

COMMONLY-REPORTED ADVERSE EFFECTS FOLLOWING IMMUNISATION

Pfizer/BioNTech BNT162b2

- Pain at injection site (83%) – most mild, resolved 1-2 days
- Fatigue (47%) – most mild, resolved 1-2 days
- Muscle aches (21%)
- Chills (14%)
- Diarrhoea (11%), vomiting (1.2%) – note equivalent in placebo group
- Fever (3.7%)

AEFIs more common following second dose, lower prevalence in over >55s)

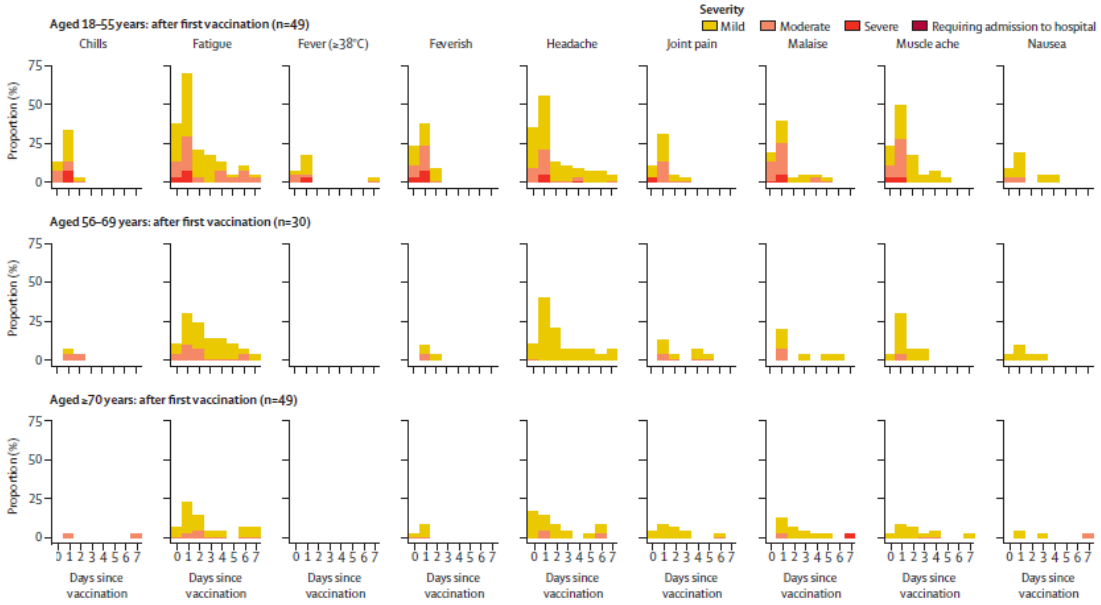
Astra-Zeneca/ChAdOx1/AZD1222

In 18-55 year age group:

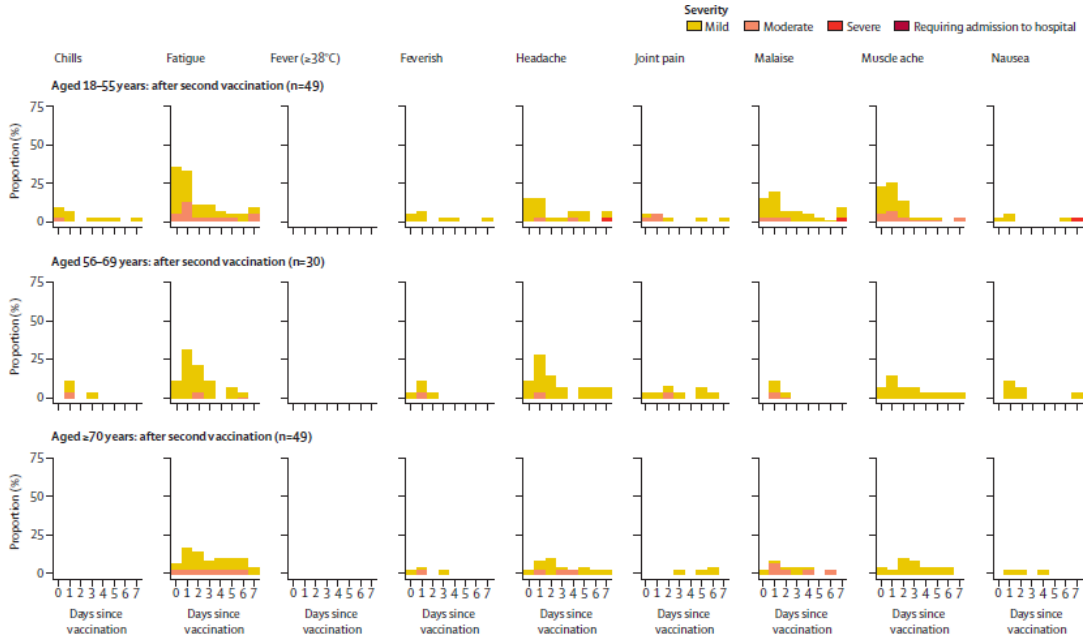
- Pain at injection site (without redness/swelling/induration) (61%)
- Fatigue (76%)
- Headache (65%)
- Muscle aches (53%)
- Feverishness (21%)

AEFIs less common following second dose, lower prevalence in over 55s

First dose



Second dose



ADVERSE EVENTS (CONT'D)

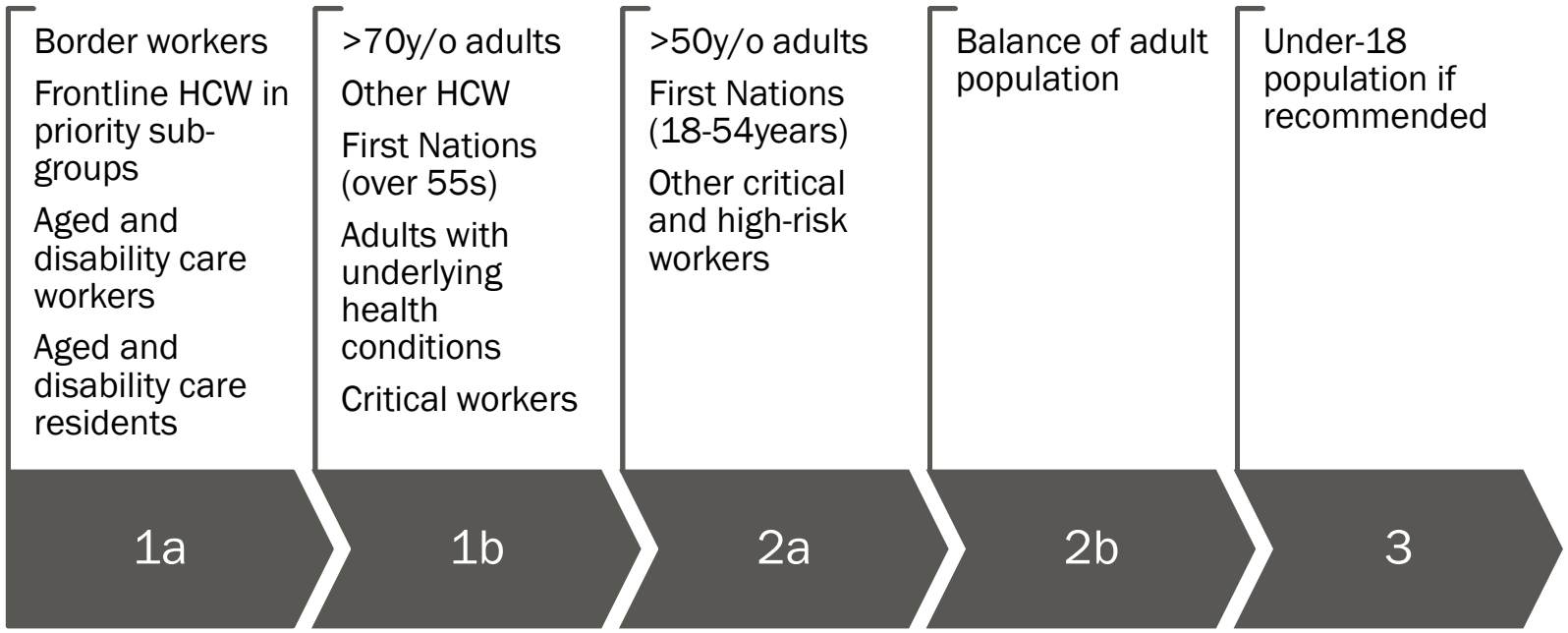
- ChAdOx1 (Astra Zeneca)

VACCINE SAFETY SURVEILLANCE

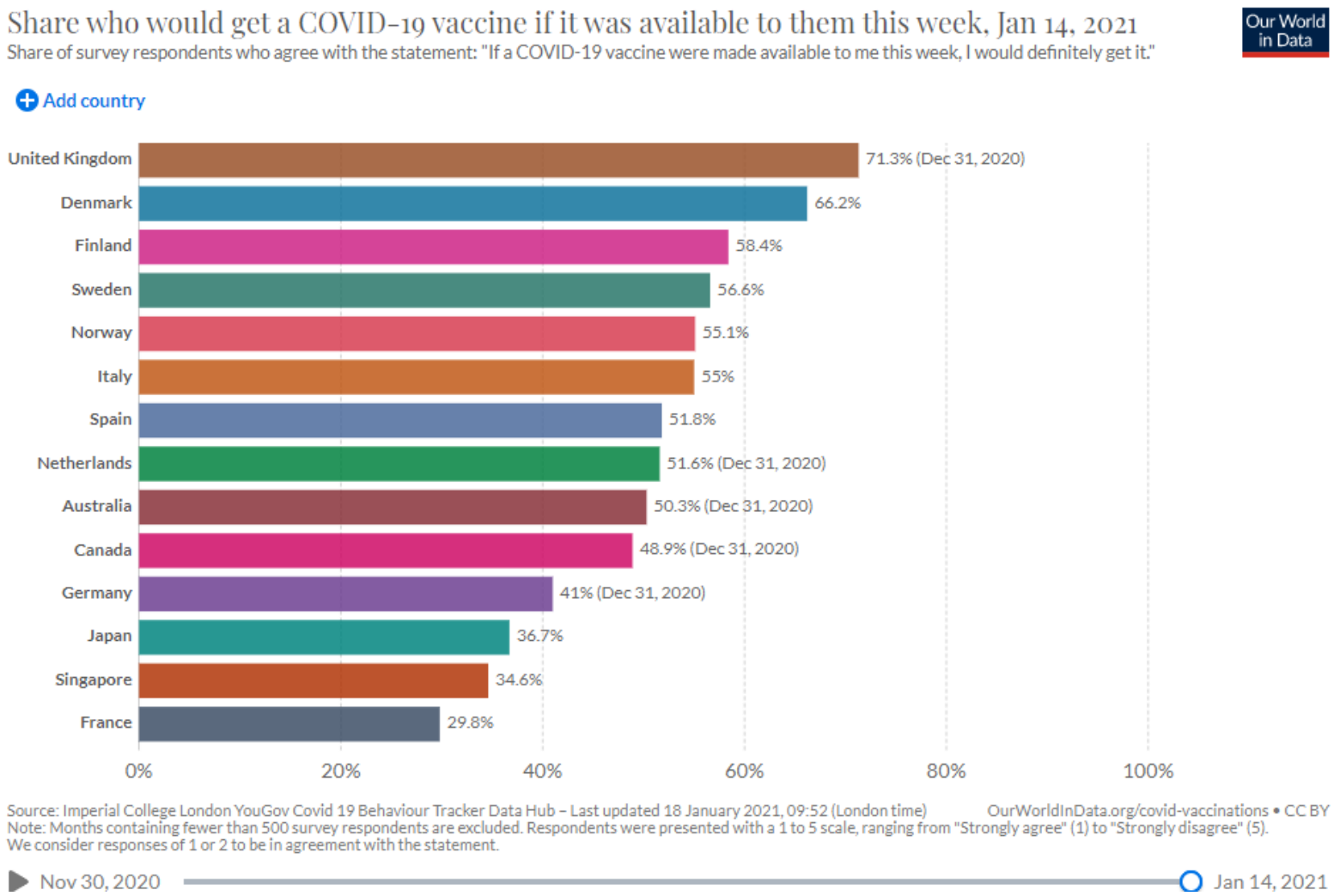
- Guidance for Clinicians on reporting obligations to come shortly

- Passive systems
  - PAEDS
  - PHREDSS
  - Modified clinician reporting obligations
- Active surveillance platforms
  - Vaxtracker
  - SmartVax
- Expanded expert guidance to be provided
- Guidance for Clinicians on AEFI reporting obligations expected soon

AUSTRALIAN ROLLOUT

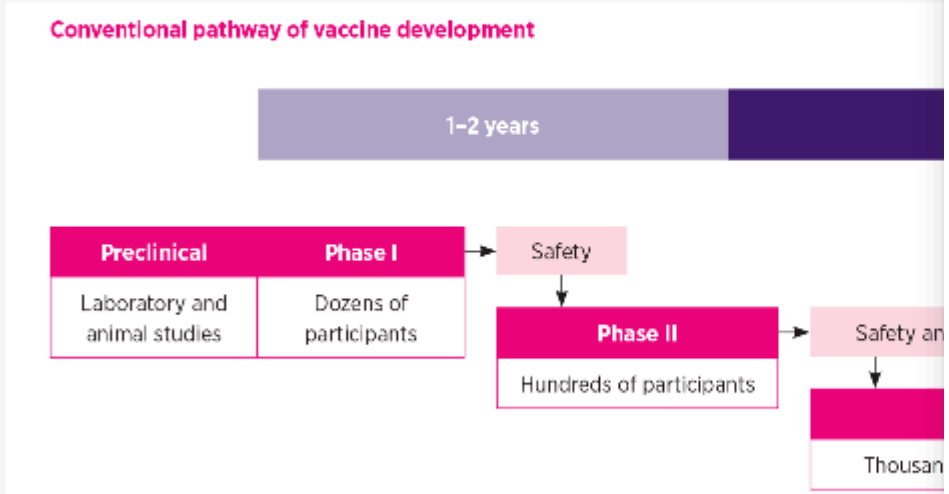


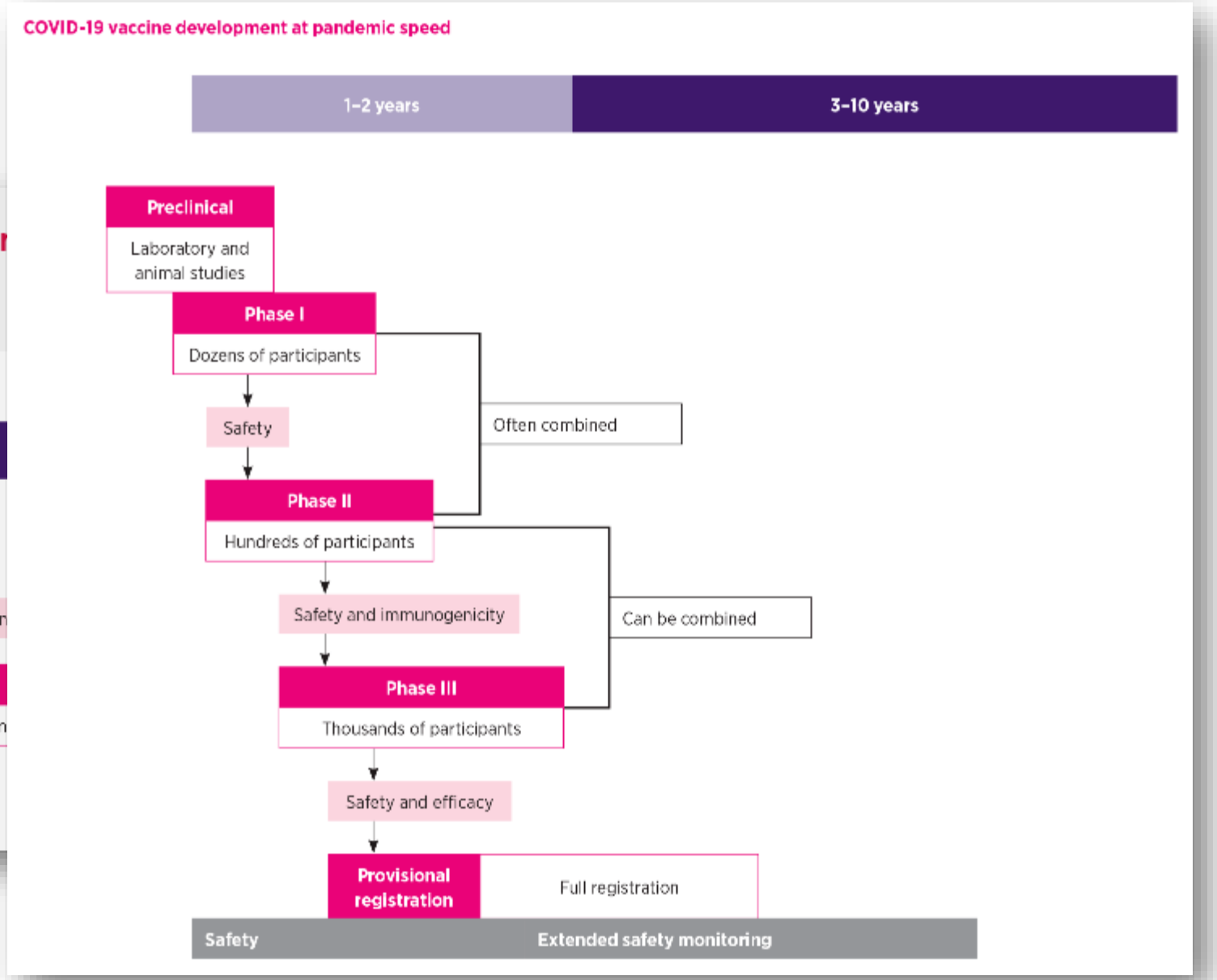
VACCINE PERCEPTIONS



FAQS

Fig. 1 - Timeline of COVID-19 vaccine develop compared to conventional vaccine pathway





MIXING VACCINES

OTHER CANDIDATES

Novavax NVX-CoV2373 (protein subunit vaccine)

- Over 15,000 participants in UK phase 3 results
- Primary endpoint is COVID-19 symptomatic disease
- The first interim analysis is based on 62 cases and resulted in a point estimate of vaccine efficacy of 89.3%
- Efficacy by strain was calculated to be 95.6% against the original COVID-19 strain and 85.6% against the UK variant strain

Johnson & Johnson JNJ-78436735 (viral vector)

- Single dose vaccine
- 43,783 participants accruing 468 symptomatic cases of COVID-19
- Primary endpoint is moderate to severe COVID-19
- 72% effective in the US and 66% effective overall at preventing moderate to severe COVID-19, 28 days after vaccination
- 85% effective overall in preventing severe disease and demonstrated complete protection against COVID-19 related hospitalization and death as of day 28
- Protection across geographies, ages, and multiple virus variants, including the SARS-CoV-2 variant from the B.1.351 Lineage