



COVID-19 Response

07 JANUARY 2021



health

Department:
Health
REPUBLIC OF SOUTH AFRICA



EPIDEMIOLOGY AND SURVEILLANCE



health

Department:
Health
REPUBLIC OF SOUTH AFRICA



COVID 19: South Africa Epidemiology and Surveillance

As of the **06th January 2021**

- The majority of new cases today are from **KwaZulu-Natal**, which accounted for **30,9%** (6 742) of all new positives reported today, followed by **Gauteng** which accounted for **26,4%** (5 754) and **Western Cape** which accounted for **17,2%** (3 766).
- Limpopo accounted for 7,2%; Mpumalanga accounted for 5,0%; Eastern Cape accounted for 5,0%; North West accounted for 4,5%; Free State accounted for 2,0% and the Northern Cape accounted for 1,2% of new cases.

Province	Updated Cases Post Harmonisation	New Cases	% New Cases	Total Cumulative Cases	% Total Cases	Total Deaths	Case Fatality Rate	Total Recoveries	Active Cases	New Case Incidence per 100k Population
	05 January 2021	06 January 2021	06 January 2021	06 January 2021	06 January 2021	06 January 2021		06 January 2021	06 January 2021	
Eastern Cape	174859	1082	5.0%	175,941	15.3%	8292	4.7%	162,039	5,610	16.1
Free State	63971	438	2.0%	64,409	5.6%	2215	3.4%	55,629	6,565	15.0
Gauteng	304447	5754	26.4%	310,201	27.0%	5923	1.9%	268,551	35,727	37.2
KwaZulu-Natal	223541	6742	30.9%	230,283	20.0%	4870	2.1%	148,420	76,993	58.5
Limpopo	29264	1576	7.2%	30,840	2.7%	636	2.1%	22,612	7,592	26.9
Mpumalanga	39527	1224	5.6%	40,751	3.5%	664	1.6%	34,646	5,441	26.2
North West	42166	993	4.5%	43,159	3.8%	648	1.5%	35,553	6,958	76.8
Northern Cape	26096	257	1.2%	26,353	2.3%	417	1.6%	23,194	2,742	6.3
Western Cape	223888	3766	17.2%	227,654	19.8%	7703	3.4%	178,595	41,356	53.8
Unknown	0	0	0.0%	0	0.0%	0	0.0%	0	0	0.0
Total	1,127,759	21,832		1,149,591		31,368	2.7%	929,239	188,984	39.0

COVID-19 Trends: 7 day moving average

As of the 05th January 2021

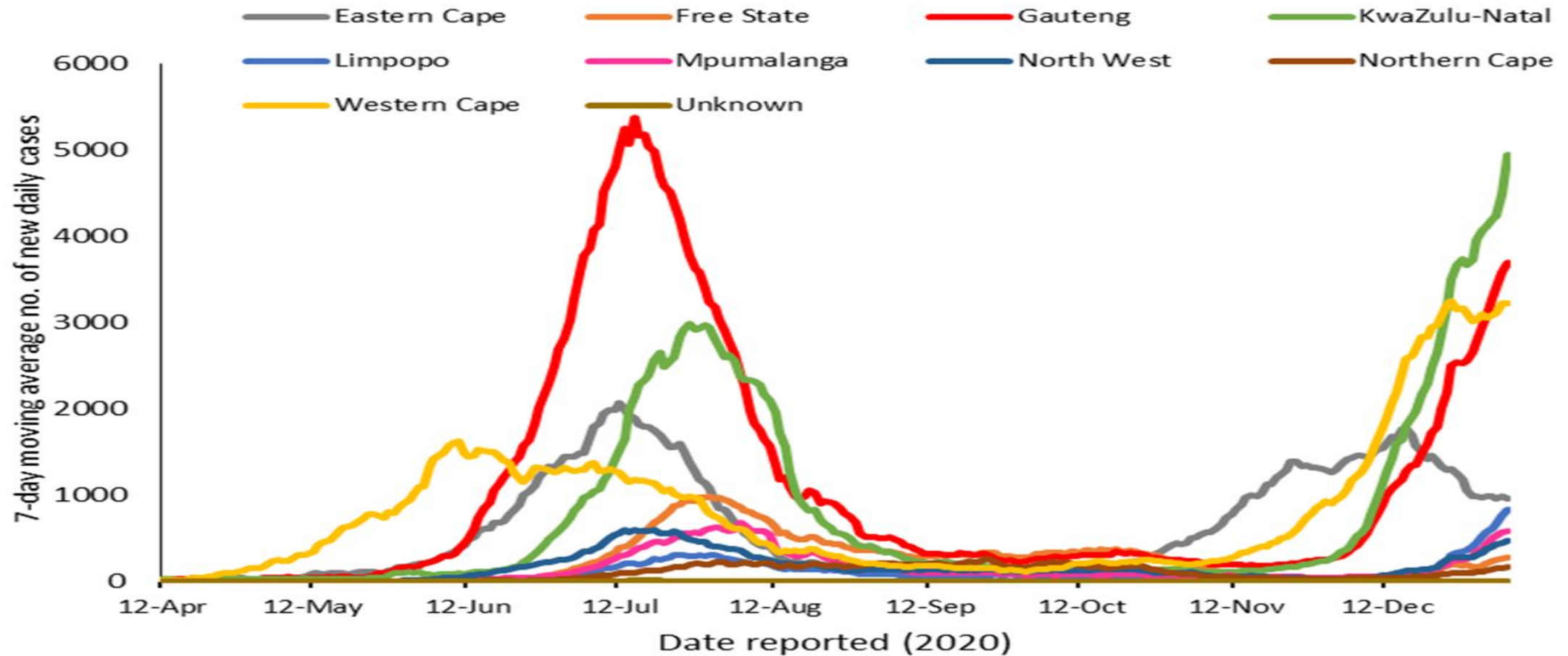
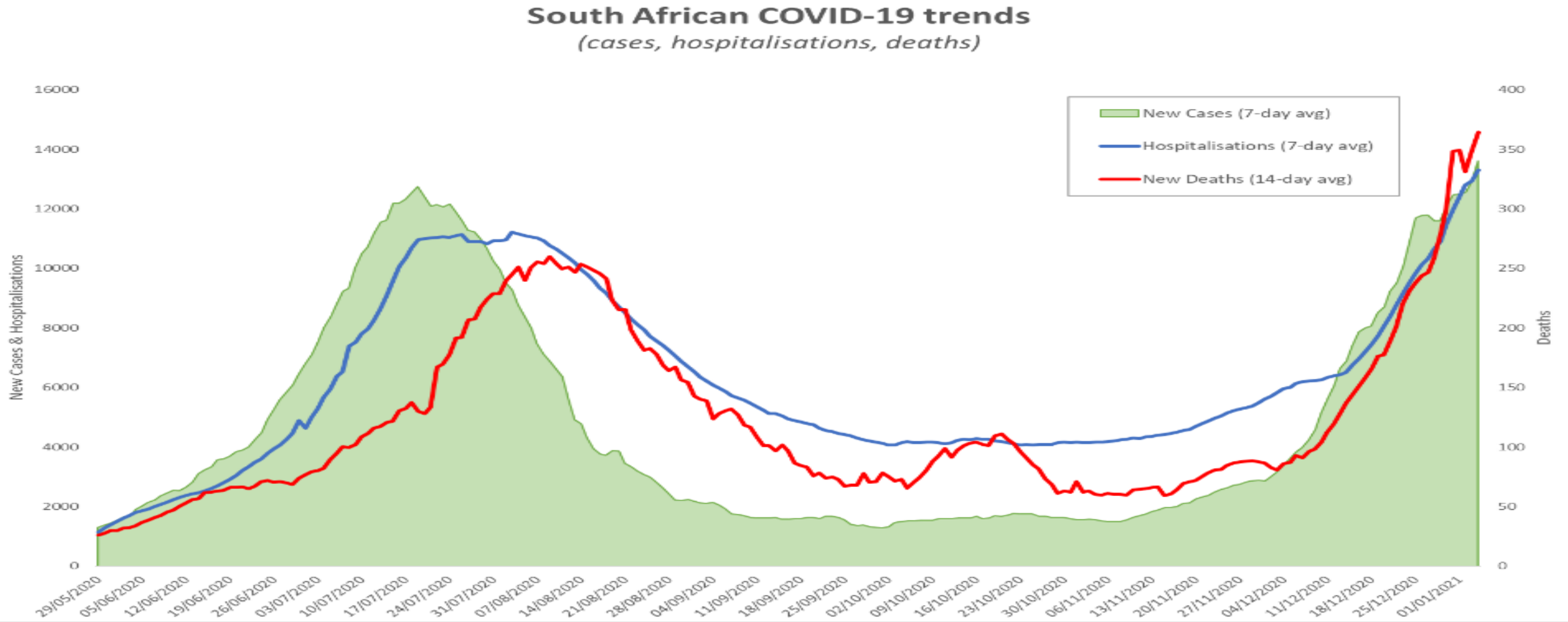


Figure 2. 7-day moving average number of new cases by province and date of reporting, 12 April to date, South Africa

COVID-19 Trends: National New Cases, Hospitalizations & Deaths

As of the 05th January 2021



health

Department:
Health
REPUBLIC OF SOUTH AFRICA



VACCINE ROLL OUT PLAN

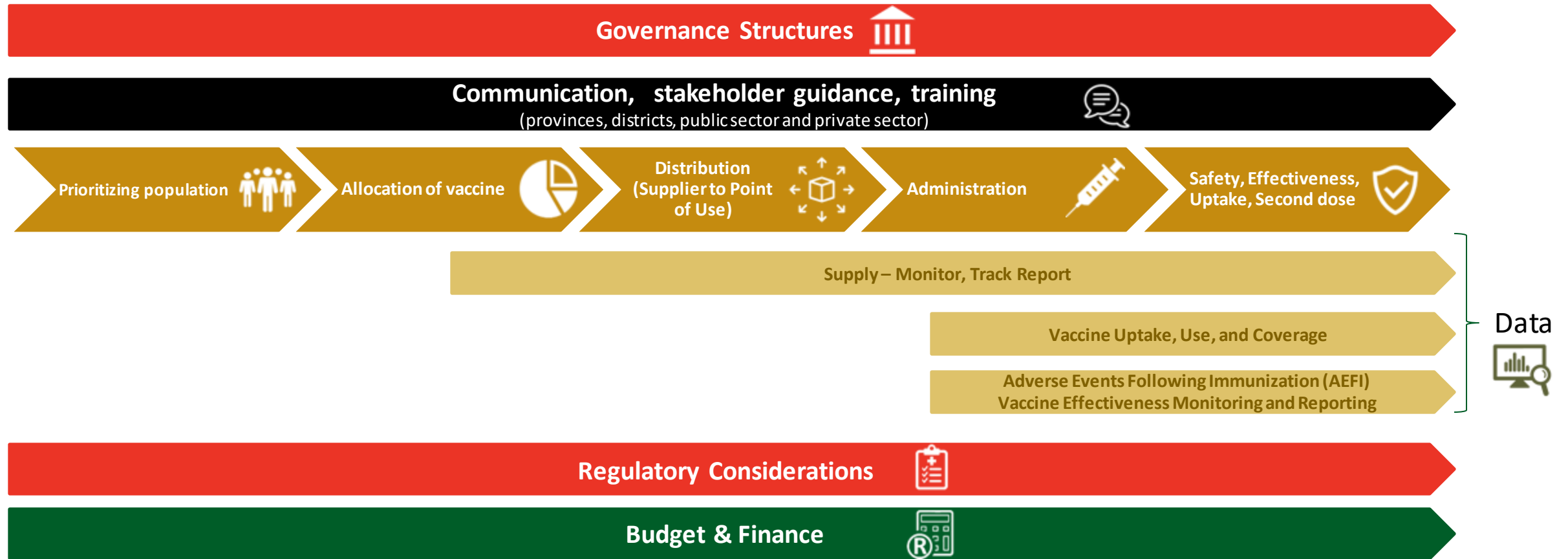


health

Department:
Health
REPUBLIC OF SOUTH AFRICA



FRAMEWORK FOR VACCINE IMPLEMENTATION



Adapted: From The Factory To The Frontlines: US Department of Health and Human Services)

WHY ARE VACCINES IMPORTANT

The aim of vaccination is to:

- To prevent **morbidity and mortality**.
- To achieve **herd immunity** and **prevent ongoing transmission**.

When a person gets vaccinated against a disease, their risk of infection is also reduced – personal protection

'Herd immunity', also known as **'population immunity'**, is the indirect protection from an infectious disease that happens when immunity develops in a population either through vaccination or through previous infection.

Herd immunity does not mean unvaccinated or individuals who have not previously been infected are themselves immune. Instead, herd immunity exists when individuals who are not immune, but live in a community with a high proportion of immunity, have a reduced risk of disease as compared to non-immune individuals living in a community with a small fraction of immunity.

Lowering the possibility for a pathogen to circulate in the community protects those who cannot be vaccinated (due to health conditions, like allergies, or their age) from the disease targeted by the vaccine.

KEY PRINCIPLES

- **The SA government will be the sole purchaser** of the vaccines for the country. The NDOH will contract with suppliers to purchase stock and allocate to provincial health departments and private health sector.
- Given the limited availability of vaccines it will be necessary to procure available stock from different manufacturers hence there may be **multiple vaccines in the programme** that are **NOT interchangeable in a 2 dose vaccine schedule**
- **Allocation of vaccines** to the various priority groups will be **guided by the MAC on vaccines**.
- The vaccination system should be based **on pre-vaccination registration and appointment system for vaccination**
- All vaccinated persons should be on a **national register and will be provided a vaccination card**.
- **A national rollout committee** will oversee the rollout including both the public and private sectors.

LEADERSHIP AND CO-ORDINATION

- A **national vaccine co-ordinating committee** established at the NDOH with representatives from various clusters:
- Chaired by DG, co-chaired by Dr Lesley Bamford
 - Expanded Programme for Immunisation (EPI): Ms Marione Schonfeldt
 - Communicable Disease Cluster (CDC): Ms Tsakani Furumele
 - Medicines: Ms Khadija Jamaloodien
 - Supply Chain Management (SCM): Ms Dikeledi Tshabalala/Office of CPO, National Treasury
 - Health Information Systems: Ms Milani Wolmarans
 - Human Resources for Health (HRH), Human Resource Development (HRD): Mr Victor Khanyile/Dr Nonhlanhla Makanya
 - Primary Health Care (PHC): Mr Rams Morewane
 - Hospital Services: Dr Anban Pillay
 - Monitoring and evaluation: Ms Thulile Zondi
 - Communication: Mr Popo Maja
 - Provinces: HODs
 - SAMHS
 - SALGA
 - Private sector: Chairperson of Private Sector Co-ordinating Committee
 - Civil Society (TBA)
 - WHO
- **Provincial co-ordinating committees** appointed by HODs with representation from similar functionaries

LEADERSHIP AND CO-ORDINATION- STAKEHOLDERS

MINISTERIAL ADVISORY COMMITTEES

- The MAC on Vaccines will continue to provide ongoing scientific guidance using latest or emerging data on vaccines as they evolve and advise on necessary adjustments to the plan.
- The MAC on Social and Behaviour Change will drive a concerted social mobilization campaign to all the sectors:
 - Focusing on correcting myths about vaccines
 - Emphasizing on the importance of NPIs even if someone is vaccinated
 - promoting the use of the vaccines
 - availing some of the facilities for mass vaccinations

ORGANISED LABOUR

- Organized labour will assist with mobilization of their membership for the vaccination
- Campaign to demystify the vaccines
- Through the OHSC, assist with overseeing vaccination programme in the workplaces

OTHER CIVIL SOCIETY FORMATIONS

- Correct community messaging of the vaccine

LEADERSHIP AND CO-ORDINATION- PRIVATE SECTOR

PRIVATE HEALTH SECTOR AND MEDICAL SCHEMES

- Private health coordinating forum will be established consisting of the role players including HASA, IPAs, Retail pharmacies and others (the chair of this forum will participate in the national vaccine coordinating committee chaired by the DG)
- Main roles:
 - Coordination of the vaccination of the private health sector employees (eg private hospitals will vaccinate their own employees)
 - providing the platform for the vaccination of the communities similar to the CCMDD programmes (GPs, Retail pharmacies)
 - Medical schemes to pay for vaccines for their members through an agreed mechanism with government

OTHER PRIVATE SECTOR/BUSINESS SECTOR

- Pooling of funds support the vaccination programme through the SF
- Promoting the use of vaccine amongst their employees
- Provision of vaccination platform through the occupational health systems

IDENTIFICATION AND PRIORITISATION OF TARGET POPULATION

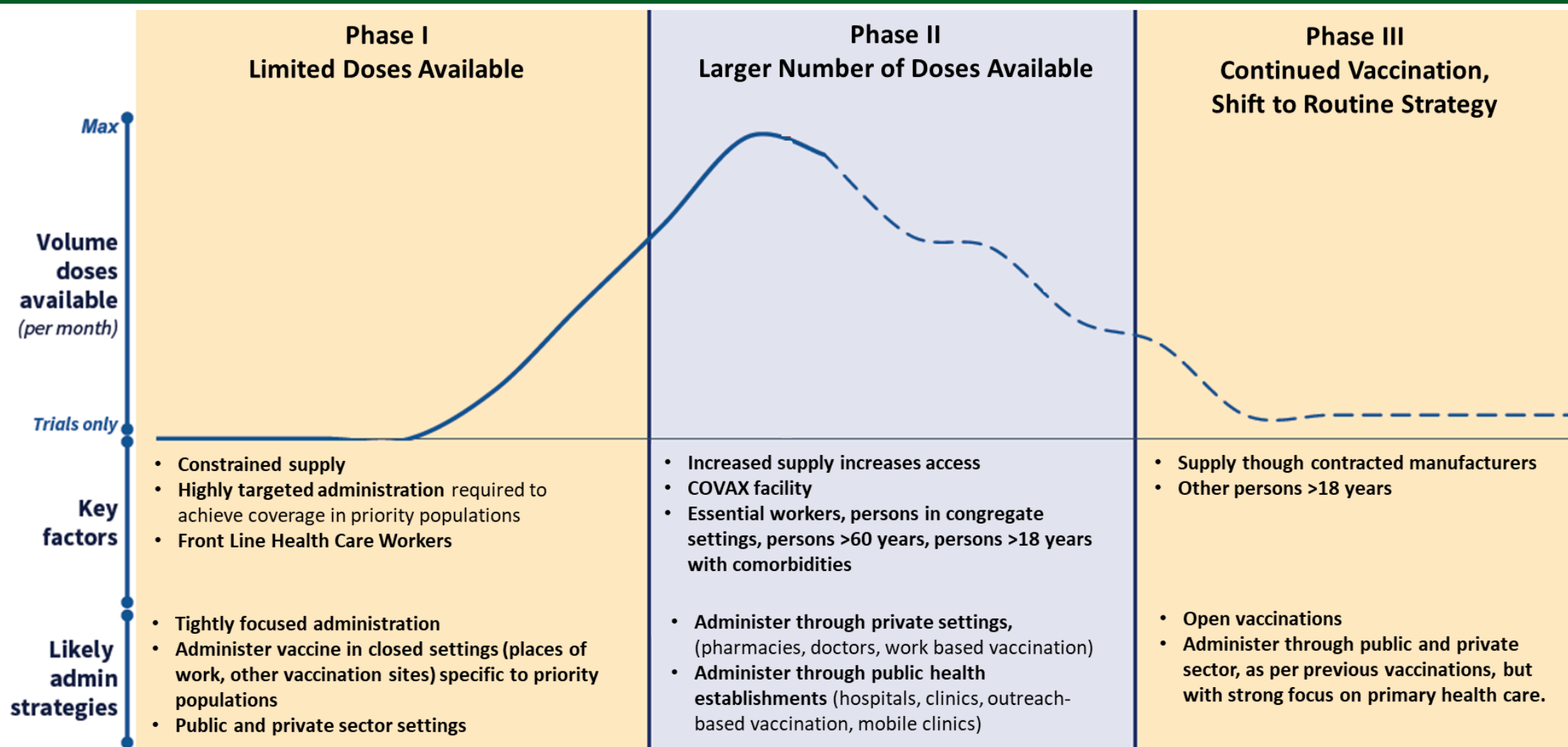
Vaccines will not be available for everyone immediately, and a **prioritization system** will have to be applied.

Guided by the MAC on Vaccines.

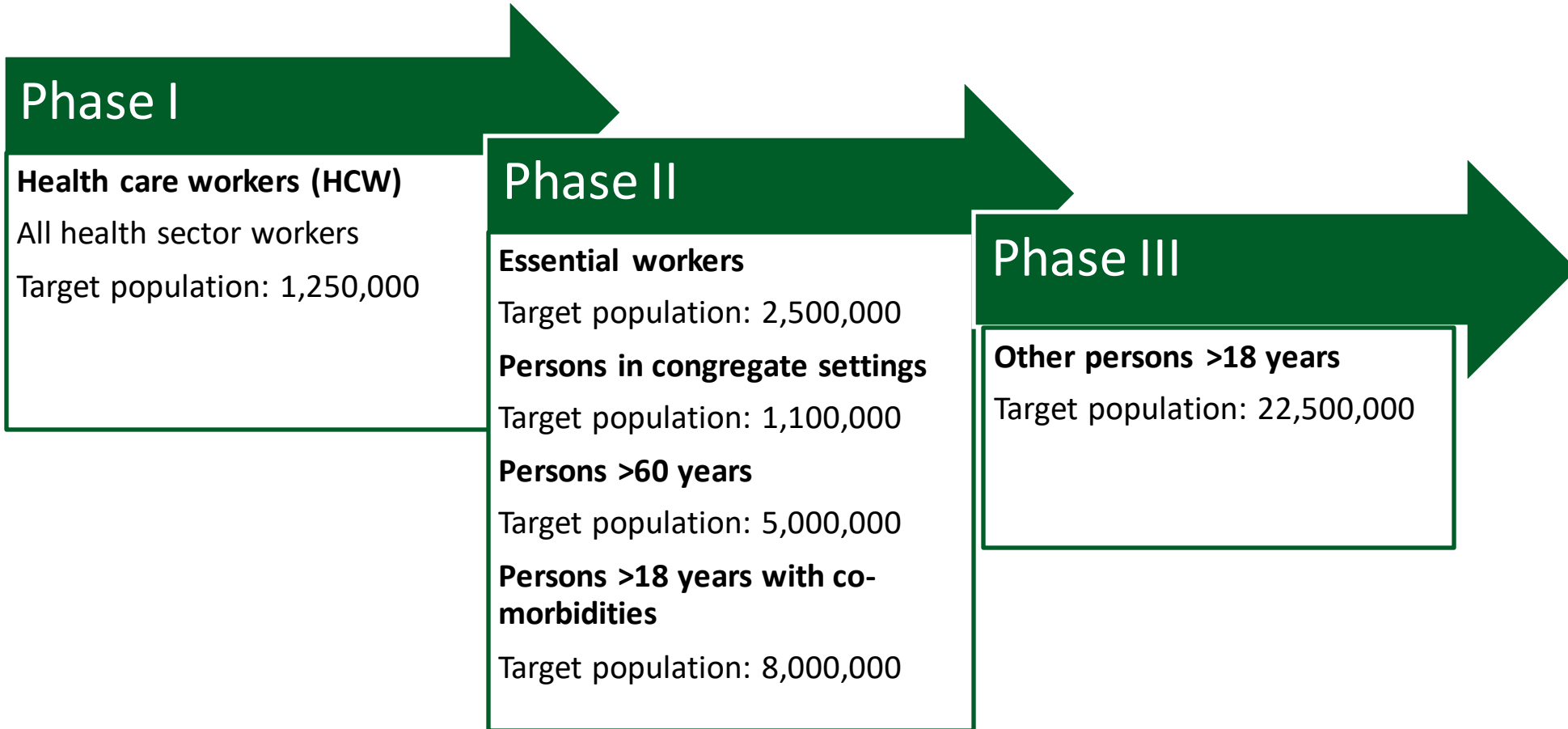
Priority will be given to those:

- in roles considered to be **essential for societal functioning**;
- **most at risk** of infection and serious outcomes, for example, those over 60 years, those with comorbid conditions and those living in overcrowded settings,
- **most at risk of transmitting** SARS-CoV-2 to others.
- Decisions will also be based on efficacy of a vaccine for a specific population and on the doses available.

PHASED APPROACH BASED ON AVAILABILITY OF VACCINES



PHASED APPROACH FOR VACCINE INTRODUCTION



health

Department:
Health
REPUBLIC OF SOUTH AFRICA



PHASE I: HEALTH CARE WORKERS

- Health workers will be divided into risk categories with those in the priority categories receiving vaccination first.
- These risk categories are linked to the PPE Risk Categories, and reflect risk of risk of contracting Covid-19.

Category 1	Those conducting aerosol-generating procedures i.e. intubation, ventilation, taking Covid-19 specimens
Category 2	Those in direct contact with known or suspected Covid-19 patients
Category 3	Those in contact with patients (who are not known or suspected to have Covid-19)
Category 4	Those not in contact with patients

IDENTIFICATION AND PRIORITISATION OF TARGET POPULATION

Phase	Priority Group	Definition
II	Essential workers	Teachers, police officers, military, miners and workers in the security, retail food, funeral, banking and essential municipal and home affairs, border control and port health services.
	Persons in congregate settings	Persons in prison, detention centres, shelters and care homes. In addition, people working in the hospitality and tourism industry, and educational institutions are also at risk.
	Persons 60 years and older	-
	Persons older than 18 years with co-morbidities	Persons living with HIV, tuberculosis, diabetics, chronic lung disease, cardiovascular disease, renal disease, obesity, etc



UNRESOLVED ISSUES- MAC STILL WORKING ON THESE

Should pregnant women and children be vaccinated?

- Safety and efficacy of vaccines in children and pregnant women are currently not known.
- Vaccination is currently not recommended.
- Guidance will be updated as new evidence becomes available.

Should people who are known to have had Covid-19 infection be vaccinated?

- This includes persons who tested positive during their illness, as well as patients with positive antibody tests
- Best practice currently remains unclear
- Guidance is awaited from WHO and the Vaccine MAC

VACCINE SELECTION

- **Six key considerations in the selection of Covid-19 vaccines** for the South African setting:
 - **Vaccine Supply and sustainability** (i.e. supplier capacity)
 - **Safety, efficacy and immunogenicity** (reactogenicity, short and long term safety and efficacy, population groups studied as well as humoral vs. cellular immunogenicity)
 - **Ease of use** and schedule (including number of doses required)
 - Stability during **storage and distribution**
 - **Cost**
 - **SAHPRA approval** (full licensure or emergency use authorisation)

VACCINE OVERVIEW

VACCINES AT ADVANCED STAGES OF STUDY

Pfizer /BioNTech Vaccine

- **Regulatory approval:** EUA by FDA and a number of other countries (with bilateral deals) including WHO PQ. SAHPRA filing not completed.
- Efficacy: > 90% protection – 2 dose vaccine
- Rollout has happened in a few countries already where bilateral deals had occurred very early on.
- Storage: minus 70 deg C which is a limitation for SA as we have limited commercial ultra low cold chain storage in SA only suitable for small volume.

AstraZeneca/ University of Oxford Vaccine

- **Regulatory Approval:** Product has been approved as EUA by MHRA and DCGI
- Efficacy: 70% efficacy – 2 dose vaccine
- AZ has outsourced the production of the vaccine to various sites globally. The main vaccine producer globally is Serum institute of India (SII).
- This vaccine is likely to be widely used globally due to temp stability and volumes that AZ committed to produce through partners and their tiered price model
- Storage: 2 – 8 deg C

VACCINE OVERVIEW

Johnson and Johnson

- **Regulatory Approval:** Product has not been approved as yet – dossier submission expected in January
- Single dose product that is much easier for administration and more cost effective
- Product will also be manufactured at the Aspen facility on a contract basis
- **Status of engagements:**

Moderna

Regulatory approval: EUA by FDA

Two dose vaccine

Storage: minus 20 deg C

Sinopharm vaccine (China)

Approved in China, Egypt and a number of middle East countries incl UAE (79% efficacy)

REGULATORY MATTERS

- Vaccines must be **safe and effective** - Medicines and Related Substances Act 101 of 1965
- South African Health Products Regulatory Authority (SAHPRA) put several measures in place to ensure expedited regulatory approvals of safe vaccines. These measures include:
 - **Agreements with EMA, USFDA, MHRA, and TGA** – SAHPRA will thus be able to use their assessment reports as a reliance approach to reduce timelines in the evaluation process.
 - **SAHPRA has adopted a priority review approach for all COVID-19 vaccine applications** since the onset of the pandemic. Thus, the process of expedited review will apply to any COVID-19 vaccine registration application.
 - **Flexibility in relation to labelling and packaging requirements** effected in terms of effect Section 36 of the Medicines Act (exemption of medicines by the Minister of Health from certain requirements of the Medicines Act) for specific labelling and packaging requirement exemptions.
 - **Authorisation in terms of Section 21** of the Medicines Act where manufacturers have not submitted dossiers to SAHPRA

Note: NDoH has been meeting with vaccine manufacturers who are being encouraged to submit dossiers to SAHPRA

REGULATORY MATTERS

- **Covid-19 vaccine products based on new technology**, never licensed before – therefore transparent and effective vaccine safety surveillance and causality assessment systems to continuously monitor vaccine safety
- **Active and passive surveillance (SAHPRA)**
 - Active – adaptation of Yellow Vaccine Card System
 - Passive – MedSafety app for electronic reporting of all AEFI (including causality assessment) from both the public and private sector
- **Use electronic reporting system** to collect core variables required for AEFI causality assessment, for assessment by the **National Immunisation Safety Expert Committee (NISEC)**
- Availability of **reporting tools and coordinated reporting lines** (Case reporting and case investigation forms)
- **Surveillance to enable data sharing** (NDOH, WHO, SAHPRA)

DISTRIBUTION



Vaccines for Health Care Workers

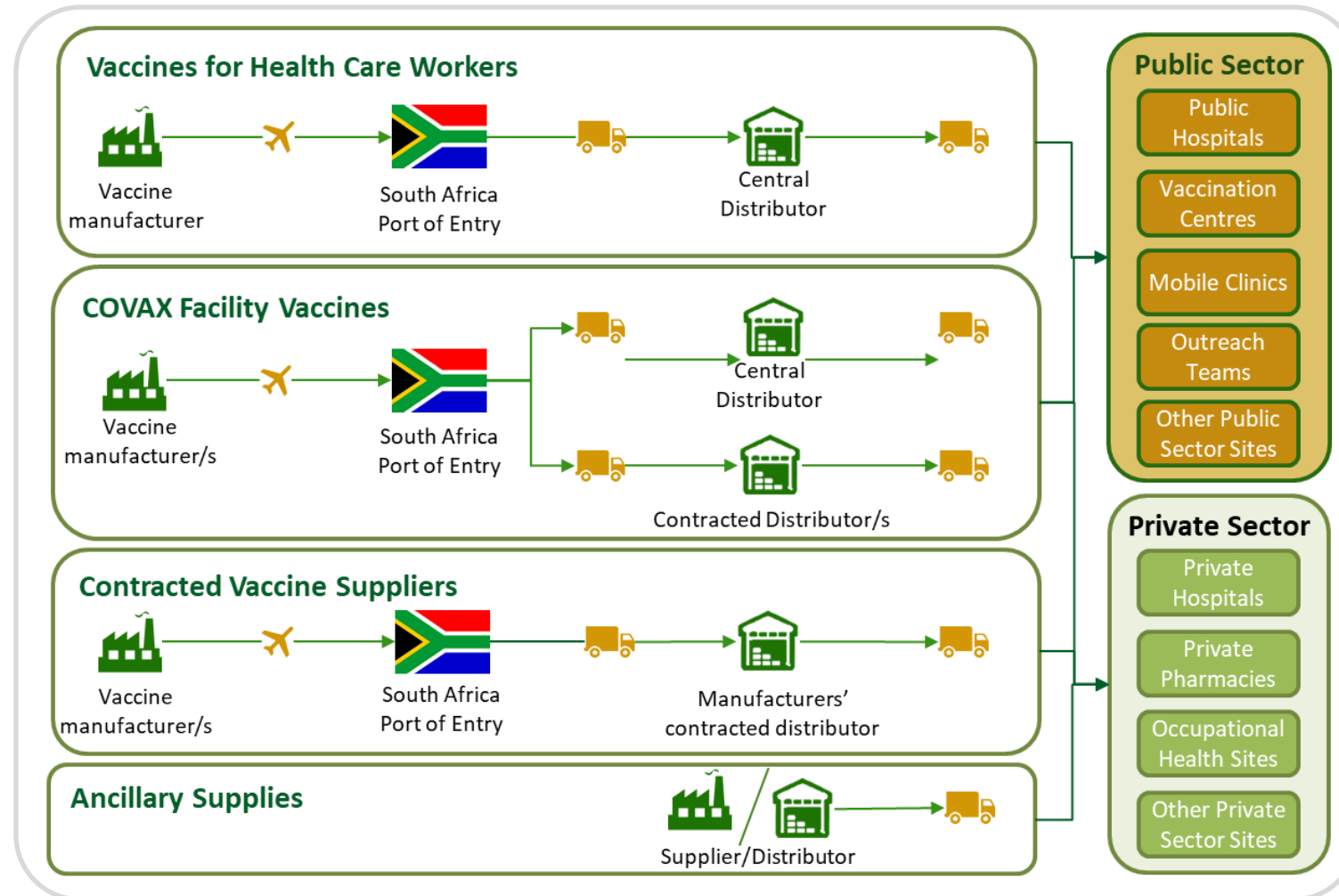
- Outsourced storage and distribution
 - Central Distributor

COVAX Facility Vaccine

- Outsourced storage and distribution
 - Central Distributor
 - Contracted distributors (competitive bid)

Contracted Vaccine Suppliers

- Supplier will be responsible for storage and distribution with direct delivery to identified vaccine administration sites



DISTRIBUTION: SECURITY



- **Distribution security**
 - Vehicle tracking and monitoring (central distributor / contract distributors)
- **Safety and security at administration sites**
 - Security deployment and presence
- **Track and traceability** of vaccines using **barcode scanning**
- **Safe and secure disposal** of all vaccine packaging and vials
- **Data verification** of volumes distributed vs volumes administered
- Monitoring of **vaccine wastage**



PHASE 1: HEALTH CARE WORKER SERVICE DELIVERY PLATFORM

Work-based vaccination programme:
Public and private hospitals



- Most suitable for hospital linked HCWs

Outreach work-based vaccination programme:
Mobile teams move from facility to facility



- Most suitable for HCWs in PHC, CHC and private medical centres

Vaccination Centres: Remote or facility-based
vaccination centres e.g. pharmacies or other settings



- Suitable for independent HCWs

ADMINISTRATION: PHASE 1



Work-based vaccination programme: Hospitals

Model: Hospital vaccinates all staff working in the hospital (both public and private hospitals)

- Provided through occupational health centres or services (where these exist)
- Vaccine delivered to the hospital – stored in hospital pharmacy in accordance with vaccine presentation
- Vaccination team from the facility provides on-site vaccination service to all health workers in the hospital.

Vaccinators may be occupational health workers or other staff members.

- Virtual training sent in advance to hospital vaccination team
- Resources: Vaccinators (available), ancillary supplies, emergency equipment, waste disposal

ADMINISTRATION



Work-based vaccination programme: Outreach teams

Model: Outreach teams vaccinate health workers in smaller health facilities (Hub and Spoke Model)

- Vaccine distributed to hospital for collection daily – stored in accordance with vaccine presentation
- Mobile clinics/teams move from facility to facility vaccinating eligible health care workers - health facilities include PHC facilities, CHCs and private medical centres
- Teams coordinated by District Health Services
- Identified by district occupational health and safety committee
- Virtual training provided to outreach teams
- Resources: Human resources (retired nurses, partners), ancillary supplies, waste management



Vaccination centres

Model: Additional sites for vaccination created (may be linked to a health facility/pharmacy or be standalone)

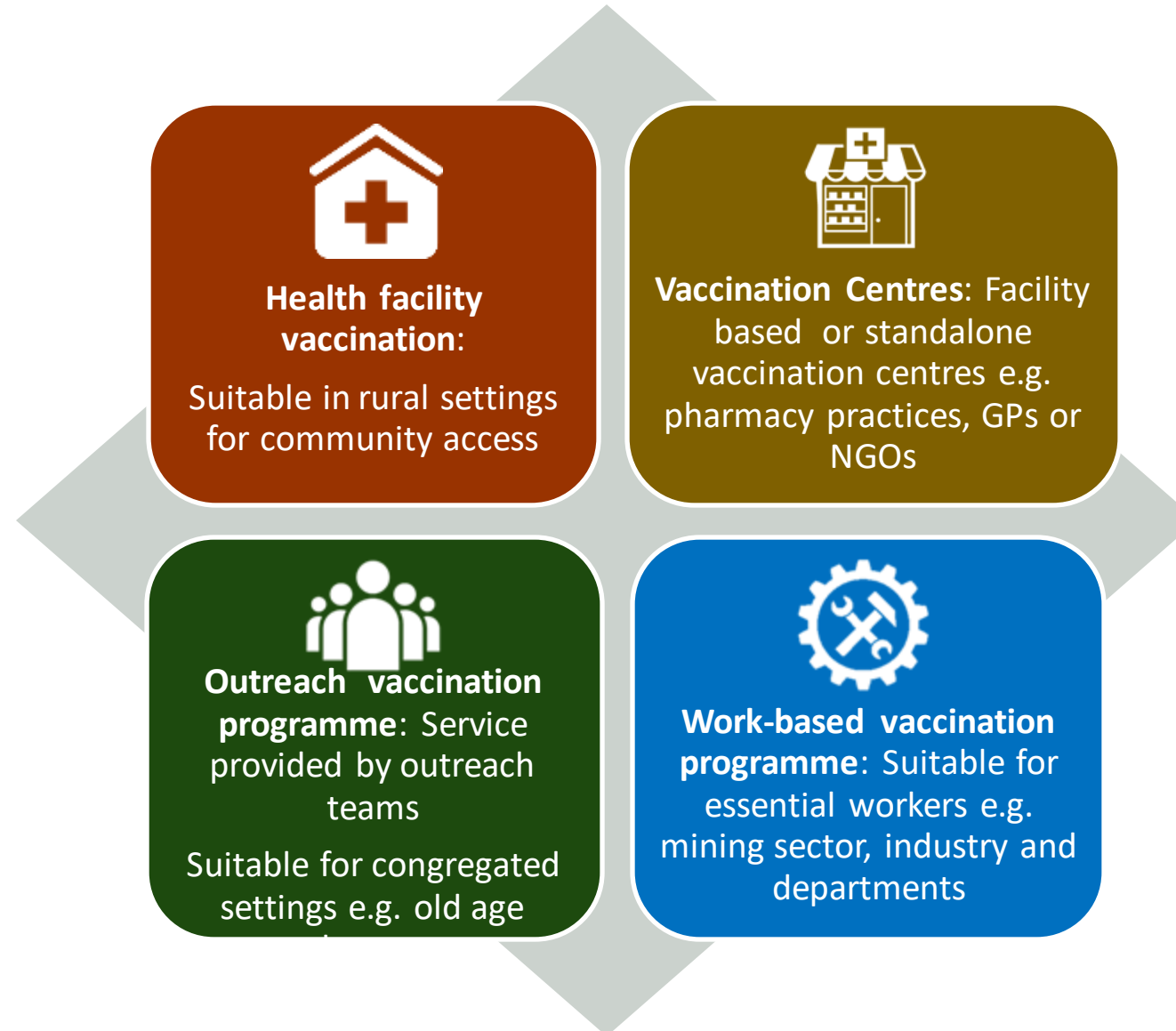
- Suitable for reaching eligible health workers not working in a health facility with occupational health services
- Vaccination centres set up per district.
- Distribution to vaccination point – stored in accordance with vaccine presentation
- Good option for urban settings, and reaching independent HCWs
- Will require participation of private and public sector to share the burden of service delivery
- Short term contract nurses to provide vaccination for the required period
- Other resources: ancillary supplies, emergency supplies, waste disposal

How will health workers access the vaccine?



Place of work		Vaccinated at:	Responsibility:
Health workers employed in hospitals	All health workers	At their hospital	Occupational health services Hospital services
Health workers working in smaller health facilities	All health workers CHWs linked to health facilities	At workplace	Occupational health services District Health Services
Health workers not linked to a facility	EMS staff Independent practitioners CHWs not linked to a facility Traditional healers Administrative staff	At Vaccination Centre	Co-ordinated by District Health Services May involve private and public sector providers

PHASE 2 AND 3: HIGH RISK PRIORITY GROUPS AND GENERAL PUBLIC SERVICE DELIVERY PLATFORMS



health

Department:
Health
REPUBLIC OF SOUTH AFRICA



PHASE 2 and 3 DELIVERY PLATFORMS

- Need to balance vaccine roll-out with ongoing provision of essential services
- Health facilities and outreach teams will shift to providing services to other target groups
- Vaccination centres will play a larger role, so additional sites will be established.
 - Pharmacies (independent or pharmacy groups)
 - Mass vaccination centres in urban centres
 - Individuals
 - Groups e.g. essential workers
 - Other settings – community halls, churches, schools
- Registration and accreditation of non-facility sites process will be in place

RESOURCE REQUIREMENTS

Vaccinators

- 40 million people over 12-month period (two doses)
- 316 000 vaccinations per day
- Each vaccinator can vaccinate 50 people per day
- Approximately 6300 full-time vaccinators
- Additional vaccinators may be recruited from, amongst others:
 - Clinical associates
 - Post-Community service nurses and doctors
 - Contract nurses (already part of the HPV vaccination campaign)
 - Final year medical and nursing students
 - Other cadres (may require changes to scope of practice)
 - Other

Managers

- All provinces advised to appoint a full-time, dedicated cold chain manager
- Supervisors/Accreditors



ADMINISTRATION: Safety, effectiveness, uptake, second dose

- Perceived vaccine safety essential component of acceptability of the vaccine
- Vaccine confidence increase through transparent and effective vaccine safety surveillance and causality assessment
- Use electronic reporting system to collect core variables required for AEFI causality assessment
- SAHPRA to implement Yellow Vaccine Card System – to be adapted for RSA for active surveillance
- SAHPRA to implement MedSafety app for electronic reporting of all AEFI for passive surveillance
- Ensure availability of reporting tools and reporting lines which facilitate causality assessment of cases from the private and public sector (Case reporting and case investigation forms)
- Surveillance to enable data sharing (NDOH, WHO, SAHPRA)

AEFI surveillance for Covid vaccine to be finalized and vaccinators trained



Communication

- Targeted Stakeholder engagements with a clear roll out plan:
 - Community Leadership (Political leaders, traditional leaders, religious leaders
 - media
 - unions
 - Civil society

Ongoing updates on the progress of the programme



Training and supervision

- Develop training material – virtual and in person where allowed
- Develop training plan
- Develop supervision, criteria and tools
- Develop vaccination field guide
- Ensure availability of IEC material

Post introduction evaluation will be conducted

DATA FOR VACCINE MANAGEMENT AND SURVEILLANCE

- Data needed for monitoring vaccine **uptake and coverage, prioritization, planning, safety monitoring and vaccine effectiveness studies.**
- To meet anticipated needs of stakeholders, **electronic vaccination data system (EVDS)** is in the process of being developed.
- EVDS will **leverage off existing systems** which are currently deployed and implemented at scale.
- **EVDS must support collection and provision of the following information**
 - **Patient information** (including demographics, number of doses, etc.)
 - **Health establishment** where service is accessible (name and type, e.g. clinic)
 - **Vaccine administered** (manufacturer, batch number, etc.)
 - **Safety information** as part of a pharmacovigilance plan (Adverse Events Following Immunization – AEFI)
 - **A record of vaccination issued to individuals where appropriate and required**



EVD Requirements – Functionality

- Pre-registration of HCWs during Phase 1, other recipients during Phase 2 in order to receive vaccination appointment.
- Prepopulated with existing databases (Persal, Health Professional Councils, HPRS (includes SASSA database)).
- Consent form (for vaccination, to use personal data, to use location data).
- Vaccinators must be able to see whether it is an individual's first or second dose and which vaccine has been administered. (Dose alerts - vaccine dependent)
- Link to NHLS / NICD to determine effectiveness of vaccine i.e. if patient later tests positive
- Include Adverse events following immunisation (AEFI) monitoring
- Data sharing with SAHPRA apps e.g. Yellow Vaccine Safety Card (Active surveillance) and MedSafety app (Passive surveillance)
- Send reminders or notifications for subsequent doses including date and facility
- Recipients can use app as proof of vaccination.



National Data Dashboard

- A national public data dashboard that will show numbers vaccinated daily will be developed and this will be updated daily (the elements of this dashboard will be finalized soon)

Reports:

- Number of doses administered per vaccine per location per reporting period
- Vaccine coverage in target population
- Vaccine refusal rate and reason
- For vaccines requiring a second dose a schedule of the number of doses required per day/week and per vaccine.
- A list of non-adherent patients for follow up – track and trace functionality

ROLES AND RESPONSIBILITIES: National Department of Health

- Finalise and implement financing model
- Establish a National Co-ordinating Structure with clear reporting lines
- Vaccine procurement (and distribution to identified vaccination sites)
- Work with SAHPRA and other stakeholders to address regulatory issues
- Development of electronic information system
- Development and distribution of key documents including guidelines and training materials
 - Guidance regarding procurement of ancillary supplies will be sent during 2nd week of January
- In collaboration with provincial Departments of Health:
 - Finalise national implementation plan
 - Develop a Communication strategy and plan
 - Support implementation
- Private sector buy-in and collaboration (including system for accreditation of private sector sites)

ROLES AND RESPONSIBILITIES: Provincial Departments of Health

- Establish a Covid-19 Vaccine Task Team with similar functions as national team.
- The task team will be responsible for:
 - Development and implementation of a provincial plan based on the national implementation plan. The plan must identify target population, service points, availability of vaccinators, transport and supplies.
 - Ensuring that HCWs register on the electronic system.
 - Procurement of needles/syringes/waste disposal
 - Liaise with national DOH regarding distribution of vaccines
 - Monitoring of coverage
 - Stakeholder liaison including liaison with the private sector

INDICATIVE TOTAL BUDGET FOR VACCINATION

- Total budget [billions 2020/21 ZAR]

10%	30%	50%	67%	100% of population
2.4	9.0	15.6	20.6	30.0

- Assumptions based on the following distribution into vaccine options:

5% Moderna (R536 per dose)

5% Pfizer (R299)

70% AstraZeneca (R54)

20% J+J (R153)

Additional cost of distribution, administration (PHC, outreach, mass vaccination, community pharmacy), training, M+E, demand creation and No-fault immunisation compensation scheme between R270 and R64

Excludes Solidarity Fund donation and recoupment of fees from medical aids

THANK YOU



health

Department:
Health
REPUBLIC OF SOUTH AFRICA

