Vaccine Rollout Framework and Plan: Immediate Actions

08 January 2020
FRAMEWORK FOR VACCINE IMPLEMENTATION

Governance Structures

Communication, stakeholder guidance, training
(provinces, districts, public sector and private sector)

Prioritizing population
Allocation of vaccine
Distribution (Supplier to Point of Use)
Administration
Safety, Effectiveness, Uptake, Second dose

Supply – Monitor, Track Report
Vaccine Uptake, Use, and Coverage
Adverse Events Following Immunization (AEFI)
Vaccine Effectiveness Monitoring and Reporting

Regulatory Considerations

Budget & Finance

Adapted: From The Factory To The Frontlines: US Department of Health and Human Services)
NATIONAL VACCINE CO-ORDINATING COMMITTEE

• Includes the relevant stakeholders and expertise to co-ordinate the rollout of the various phases of the vaccine delivery.
• Task: Lead national vaccine scale-up in close co-ordination with provincial health departments and the private healthcare sector.
• Provinces will have to establish structures at district level to manage the mass rollout
• Private health sector coordinating committee which includes medical schemes, private hospital association, pharmacies groups, general practitioner and specialist associations, nursing association, allied health professions associations, logistics providers, pharmaceutical manufacturers, employers and business associations.
• Frequency of meetings: Twice weekly
• Secretariat: NDOH with support from CHAI
NATIONAL VACCINE CO-ORDINATING COMMITTEE

- Established at the NDOH by DG 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
    - Delivery platforms: Dr Aquina Thulare
    - 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
IMMEDIATE TASK

- Plan and lead Phase 1 of vaccine roll-out
PHASED APPROACH FOR VACCINE INTRODUCTION

Phase I
Health care workers (HCW)
All health sector workers
Target population: 1,250,000

Phase II
Essential workers
Target population: 2,500,000
Persons in congregate settings
Target population: 1,100,000
Persons >60 years
Target population: 5,000,000
Persons >18 years with co-morbidities
Target population: 8,000,000

Phase III
Other persons >18 years
Target population: 22,500,000
### Identification and Prioritisation of Target Population

<table>
<thead>
<tr>
<th>Phase</th>
<th>Priority Group</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>II</td>
<td>Essential workers</td>
<td>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.</td>
</tr>
<tr>
<td></td>
<td>Persons in congregate settings</td>
<td>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.</td>
</tr>
<tr>
<td></td>
<td>Persons 60 years and older</td>
<td>-</td>
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<tr>
<td></td>
<td>Persons older than 18 years with co-morbidities</td>
<td>Persons living with HIV, tuberculosis, diabetics, chronic lung disease, cardiovascular disease, renal disease, obesity, etc.</td>
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### PHASED APPROACH BASED ON AVAILABILITY OF VACCINES

<table>
<thead>
<tr>
<th>Phase I</th>
<th>Phase II</th>
<th>Phase III</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limited Doses Available</td>
<td>Larger Number of Doses Available</td>
<td>Continued Vaccination, Shift to Routine Strategy</td>
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</table>

#### Key Factors

- **Volume doses available (per month)**
- **Trials only**

#### Likely Admin Strategies

- **Phase I**
  - Constrained supply
  - Highly targeted administration required to achieve coverage in priority populations
  - Front Line Health Care Workers

- **Phase II**
  - Increased supply increases access
  - COVAX facility
  - Essential workers, persons in congregate settings, persons >60 years, persons >18 years with comorbidities
  - Administer through private settings, (pharmacies, doctors, work based vaccination)
  - Administer through public health establishments (hospitals, clinics, outreach-based vaccination, mobile clinics)

- **Phase III**
  - Supply through contracted manufacturers
  - Other persons >18 years
  - Open vaccinations
  - Administer through public and private sector, as per previous vaccinations, but with strong focus on primary health care.

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Adapted: From the factory to the frontlines: US Department of Health and Human Services  
Illustrative and not to scale.
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 contracting Covid-19.

<table>
<thead>
<tr>
<th>Category 1</th>
<th>Those conducting aerosol-generating procedures i.e. intubation, ventilation, taking Covid-19 specimens</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category 2</td>
<td>Those in direct contact with known or suspected Covid-19 patients</td>
</tr>
<tr>
<td>Category 3</td>
<td>Those in contact with patients (who are not known or suspected to have Covid-19)</td>
</tr>
<tr>
<td>Category 4</td>
<td>Those not in contact with patients</td>
</tr>
</tbody>
</table>
UNRESOLVED ISSUES

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)
• Governed by
  o Public Finance Management Act 1 of 1999
  o Medicines and Related Substances Act 101 of 1965
• Emergency procurement procedures for vaccine, service providers in logistics, training, communication, HR where no contracts are available.
• Request deviation from NT for deviation from normal supply chain processes for vaccines
• SAHPRA registration/approval required
• 1.5 million doses of AstraZeneca vaccine procured. Expected to arrive in SA in late January.
  o Two dose schedule (28 days apart)
  o 10 dose vials – no diluent
  o Standard cold chain (2 – 8 degrees)
**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
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
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?**

<table>
<thead>
<tr>
<th>Place of work</th>
<th>Vaccinated at:</th>
<th>Responsibility:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health workers employed in hospitals</td>
<td>All health workers</td>
<td>At their hospital</td>
</tr>
<tr>
<td>Health workers working in smaller health facilities</td>
<td>All health workers CHWs linked to health facilities</td>
<td>At workplace</td>
</tr>
<tr>
<td>Health workers not linked to a facility</td>
<td>EMS staff Independent practitioners CHWs not linked to a facility Traditional healers Administrative staff</td>
<td>At Vaccination Centre</td>
</tr>
</tbody>
</table>

- Occupational health services
- Hospital services
- 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 facility vaccination**: Suitable in rural settings for community access
- **Vaccination Centres**: Facility based or standalone vaccination centres e.g. pharmacy practices, GPs or NGOs
- **Outreach vaccination programme**: Service provided by outreach teams Suitable for congregated settings e.g. old age
- **Work-based vaccination programme**: Suitable for essential workers e.g. mining sector, industry and departments
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
  o Guidance regarding procurement of ancillary supplies will be sent during 2\textsuperscript{nd} 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)
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
URGENT TASKS

- *Financing Model*
- *Regulatory Issues*
- Data collection and management system
- Procurement, distribution and storage of vaccine and ancillary supplies
- Vaccination Readiness
  - Target population – HCWs by facility and category
  - Mobilisation of Human Resources from the public and private sectors
  - Development and submission of Provincial micro-plans

Other important tasks
- Development of a communication strategy
- Training of vaccinators (materials, plans, etc)
- Private sector liaison
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.
### Electronic Vaccination Data (EVD) – Master Data

**Recipients**
- Identification number (RSA ID, Passport number, PERSAL No., HPRS)
- Medical aid name and number if applicable
- Classification – HCW or Non-HCW
- HCW – drop down list of type
  - Professional body
  - Professional registration number
  - Health establishment where working

**Vaccine**
- Name
- GTIN
- Storage requirements
- Number of doses
- Frequency of doses

**Facilities – vaccine administration sites**
- Name
- GPS Coordinates
- Facility type

**DATA COLLECTION AND MANAGEMENT**

**Facilities** – vaccine administration sites
- Name
- GPS Coordinates
- Facility type
DATA COLLECTION AND MANAGEMENT

Tasks
• Definition of critical functionality of a Covid Vaccine Information System
• Mobilisation of public and private sector capacity to deliver this system
• Plan with clear timelines for implementing this system within one month

Working Group
• Ms Milani Wolmarans
• Ms Thulile Zondi
• HASA
• Private sector

Output:
Plan for functional information system by February 2021
Vaccines for Health Care Workers

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

COVAX Facility Vaccine

- Outsourced storage and distribution
  - Central Distributor

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
  - SANDF 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
Ancillary supplies include:

Items for administration
- Syringes
- Needles
- Cotton swabs
- Sharps containers
- PPE for administration (gloves, aprons, medical masks)
- (Diluent if not provided by the manufacturer)

Emergency treatment (anaphylaxis) as per EML guidelines
- Syringes
- Needles
- Adrenaline

Waste management
- Sharps containers
- Vial disposal containers
PROCUREMENT, DISTRIBUTION AND STORAGE OF VACCINE AND ANCILLARY SUPPLIES

Tasks

• Agreement and finalization of distribution plan
• Ensure availability of ancillary supplies
• Address related to security during transport and storage
• Develop standard operating procedures for effective vaccine management
• Develop a checklist that should be applied in facilities where vaccine will be stored
• Ensure stock visibility

Working Group

• Ms Marione Schonfeldt
• Mr Rob Botha
• Provincial HOPs and cold chain managers
• National and provincial SCMs
• Private sector representatives
VACCINATION READINESS

- Target population
- Vaccination sites
- Vaccinators
- Safety – monitoring of Adverse Events Following Immunisation
- Linked to supplies, distribution and storage
- Assessed through a Vaccine Readiness Checklist – must be completed (electronically) before a facility or other site will receive vaccine
VACCINATION READINESS: WHO SHOULD BE VACCINATED?

**Task**

- Provinces have been requested to submit numbers of health care workers per facility (based on PERSAL)
- Need to identify the number of health workers in private and independent practice

**Working Group**

- Mr Victor Khanyile
- Provincial HR managers
- Private sector

**Output:**

Number of health workers per facility in each district
VACCINATION READINESS: WHO WILL VACCINATE?

Task

- Identification of sufficient vaccinators per district
  - Occupational health practitioners
  - Other facility staff
  - Partners
  - Private sector (GPs, Pharmacists)
  - Other cadres - ?EMS

Working Group

- Lead: Dr Thulare
VACCINE READINESS: PROVINCIAL MICRO-PLANS

- Governance and management at provincial, district and facility level
- Target population – numbers by category, facility
- Vaccination sites: Mix between public and private, hospital/PHC/other sites
- Vaccinators (numbers, training, supervision)
- Hours of operation/Throughput, monitoring of adverse events, recall for second dose
- Procurement and distribution of vaccine and ancillary supplies
- Management and storage of vaccine
- Data collection and management
- *Demand creation and communication*

**Responsibility:**
- Provincial HODs and District Managers
- Dr Aquina Thulare, Mr Victor Khanyile, Mr Rams Morewane
WAY FORWARD

• Task Teams to convene and provide input at next meeting (Wednesday, 13th January 2021).
• Provincial plans required to inform national demand and distribution plans
  o Development of HCW beneficiary register
  o Ongoing identification of HCWs
  o National plan and template will be sent out early next week
  o ? Sharing of plans from other countries, provinces
• National tasks
  • Financing model
  • Procurement of Vaccine
  • Guidelines and training materials
  • Communication strategy
• Thank you