Vaccinations Programme

COVID-19 Vaccination Programme Update

Deep Dive

12 November 2020

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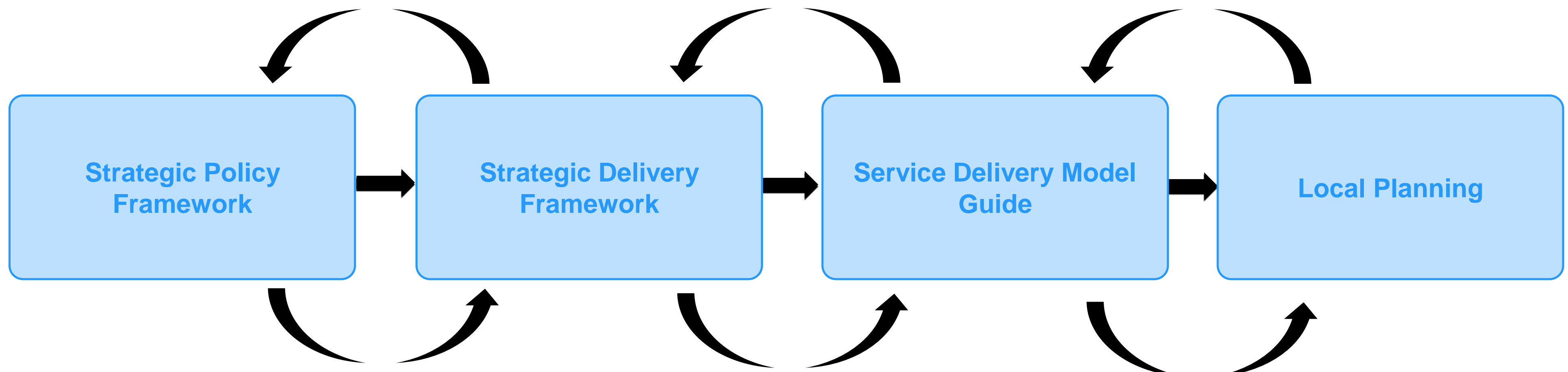
Purpose

To provide a detailed examination of the national Covid-19 vaccination plan:

- The vaccines in development and likely characteristics of the ones due for earliest release.
- Development of a Strategic Policy Framework,
- Interim advice on priority cohorts
- Development of a National Delivery Framework, and a Service Delivery Manual – the 'tramlines' to guide local delivery
- Delivery channels, and Wave 1 challenges
- Delivery channels – Waves 2 & 3
- Logistics, Digital infrastructure and Workforce
- Communications

Policy Objectives:

- The most vulnerable people are protected by a vaccination programme that prevents transmission to them and/or minimises severity of illness.
- People would be able to resume and continue as close to normal life as possible.



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Covid-19 Vaccination Prioritisation

Priority cohorts based on JCVI - Updated interim advice on priority groups for COVID-19 vaccination (subject to change)

JCVI Advice
(Subject to change):

- older adults in Care Homes and Care Home workers
- frontline health and social care workers and aged 80 years and over
- those at increased risk of serious disease and death from C-19 infection stratified according to age and risk factors

Scottish Government Policy Alignment

including:
- Vaccinations policy
- Workforce considerations
- Shielding
- Analytical Evidence

Vaccine Availability

- Successful candidate(s) characteristics
- Manufacture and delivery

Challenges:
- JCVI advice may change and could come just before delivery
- Vaccine availability may be unpredictable
- Vaccine characteristics and interaction with seasonal flu/other immunisations
- Vaccines with greater efficacy become available 'in-flight'

PRIORITISATION POLICY

OPERATIONAL DELIVERY

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Citizens & sequencing

	Wave 1 – Low level of supply		Wave 2 – Scaling-up		Wave 3 – Mass Vaccination
	December 2020	January 2021	February 2021	March 2021	Pending further supply data
1. Care homes residents & staff	Older adults' resident in a care home and care home workers				
2. Over 65 years and living at home	All those 80 years of age and over		All those 75 years of age and over All those 70 years of age and over All those 65 years of age and over		
3. Health and social care workers	Health & social care workers				
4. At risk individuals under 65 years of age			High-risk adults under 65 years of age Moderate-risk adults under 65 years of age		
5. Between 50 and 65 years of age					All those 60 years of age and over All those 55 years of age and over All those 50 years of age and over
6. Rest of the population					Rest of the population (priority to be determined)

This is an extract from the JCVI - Updated interim advice on priority groups for COVID-19 vaccination. This advice has been released to help boards to plan for the COVID-19 vaccination programme. The view on prioritisation will be refined when further information is available especially Phase 3 clinical trials information.

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A national programme, locally delivered

Vaccines and vaccinations are not new. There are however characteristics of the Covid-19 vaccination programme that will pose significant pressure:

- New vaccines with particular storage and transportation considerations;
- The volume of vaccinations to be administered is unprecedented;
- New digital scheduling and vaccination systems to be rolled out;
- A new national advice and booking line to be introduced; and
- With heightened public interest comes the need to report regularly on operational performance.

We have used the Institute of Medicine's six dimensions of quality to guide our design: *Person-centred, Safe, Effective, Efficient, Equitable, Timely and Local.*

Nationally developed

- Policy direction
- Strategic Policy Framework
- Strategic Delivery Framework
- Service Delivery Guide
- National trajectory model
- National workforce model
- National vaccine procurement and logistics
- National advice and booking service*
- National vaccination record system*
- National performance dashboard*

Locally delivered

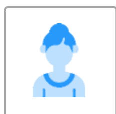
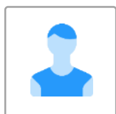
- Local delivery plans (developed consistently and within the Strategic Delivery Framework)
- Local recruitment and staffing
- Local operations management and delivery (delivered consistently in line with the Service Delivery Manual)
- Partnership working to link to Local Authority assets and resources.
- Reporting returns (to feed into national performance dashboard)

- Lessons have been learned from the recent flu/extended flu campaign and have informed the "Tramlines" by which a national vaccination programme can be delivered with consistency.
- Balancing local person centered care (particularly for older or less mobile citizens) with vaccinating at scale for general population.
- NHS Boards will be responsible for the development and delivery of their local Covid-19 vaccination plans; recruitment; and operations of clinics within their board area.
- Formal request to be issued to COSLA leaders to support NHS Boards utilising public assets and resources (eg mobile libraries)
- We have set up a *Service Delivery Planning Forum* with representatives from all Health Boards to support planning and a consistent Once for Scotland approach.
- Delivery settings and operations to be developed within the boundaries of the *Service Delivery Framework* and the *Service Delivery Manual (*to avoid variation in the delivery of vaccinations)

*in development

Delivery channels for each cohort

WAVE 1

	Cohort	Primary Channel(s)	Person-Centred Alternative Channels
	Older adults' resident in a care home and care home workers	• Onsite delivery within care homes • Peer to peer vaccinations by care staff	
	Health and Social Care Workers	• Onsite peer-to-peer • Occupational Health clinics	
	Aged 80 and over living at home	• Primary Care • Roving vaccination Unit (rural/island)	• Home visit (Talent vaccine only) • Walk through / drive through clinic
	Aged 65 and over living at home	• Walk through clinic • Drive through clinic • Roving vaccination Unit (rural/island)	• Home visit* • Primary Care
	At risk adults under 65 years of age	• Walk through clinic • Drive through clinic • Roving vaccination Unit (rural/island)	• Home visit* • Primary Care
	Between 50 and 65 years of age	• Walk through clinic • Drive through clinic • Roving vaccination Unit (rural/island)	• Home visit* • Primary Care
	Under 55 adults	• Walk through clinic • Drive through clinic • Roving vaccination Unit (rural/island)	• Home visit* • Primary Care

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*Assumes vaccine candidates capable of transportation will be available over time

Wave 1 Delivery model with only [Redacted] available

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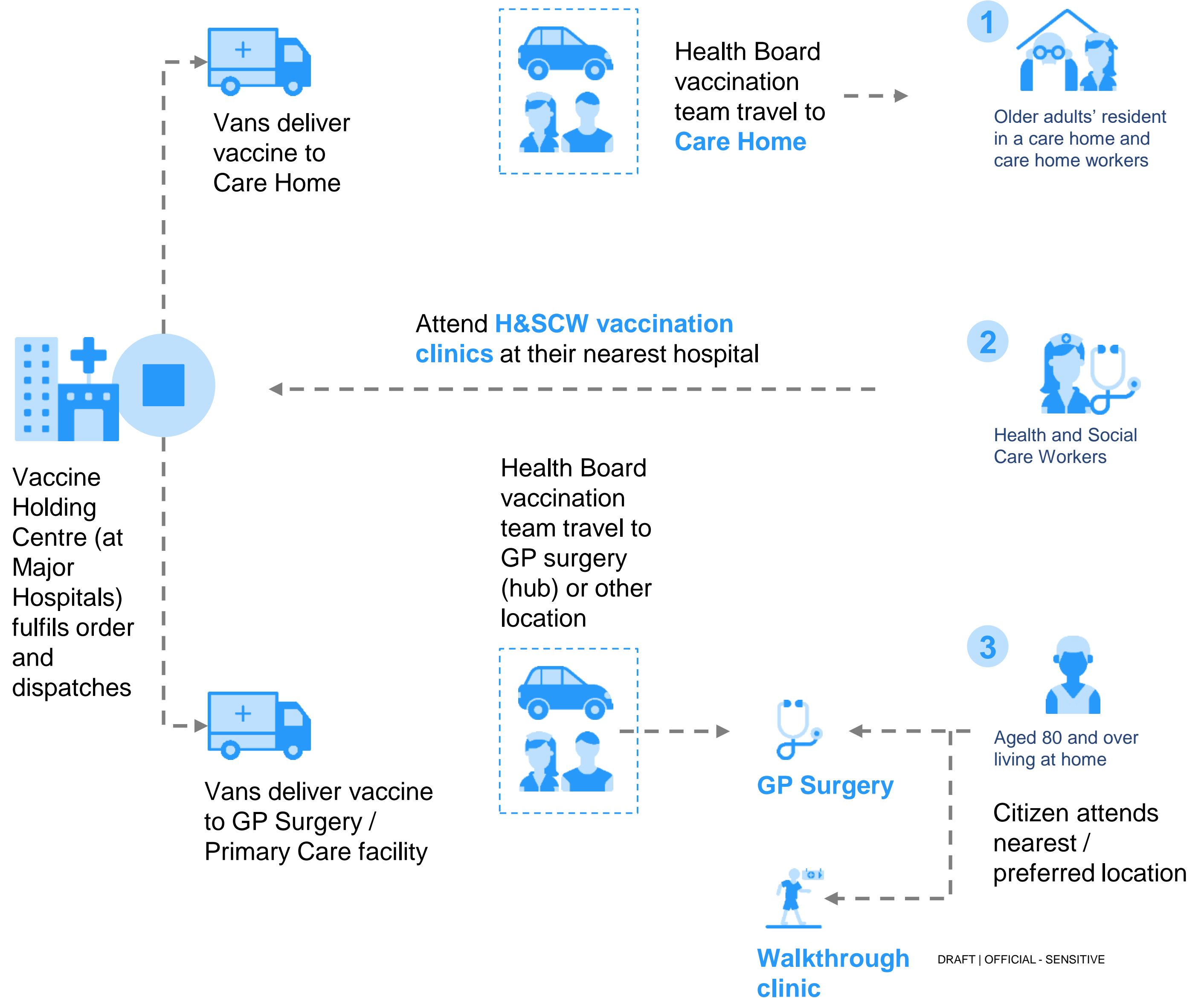

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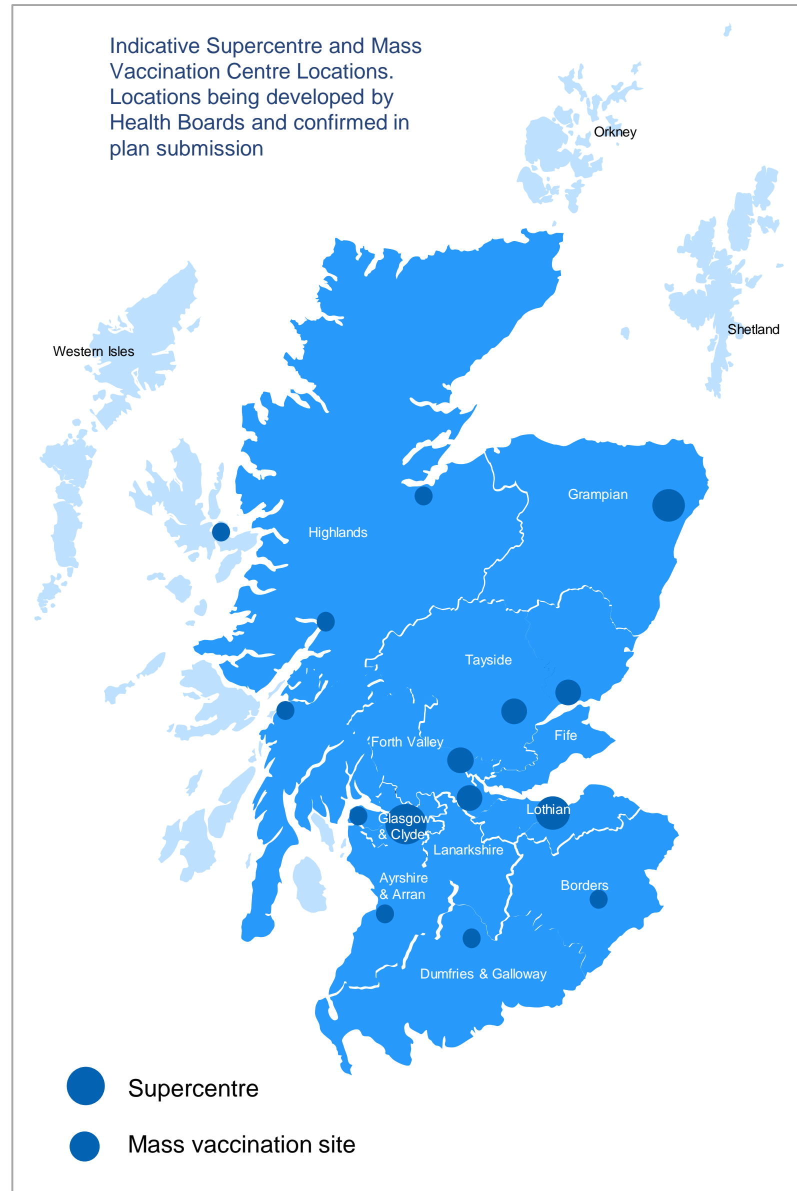
Waves 2 & 3 - Supercentres and Mass Vaccination Delivery Centres – for some (not all) cohorts

It is proposed that as part of the ongoing planning for Waves 2 and 3, a number of very large "Super Centres" be established in major cities together with a number of medium sized "Mass Vaccination Centres" in other key locations.

Presently, c.55% of the total population of Scotland live within the vicinity of 4 major city hubs: Edinburgh, Glasgow, Aberdeen and Dundee and therefore establishing one or more Super Centres in each of these major cities would enable more effective and efficient vaccination at scale.

It should be noted that these delivery settings will be targeted at some (but not all) cohorts.



Cohorts these settings will be most appropriate for

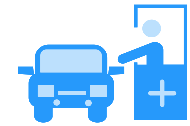
H&SC Workers

Between 50 and 65 years of age

Rest of the population (excluding under 18s)

Delivery Channels

Walk-through clinic


Drive-through clinic

Potential Population Numbers for Supercentres

~3m

Target Citizens

Benefits to citizens

Less wait time to be vaccinated due to increased efficiency

Freeing up other settings to address equality of care

Close to public transport road and car parking

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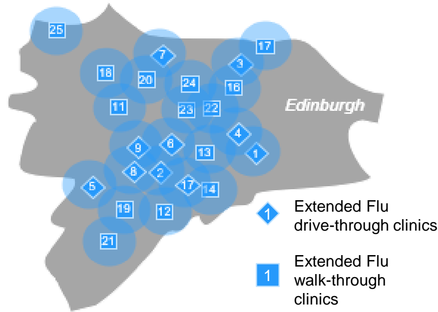
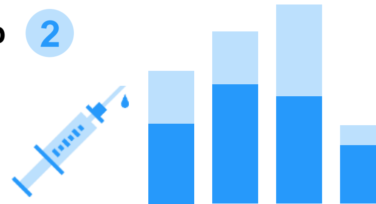
How the point of delivery logistics model is being developed

Step 1



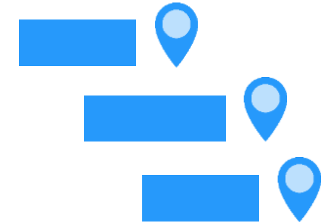
Identify number of, type and location of delivery settings per board

Step 2



Projections of volume of doses to be administered

Step 3

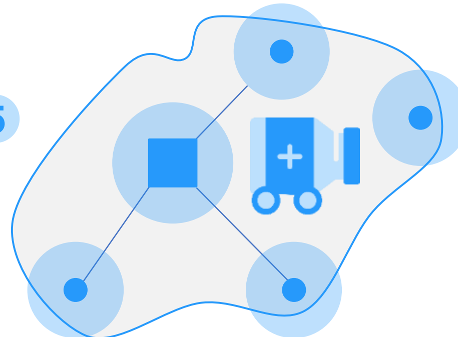


Delivery schedules including list of locations, in order; start – end dates; volumes

Step 4

Place linked order for vaccine and accompanying PPE and consumables

Step 5



Vaccine Holding Centre fulfils order and dispatches

Step 6

Secure receipt and storage

Step 7

Waste material collection and incineration

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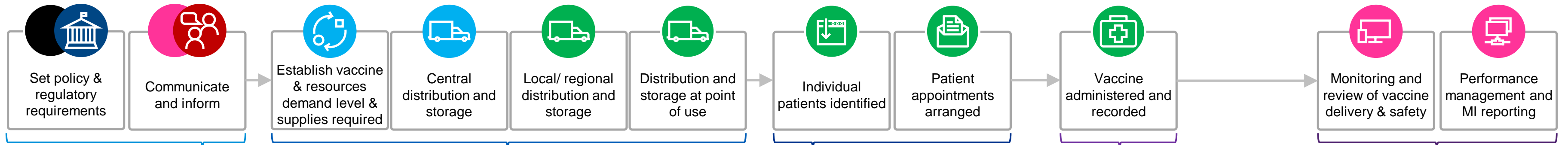
Digital Rollout to Support Vaccinations: Summary



	PLAN	SUPPLY & DISTR.	ENGAGE	VACCINATE	MONITOR
DATA	Board level demand models	Central stock, orders and shipments	Cohorts, Service Delivery Locations, Appointments	Patients, Vaccinators, Service Delivery Locations	Performance, Safety, Surveillance
WAVE 1					
Logistics Management		Inventory Management	Improved Scheduling	Wastage Management	Advanced Visibility
Clinical Repository & Scheduling			Cohort Identification	Immunisation History	Patient Demographics
Vaccine Delivery Management			Appointment Workflow	Immunisation Record	Safety Data
Analytics and Reporting		Central Stock View	Cohort Analysis	Adverse Reactions	Patient level analytics and reporting
WAVE 2+					
Appointment Management	Actuals-based Models		Reactive Appointment Management	Streamlined Vaccination	Appointment Analysis

National Strategic Solution (aligns to other major digital healthcare initiatives)

National Covid19 Solution (can be extended to support other vaccination programmess)

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Assessing Workforce Requirements: Current Modelling

Defining Workforce Requirements:
- Volume is contingent directly on pace of delivery (i.e. target number of vaccinations to be delivered x vaccination productivity assumptions.)
- In wave 1, running to Jan 31st, target population for vaccination is c. 1 million (each requiring 2 doses).

Current Productivity Assumptions:
- Current assumed productivity for a vaccinator is c. 330 productive minutes per whole-time shift; the estimated productive minutes per shift and time for vaccine administration does not materially change by delivery pathway.
- The assumed Covid productivity rate is c. 7 minutes per vaccine.

Identifying WTE Workforce

- Flu vaccinations teams are expected to remain in place to move onto Covid-19 vaccination.
- At peak, Flu vaccinations teams can carry out c. 45,000 vaccinations per day, with a pool of c. 1,200 WTE staff – including vaccinators and support staff.
- On the basis of anticipated supply of Covid and continuing to deliver the flu vaccine, minimum weekly WTE staffing requirements fluctuate between 1,218 and 1,768 over the 8 week period (based on flu productivity assumptions).

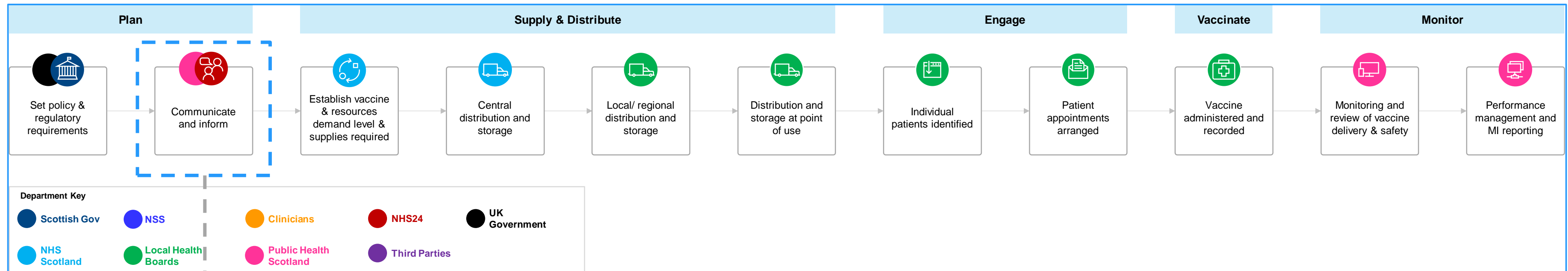
Board Planning Requirement:
- Boards have been asked to minimally double their vaccinations workforce, using a combination of redeployment and recruitment. We are undertaking an assessment of this from plans received on 11 November.

How will staffing be comprised in Wave 1:
- Given working assumptions about delivery, this will be a *mixed economy* of gradually released vaccinators from the flu vaccine, with additional workforce coming from the following sources:
- Returners/retiree pools – comms going to GMC/NMC this week.
- Additional registrants and HCSW from board planning.
- Deprioritised services for redeployment on Covid Vaccination.
- Additionality provided by independent contractors through agreements being established to provide a per vaccination/sessional rate.
- Short term re-deployment will be essential to deliver required training to ensure staff are available from 02 Dec go-live date.

Training for Vaccine Delivery:
- All vaccinators will require Covid-19 specific training (c. 0.5 days), this will not be available until later in November following changes to Green Book.The training assumptions are being tested.
- Boards are expected to be delivering extant vaccinations training to the identified workforce – i.e. they should be ‘vaccinator ready’.

Building a Sustainable Workforce –Wave 2 and Beyond
- The current target Wave 2 target population is c. 1.3 million individuals, to be delivered in February and March.
- This would require further growth in minimum workforce.
- **Phased recruitment of non-registered staff (healthcare support workers) will be needed, sequentially throughout first-half of 2021 – to provide net-additionality and return staff to other services.**
- **This would need to be based on a max 70/30 split – so a permanent vaccination service will need to retain a minimum 30% registered (clinical workforce).**

Communications and Information to Support Service Delivery



FVCV Programme Service Delivery Map

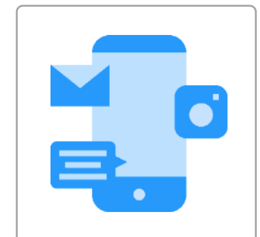
FVCV Patient Cohorts

Good communication and information will support good service delivery. At the heart of a positive citizen experience will be the appropriate setting of expectations and clear, unambiguous information personalised to their own circumstances.

Marketing and information materials and channels will be required to provide information about the vaccine properties as well as provide explicit instructions on where and when to go for a vaccine.

Messaging will need to be timed to coincide with the planned scheduling (and volumes) of cohorts (e.g. Care Home Residents and Staff, and Health & Social Care Workers in low volumes initially)

Public messaging



Anti-vax / vaccine hesitancy

Information on vaccine

Coordinated helplines / online information

Executive Summary

4.45m
Target Citizens

6.7m
Vaccinations (assuming 75% Uptake**)

Priority cohorts based on JCVI - Updated interim advice on priority groups for COVID-19 vaccination (subject to change)

1. Older adults' resident in a care home and care home workers
2. Health and Social Care Workers
3. Aged 80+ living at home (Then descending age ranges covering 65-79 year olds)
4. At risk adults under 65 years of age (priority based on risk level)
5. Between 50 and 65 years of age
6. Rest of the population (excluding under 18s)

Limited initial level of supply will require the programme to develop a phased approach to target specific cohorts

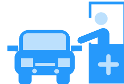
- 2 months
- ~1m people vaccinated*
- Priority cohort 1 and 2 and 80+ year olds

- 2 months
- ~1.3m people vaccinated*
- Priority cohort 3 and 4

- 3 months
- ~2.2m people vaccinated*
- Priority cohort 5 and 6

Delivery channels recommendation for mass vaccinations (excluding care homes settings and occupational health settings.)

Walk Through Clinic


Drive Through Clinic

Roving/Onsite Clinic (Rural / Island)

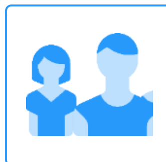
Preferred delivery channels for mass vaccinations

At home visit

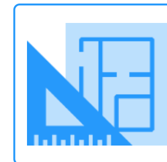
Other sites

Potential additional person-centred delivery channels for outliers

Next steps



- COVID-19 delivery plans within each Health Board submitted 11/11/20 to identify areas of additional support



- Supply Chain requirements
- Service Delivery Manual (V1 released)
- COVID-19 delivery modelling (under-development)
- Workforce requirements & model (under-development)
- Digital infrastructure (under-development)

** These numbers are purely based on supply level and do not take into account operational constraints.*
*** Based on seasonal flu uptake*

Vaccinations Programme

Appendix

Programme risks

Risk Headline	Risk Summary	Mitigation	Reference
Uptake: Low take-up of vaccine diminishes impact	• Low take-up of vaccine from population e.g. due to concern about safety • As a knock on effect, low take-up of HSCW risks losing advocacy from this group to the wider population	• Proactive communications inc. repeating the same messages, avoiding repeating misinformation • Insight gathering is underway on HSCW cohort to inform comms	RIS002; RIS073
Workforce: Unable to have sufficient trained staff to keep pace with availability of vaccine	• Information needed to finalise training are coming late and therefore delay production of materials, and allow training to take place (the Green Book Chapter) • The more experienced staff whom would need less training are already deployed to flu vaccine	• Training material in development and using a range of approaches to fit different workforce experience levels • Engaging with LHBs on use of experienced staff in earlier stages • Workforce modelling and scheduling assumptions underway	RISO74
Digital: Requirement for workarounds to substitute for digital solutions being in place	• Quality of data (cohort identification) and ability to schedule and reschedule appointments are gaps in capability currently being developed • The workarounds if these systems are not available will delay reporting, impair the experience for the individual and increase workload	• Digital solution development is taking place and is prioritised against a 'minimum viable product' list of requirements • The pace of delivery is being monitored as part of the Critical Path, particularly for scheduling • Workaround options are being developed in parallel	R1S058; RIS057; RIS066; RIS076
Timing: dependency on the JCVI announcement within our Critical Path and so risk of delay to planned go-live date	• The JCVI announcement and subsequent publication of the relevant Green Book Chapter are key dependencies on workstreams including training materials, communication and information sharing and so as this moves it shifts our planning go live date	• The 'Critical Path' reflects pre- and post- JCVI and Green Book Chapter activity and the programme is challenging itself on how much can be delivered ahead of this milestone • There is an LHB planning forum for LHB planners to engage with the ongoing picture as it develops	To be raised
Safety: Serious vaccine side effects emerge as we vaccinate more people	• Rare events emerge not identified during the clinical trials	• Clinical governance and procedures being developed including the ability to 'stop'	RIS035
Service Delivery Model: Ability to deliver vaccine to housebound individuals in the first wave	• Transportation and storage constraints of the Courageous vaccine will limit the ability to deliver person-centred care such as over 80s requiring a home visit	• Developing options for how to deliver to this sub group – note this could include requiring waiting for non-cold storage vaccines to be available	To be raised
Service Delivery Model: regulatory constraints will limit the workforce able to deliver the vaccine and put more pressure on LHBs	• The MHRC require a MIA licence for GPs and Care Workers to be able to deliver the vaccine • As only Health Boards have this licence, this restricts the ability to use GPs or peer-to-peer delivery models	• The backup option is to deploy LHB staff into the GP and care home settings to deliver the vaccines • Further options to be considered to overcome the regulatory restrictions so GPs and Care Workers can administer the vaccine	To be raised

Learning from Seasonal Flu Summary

Programme

- Co-ordination of communication and engagement with Boards to prevent duplication in effort and unnecessary confusion.
- Clear roles and Responsibilities from Programme and LHB
- Clear escalation and support processes

Service Delivery

- Clear and consistent scheduling processes
- Clear and consistent communications on delivery models
- Well communicated Patient Centred Delivery Models with alternatives available and in line with commitment to mass vaccination
- Clarity and simplicity of telephone helplines and booking
- Clarity on vaccine availability and delivery schedules

Policy

- Taking a 'Once for Scotland' approach with a clear national position; national principles and national delivery models.
- Ensuring that Boards have clear guidance on prioritisation and availability of resources.

Covid Programme Actions

- Once for Scotland Document Suite to include: Policy Framework; Delivery Framework; Delivery Manual and Comms Strategy
- Enhancing of draft Communications Strategy
- LHB Central Planning Hub with key Planning Milestones and links to logistics and delivery
- Programme Level Governance Document in development to include escalation procedures; roles and responsibilities and detail of processes such as central mailbox to be developed
- Develop of Digital Systems to include scheduling and point of care app

Constraints

- Emerging information from JCVI on vaccine characteristics, and planning and timing considerations associated with this
- Digital Capability able to be developed in time frame (Gold, Silver, Bronze Model and MVP in development)

Large Scale Delivery channel comparison with UK Government approach

Notwithstanding nomenclature, similar delivery channels have been developed independently of one another.

England	Scotland
A variety of **new delivery models** have been defined to describe how COVID-19 will be deployed	
• **Fixed site**: Large scale site that supports high-volume, high throughput in a fixed location for an extended period – e.g. sports venue, conference venues, airports Capacity per site: 520 – 2,600 per day	**Walk through clinics**: • "Super Centres" - large indoor locations in urban areas close to road and public transport network to support high volume, high throughput. • "Pop-ups" located in local communities (town halls, sport centres etc)
• **Mobile site**: Community site, vehicle or container that can be set up to support mid-scale vaccination for a temporary period – e.g. polling station, COVID-19 test centre portacabin, container Capacity per site: 520 per day	**Drive Through clinics** • Large outdoor locations close to road network to support high volume, high throughput.
• **Roving:** Vehicles that can deploy vaccinators, vaccine and supplies on an outreach basis, primarily to residential sites – e.g. St John's Ambulance, mobile units Capacity per team: 2 care homes per day; 0.4 detained estates per day; 11 housebound per day	**Roving Vaccination Units** • A range of vehicle types to deploy vaccinators and supplies. In rural areas, vaccination teams moving from town to town setting up temporary Pop Up clinics in temporary buildings; in other settings, teams of vaccinators conducting home visits. Scottish Ambulance Service possible provision.
• **NHS Trusts**: Delivery to NHS Trust Employees – supply routes direct to the Trusts Capacity: 10 mins per vaccination depending on site utilisation	**Operational Health clinics** • Vaccination within healthcare settings for health and social care workers

NHS England and NHS Improvement *Workforce & Training, Extended Flu and Covid-19 Vaccination Programme*, 4th September 2020.

Monitoring the delivery of the programme

What is this?
A (virtual) delivery unit to keep the finger on the pulse of live operations across the country. The VDU is there to provide national oversight and additional support (money, workforce, expertise) to help vaccinate at scale and to "load balance" where practicable between neighbouring Health Boards. (UK Government are developing a "Command Centre")

Why is this needed?
Recent operational issues with flu/extended flu have highlighted the need for a more considered approach covering operational performance, reporting, and the ability to rapidly respond to live issues

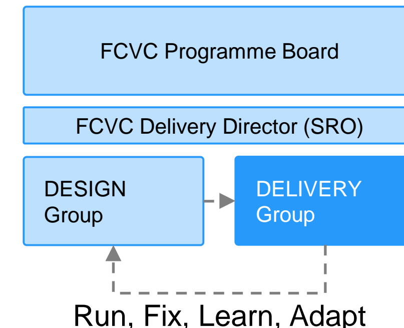
What would the VDU cover?

- Dedicated operational leadership and resources
- Comprehensive dashboard of live delivery across the country (and with the ability to view information at a regional and health board level)
- Named Liaison teams covering 3 x regions (North / West / East), and x14 Territorial Health Boards
- A media monitoring team gathering and reacting to (social) media

Issue Resolution Team
A key resource within the Vaccine Delivery Unit will be a ring-fenced team able to identify, prioritise, assign appropriate resources, and track live operational issues to conclusion.

Key roles
This would be an operational unit, **housed within NSS**, under a single named operational leader who in turn will report into the FVCV Senior Responsible Officer (Caroline Lamb) reporting direct to Scottish Ministers.

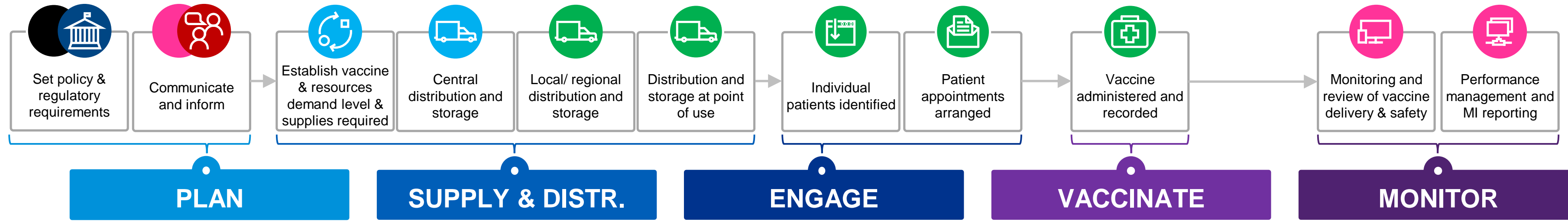
- Operational leader
- Service Delivery Lead
- Logistics Lead
- Workforce Lead
- Media Lead
- Digital & Data Lead
- 3 x Health Board Liaisons



Post go-live governance
The unit would comprise some individuals who have been part of the FVCV programme design process. Upon go-live, the nature of the FVCV Programme would change with design falling to the FVCV Design Group.

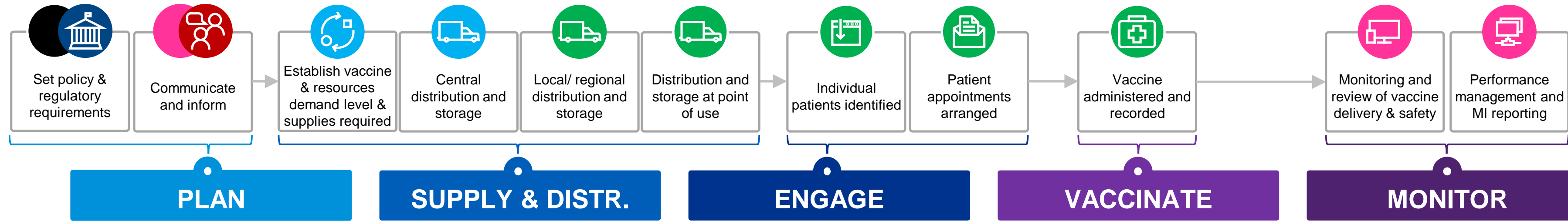
Recommendation
We believe that there is merit in implementing this concept to provide Minsters with visibility of operational performance and welcome views on this.

Digital Rollout to Support Vaccinations: Wave 1



		PLAN	SUPPLY & DISTR.	ENGAGE	VACCINATE	MONITOR
DATA		**Models developed to understand demand profile and delivery centre approach at health board level.**	**Orders and shipment tracking data via Movianto platforms**	**3 main cohorts – care homes, over 80s, H&SC staff. Range of clinical (GPIT) and non-clinical (HR/care home) data sources required**	**Immunisation record of vaccination available through TURAS app integrated with CDS.**	**Series of reports and dashboards primarily aimed at performance and surveillance**
TECHNOLOGY IMPLEMENTED	**GP / Acute Systems**	— n/a	— n/a	— GPIT used within cohort identification process	— n/a	— VAX data to GPIT (daily file) — VAX data to Acute via CDS
TECHNOLOGY IMPLEMENTED	**Logistics Management**	— n/a	— Separated order and shipment management solution	— n/a	— Stock levels at delivery locations managed manually	— Standalone Movianto based reports and some integration of data into reporting solution
TECHNOLOGY IMPLEMENTED / NATIONAL SOLUTION	**Clinical Store & Scheduling**	— n/a	— n/a	— Clinical Data Store (CDS) holding clinical and non-clinical cohort selection data and immunisation history	— Immunisation history held	— CDS provides immunisation data to reporting platform
TECHNOLOGY IMPLEMENTED / NATIONAL SOLUTION	**Appointment Management**	— n/a	— n/a	— Outbound initial appointment schedule for over 80s (non-care home) patients only	— Managed through TURAS app waiting list functionality	— Attendance reporting through TURAS generated data
TECHNOLOGY IMPLEMENTED / NATIONAL SOLUTION	**Vaccine Delivery**	— n/a	— n/a	— n/a	— TURAS app to match patient and vaccine data and record immunisation	— Consent, refusal and adverse reaction data available through TURAS generated data
TECHNOLOGY IMPLEMENTED / NATIONAL SOLUTION	**Analytics and Reporting**	— n/a	— Standalone Movianto reporting available	— n/a	— Immediate adverse reactions	— Vax take-up (board/national) — Adverse reactions — Stock — Surveillance data
USER IMPACT		— Planning developed at board level	— Demand and supply views not fully linked	— Over 80's non-care home patients notified by current methods	— App use mandated for all clinical settings to register patients at the point of vaccination with questions being asked to determine consent and eligibility	— Health Boards and national view of performance — PHS views for safety and surveillance

Digital Rollout to Support Vaccinations: Wave 2+



		PLAN	SUPPLY & DISTR.	ENGAGE	VACCINATE	MONITOR
DATA		**Models developed to understand demand profile and delivery centre approach at health board level.**	**Orders and shipment tracking data via Movianto platforms better stock level reporting to allow reactive ordering**	**Clinical risk groups age-descending through wave 2 and 3. Potential for other data requirements (schools / prisons etc) ServiceNow introduced for appointments**	**Immunisation record of vaccination available through TURAS app integrated with CDS. Potential for offline working to avoid manual workarounds**	**More information on appointment – attendance etc to help drive vaccine take-up.**
TECHNOLOGY IMPLEMENTED	**GP / Acute Systems**	— n/a	— n/a	— GPIT used within cohort identification process	— n/a	— VAX data to GPIT (daily file) — VAX data to Acute via CDS
TECHNOLOGY IMPLEMENTED	**Logistics Management**	— n/a	— Data provided by logistics platform to give forward view of stock at delivery locations	— Improved scheduling and appointment management through stock visibility	— Stock levels at delivery locations managed manually	— Advanced stock visibility — Wastage reporting provides more accurate stock picture
TECHNOLOGY IMPLEMENTED – NATIONAL SOLUTION	**Clinical Store & Scheduling**	— n/a	— Movianto Marketplace — Vaccine Holding Centre	— Clinical Data Store (CDS) holding clinical and non-clinical cohort selection data and immunisation history	— Immunisation history held in CDS and available in TURAS app	— CDS provides immunisation data to reporting platform
TECHNOLOGY IMPLEMENTED – NATIONAL SOLUTION	**Appointment Management**	— Take-up and vaccine delivery performance data to help optimise existing plans	— n/a	— Multi-channel citizen focused appointment booking across range of locations using ServiceNow	— TURAS waiting list functionality aligned to delivery centre calendars and preloaded with consent data	— Reactive reporting based on appointment profiles to provide marketing data to drive uptake
TECHNOLOGY IMPLEMENTED – NATIONAL SOLUTION	**Vaccine Delivery**	— n/a	— n/a	— Automatic creation and notification of secondary booking (call to action) using ServiceNow	— TURAS app to match patient and vaccine data and record immunisation	— Consent, refusal and adverse reaction data available through TURAS generated data
TECHNOLOGY IMPLEMENTED – NATIONAL SOLUTION	**Analytics and Reporting**	— n/a	— Standalone Movianto reporting available	— Missed appointment management (follow-up)	— Immediate adverse reactions	— Vax take-up (board/national) — Adverse reactions — Stock — Surveillance data
USER IMPACT		— Planning developed at board level — Planning optimised based on actuals	— Improved view of supply chain across delivery locations allowing load balance of supply	— Patients can choose their communication channel and way of booking appointments	— TURAS app can be pre-loaded with appointment data improving patient experience and increasing throughput	— Ability to respond to take-up data and maximise vaccine usage

[Redacted – Section 28(1) – Relations within the United Kingdom]

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