NHS Board Meeting
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Lanarkshire NHS Board
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SUBJECT: COVID VACCINE DELIVERY UPDATE

1. PURPOSE

The purpose of this paper is to provide Board Members with an update on the Covid vaccination programme.

For assurance	☒	For endorsement	☐	To note	☐

2. ROUTE TO THE BOARD

This paper has been prepared by Dr Mark Russell, Associate Medical Director, North Lanarkshire, Health & Social Care Partnership.

3. SUMMARY OF KEY ISSUES

The Covid-19 Vaccination Programme is a key priority for NHS Lanarkshire as it represents a substantial contribution to the national exit strategy from the Covid-19 pandemic.

Structure of programme
A tactical group was set up within the Covid-19 Command Structure in November 2020. The tactical group meets twice weekly for planning purposes with daily operational meetings. A number of operational and planning subgroups have been set up. The internal programme structure is outlined in Appendix 1.

The tactical group reports to the Strategic Command Group three times per week.

Responsibility for the delivery of the Covid-19 vaccination programme is the national FVCV (Flu Vaccine and Covid Vaccine) Programme and territorial Health Boards. The national programme is responsible for setting programme policy, pace, providing monitoring, reporting, vaccine supply control and clinical governance structures. It is also responsible providing scheduling and rebooking functions through the National Vaccination Scheduling System (NVSS), Online Appointment Management Service and national Covid Vaccination Helpline.

NHS Lanarkshire is responsible for providing physical infrastructure for vaccination delivery, workforce and linking with national scheduling systems.

Population priorities
The aim of the Covid-19 vaccination programme is to protect those who are at most risk from serious illness or death from COVID-19. The Joint Committee on Vaccination and Immunisation (JCVI) was therefore asked to consider the available epidemiological, microbiological and clinical information and provide advice to support the development of a vaccine strategy.

This advice prioritised vaccinations in this order:

Cohort	Description	Cohort Size	Wave
1	Residents in a care home for older adults and their carers	>10,000	1
2	All those 80 years of age and over Frontline health and social care workers	29,730 >27,000	
3	All those 75-79 years of age	23,078	2
4	all those 70-74 years of age Clinically extremely vulnerable individuals over 16 years of age	32,449 23,373	
5	All those 65-69 years of age	36,548	
6	All individuals aged 16 to 64 years in an at-risk group Unpaid Carers	>60,000 Unknown	
7	All those 60-64 years of age	43,003	3
8	All those 55-59 years of age	49,881	
9	All those 50-54 years of age	51,583	
10	All those 16 – 49	277,143	

The Scottish FVCV programme further split the programme into three waves. Wave 1 (the highest risk groups) has been completed with respect to first dose vaccinations, and has delivered vaccinations to Health and Social Care staff, Care Home residents and staff and over 80s via individual delivery channels. Second doses and a mop-up program is now under way.

Waves 2 and 3, which will be delivered from a relatively small number of mass vaccination hubs to optimise flow, efficient use of workforce and speed of delivery

It is important to note that populations above are indicative and refer to the total cohort concerned; they will sum to more than the total adult population of Lanarkshire (around 543,000) as many individuals will be present in multiple cohorts. There is significant movement into and out of the care home resident and staff cohort which makes establishing a precise cohort size challenging. Age related bands are taken from PHS mid 2019 estimates. Ongoing definitional work around cohort 6, and the self-identified nature of the carer's component renders it not possible to give a figure for this cohort at the time of writing. The starting estimated staff population for patient facing NHS/Council employed Health and Social Care workers was 13,500. Over 27,000 persons in this group have now been vaccinated due to the inclusion of independent contractors and the independent and voluntary sector, and it is therefore not possible to set an accurate cohort size.

Update on Progress

The Covid-19 vaccination programme began on 4 December 2020 with the authorisation for use by the Medicines and Healthcare Products Regulatory Agency (MHRA) of the Pfizer vaccination.

In line with national plans, NHS Lanarkshire delivered a programme of vaccination to care home residents and health and social care staff. This was initially based in care homes and three acute sites, and spread to a community staff programme with a base in each locality. Initially MHRA required the retention of half of vaccine stock for second doses; this restriction was lifted in late December but a requirement to monitor persons vaccinated for 15 minutes after vaccination due to 2 early

cases of anaphylaxis elsewhere in the UK remains in force. Furthermore, the delay to second dose was extended to 10-12 weeks (this also applies to AstraZeneca Vaccine). The handling characteristics of this vaccine (5-day period to use before disposal after removing from ultra-low temperature storage) require careful monitoring to minimize vaccine wastage.

Use of the AstraZeneca vaccination was subsequently authorized in late December. Over 80 vaccinations were delivered by GPs and locality teams where practices were unable to participate, though 89% of practices participated in either ambulant or domiciliary. GPs were asked to deliver this part of the programme to ensure person-centred delivery to this cohort, as both scheduling and access are more challenging in this age group than in younger cohorts. Furthermore, the National Vaccine Scheduling System was no scoped to be ready in time to appoint this cohort and the previous SIRS system was deemed by Scottish Government to be unfit for this purpose.

As noted above, difficulties in establishing cohort sizes make it challenging to calculate uptake. However, care home resident uptake is >90%, care home staff uptake >85% and uptake from national data sources for 75-79 and 70-74 year olds are 96% and 88% respectively. The figure from national data sources for over 80 uptake is >100%; this may reflect an increase in population size from mid 2019 estimates but there may also be an element of double entry between GPIT and the national vaccination management tool. Work is ongoing to deduplicate these data sources but local figures indicate uptake of >95% for those over 80.

Total numbers vaccinated are currently increasing by over 6000 per day; a verbal update of total current numbers will therefore be given to board members.

Current delivery model

The Covid-19 Vaccination programme is the largest vaccination programme ever delivered in Scotland – over 1 million vaccination doses will be delivered in NHS Lanarkshire alone over a few months. This sits within a context of unprecedented pressures within the NHS and the programme must be delivered as efficiently as possible to minimise its impact. In wave 2 and 3 it will therefore utilise a Mass Vaccination model of large clinics which can be operated in a Covid-safe manner.

Locations which are accessible by car, foot and public transport are being used.

Drive through vaccination was considered by the programme, but Lanarkshire lacks covered drive–through sites of sufficient site and with adequate road network access to make this an appealing solution.

Locations on 3 scales are being utilised:

- Surge site – this will provide non geographic capacity at peak delivery points within the programme
- Hubs – these centres will be based in Town Halls and sports centres and will be the core of the programme. This will operate 8am-8pm 7 days a week
- Satellites – these centres will be based in village halls and similar locations, and will provide access in rural locations. They operate the same hours but not continually – rather, they operate on a rotational basis with 4 satellite sites being open at any time.

This model has provided an easy transition from hyperlocal GP delivery (across over 100 sites) in the over 80 cohort and has generally been well received by local communities, who have valued being appointed to a local facility. Each facility was selected after an extensive options appraisal process, working with local authority partners. This prioritised adequate size, layout to facilitate the flow required by the multi stage National Service Delivery Model, good accessibility for those with mobility difficulties, and good public transport links and car parking. All eligible people were

appointed to their nearest site with capacity, and efforts were made to match each site's capacity with its catchment population.

Locations
The programme has set up the following locations; as above hub sites are continual use, satellite sites are used intermittently. However indicative weekly capacities for all sites are given if they were used continuously:

Surge Site	Ravenscraig	10836
Hub sites	Fernhill Community Centre	7224
	Whitehill Community Centre, Hamilton	7224
	Alastair McCoist Complex	10836
	Sir Matt Busby	7224
	Muirfield, Cumbernauld	7224
	Civic Theatre, Motherwell	10836
	Airdrie Town Hall, Airdrie	7224
	Wishaw Sports Centre, Wishaw	7224
	Time Capsule, Coatbridge	7224
Satellite Sites	Garrell Vale Community Centre, Kilsyth	3612
	Sir Ian Nicholson Sports Centre , Moodiesburn	7224
	Shotts Sports Centre	7224
	Biggar Municipal Hall, Biggar	3612
	Abington Community Hall	3612
	Carnwath Community Hall	3612
	Forth Sports Centre	3612
	The Fountain, Lesmahagow	3612
	Stonehouse Lifestyle Centre, Stonehouse	7224
	Coalburn Leisure Centre	3612
	St. Athanasius Community Hall, Carluke	3612
	St Nicholas Hall, Lanark	3612
Total Theoretical Weekly Capacity		137256

This is more than double the plausible weekly output at any point in the programme, so overall physical capacity will not be limiting factor. However, it should be noted that only a small number of these site can accommodate the observation requirements of the Pfizer vaccine.

Workforce
Significant recruitment has taken place to support the programme; by the end of February, Human Resources will have recruited over 600 individuals to a variety of roles on either a fixed term or bank basis.

The National Service Delivery Model splits the vaccination process into Registration, Clinical Assessments and Vaccination stages. Only the Clinical Assessment phase requires to be undertaken by registered staff. To this end, 160 whole time equivalent vaccinators have been recruited, along with a similar number of administrative and clinical support staff. Significant sessional input has been obtained from a wide range of independent contractors, and this input will increase over the next 2 weeks in parallel to an expected reduction in dependence on redeployed staff from acute and community.

Progress and trajectory
At the time of writing, over 150,000 covid vaccinations have been given in Lanarkshire - over 100,000 of them since the start of February.

Scheduling of cohorts 3-5 has now been completed in all sites and all vaccinations will be completed by the end of February. The first part of Cohort 6 - the modified flu list - has also now been scheduled into appointments before 7 March.

It is expected that output of first doses will significantly drop across March compared with February. This is due to the need to set aside supply for second doses and national vaccine supply reductions as a result of pauses in manufacturing to facilitate later greater volumes. However, this will be partially compensated for in overall output by the increasing number of second doses, initially through the staff and care homes programme. It is not currently possible to set a numerical trajectory beyond the end of the first week in March. It is currently expected that approximately 35,000 vaccinations will be undertaken in week beginning 22 February, and 25,000 in week beginning 1 March. However, this is dependent on no disruption to vaccine supply, as a just in time approach is now being taken and only minimal reserve stock is held locally.

It is expected that two further vaccines will be licenced over the coming months; earliest supplies are likely to be available in late April.

Communications

A significant number of MSP/MP and elected member enquiries have been received. These mostly pertain to challenges in securing or confirming appointments through the national rebooking service. A local team has been put in place to handle these enquiries. Stakeholder briefings took place in late January and further briefings will take place in early March.

Regular communications regarding progress of the programme have been issued via both traditional and social media.

4. STRATEGIC CONTEXT

This paper links to the following:

Corporate objectives	☒	AOP	☒	Government policy	☒
Government directive	☒	Statutory requirement	☒	AHF/local policy	☐
Urgent operational issue	☒	Other	☐		

5. CONTRIBUTION TO QUALITY

This paper aligns to the following elements of safety and quality improvement:

Three Quality Ambitions:

Safe	☒	Effective	☒	Person Centred	☒

Six Quality Outcomes:

Everyone has the best start in life and is able to live longer healthier lives; (Effective)	☒
People are able to live well at home or in the community; (Person Centred)	☒
Everyone has a positive experience of healthcare; (Person Centred)	☒

Staff feel supported and engaged; (Effective)	☒
Healthcare is safe for every person, every time; (Safe)	☒
Best use is made of available resources. (Effective)	☒

6. MEASURES FOR IMPROVEMENT

These are set out in the update in terms of projected activity and management of the programme.

7. FINANCIAL IMPLICATIONS

Not applicable**.**

8. RISK ASSESSMENT/MANAGEMENT IMPLICATIONS

There are a number of specific risks recorded in the corporate risk register, however there are four broad challenges which the programme will face over coming weeks:

- **Optimising clinical quality**
  The substantial number of active sites makes it challenging to ensure senior clinical leadership is present on each site. This manifests as a challenge in
    - creating a supportive environment for sessional workers and
    - issues with ensuring consistency of delivery, delivering uniform improvements to the delivery model and the maintenance of quality improvement cycles across those teams
- **Improving Efficiency**
  Larger sites have greater capacity for maximal efficiency; whole numbers of staff require to be sent to smaller sites regardless of calculated requirements, and these marginal losses accumulate to a substantial sum over 13 simultaneously running sites. Small sites also require to be relatively overstaffed to ensure they can handle throughput at all times; they often do not have the physical space to handle the queue which quickly builds with a few minutes of downtime or the loss of a single member of staff which would be easily absorbed on a larger site.
  It will also become less challenging to minimise the risk of vaccine waste, which decreases with higher patient flow through an operational site.
- **Best utilisation of whole system workforce**
  Although NHS Lanarkshire has recruited 160 whole time equivalent Band 3 vaccinators and moved to a split vaccinator/clinical assessor model to ensure sustainability, the current model necessarily has a higher than the nationally prescribed 70:30 unregistered to registered staff ratio, because of the minimum number of registered staff required for the safe operation of each site. While this is sustainable in the short term through the use of independent contractors, it may be challenging to reduce reliance on redeployed registered staff from other directorates, which may impact on the recovery of other services, as the availability of independent contractors in the medium to longer term is not guaranteed.
- **Interface with national systems**
  As second doses begin, the complexity of scheduling will increase substantially at a time of minimal vaccine supply and reserve. This will necessitate the development of sophisticated tools within the National Vaccine Scheduling System to ensure that appropriate volumes of patients are scheduled depending on vaccine availability and that appropriate volumes of each vaccine are available on each site on a daily basis

These risks are being addressed by:

- a reappraisal of the delivery model to look for ways in which it can be optimised to reduce risk to the delivery of both the programme and healthcare in Lanarkshire more broadly
- ongoing engagement with staff and independent contractors to ensure staff engagement and participation in the service remains high
- clear engagement with Scottish Government to ensure that the challenges present and assistance required from national programme are clearly understood

9. FIT WITH BEST VALUE CRITERIA

This paper aligns to the following best value criteria:

Vision and leadership	☒	Effective partnerships	☒	Governance and accountability	☒
Use of resources	☒	Performance Management	☐	Equality	☐
Sustainability Management	☒				

10. EQUALITY AND DIVERSITY IMPACT ASSESSMENT / FAIRER SCOTLAND DUTY

Not Applicable.

11. CONSULTATION AND ENGAGEMENT

Not Applicable.

12. ACTIONS FOR THE BOARD

Approve	☐	Endorse	☐	Identify further actions	☐
Note	☐	Accept the risk identified	☐	Ask for a further report	☐

The Board is asked to

1. Note the progress being made in relation to the Covid-19 vaccination programme; and

2. Derive assurance that vaccination uptake rates are high and that the risks inherent in the programme are being actively managed.

13. FURTHER INFORMATION

For further information about any aspect of this paper, please contact:

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Appendix 1 – Programme Structure