



COVID-19 Vaccination Programme Report

15/07/2022

1. Executive Summary

- The ongoing delivery of the Primary & first Booster programme to date has delivered a high overall uptake (full primary vaccination uptake of ca. 96.8% and first Booster Uptake of 77.8% in the adult population) placing Ireland amongst top performing EU countries.
- The second booster programme is progressing from its 22 April launch focussing on the vaccination of over 65s and already identified over 12s Immunocompromised with ca. 439.3k second Boosters administered to date representing ca. 58% of the eligible population. Clinical advice distributed to Hospital Groups on the identification of newly immunocompromised individuals has been circulated and this activity continues.
- All channels are being utilised for this second booster at this time (i.e. all eligible cohorts can be vaccinated through GPs, Pharmacies and CVCs). In line with observed and expected demand, and while transitioning to the sustainable operating model, a scaled-back operation in Vaccination Centres through the period June to September 2022 is now underway (with Pfizer as the primary vaccine in use for CVCs).
- Following the HSE press release on 16 June stating that the second booster will continue until the end of June and informing the public of the scale down of VCs, all closures have taken place over the months of May and June. 15 Vaccination Centres now remain operational along with the continuing involvement of many pharmacies ensuring access to vaccination over the summer for anyone who requires it.
- Communication efforts over the past week have focused on encouraging uptake of second boosters through local radio, press and social media campaigns. Direct engagement via HSE live to the Immunocompromised group, those becoming eligible after COVID infection and those eligible individuals for whom their corresponding GP are not participating in the programme continues. These efforts remain particularly important in the context of rising Covid infection rates and ahead of the planned Autumn vaccination programme for which a minimum interval of 4 months is expected.
- The HSE and DOH continue to monitor the position of stock levels and likely expiry and exploring options for the re-phasing of Pfizer and donations of Moderna. Whilst continuing uptake will utilise stock levels in June, there is still the likelihood of significant volumes of stock expiry.
- The long term sustainable operating model for COVID-19 vaccination will be primary care led with GPs and Pharmacies delivering a significant proportion of vaccines with the balance delivered directly through Vaccination Centres. This proximity led model will remove a potential barrier to high uptake and moves cost to “pay as you go” for the programme and is similar to the approach used nationally for seasonal influenza. Planning is ongoing for its delivery to enable an assumed Autumn programme (covering Governance, ICT, Workforce etc), subject to NIAC guidance which is a key dependency for further detailed planning.
- The DoH has confirmed sanction for the HSE to incur the following expenditure amounts in connection with the 2021 and 2022 Covid-19 vaccination programmes:
 - (i) additional gross expenditure of €94.4m on the 2021 Covid Vaccination Programme, bringing total expenditure on the 2021 Covid Vaccination Programme to €573.2m
 - (ii) expenditure up to an anticipated maximum of €557m for the purpose of funding the 2022 Covid vaccination Programme.
- A total of 33 WTE (Grade 8 and over group) have been approved for the sustainable operating model. Grade 7 and below groups as well as clinical roles considerations are underway to ascertain direction of the post.

- In addition to this sustainable operating model, an Emergency Plan is being developed which would be triggered in the case of an emergency scenario if/ when there is a need to suddenly and rapidly deliver a mass vaccination programme to the whole population within a short timeframe and requiring a whole Government response.

2. Second Booster Programme - (as of 14th July)

	Cumulative Booster 2 Uptake						
	65 - 69 yrs	70 - 74 yrs	75 - 79 yrs	80 - 84 yrs	85+ yrs	IC	Total
Population (1st Booster)	206 k	182 k	142 k	91 k	84 k	85 k	790 k
Eligible Population*	189 k	167 k	134 k	85 k	77 k	81 k	736 k
2nd Booster Administered	111.8 k	106.2 k	88.4 k	56.3 k	48.0 k	28.5 k	439 k
% Population with 2nd Booster	54.3%	58.4%	62.1%	61.7%	56.8%	33.5%	55.5%
% Eligible Population with 2nd Booster	59.1%	62.5%	66.1%	66.0%	61.9%	35.2%	59.6%

- On 5th April 2022, NIAC issued guidance reiterating the importance of completing the primary and first Booster course even after an infection (in unvaccinated people) or a breakthrough infection post vaccination and recommending the administration of a second Booster to over 65s and immunocompromised individuals. HSE will lead with the administration of the booster vaccine in LTRCF and those who are housebound.
- A steady decrease has been observed in booster 2 administrations, with average weekly administrations at ca. 24.5k over the last 4 weeks, from a height of 67k in w/c 9th May.
- Uptake of the second booster continues to remain low compared to previous programmes which saw these groups (over 65s and immunocompromised) achieve the highest uptake.

Future Sustainable Long Term Model for COVID-19 Vaccination

- The sustainable long term model for COVID-19 vaccination model will be primary care led with GPs and Pharmacies delivering a significant proportion of vaccines with the balance delivered directly through Vaccination Centres. This proximity led model will remove a potential barrier to high uptake and move the cost to “pay as you go” for the programme, similar to the approach used nationally for seasonal flu programmes.
- Immediate mobilisation is required in order to ensure this programme is operationalised in a timely manner and can be successfully delivered within the required timeframe. Key deliverables at this time include flu alignment, GP and Pharmacy Negotiations, Facility and Workforce Management, ICT Delivery, and Core team migration and recruitment.
- A key dependency remains on early NIAC guidance that will provide direction on the nature, scope and scale of the assumed Autumn programme. This week, the HSE was informed that interim recommendations are expected from NIAC in the coming week.
- The estimated budget to run the Vaccination Programme for this year is €550-600m and the DOH has approved full sanction for all vaccination costs committed and expected to be incurred in 2022 and 2023.

- Plans are in development for an emergency scenario where there may be a need to suddenly and rapidly deliver a vaccine (existing or a new vaccine which targets a variant of concern) to the whole population within a short timeframe. There are a number of assumptions which underpin this model and factors such as workforce, governance and capacity, all of which are being taken into consideration.

3. First Booster Programme - (as of 14th July)

	<i>Cumulative Booster & Additional 3rd Dose (Immunocompromised) Vaccination Uptake</i>												
	LTRCF >65s	>80s	70-79s	60-69s	HCWs	Clinically Vulnerable	50-59s	40-49s	30-39s	18-29s	16-17s	12-15s	Other / Unalloc ated**
Cohort Population*	25 k	155 k	329 k	396 k	304 k	427 k	454 k	558 k	504 k	580 k	120 k	280 k	21 k
Primary Course Completed	25 k	176 k	348 k	395 k	304 k	427 k	444 k	515 k	462 k	517 k	100 k	196 k	21 k
Boosters Administered	26 k	165 k	332 k	367 k	264 k	355 k	382 k	390 k	297 k	293 k	55 k	41 k	10 k
% Complete of Cohort Population	99%	99%	99%	92.6%	87.0%	83.2%	84.1%	69.9%	58.8%	50.5%	45.7%	14.7%	-
% Complete of population with Primary Course	99%	93.7%	95.6%	92.8%	87.0%	83.2%	86.1%	75.7%	64.2%	56.6%	54.6%	21.0%	-

- Current uptake of the first Booster programme as of 14th July remains generally lower when compared with the Primary Vaccination programme, particularly in the younger age groups (ca. 60.2% uptake for the 18-39 group and 65.5% in the 18-49 group).
- It is estimated that ca. 901.4k of the 12+ population remain eligible for first Booster vaccination with an estimated ca. 24.3k who are currently ineligible due to having had COVID in the last 3 months (or 6 months for those aged 12 to 15) as of 14th July.

4. Primary Vaccination Programme Progress - (as of 14th July)

	<i>Cumulative Primary vaccination uptake</i>								
	5-11	12 - 15	16-29	30-39	40-49	50-59	60-69	70-79*	80+*
Eligible Population	482k	280k	843k	656k	743k	621k	492k	340k	178k
Total Registered	134k	205k	792k	637k	718k	620k	492k	340k	178k
% Registered	28%	73%	94%	97%	97%	99%	99%	99%	99%
Total People Vaccinated	124k	201k	777k	625k	709k	615k	492k	340k	178k
% People Vaccinated	26%	72%	92%	95%	95%	99%	99%	99%	99%
Fully Vaccinated	114k	195k	758k	612k	699k	608k	490k	340k	178k
% Fully vaccinated	24%	70%	90%	93%	94%	98%	99%	99%	99%

*Partial and full vaccinations to over 60s has been capped at 99.9% of the population size.

- Last week (w/c 4th July), ca. 1.3k vaccines were administered across all primary course doses, including 557 dose 1s, 670 dose 2s and 88 immuno doses.

5. Communications and Uptake Improvement Group

- A number of initiatives have been put in place over the course of the Primary, Booster and Second Booster to drive demand and thereby minimise the volume of stock that will expire and increase the overall protection from the virus in the population.
- A high level of public communications and advertising has taken place including:
 - Campaigns such as 'You Never Know', bring all the protective behaviours together – hands, masks, air, vaccinate and stay home if unwell -and highlights that there are people at risk in our communities because 'We don't always know who's at risk from COVID-19 and other viruses, but we do know how to protect them.'
 - Media releases have encouraged those eligible to get their booster dose at this time and access the vaccine at the various available channels. A number of key spokespersons did interviews with national media on this message.
 - Encouraging local 'voices' to be put forward, we continue to support our CHO colleagues in preparing media messaging to issue to regional media as part of this activity encouraging people to come forward for COVID-19 vaccine as well as messaging on the closure of several vaccination centres as we move to the next stage of the COVID-19 vaccine programme.
 - Second booster radio is ongoing on national and local radio reaching 82% of the audience aged 65 and over. A new 20th version of our radio ad has been recorded to run through July and a 3rd round of local newspaper advertising is running, highlighting the importance of second boosters.
 - Social media traffic increased by 14% overall last week. Direct traffic drove 14.4k sessions which is up 59% from the previous week and the vaccination booking page was the most popular page, with 66k page views - up 32% on the previous period.
 - The focus in recent weeks has been on specific messaging for those who are immunocompromised, ensuring that the conditions criteria were well messaged on all social media sites.
 - We continue to progress numerous queries around the COVID-19 booster programme from the national media. Dr Colm Henry featured on a number of national media outlets in response to the rising number of COVID-19 cases and continued to encourage eligible people to get their COVID-19 booster dose.
 - Several articles also featured in the Irish Times last week from an interview that we facilitated for the media outlet with Eileen Whelan, National Lead - Test, Trace and Vaccination Programme.
 - Continuance of access to first Booster doses through remaining CVCs and pharmacies. CVCs will operate during hours that ensure accessibility to the public though self-scheduling and weekend clinics.
 - Direct contact is being made with eligible individuals detailing their vaccination options, where their corresponding GP is not participating in the programme. Almost 50,000 calls have been made, from which almost 10% resulted in a HSELive assisted appointment booking.
 - The approach to public messaging for the Autumn programme, taking into consideration the likely impact of multivalent vaccines on driving 'preferences' and the difficulty in achieving uptake of both Flu and Covid-19 vaccination in children, is being considered and planned. Key to all communications, will be the messaging to accept the vaccine offered at the time of offer.
- Research was undertaken on parents of 5-11 year olds to understand current attitudes toward vaccination. In summary:
 - There was a general consensus that the perceived risk of COVID-19 has waned;

- Parents are willing to risk their children getting COVID-19 in the short term when faced with the (unsubstantiated) safety concerns or long term effects of the vaccine;
 - Parents feel uncomfortable with the responsibility of vaccination and are adopting a 'wait and see' approach; and
 - Parents would prefer if the child vaccination was available in schools or GPs and Pharmacies.
- In response to the findings of this research, a reinvigoration of the 5-11s primary programme through GPs and Pharmacies in August, ahead of the return to schools is being modelled and planned.
 - Ukrainian people can access a COVID-19 vaccine through existing channels where Citiwest has been established as a transit and Reception Centre for Ukrainians and vaccines would be offered on arrival. They also can give a voluntary health assessment when they are in the Reception Centre which can state the vaccination history. All COVID-19 resources have been translated and are available in Ukrainian and Russian on the HSE website.
 - There are a number of vaccination pathways which are appropriate for the Roma, Travellers, Homeless and individuals in DPC and OST by the various vaccination leads and Social Inclusion leads within each CHO. These include Vaccination clinics organised and administered by the CHO teams, dedicated clinic times at CVCs by registering on the public portal, participating GPs and also the retail Pharmacy Outlets.

6. Vaccine Supply

- [REDACTED]

Age Group	Percentage
18-24	10%
25-34	15%
35-44	20%
45-54	25%
55-64	30%
65-74	35%
75-84	40%
TOTAL	100%

- There is now a possibility that [REDACTED] and [REDACTED] will get shelf-life extensions, but this is not yet approved.
- The EMA has licensed [REDACTED] for use down to 12 years of age and the FDA approved use of [REDACTED] vaccine for 6/12 to 4 year olds. We will closely monitor the operational use of these vaccines in younger cohorts to inform forward planning in the event that NIAC may make similar recommendations.
- NIAC has advised that the domestic vaccination programme must retain the capacity and agility to effectively react immediately to any revised advice from the NIAC this year (incl. an possible emergency 'whole of population' vaccination scenario in the event of a new variant/waning immunity).

- If such an emergency scenario does not come to pass, a significant volume of stock is at risk of expiry over the next number of months with incoming deliveries also at risk to expire if not administered, diverted or donated.
[REDACTED]
- A vaccine stock strategy has been agreed with the Department with regular meetings that will continue in order to review this strategy. This involves the Department (and all EU member states) continuously looking at any available options for deferral, rephasing or donation – however there is a significant global supply: demand imbalance at present, with little demand for excess COVID vaccines globally (i.e. GAVI & bilateral offers of donations being declined until at least Q3/Q4). There remains a number of uncertainties surrounding vaccine stock management, including:
 - Emerging variants with higher transmissibility and/or severity.
 - Low uptake in any future COVID-19 vaccination programme.
 - Potential emergence of new vaccines more effective on potential new variants of the disease.
- All EU members are encountering issues with regards to excess supply and insufficient demand with the EU itself currently working on a potential plan to defer vaccines. There are ongoing negotiations with [REDACTED] and [REDACTED] for rephrasing of the vaccinations.
- DoH are leading on the procurement of adapted vaccines and this week, the HSE were informed that adapted vaccines by [REDACTED] and [REDACTED] may receive EMA approval in July/August. This would see a potential 2.5 million doses of [REDACTED] and 2.6 of [REDACTED] adapted vaccines, including an additional 900,000 doses pending contract amendments between [REDACTED] and [REDACTED], received in country between the months of September and December. While this proposed quantity and delivery schedule would allow for the co-administration of Covid-19 and flu vaccines in Autumn, all delivery dates are subject to change and dependent on regulatory authorisation approval timelines.
- The arrival of these multivalent vaccines will increase the risk of wastage of current vaccine stock.

Supply Forecast Outlook

- Overview of Authorised Vaccines Supplies for Quarter 1 2022 – Quarter 4 2022 (In Millions).

Vaccine	June 22	July 22	Aug 22	Sept 22	Oct 22	Nov 22	Dec 22	Total
[REDACTED]								

- Please note that the table represents delivery commitments and may be subject to change (e.g. with regard to future donations/revised delivery schedules). The table also includes the rephrasing of 1.3m [REDACTED] doses from May and June to July, August and September.
- The stock level above excludes [REDACTED] as Ireland, like other EU countries, is not accepting [REDACTED] in-country [REDACTED] exhausted all donation avenues, incl. offers to >40 countries) and stock is managed at source with significant wastage.

- The HSE and DOH are monitoring the position of stock levels and there has been an agreed “rephasing” of [REDACTED] deliveries with a need to finalise payments of [REDACTED] rephasing. Whilst recent NIAC guidance will utilise stock levels in June, there is still a risk of significant volumes of stock expiry.
- As part of EU contracts, we have committed to spend [REDACTED] on current generation vaccines this year, with an estimated (up to) [REDACTED] additional funding needed should multivalent vaccine be approved before any winter programme (& if it is recommended as the core vaccine to underpin that programme).
- The risk of wastage increases with introduction of any multi-valent vaccine, as they may render current generation vaccines obsolete.

7. Vaccination Channels Overview

- All vaccination channels are open to individuals from all cohorts. Capacity has been created across all channels to offer an optimum number of appointments to complete each group as quickly as possible.

Vaccination Centres

- Last week (w/c 4th July), Vaccination Centres administered ca. 8.2k vaccines (ca. 5.64 million in total across primary, additional and Booster courses) which includes ca. 7.2k second boosters.
- The CVC Continuity Oversight group have considered the requirements for CVCs through the transitional period and outlined their recommendation on CVC footprint ahead of the move to a longer term operating model. This model will utilise a fixed vaccination centre infrastructure in large population areas supported by temporary or pop-up type facilities to provide more localised access to the service.
- Vaccination Centres have served as key locations for the large-scale administration of Covid-19 vaccines to the public. However, in the coming months the Vaccination Centres will reduce substantially as the demand for the vaccination has reduced.
- There are 15 Central Vaccination Centre outlets which are remaining operational nationally, which will support the delivery of the combined Flu and COVID-19 vaccination programme. All Vaccination Centres that were due to close have now closed over the months of May and June. Please see below those 15 centres that remain.
- An additional Vaccination Centre behind the RDS in Dublin 4 was procured this week, which will plug the current VC access gap in South Dublin.
- Despite the closure of these outlets in various CHOs, there remains a large number of operating outlets where people can continue to receive their COVID-19 Vaccinations.

Area	Central Vaccination Clinic (CVC)	County
Saolta	Finisklin	Sligo
Saolta	Unit 4 Letterkenny	Donegal
Saolta	Galway Racecourse	Galway
MidWest: ULHG & CHO3	Scoil Carmel	Limerick
SSWG and CHO4	North Main Street	Cork City
SSWHG and CHO4	Borg Warner Building Industrial Estate	Kerry
SSWHG and CHO6	NEW Waterford CVC REQUIRED	Waterford

SSWHG and CHO5	Clonmel - Gortnafleur Kent Building	South Tipperary
DMHG and CHO7	Citywest Convention Centre	Dublin
DMHG and CHO7	Punchestown Racecourse	Kildare
CHO8	Simonstown GAA Club Navan	Meath
CHO8	Fairways Hotel Dundalk	Louth
CHO8	St Fintan's campus	Laois
CHO9	National Show Centre Swords	Dublin
Ireland East HG	New South Dublin REQUIRED	Dublin

Portal Registrations

- Over 2,498,800 people in the 5 - 69 age cohorts have registered on the Public Portal Sign-up for CVCs. This includes over 129,000 Children in the 5-11 age cohort who have been registered by a parent/guardian on the Public Portal Sign-up for CVCs as of 3pm on 14/07/2022.
- Over 2,405,300 people aged 5 - 69 years who registered on the Public Portal have been vaccinated in CVCs as of 3pm on 14/07/2022.

Walk In Clinics

- Walk in clinics for specific cohorts may be operated as Walk in only, self-scheduled or combination of both Clinics self-scheduling appointments are open to all those aged 12+ years for Dose1 and Dose 2 vaccinations and 12+ years for Booster vaccinations.
- Self-scheduled appointments have extended and these appointments can now be booked for 5 to 11 year olds.
- A total 26 counties currently utilize the self-scheduler.
- Week of 4 July – 10 July over 10,000 walk-ins and self-scheduled vaccinations took place.

General Practice

- Last week (w/c 4th July), GPs administered ca. 8k vaccines, of which 7.1k were second boosters. Ca. 3.6 million to date have been administered by GPs across primary, additional and Booster courses. All GPs who have not placed orders are being contacted directly and encouraged to participate in the programme, to help increase the uptake of vaccinations.
- GP negotiations regarding the co-administration of the Covid-19 and Flu vaccinations in Autumn continue.

Pharmacy

- Last week (w/c 4th July), Pharmacies administered ca. 14.3K vaccines (ca. 0.94 million in total across primary, additional and Booster courses). Of the total administered vaccines last week, ca. 11.7k were second boosters.
- Discussions are ongoing to determine the part Pharmacies will play in the long term in relation to the vaccination of the public.
- Pharmacy negotiations regarding the administration of the Covid-19 in Autumn are in progress.

8. Future Plan

Latest NIAC Guidance

- The latest NIAC guidance on the medium term strategy for the COVID-19 Vaccination Programme was released on 5 April 2022 which recommended a second booster dose be administered, at least 6 months post a first booster dose or breakthrough infection or 4 months for operational reasons, to those aged 65 years and older and those Immunocompromised aged 12 years and older.

- In the same letter on 5 April, NIAC stated that it considered it likely that a third booster dose will be required for older persons and the immunocompromised in Autumn 2022. NIAC also advised that it will continue to actively examine the evidence regarding the likely benefit of a second booster to other groups considering the likely predominant variant.
- Subsequently, the HSE began planning for a possible aligned Flu and Covid-19 Autumn 2022 Vaccination programme. To ensure this subsequent programme could be operationalised in Autumn, as indicated by NIAC, the HSE has made every effort to encourage the uptake of second boosters among all eligible individuals in the over 65 and immunocompromised cohorts by early June 2022, to allow for an appropriate interval before an assumed third booster programme for the same cohorts in October.
- NIAC have yet to confirm the scope, scale or nature of any Autumn programme, however, interim recommendations are expected in the coming week.

Autumn Plan - Summary

- The sustainable long term model for COVID-19 vaccination model will be primary care led with GPs and Pharmacies delivering a significant proportion of vaccines with the balance delivered directly through Vaccination Centres. This proximity led model will remove a potential barrier to high uptake and move the cost to “pay as you go” for the programme, similar to the approach used nationally for seasonal flu programmes.
- Core Planning Assumptions underpinning this sustainable model are set out below:
 - In scope population for COVID-19 Vaccination of up to full population of 4.1m.
 - Fully vaccinated population is 4.1m (87% uptake) which includes all aged 12+ who currently have 2 doses and assumes an uptake of 40% for 5-11yrs.
 - Annual COVID/ Flu vaccine programmes are aligned where practicable.
 - Programme will run from October 2022 to January 2023 (20 weeks), but no vaccinations over two-week Christmas period¹.
 - There will be no vaccine supply constraints, but aim will remain to minimise potential wastage and expiry of vaccines.
 - There is stability of clinical guidance that is clearly communicated well in advance of delivery timeframe.
 - The economy is running as normal however there may be some NPI in place within vaccination facilities.
 - The model supports the delivery of non-COVID health care services at normal levels on an ongoing basis.
 - Age cohorting is not used (apart from first prioritising LTRCF). As supply is believed not to be a constraint, the most efficient delivery model will be to make the vaccine widely available.
 - Heavy investment in ICT required (which is to be defined over the interim period), particularly in GPs and clear roles and responsibilities documented.
- Key activities (and their status) to the delivery of the sustainable model and ensure operational readiness for any Autumn programme by October 2022 are;

Governance & Operating Model

- Newly developed governance structure developed and in place for an aligned Flu and COVID-19 Autumn Vaccination Programme (aligning in areas/ cohorts where practicable through the GP/Pharmacy cohort) - complete.

Operations/HSE Channels

- Negotiations for the leases on 15 vaccination facilities in addition to identification of secondary sites - ongoing.
- Procurement of mobile vehicles - completed.

¹ This timeframe is the most effective one due to (i) peak in infection during the winter season and (ii) alignment with the flu jab maximizing the potential uptake

- Maintenance of training and access to resources and core operations team - ongoing

Information Communications Technology

- Sprint 22 to enable Flu and Covid alignment where practicable - ongoing.
- Development of Mobile TrackVax solution - ongoing
- Candidate list for Sprint 23 will be informed by NIAC guidance.

GP & Pharmacy

- Contract negotiations with IPU and IMO are due to be completed to enable the Primary care led element of this intended sustainable model - ongoing.
- GP & Pharmacy ICT integration - ongoing

Public Engagement and Communications

- Plan developed in line with agreed capacity/ access options from May to September - ongoing.
- The approach to public messaging for the Autumn/Winter programme is in planning - ongoing.
- Research on public behaviours, testing and attitudes to vaccination will continue and will inform public communications campaigns for the Autumn programme - ongoing.

Recruitment of Core Team

- Recruitment of internal staff required to deliver the ongoing sustainable model across all functional areas - ongoing

- There are key dependencies to achieving the above in a timely manner, these are:
 - **NIAC Guidance** - Early, clear and stable clinical NIAC guidance on Booster 2 requirements including guidance on eligible cohorts, Interval, Vaccine type (Multi-valent approval), Alignment with Flu etc).
 - **“Substantial Completion” of current programmes** - “Substantial completion” of current Booster programme at end June (assumes small amounts of vaccine available throughout summer).
 - **GP Negotiations - The conclusion of the GP/ Pharmacy negotiations to enable the primary led sustainable model. SI expansion** - Expansion of SI expected to be approved soon, enabling co-administration of both COVID & Flu vaccines.
- Risks to the successful mobilisation and delivery of an Autumn programme are:
 - **Lack of Clarity on Requirements for Future Phases** - Due to emerging evidence, there may be a risk of delay to the provision of NIAC guidance and/or significant change in guidance which will result in a requirement to change the operational plan.
 - **Variant Vaccines (Approval and Use Case)** - It is possible that NIAC guidance on which cohorts should get which type may mean that plans for ‘all comers’ clinics may not be possible adding additional operational complexity.
 - **Variant Vaccines (expiry)** - Risk of increased level of vaccine wastage if a multivalent vaccine is approved by EMA/ NIAC and is received in the country.
 - **Vaccine Expiry (General)** - Risk of Vaccine stock expiration resulting in wastage and potential reputation damage.
 - **General Practice involvement in Autumn Programme** - Risk that a fully aligned delivery of the Flu and Covid-19 Vaccination Programmes may not materialise in General Practice due lack of NIAC Guidance on eligible population and intervals.
 - **Low or Slow Uptake of Booster** - Given the observed slower uptake for Booster 2, there is a risk of low levels of uptake or a slow rate of uptake for those in scope of the booster programme resulting in a requirement to re-assess infrastructure and resource requirements.

- **5-11 programme Timing** - Due to the intended campaign to increase uptake in the 5-11 year olds along with a potential booster programme for that group, the timing of these programmes may impact capacity for the autumn programme and/or confuse messaging.
- **Recruitment challenges** - Risk of delays in/failure to recruit to key roles in the sustainable operating model in time for the Autumn programme.
- **ICT System Changes** - Risk of delay to the implementation of NIAC guidance due to time required to to define, develop and deliver enabling ICT system changes.