COVID-19 Test and Trace and Vaccination Programmes

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Contents

Summary

Introduction

1. Both the Test and Trace and the Vaccination Programmes have been key tools as part of the Government of Jersey's COVID-19 pandemic strategy.

2. Towards the beginning of the COVID-19 pandemic, in May 2020 an Island-wide testing programme was established. Alongside this, a programme for contact tracing was also established. Both programmes have continued to operate throughout the pandemic.

3. The Government of Jersey spent over £20.2 million on the Test and Trace Programme during 2020 and a further £41.7 million during 2021. At 31 December 2021, a total of £61.9 million has been spent on the Test and Trace Programme. A further £20 million of funding has been allocated to the programme in the Government Plan 2022-25.

4. The roll-out of the COVID-19 vaccine in Jersey began in December 2020 and is aligned to the Vaccination Programme roll-out in the UK. At 31 December 2021, the Government of Jersey reported that:

    - over 209,000 doses have been administered in total
    - 87% of the resident population aged 18 years and over has received two doses of the vaccine
    - 60% of the resident population over 18 years has received a third 'booster' dose
    - 61% of the population of 16-17 year olds has received a first dose, with 28% also having received a second dose and 2% having received a third 'booster' dose; and
    - 46% of the population of 12-15 year olds has received a first dose.

5. At 31 December 2021, over £5 million had been spent on the Vaccination Programme against a budget of £5.5 million. A further £6.7 million has been allocated to the Vaccination Programme in the Government Plan for 2022-25 giving an overall programme total of up to £12.2 million.

Key Findings

6. The key findings from my review are as follows:

Test and Trace Programme

- the Government of Jersey acted at pace and in a reasonably controlled and measured way to effectively introduce and scale up an Island-wide Test and Trace Programme commencing in May 2020
- the scale of the testing programme in Jersey was significantly larger than in comparable jurisdictions
- the rapidly evolving nature and increasing duration of the COVID-19 pandemic gave rise to the need for a significant number and value of business cases to support expenditure on the Test and Trace Programme. In some instances, I consider that the business cases lacked sufficient detail and justification
- the strategic objectives set at the start of the Test and Trace Programme were consistently carried through in the Government's June 2020 COVID-19 Strategy, the November 2020 Winter COVID-19 Strategy update and the October 2021 COVID-19 Winter Strategy Update 2021-22
- despite a lot of effort, both internal and external communication could have been improved, particularly when explaining the complexities of a long running pandemic in simple terms. There is evidence that some members of the public were sometimes confused by scientifically informed and evolving test, trace and isolation advice. In addition, despite comprehensive attempts at staff communication, some test and trace staff who were on zero hours contracts did not always understand why they were sometimes being 'stood up', 'stood down' and 'stood back up' again over the lifetime of the long running pandemic
- during the course of the COVID-19 pandemic the Test and Trace Programme has had to significantly change how it operates to keep up with the evolution of the pandemic. Despite significantly increasing the Island's testing capacity, at key times the combined test and trace service could not meet demand. In particular, there were times when attempts to trace all the contacts of infected Islanders within a short period of time, was compromised. This was particularly the case in the third wave (Delta variant) during the summer of 2021 and in the fourth wave (Omicron variant) in the late autumn of 2021
- the planning assumptions underlying the set up and operation of the Test and Trace Programme, particularly from the summer of 2021 onwards, were significantly understated

- the Test and Trace Programme did successfully produce health surveillance data to help track the progress of infections on the Island. In addition, the Test and Trace Programme did, to some extent, control the spread of COVID-19 infections on the Island. It is not possible however to conclude by what amount the rate of increase was minimised and whether that minimisation of infections represented value for money; and

- as a consequence of the delay in opening the in-house testing laboratory the Government of Jersey incurred additional costs estimated to be in excess of £5 million.

Vaccination Programme

- the Government of Jersey decided to follow the UK mainland lead on the authorisation of vaccines. This was a logical decision given Jersey's involvement in the UK Joint Committee on Vaccination and Immunisation (JCVI) and Medicines and Healthcare products Regulatory Agency (MHRA)

- the overall objective of the Vaccination Programme was to '*maximise uptake, safely and with convenience*.' The objectives and purpose of the programme were clearly stated in key strategic and project management documents

- there have been clear lines of governance within the Vaccination Programme and good project management and control. There is also evidence that indicates that the Vaccination Programme communication was generally good

- vaccines were provided free of charge from the UK Government. This resulted in significant savings in the estimated cost of delivery of the first two doses which had assumed procurement by the Government of Jersey. This enabled the cost of the first phase of the booster (the third dose) to be met from the initial funding allocation for the first two doses. The cost benefit to the Government of the free vaccine provision from the UK Government is considered to be in excess of £3.5 million in 2021

- the cost of administering each vaccine during 2021 was similar to the cost seen in Scotland and lower than the cost seen in England; and

- Jersey has performed well in comparison to other jurisdictions in terms of the percentage of the population that has been vaccinated.

Conclusions

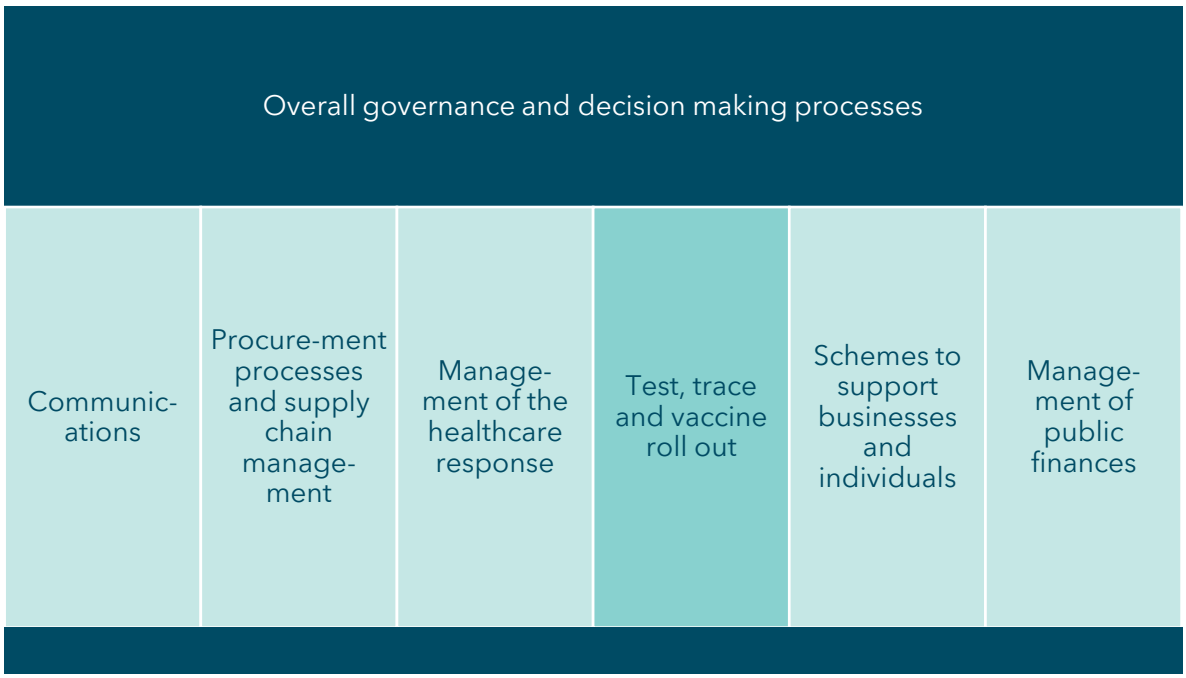
7. The Government of Jersey moved at pace to establish a large scale Island-wide Test and Trace Programme in the spring of 2020. The programme established was extensive. Over the course 2021 however there have been times when the programme has not kept pace with the pandemic.

8. The Government of Jersey performed well to deliver an effective Vaccination Programme under very tight time constraints. The delivery of the Vaccination Programme in Jersey has, in overall terms, been effective.

Objectives and scope of the review

9. The review is part of a series of reviews I am undertaking looking at the Government's response to the COVID-19 pandemic as shown in Exhibit 1.

Exhibit 1: C&AG reviews of the Government response to the COVID-19 pandemic



10. The review has evaluated:

Test and Trace Programme

- set up of the programme including:
    - initial planning and decision-making
    - objectives and purpose of the programme; and
    - planning, delivery and performance management of the tests
- governance of the programme
- changes to objectives and purpose of the programme as the pandemic progressed
- funding of the programme
- the commercial arrangements put in place

- testing capacity, activity, performance and effectiveness – including planning and forecasting and performance against key commitments
- advice given to the public in the event of a positive test
- contact tracing capacity, activity, performance and effectiveness – including planning and forecasting, effectiveness of communications and performance against key commitments
- the impact of the programme on children, young adults, those with learning disabilities and ethnic minority groups; and
- the monitoring of inequalities.

Vaccination Programme

- the Government's approach to the identification and authorisation of potential vaccines
- set up of the Vaccination Programme including initial planning and decision-making, objectives and targets
- governance of the programme
- liaison with delivery agencies
- funding of the programme
- the commercial arrangements put in place
- the arrangements for deployment of the vaccines
- effectiveness of communications
- performance and effectiveness of the programme
- monitoring of vaccine safety
- the impact of the programme on children, young adults, those with learning disabilities and ethnic minority groups
- the monitoring of inequalities; and
- the challenges that the Government needed to manage as it deployed the vaccine.

Detailed findings – Test and Trace Programme

Initial programme set up

Mobilisation

11. At the beginning of the pandemic, a test and trace regime was put in place to deal with the number of COVID-19 cases. These activities relied on a combination of NHS and commercial off-Island testing for Polymerase Chain Reaction (PCR) tests, as well as case contact tracing arrangements to identify direct contacts of positive cases. The scope and capacity of these activities were expanded as demand on the service increased in order to provide widespread testing and contact tracing as part of the pandemic response.

12. The Competent Authorities Ministers (CAM), at its meeting on 17 April 2020 agreed to '*upscale testing and tracing to monitor a safe exit*' from the first wave of the COVID-19 pandemic. A Test and Trace Framework Overarching Business Case was produced, and this went the Council of Ministers (CoM) meeting on the 29 April 2020. The Scientific and Technical Advisory Cell (STAC) had given its support to this way forward on 28 April 2020.

13. The Test and Trace Framework Overarching Business Case outlined the following areas of activity aimed at facilitating a safe exit:

    - Island-wide testing
        - target of 500 PCR tests a day by early May 2020
        - rolling population antibody surveys
        - immunity testing when viable; and
        - resilient, multi-jurisdiction supply chain
    - all case contact tracing
        - contact tracing throughout the response
        - doubling the team from 24 to 48 whole time equivalents; and
        - digitally enabling the process including proximity tracking.

14. Both workstreams – the Island-wide testing and the case contact tracing – were to be supported by an Integrated Public Health Record.

15. The Government of Jersey acted at pace and in a reasonably controlled and measured way to effectively introduce and scale up an Island-wide Test and Trace Programme commencing in May 2020.

16. A Test and Trace Implementation Programme Board was established on 11 May 2020 chaired by the then Director General of Justice and Home Affairs (JHA). This Programme Board took advice from STAC and reported to CoM and the Gold Strategic Coordinating Group (also chaired by the Director General of JHA). The Programme Board established the following workstreams to set up the Test and Trace Programme:

    - PCR testing
    - surveillance testing
    - business case
    - contact tracing
    - proximity tracing; and
    - arrivals testing.

17. The Test and Trace Implementation Programme Board meeting on 29 May 2020 agreed a Public Health Policy Decision Making paper which set out a process to identify testing and tracing issues that required clinical input. This was known as the 'bundle process' and ensured issues could be escalated to the Medical Officer of Health and the Consultant in Communicable Disease Control. The issues that fall within the 'bundle process' could include:

    - changes to contact tracing methodology
    - changes to testing eligibility and priority
    - design of or changes to the testing regime in any programme
    - changes to patient facing literature for the programmes
    - post-test advice, pathways and guidance
    - major changes to operational layout of testing centres; and
    - Personal Protective Equipment (PPE) requirement for testers.

18. Following the creation of the Test and Trace Implementation Programme Board on the 11 May 2020, a total of 39 Board meetings were held up to 21 December 2021 (an average of two a month).

Supporting business cases

19. A total of 23 individual test and trace business cases followed the initial Framework Overarching Business Case. These individual business cases covered the following themes:

- Covid Safe Team (also referred to under titles such as contact tracing, monitoring, isolation and enforcement)
- Covid testing (also referred to under titles such as testing to protect, testing to travel, Island-wide immunology)
- core programme team; and
- testing and tracing programme technology.

20. The rapidly evolving nature and increasing duration of the COVID-19 pandemic gave rise to the need for a significant number and value of business cases to support expenditure on the Test and Trace Programme. The original Framework Overarching Business Case in April 2020 was for £6.4 million, including £2.4 million in respect of test kits which were approved as separate business cases. However, by the end of 2020, total expenditure was more than £20.1 million.

21. The Government Plan 2021-24 provided for £30 million for the Test and Trace Programme Phase Two. In accordance with the policy for allocations from the General Reserve presented to the States Assembly in R.60/2021, an additional £8.5 million was allocated from reserves as part of a Ministerial Decision dated 29 June 2021. This was reported in the Government Plan mid-year review for 2021. A further £3.7 million was added with a supplementary business case supported by Ministerial Decision in December 2021 to take the total budget for 2021 to around £42 million. A total of £20 million has been allocated in the Government Plan 2022-25.

22. There are clear audit trails for the initial key policy decisions and for the subsequent implementation decisions (23 business cases). I am content that the business cases followed the required procedures. However, not all 23 business cases were considered at the very frequent Test and Trace Implementation Programme Board meetings. Best practice would have been for all business cases to have gone through the Test and Trace Implementation Programme Board, before proceeding to CAM and/or CoM for approval.

23. Instead, the core Test and Trace Programme Team developed policies and business cases that went directly to CAM and, if necessary, to CoM. Following approval, the Test and Trace Implementation Programme Board worked to implement the agreed policy and relevant business case.

24. Following the approval of the Framework Overarching Business Case in April 2020, there was no single record of all Test and Trace programme decisions made between April 2020 and December 2021. If such a decision log had been created, it would have allowed for a clear audit trail of all decisions (and the link to individual business cases) to be recorded in a single document. Such a live programme control document would have been particularly useful as the Test and Trace Programme did not create a Project Initiation Document (PID) on its inception in May 2020. Instead the original Framework Overarching Business Case was the programme guide in practice.

Overall initial programme objectives

25. The strategic objectives of the Test and Trace Programme established at the outset were:

- to reduce loss of life by minimising the transmission of the virus in the community
- to monitor the impact of introducing the safe exit plan and lifting mitigation measures
- to enable the safe exit plan to respond to transmission and infection rates as required; and
- to implement the Test and Trace Programme at the start of May 2020.

26. These objectives were consistently carried through in the Government's June 2020 COVID-19 Strategy, the November 2020 Winter COVID-19 Strategy update and the October 2021 COVID-19 Winter Strategy Update 2021-22.

27. However an important testing evolution, that had a significant impact on later testing and tracing strategies, is the introduction of lateral flow tests (LFTs). By the time of the COVID-19 Winter Strategy Update 2021-22 a key strategic aim was to move away from central testing and top down enforcement towards '*putting control in the hands of Islanders by making LFTs available to everyone*'.

Communications

28. As with most of Europe, the four COVID-19 variant waves that have reached Jersey have all been quite different. As a consequence, scientific and technical advice did change frequently over time.

29. The Test and Trace Implementation Programme Board was supported in its approach to internal and external communication through attendance of relevant officers at the Boards and through advice included in project update reports. However there is evidence that, despite this, some members of the public were sometimes confused by scientifically informed and evolving test, trace and isolation advice. In addition, despite comprehensive attempts at staff communication, some test and trace staff who were on zero hours contracts did not always understand why they were sometimes being 'stood up', 'stood down' and 'stood back up' again over the lifetime of the long running pandemic.

30. Despite a lot of effort, both internal and external communication could have been improved, particularly when explaining the complexities of a long running pandemic in simple terms.

Recommendations

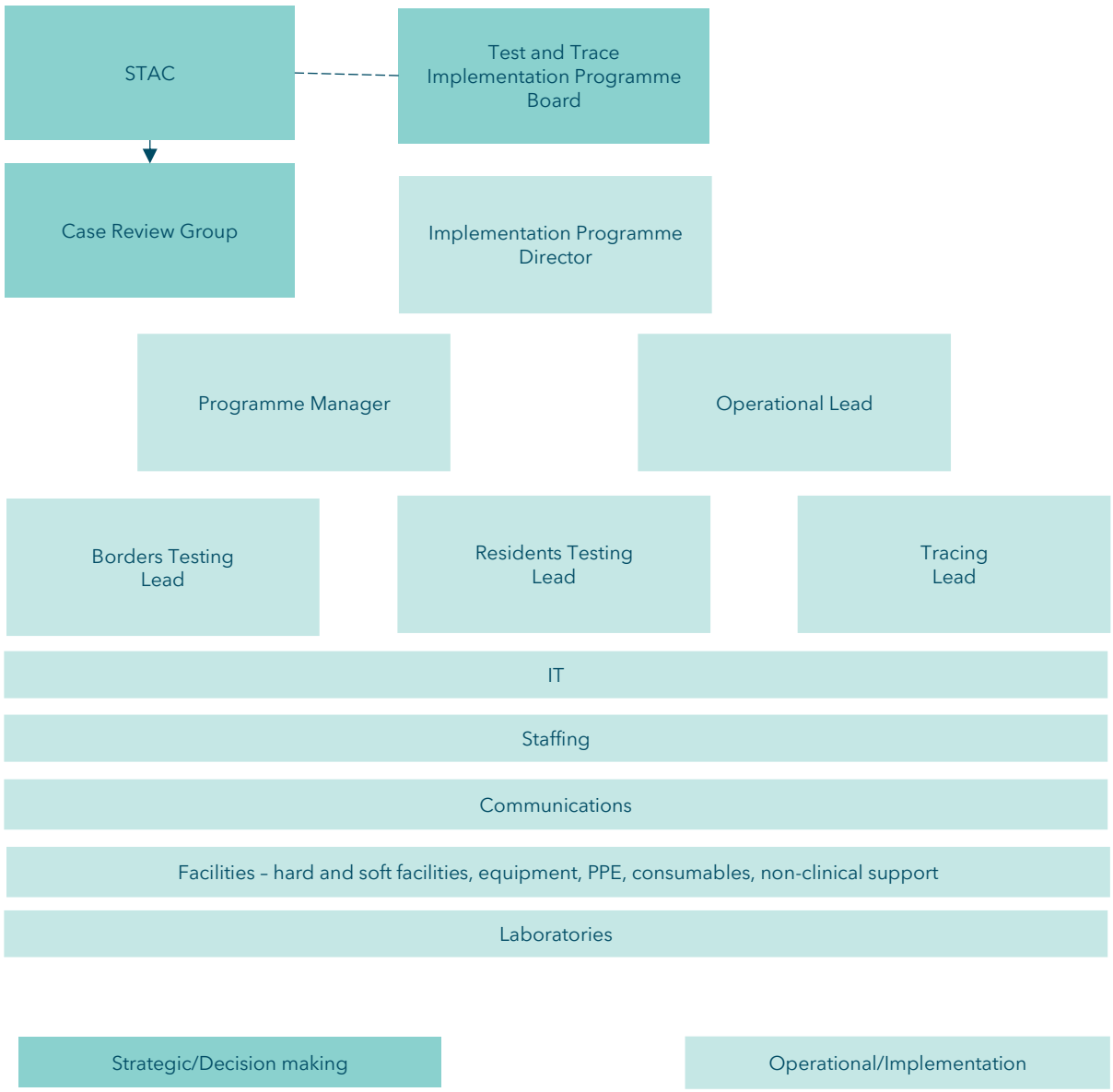
R1 Create and maintain a comprehensive live programme control document for long running emergency programmes that cover multiple activities and are initiated by a single programme business case. The live programme control document should record all business cases and decisions relating to the programme.

R2 Undertake a comprehensive review of the Test and Trace Programme communications, involving members of the public, representative community organisations and behavioural scientists, with the aim of creating a simple, robust communication plan for similar long running events of this type in the future.

Programme Governance

31. Exhibit 2 shows the governance structure for the Test and Trace Programme as set out to the Test and Trace Implementation Programme Board in May 2020.

Exhibit 2: Test and Trace Programme Governance



Source: Test and Trace Implementation Programme Board papers 11 May 2020

32. The basic building blocks of governance to and from the Test and Trace Implementation Programme Board were:

- upwards reporting – to CAM and CoM for strategic and policy decisions as required

- upwards reporting – to the Gold Strategic Command Group (SCG) for resilience coordination (when SCG was stood up)
- advice received from STAC; and
- downwards operational implementation to
    - border/travel/arrivals testing
    - population/workforce testing
    - testing laboratory capacity
    - contact tracing/enforcement
    - information technology; and
    - core programme team.

33. Frequent and well-structured programme update reports went to the Test and Trace Implementation Programme Board and contain a good record of this fast paced, ever-changing programme. A 'highlights by month summary record' from July 2020 to November 2021 captured the amount of decision making going through the programme.

34. The Accountable Officer (AO) and Senior Responsible Officer (SRO) arrangements for the Test and Trace Programme have changed over time and the timeline is as shown in Exhibit 3.

Exhibit 3: AO and SRO responsibilities

Source: Jersey Audit Office analysis

35. The Test and Trace Programme was not defined as a major project under the Public Finances Manual. As a consequence, it was not expected that it would follow the major projects requirements in the Public Finances Manual, such as

project governance requirements and project delivery documentation requirements. In practice, the Test and Trace Programme was run as a business as usual (BAU) operation. It was not managed as a structured, controlled change project.

36. Whilst I consider that this BAU approach was reasonable given the circumstances I also consider that there should have been better project documentation at the planning stage, such as an initial Project Initiation Document (PID). The rationale for adopting a BAU methodology for implementing this significant programme should have been documented in a way that explained exactly what the BAU arrangement meant and how it would work. The PID (or equivalent) should have then been updated every time the BAU management structure and service outputs changed.

37. Programme risks were discussed at the Test and Trace Implementation Programme Board and during weekly team calls. Risks were escalated in the governance structure and during particularly risky periods (waves three and four of the COVID-19 pandemic), a weekly report was sent to CAM.

Recommendation

R3 Require strategic programmes that fall outside the Public Finances Manual definition of a capital or major project to set out in a Project Initiation Document the way in which the programme will be controlled and managed.

Changes to the objectives of the programme

38. The objectives set out at the beginning of the programme were carried consistently through in the Government's June 2020 COVID-19 Strategy, the November 2020 Winter COVID-19 Strategy update and the October 2021 COVID-19 Winter Strategy Update 2021-22.

39. What has characterised the COVID-19 pandemic however has been the duration of the 'emergency response' and the evolving nature of the 'emergency' itself with four waves of the pandemic to date. An important testing evolution that had a significant impact on later testing and tracing strategies, is the introduction of LFTs. By the time of the COVID-19 Winter Strategy Update 2021-22 (October 2021) a key strategic aim was to move away from central testing and top-down enforcement towards '*putting control in the hands of Islanders by making LFTs available to everyone*'.

40. In addition, the implementation of the vaccination programme during the pandemic has meant that higher levels of COVID-19 infection could be tolerated in the community due to lower levels of hospitalisation for severe disease and lower levels of mortality.

41. During the course of the COVID-19 pandemic the Test and Trace Programme has had to significantly change how it operates to keep up with the evolution of the pandemic.

42. The COVID-19 Winter Strategy Update 2021-22 saw a shift in roles and responsibilities to the public, in response to:

- the authorisation of new lateral flow testing technology by the MHRA in December 2020; and
- the third COVID-19 wave from June to August 2021 which had seen the Test and Trace Programme put under great strain.

43. The strain on the Test and Trace Programme was discussed at a series of CAM meetings in July 2021. An example of the actions agreed in this period was for the contact tracing team to amend their time periods, from those Islanders in contact with a positive case in the previous 10 days to those in contact with a positive case in the previous three days.

44. There is strong scientific evidence internationally that indicates:

- testing, tracing and isolation does effectively work to control the spread of infection; and
- the health surveillance information that flows from testing does allow governments to make more informed decisions about non-pharmaceutical interventions, such as face masks, social distancing and lock downs.

45. The Test and Trace Programme was aimed at controlling the spread of the COVID-19 pandemic throughout the entire Island population (i.e. to keep the number of COVID-19 cases low for as long as possible). My findings show that some members of the public in Jersey were sometimes confused by scientifically informed, evolving testing, tracing and isolation advice. In addition, despite significantly increasing the Island's testing capacity, at key times the combined test and trace service could not meet demand. In particular attempts to trace all the contacts of infected Islanders within a short period of time were, at times, compromised. This was particularly the case in the third wave (Delta variant) during the summer of 2021 and in the fourth wave (Omicron variant) in the late autumn of 2021.

46. In circumstances when community infection was at a peak, available contact tracing resources were prioritised to protect those who were most vulnerable and at greatest risk. There is evidence, through the regular project updates to the Test and Trace Implementation Programme Board, that the programme flexed to accommodate key groups. Examples include testing in schools, residential and nursing care homes, prisons and rough sleepers.

Funding the Test and Trace Programme

47. The total cost of the Test and Trace Programme across 2020 and 2021 is £61.9 million. £44 million of this cost or 71% relates to the procurement of supplies and services. The costs of the programme are summarised in Exhibit 4.

Exhibit 4: Cost of the Test and Trace Programme

Department	Cost centre	Actual 2020 £000	Actual 2021 £000	Total £000
Chief Operating Office (COO)	Track and Trace	947	61	1,008
Infrastructure Housing and Environment (IHE)	Contact Tracing	1,333		1,333
	Integrated Public Health Record	577		577
HCS	Test and Trace	541		541
SPPP	Rapid serology test kits	1,349		1,349
	Programme management	417	1,938	2,355
	Testing	13,946	31,595	45,541
	Monitoring and enforcement	668	5,419	6,087
	Exposure notification app	181	173	354
	Modernisation and digital costs		2,415	2,415
	Test, track and trace programme	192		192
	Hospital Lab		104	104
Total		**20,151**	**41,705**	**61,856**

Source: Jersey Audit Office analysis

48. £30 million was initially allocated in the Government Plan 2021-24 for the Test and Trace Programme. Ministerial Decisions in respect of additional allocations of

£8.5 million and £3.7 million in June and December 2021 resulted in a total approved sum of £42 million in 2021. The entire cost of the programme in 2020 required authorisation by Ministerial Decision. The COVID-19 pandemic had not been declared at the time the Government Plan 2020-23 was approved and so no funding had been allocated.

49. The Ministerial Decisions that supported the expenditure on the Test and Trace Programme in 2020 are summarised in Exhibit 5.

Exhibit 5: Ministerial Decisions supporting Test and Trace Programme expenditure in 2020

Reference	Date	£	Detail
MD-TR-2020-0033	02/04/2020	1,700,000	Serology tests
MD-TR-2020-0039	07/04/2020	718,000	Additional serology tests
MD-TR-2020-0053	12/05/2020	5,500,000	Transfer from General Reserve for phase one
MD-TR-2020-0089	21/07/2020	756,000	On-Island testing capacity Open Cell
MD-TR-2020-0097	30/07/2020	244,420	Contact tracing digital app
MD-TR-2020-0115	25/09/2020	22,800,000	Phase two
		31,718,420	

Source: Jersey Audit Office analysis

50. The Government Plan 2021-24 and the Ministerial Decisions that supported expenditure on the Test and Trace Programme in 2021 are summarised in Exhibit 6.

Exhibit 6: Government Plan and Ministerial Decisions supporting Test and Trace Programme expenditure in 2021

Reference	Date	£	Detail
Government Plan 2021-2024	N/A	30,000,000	Test and Trace phase two to June 2021
MD-TR-2021-0084	29/06/2021	7,280,000	Transfer from General Reserve – Test and Trace Programme
MD-TR-2021-0084	29/06/2021	1,220,000	Transfer from General Reserve – test and trace technology
MD-TR-2021-0149	21/12/2021	3,500,000	Extension of arrangements due to delay in Hospital Laboratory
		42,000,000	

Source: Jersey Audit Office analysis

51. My analysis demonstrates that the expenditure on test and trace in both 2020 and 2021 was properly supported by Ministerial Decisions or as an allocation in the Government Plan. I have not however been able to reconcile the total allocated figure to the suite of 23 business cases provided as evidence for my review.

52. Business cases were initially prepared for expenditure in 2021 against a background of uncertainty. These were refreshed for the second half of the year to take account of experience to date and the policy and pandemic situation at that time. The allocation of £30 million in the Government Plan 2021-24 was provided as an estimate for the first six months of 2021 with the potential to take a further allocation from Reserves of up to £15 million if required. Following further forecasts in summer 2021, an additional allocation of £8.5 million was approved from the Reserve and this was documented in the Mid-Year Review. A further allocation from the Reserve was necessary in December 2021 to meet additional costs due to the delay in opening the Island's in-house Hospital Laboratory and to respond to a growth in the testing requirements.

53. The business cases prepared to support the Test and Trace Programme demonstrate a significant volume of analysis in a rapidly changing environment. The format of the business cases is consistent and they address key areas of:

- project summary and objectives
- benefits
- options

- financial analysis and assumptions
- risk
- dependencies
- milestones; and
- governance and monitoring.

54. Due to the changing circumstances and complexities of the Test and Trace Programme, the volume of business cases has resulted in a number of different iterations and overlaps between the various business cases. As a consequence there is a lack of a clear audit trail between the business cases and the related expenditure.

55. In some instances, I consider that the business cases lacked sufficient detail and justification. Examples of the weaknesses I noted included:

- in some cases, the consideration of alternative options to the preferred solution lacked detailed analysis and costs
- the business cases do not quantify the economic benefit of the Test and Trace Programme, particularly in respect of 'Test to Travel'
- the business case for 'Test to Travel' addresses the possibility of charging for tests, however this is not explored in sufficient depth; and
- there are some gaps and inconsistencies in the detail of some of the business case evidence provided.

56. The overall expenditure total of £61.9 million in 2020 and 2021 included procurement of supplies and services totalling £44 million, from a range of providers, to support the Test and Trace Programme. A total of £37.8 million related to procurement from suppliers in the areas shown in Exhibit 7.

Exhibit 7: Major procurement for the Test and Trace Programme 2020 and 2021

Supplier	£	Details
A	27,492,033	On-Island testing laboratory
B	5,206,822	Commercial PCR testing laboratory
C	3,020,261	Technology providers
D	814,149	Workforce provider
E	1,348,798	Serology tests
Total	**37,882,063**	

Source: Jersey Audit Office analysis of Treasury and Exchequer data

57. My 2021 report *Procurement and Supply Chain Management during the COVID-19 pandemic* considered the 2020 procurement of PCR testing kits, laboratory equipment and serology testing kits.

58. In respect of PCR testing (Supplier B above) and the laboratory equipment, I concluded that proper processes were followed to enable the Government to demonstrate value for money as far as possible in the circumstances. The initial business case for Island-wide testing concluded that capacity of 225 PCR tests per day was required from a commercial laboratory in the UK. An exemption from full procurement processes was agreed in May 2020 regarding procurement from an existing supplier and a Service Level Agreement (SLA) prepared for up to one year, capped at the exemption sum.

59. Subsequent business cases for 'Test to Protect' and 'Test to Travel' in July 2020 identified additional capacity requirements for commercial PCR testing. A separate business case was prepared to commission an on-Island laboratory in July 2020, to be fully operational by September 2020. An additional exemption from procurement processes was approved in the sum of £4 million for the commercial PCR testing supplier on the basis of continuity and investment in technology to date. This was logged on 7 May 2021 in advance of the SLA expiry and demonstrates that all expenditure (£5.2 million) with the supplier in 2020 and 2021 was covered by exemptions. However, expenditure records indicate that the capped sum referred to in the initial exemption was exceeded by September 2020, at which point a further exemption should have been, but was not, prepared to comply with the Public Finances Manual.

60. In respect of serology tests I concluded in my earlier report that, as part of the initial procurement of testing kits, the Government bought uncertified rapid serology tests at a cost £1.3 million. These tests were purchased prior to the UK

MHRA releasing its specification criteria. The tests subsequently failed to fully satisfy the MHRA criteria which limited the use of the tests in practice.

61. The major expenditure in 2020 and 2021 related to the outsourced on-Island testing laboratory solution which was commissioned for a minimum of four months from September 2020. The business case demonstrates that this solution had benefits over the off-Island solution in terms of cost and capacity. The preferred solution was supported by the Deputy Medical Officer of Health and the Pathology Manager, although the evidence of detailed cost/benefit analysis of alternatives is limited.

62. The procurement of the outsourced on-Island laboratory was covered by an exemption to the procurement process in accordance with the Public Finances Manual. However, the amount of the exemption is recorded as £756,000 in July 2020 reflecting the minimum contract amount for the four-month period. This significantly understated the likely value of the contract as peak test volumes were anticipated to be 20 times the minimum volume indicated. A further exemption in the sum of £14.5 million was logged in early December 2020 in order to extend the contract to the end of June 2021. Total expenditure to 31 December 2021 was however £27.5 million. There are no further entries in the exemption log to cover the excess expenditure for the period from July 2021. This is a breach of the requirements of the Public Finances Manual.

63. The commissioned outsourced on-Island testing laboratory was scheduled to be replaced by an in-house Hospital laboratory from 1 July 2021. The original timetable provided for a two-month transition/overlap period (August and September 2021) between the in-house Hospital laboratory and the on-Island testing laboratory.

64. The project to establish an in-house Hospital laboratory however experienced a number of delays. The in-house laboratory was rescheduled to be fully operational by September 2021, but did not open until November 2021. The additional cost due to this three-month delay was estimated as £5.1 million based on the volume of tests and the variation in unit cost between the in-house laboratory and the on-Island testing laboratory. Additional funding of £3.4 million was provided to cover this as part of business case IA21-061 which was net of £2.6 million savings in other areas.

Recommendations

R4 Ensure that a reconcilable audit trail is maintained between business cases and related expenditure for all significant projects when these might include changes over time.

R5 Review exemption and breach records in respect of expenditure on PCR testing and the on-Island laboratory and ensure breaches have been recorded in compliance with the Public Finances Manual.

Technology to support the Test and Trace Programme

65. The following applications were either procured or developed to support the Test and Trace Programme:

- NearForm – a proximity tracing application was procured as an 'off the shelf' package. This application was also selected by several other jurisdictions. It is a mobile phone application that 'pings' potential contacts if they are at risk of having contracted the virus
- the Integrated Public Health Record (IPHR) system was developed by an on-Island computer specialist based in St Helier. This system was developed because it was impossible to effectively manage large-scale contact tracing and isolation without a new case management system; and
- the Booking and Testing System (BATS) which was developed by the Government in conjunction with Microsoft to allow large-scale COVID-19 testing to be managed. It was subsequently developed to encompass the COVID Status Certificate (CSC) system and vaccination appointment bookings.

66. In addition, a number of existing systems were related to the Test and Trace Programme, including:

- the People Directory (a database of people who have interacted with the States of Jersey) used to populate the IPHR system
- Omnilab, the hospital laboratory information system
- TrakCare, the hospital information system; and
- EMIS (the Egton Medical Information System used by GPs) used to record the administration of vaccines and feed this information into the CSC system.

67. As the Government did not have a sufficient in-house systems development capability, it considered that the only practical way to obtain the systems required for the Test and Trace Programme was to source them from external suppliers.

68. Due to the tight timescales, the Government's only viable option was to adopt an 'Agile' approach to development. Under the 'Agile' approach high-level systems

specifications and prototypes are developed, typically within a matter of days. These are refined through communications with the end users.

69. Whilst I have been informed that the Government had developed some high-level specifications for its systems investment, I have not been presented with any evidence to support this. The high-level architecture was designed by the Head of Business Architecture and was included in the business case. I have not however been provided with any evidence that this was subject to formal approval by the Government's Design Authority which was still in its infancy at the time BATS was created.

70. One potential drawback of the 'Agile' approach is that it focusses primarily on the end-user experience and can sometimes result in the 'back office' requirements such as business intelligence reporting becoming a secondary consideration. This drawback has materialised in practice for the systems supporting the Test and Trace Programme. The collation of management information from the various systems that have been implemented has been difficult and much effort and cost has been expended in obtaining and processing this information. I recognise that this is partly because some aspects of the management information requirements only became clear once the systems were operational.

71. Because of the tight implementation timescales, testing prior to 'go-live' was not given the prominence I would have expected. This resulted in a number of problems which included:

- a technical problem being identified with BATS on the day it was planned to go live. Initially a decision had been taken that the existing TrakCare system would be used to support the opening of the Harbour, however this decision was reversed. The abandonment of 'go-live' at the Harbour was avoided when a technical resolution was developed at short notice by Microsoft, and implemented quickly to allow the go-live to take place; and

- a security flaw being identified in the CSC component of BATS, which resulted in the online CSC portal being taken down for almost two months. During this time the Government offered two 'workarounds':

    - reverting to a manual process by asking individuals to call the Coronavirus Helpline, which would result in an email of the certificate being sent; or

    - using the secure paper CSC document that was sent to Islanders in the post and which many countries are still accepting as evidence of vaccination status.

Recommendations

R6 Ensure that the full range of requirements for all users is captured when compiling high-level IT systems specifications.

R7 Ensure that all IT and digital investments are validated by the Design Authority, so that there is a clear view of systems interdependencies and to avoid the unnecessary duplication of data.

R8 Ensure all future IT systems developments are tested rigorously, both functionally and non-functionally in-line with best practice principles.

Operation of the Test and Trace Programme in practice

72. Operationally during 2020 and 2021 the entire Test and Trace Programme has been made up of six main parts:

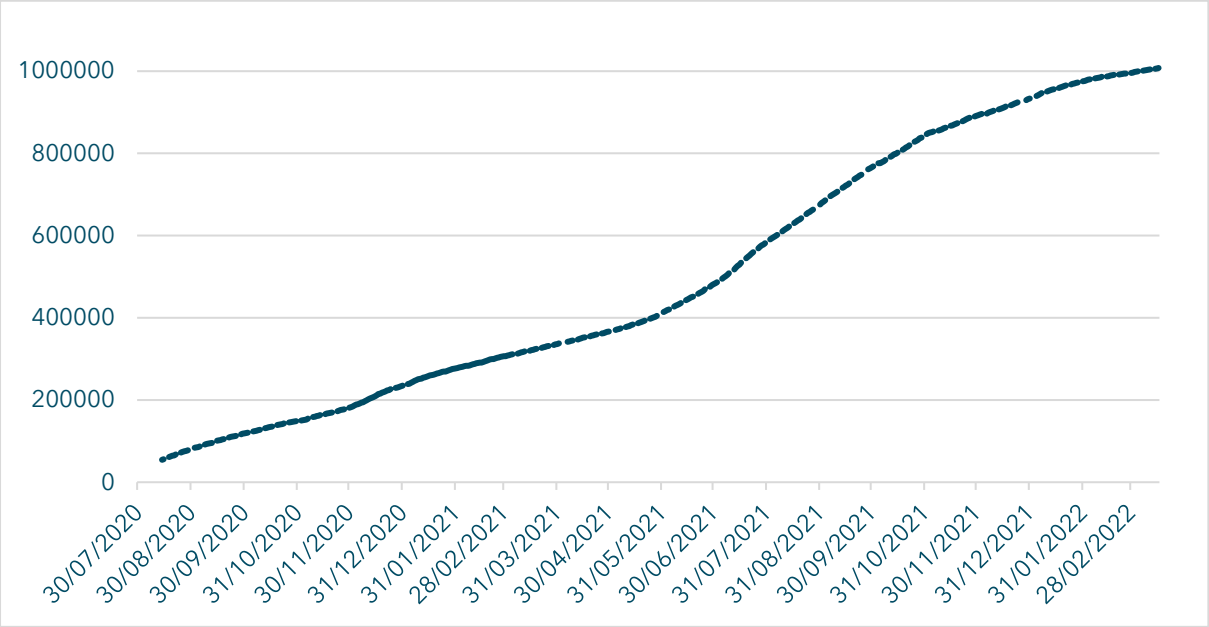
- border/travel/arrivals testing
- population/workforce testing
- laboratory testing
- contact tracing and enforcement
- information technology; and
- core programme team.

Testing

73. For PCR testing, the Test and Trace Programme relied initially on a combination of NHS and commercial off-Island testing. At the end of June 2020 the decision was made to procure an outsourced on-Island laboratory and the Open Cell laboratory was delivered and fully operational by 15 September 2020. Ultimately a new in-house PCR Hospital laboratory run by the Health and Community Services Department (HCS) started operating in November 2021. Apart from early on in the pandemic, there was no shortage of testing capacity that had a material impact on the testing and tracing service. The laboratories were appropriately regulated and their work supervised from a clinical professional perspective.

74. As at 16 March 2022 just over 1,000,000 tests had been undertaken as part of the Test and Trace Programme as shown in Exhibit 8.

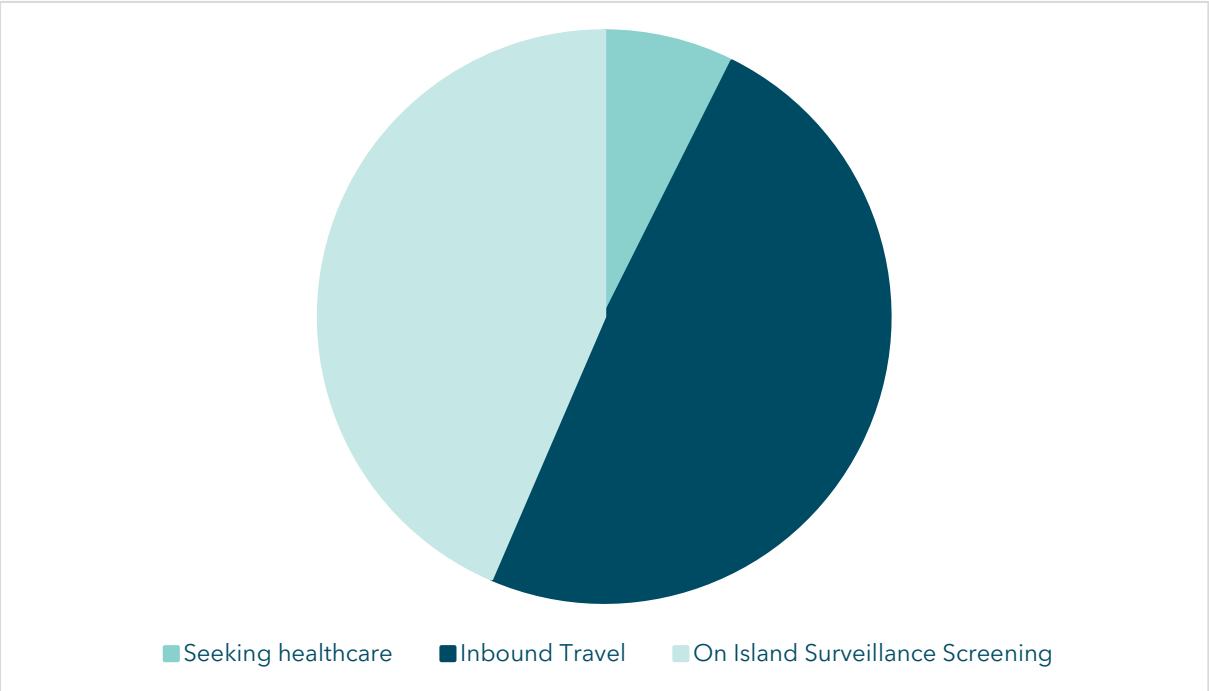
Exhibit 8: Number of COVID-19 tests undertaken



Source: opendata.gov.je

75. Exhibit 9 shows that 49% of these tests were undertaken in respect of inbound travel.

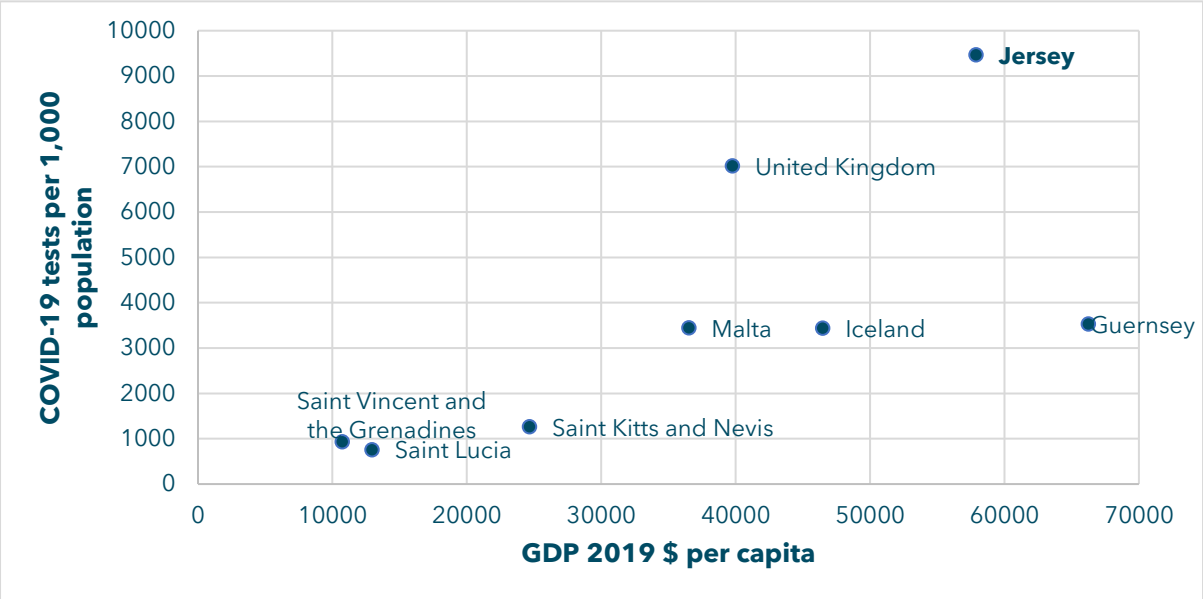
Exhibit 9: Reasons for COVID-19 tests July 2020 to 16 March 2022



Source: opendata.gov.je

76. The scale of the testing programme in Jersey was significant when compared with other jurisdictions. Exhibit 10 provides comparative data on the number of tests undertaken per 1,000 population across a number of jurisdictions. Exhibit 10 also provides data on the Gross Domestic Product (GDP) of the jurisdictions. In general, richer jurisdictions have undertaken more testing. It should be noted that there are limitations in the data comparison including limitations due to differences in testing regimes and differences in reported data periods. In addition, the publicly available data has not been subject to audit.

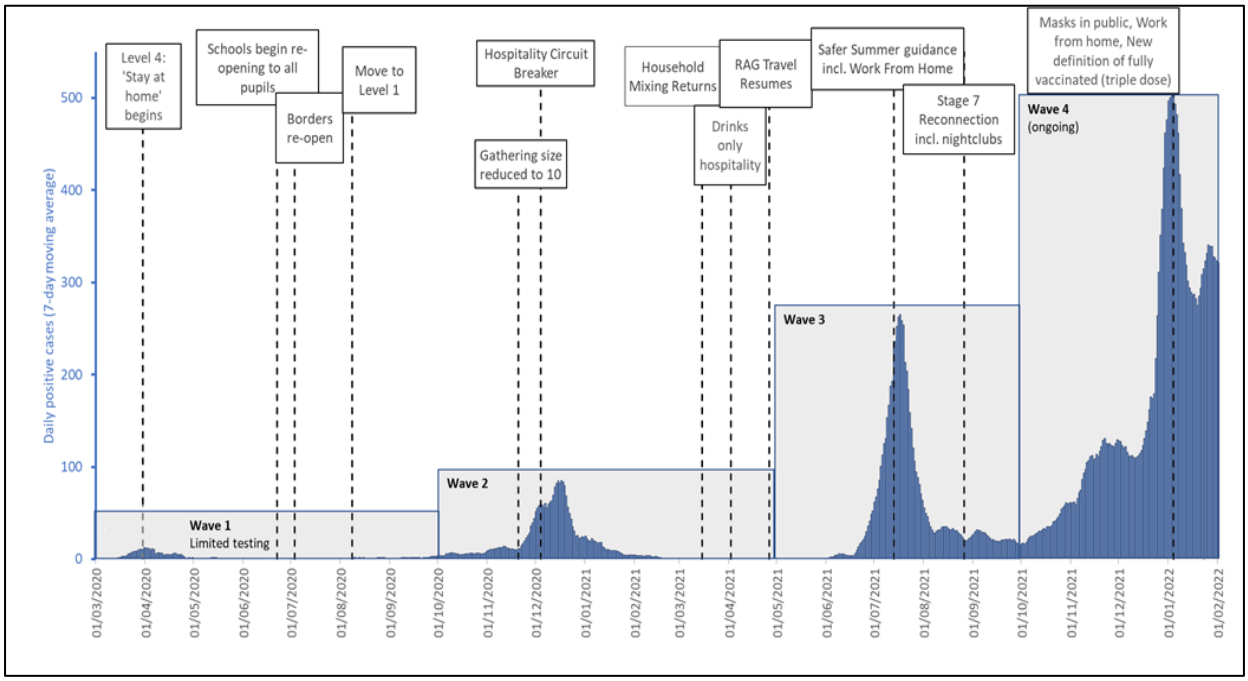
Exhibit 10: Comparative scale of testing across a selection of jurisdictions



Source: Jersey Audit Office analysis using Our World in Data and other publicly available information

77. The Test and Trace Programme was significantly impacted by policy decisions made at CAM and CoM, including decisions such as prioritising keeping education, the economy and travel open as far as possible. During the third and fourth waves of the COVID-19 pandemic this resulted in the Test and Trace Programme being under significant pressure. This pressure tended to occur in particular when the number of new cases exceeded 200/300 a day or total COVID-19 cases exceeded 2,000/3,000. At these times, demand for services far exceeded the capacity of the programme. Exhibit 11 provides details of the number of cases and waves of the COVID-19 pandemic.

Exhibit 11: Number of cases and waves of the COVID-19 pandemic



Source: Government of Jersey

78. At its meeting on 23 March 2021, CAM approved the Future Testing Strategy: Policy into Practice. This document noted that '*the Government of Jersey has chosen to follow a suppression strategy in response to the threat of the COVID-19 global pandemic. One of the key strategic levers identified for the delivery of this suppression strategy in Jersey is a robust testing and tracing programme.*

The primary purpose of any testing and tracing programme is the continued suppression of the virus by:

- *identifying new cases of Covid-19 from arriving passengers, with risk-based isolation requirements, to prevent seeding of new infections*
- *identifying new cases of Covid-19 on island and breaking the chains of community transmission, in asymptomatic individuals (to interrupt transmission before it reaches more vulnerable individuals), symptomatic individuals (infectious due to symptoms and also at risk of wide transmission), and contacts of positive cases, whilst also by acting quickly to prevent clusters and outbreaks*
- *providing the early warning signs that active cases on-island are rising, in order to allow timely and appropriate interventions to be introduced which will not only prevent a significant rise in hospitalisations and deaths, but also provide a level of stability to all islanders and business owners to plan for the future*

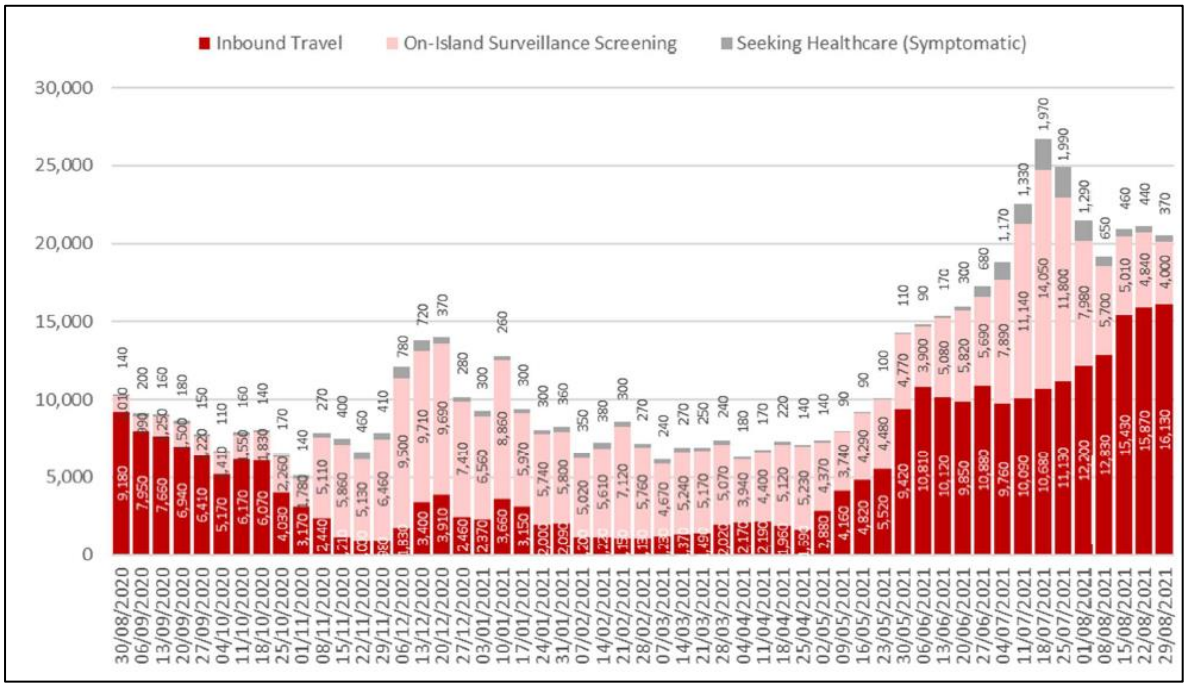
A testing and tracing system that is sufficiently robust to keep active cases consistently low, will enable reconnection and relaxation of restrictions on-island, allow stabilisation of conditions with the avoidance of the cycle of lockdown and reopening, and create an environment which facilitates discussion regarding a risk-based return to travel.'

79. The Test and Trace Programme did successfully produce health surveillance data to help track the progress of infections on the Island. In addition, the Test and Trace Programme did, to some extent, control the spread of COVID-19 infections on the Island. Contact tracing accounted for the detection of around 25% of all positive cases in 2021. In addition, around 7% of 62,800 Direct Contacts subsequently tested positive.

80. However, the planning assumptions included in the March 2021 Future Testing Strategy: Policy into Practice document were significantly understated. The planning assumptions were that for Quarter Three of 2021 (1 July to 30 September), there would be an average of 2,526 PCR tests per day, reducing to an average of 1,358 PCR tests a day in Quarter Four (1 October to 31 December). It was also assumed that in Quarter Three, 16% of these PCR tests would be on-Island and 84% for inbound travel, changing to 30% on-Island and 70% inbound travel in Quarter Four. The planning assumptions were based on supposition that most testing would be the result of travel, as it had been in the previous summer, and in circumstances where there had been no vaccination. However, the planning assumption did anticipate the timing and effect of the emergence of new variants. The reality was quite different to these planning assumptions, particularly from July 2021 where the Delta variant led to a significant increase in cases.

81. Exhibit 12 provides more details of actual testing demand each week from August 2020 to August 2021.

Exhibit 12: Actual testing demand each week August 2020 to August 2021



Source: Government of Jersey

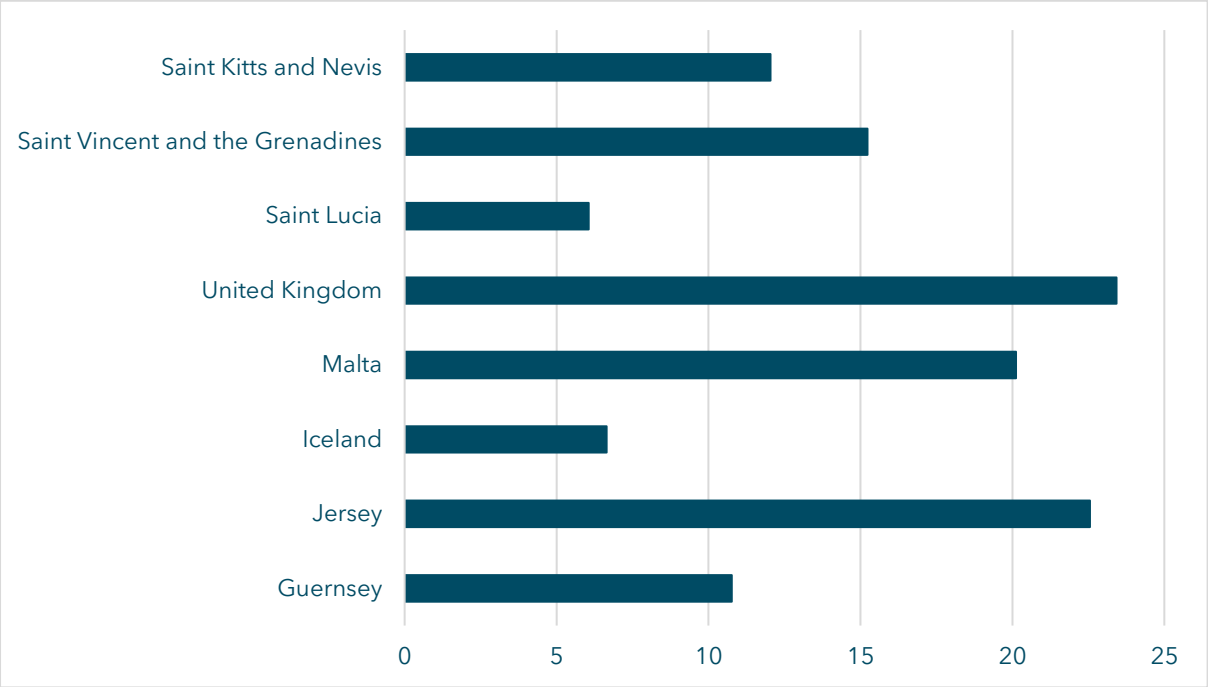
82. During July 2021 the actual total number of daily PCR tests exceeded 4,200, which is 66% higher than the original forecast of 2,526 a day.

83. Clearly COVID-19 variants such as Delta and Omicron have a significant impact on the demand for tests. The objectives of the Test and Trace Programme were not however formally revisited as demand increased significantly.

84. The Test and Trace Programme did, to some extent, minimise the rate of increase in infections during the COVID-19 pandemic. It is not possible however to conclude by what amount the rate of increase was minimised and whether that minimisation of infections represented value for money.

85. Exhibit 13 provides comparative data across a selection of jurisdictions as to the extent of testing relative to the scale of COVID-19 cases. It shows the number of tests undertaken divided by the number of COVID-19 cases and is an indication of how many tests a jurisdiction has undertaken to find each COVID-19 case. It should be noted that there are limitations in the data comparison including limitations due to differences in testing regimes and differences in reported data periods. In addition, the publicly available data has not been subject to audit.

Exhibit 13: Comparative data on the number of tests undertaken per COVID-19 case



Source: Jersey Audit Office analysis using Our World in Data and other publicly available data

86. This data shows that the scale of testing undertaken for each COVID-19 case in Jersey was similar to the United Kingdom and was significantly higher than a number of other jurisdictions.

Contact tracing and enforcement

87. A contact tracing workstream and team were established at the early stages of the Test and Trace Programme. A report to the Test and Trace Implementation Programme Board of 14 May 2020 shows that 35 staff had already been inducted and trained at that point. Options were also being considered in respect of proximity tracing.

88. A daily process of clinical review (known as the 'bundle process') was established to rapidly escalate clinically related issues for decision by the Public Health team. Changes to contact tracing methodology were required to be put through the 'bundle process'.

89. The capacity and activity of the contact tracing and monitoring and enforcement teams grew during 2020. When established, the size of the contact tracing team had been based on 10 positive cases per day, with an average of 15 Direct Contacts per positive case. A report to CAM in November 2020 identified the pressures on the service and the team was further expanded. By December 2020, the team composition was 89 staff with an additional 12 vacant positions. Of the

89 staff, 14 were responsible for monitoring and enforcement activities with the remainder undertaking contact tracing activities.

90. During 2021, the size of the contact tracing and monitoring and enforcement teams varied, dependent on the stage of the pandemic and the demand for the services provided by the teams.

91. The activities of the contact tracing and monitoring and enforcement teams have been included in the progress reports submitted to the Test and Trace Implementation Programme Board. The reporting has focussed on the number of activities undertaken. It was not however always clear from the reports whether the number of activities undertaken matched the number of activities required to be undertaken to meet the programme objectives and parameters.

92. The reporting of the activities undertaken provided historic data rather than information forecasting anticipated demand. Potential increased demands on the team could have been anticipated earlier in the third wave of the COVID-19 pandemic. The risk of a third wave had been identified in February 2021. However the reporting to the Test and Trace Implementation Programme Board even as late as mid June 2021 did not anticipate or project the impact of increased demand on the contact tracing and monitoring and enforcement teams.

93. The risk register presented to the Test and Trace Implementation Programme Board on 13 June 2021 included a risk in respect of the capacity of the Covid Safe Team at the weekends but did not highlight the risks associated with increased cases which might cause the services to be overwhelmed during the third wave.

94. At an operational level, decisions were being made in respect of the operating procedures being followed by the contact tracing and monitoring and enforcement teams during June 2021. Examples of these included:

- the ceasing of backward contact tracing, reducing the number of days for contact tracing from 10 days from contact with a positive case to 72 hours; and
- dealing with contact tracing only (other than escalations for those who have been unable to be contacted), to focus on making calls to positive cases and direct contacts.

95. Operational decisions were made by relevant officers. Key decisions regarding the service-wide response to policy direction were discussed and ratified at the Test and Trace Implementation Programme Board, and these decisions noted in the minutes. Some operational decisions were not reported clearly in the written reports or risk registers submitted to the Test and Trace Implementation Programme Board in June 2021. They were however reported to CAM on 12 July 2021.

Information technology

96. I have commented on the information technology aspects of the Test and Trace Programme earlier in this report.

Core programme team

97. A key feature of the operational model used by the Test and Trace Programme was the use of zero hours contracts for testing (collecting samples) staff and tracing staff. This decision reflected the nature of the work and ease of training (so staff numbers could easily be flexed up and down). It also reflected the financial dimension of employing too many staff when the number of infections was low.

98. An example of the impact of this flexible staffing approach is in a supplementary business case submitted in December 2021, where a request for additional PCR funding in 2021 was offset by staff and other savings of £2.6 million.

Overall control of the programme

99. The standard weekly programme update report to the Test and Trace Implementation Programme Board provided information on a regular basis to control the operational delivery of the programme.

100. Financial reports were provided on a monthly basis to the AO and departmental senior leadership teams. However there were gaps in the financial and workforce reporting to the Test and Trace Implementation Programme Board. Whilst financial updates were, on occasions, provided to the Test and Trace Implementation Programme Board, comprehensive financial and workforce reports were not provided on a systematic basis.

101. It is best practice for governments, when making decisions, to consider the impact of policy on inequalities and on vulnerable groups. Such inequalities impact assessments are not currently required under Jersey legislation. I understand that mandatory health and inequalities impact assessments are being considered as a requirement under the new Public Health Law being developed in Jersey. I saw no evidence that an inequalities impact assessment had been undertaken to support the work of the Test and Trace Programme.

Recommendations

R9 Require all major programmes to maintain a formal operational decision log.

R10 Ensure reporting to programme boards includes appropriate forward projections for the programme and a comprehensive assessment of potential future programme risks.

R11 Require all major programmes to document an inequalities impact assessment at the outset of the programme.

Detailed findings – Vaccination Programme

Approach to the identification and authorisation of potential vaccines

102. The Government of Jersey decided to follow the UK mainland lead on vaccine tracking and authorisation. This was a logical decision given Jersey's involvement in the UK JCVI and MHRA.

103. At the time of taking this decision in November 2020, CAM noted that it anticipated that small quantities of vaccines would be available by the end of 2020 through an arrangement with the UK's Department of Health and Social Care. The amount of the UK stocks to be made available to Jersey was understood to be proportionate to the comparative population of Jersey to the UK. In addition, the UK would be providing the vaccines to Jersey free of charge.

104. The Government of Jersey received an indemnity letter from the UK Department of Health and Social Care on the 17 December 2020 to use the procured vaccines. The Government of Jersey then signed a related Memorandum of Understanding on 20 January 2021 with the Secretary of State for Business, Energy and Industrial Strategy and the UK Health Security Agency.

Initial programme set up

Mobilisation

105. In July 2020, planning for the vaccination programme had commenced. A paper was taken to the Emergencies Council meeting on 22 July 2020 which covered the identification, purchase, distribution and administering of a COVID-19 vaccine to the Jersey population. A request for funding for not just the vaccine but for the associated activities was also submitted to Treasury and Exchequer on 31 July 2020 by HCS.

106. A paper to CAM on 6 August 2020 set out the issues and decisions to be made at the initial stage of establishment of the Jersey vaccination programme. At this time, the Government of Jersey had assumed that it would be charged for the vaccines. However, the UK subsequently provided the vaccines to Jersey free of charge.

107. The following key policy principles informed the proposed future delivery of the COVID-19 Vaccination Programme in Jersey:

- *Principle 1 - All eligible cohorts should be vaccinated as soon as a vaccine becomes available – this is a key element of the control of COVID-19*
- *Principle 2 - The vaccine will not be compulsory but will very strongly recommended*
- *Principle 3 - Islanders should not be charged for the vaccine*
- *Principle 4 - The vaccines will be received through the Department of Health and Social Care and Public Health England (PHE) to assure the safety and efficacy of the vaccines.*
- *Principle 5 - Roll out of the vaccine will be based upon priority groups as determined clinically based on the Joint Committee of Vaccination and Immunisation (JCVI) in the UK.*

Initial business cases

108. Whilst the Vaccination Programme was entirely separate from the Test and Trace Programme, it initially reported to the Test and Trace Implementation Programme Board. The Director General of JHA was the SRO and the Director General of HCS was the AO for the Vaccination Programme when it was established.

109. An initial business case for £5.47million was prepared to support allocation of funding for the Vaccination Programme in the Government Plan 2021-24. The funding request in this business case to support the Vaccination Programme was an approximation based on limited available information at the time. Whilst previous swine flu and seasonal flu vaccination programmes provided reference points, early financial planning from August 2020 included a range of unknown parameters. Options were modelled based on documented assumptions related to vaccine cost, timing, dosage and take-up.

110. A Project Initiation Document (PID) and updated business case for £8.12 million were included on the agenda of Test and Trace Implementation Programme Board meeting of 28 October 2020. The business case was based on an 80% uptake and £90 for each vaccine dose, for a population of 106,000 people. The business case forecast was further revised in November 2020 to £3.64 million once costs and delivery options became clearer and it was apparent that the vaccine would be received free of charge.

111. A supplementary business case was produced in August 2021 requesting an additional £1.84 million to deliver the booster programme in the autumn/winter of

2021 as well as an additional £6.68 million for the same programme in 2022. The estimate for booster delivery in the latter part of 2022 may need to be revised if:

- free vaccines continue to be provided from the UK; or
- unit cost of vaccines varies from the estimate in terms of supplier mix and unit cost.

Programme objectives

112. The objectives of the Vaccination Programme are clearly outlined in the PID that went to the Test and Trace Implementation Programme Board on 28 October 2020.

113. The overall objective of the Vaccination Programme was to '*maximise uptake, safely and with convenience*'. This objective did not change over time.

Communications

114. There is evidence that confirms that the Vaccination Programme communication was good. This includes a detailed stakeholder communication plan dated 21 June 2021.

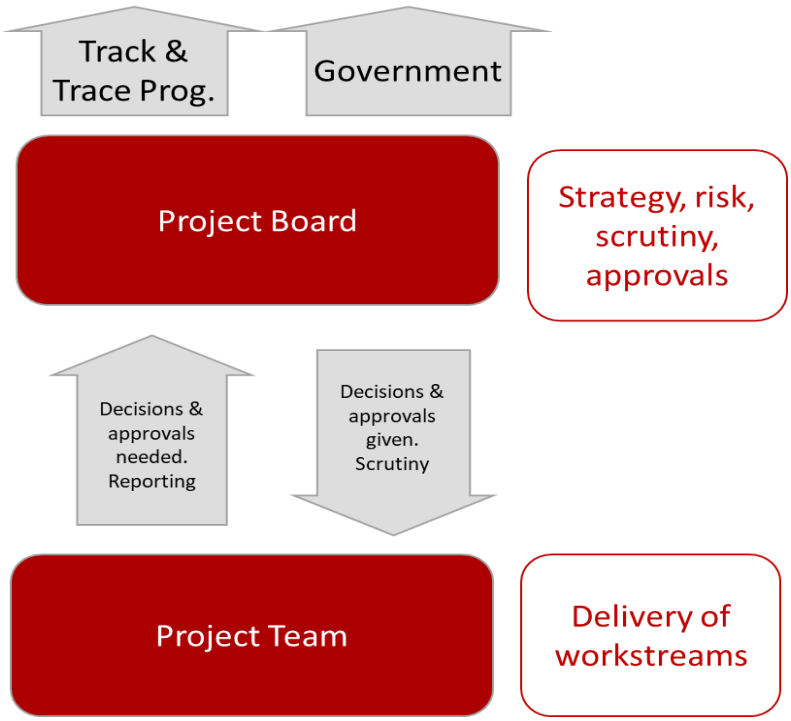
115. The Government worked with a team of behavioural scientists in determining the communication plan for the Vaccination Programme. The team developed 'personal appeals' that formed a core part of the communication programme. These 'personal appeals' were successful in explaining the importance of the vaccination and in encouraging Islanders to be vaccinated.

116. There has however been some feedback from stakeholders that much of the advice and guidance available was technology based and that this was difficult for certain groups to access. This included the online booking system for vaccination appointments.

Programme governance

117. The initial governance structure of the Vaccination Programme is set out in Exhibit 14.

Exhibit 14: Initial governance structure for the Vaccination Programme



Source: Government of Jersey

118. Initially the Vaccination Programme reported to the Test and Trace Implementation Programme Board, chaired by the Director General of JHA. However the AO for the Vaccination Programme (the Director General of HCS) did not attend meetings of the Test and Trace Implementation Programme Board.

119. After August 2021 however when the Director General of JHA left the Government of Jersey, the Director General of SPPP became SRO for the Vaccination Programme. At this point the Vaccination Programme began to be managed separately from the Test and Trace Programme and by 19 October 2021 the Vaccination Programme was off the meeting agenda of the Test and Trace Implementation Programme Board.

120. In November 2021 a revised PID was produced. From this point, both COVID-19 and the flu vaccination programmes were fully part of SPPP. The Director General for SPPP became the AO and the Director of Public Health became the SRO and chairman of the Vaccination Programme Board, which covers all vaccination programmes.

121. Risk escalation in respect of the COVID-19 Vaccination Programme was handled through:

- a weekly review of risks and issues with revised mitigation details included in a weekly report
- regular fortnightly reports to the Vaccination Programme Board as one of a series of regular update slides; and
- monthly reviews by the Head of Risk to validate the risk management and review the validity of any escalation.

Funding the Vaccination Programme

122. Funding was allocated in the Government Plan 2021-24 and the Government Plan 2022-25 for the Vaccination Programme. Exhibit 15 contains more details.

Exhibit 15: Funding allocated to the Vaccination Programme in the Government Plans

	Government Plan 2021-24 £'000	Government Plan 2022-25 £'000	Total £'000
Vaccine funding	5,474	4,103	9,577
Reserve		2,585	2,585
Total funding	**5,474**	**6,688**	**12,162**

Source: Government Plans 2021-24 and 2022-25

123. Actual expenditure in 2021 on the Vaccination Programme was £5,003,000. The current forecast for expenditure in 2022 is in line with the Government Plan 2022-25.

124. Business cases were approved to support the expenditure on the Vaccination Programme allocated in the Government Plans. Exhibit 16 summarises these business cases.

Exhibit 16: Business cases supporting the Vaccination Programme

	2021 £'000	2022 £'000	Total £'000
Initial business case Dose 1 and 2 *	5,474		5,474
Adult booster 1	1,838	1,103	2,941
Adult booster 2 and booster for ages 12-17		5,585	5,585
Total Business cases	**7,312**	**6,688**	**14,000**

**Based on population of 106,000 and 80% take-up.*

Source: Jersey Audit Office analysis

125. The analysis shows that whilst a business case was approved for the first adult booster in 2021, additional funding was not required. Vaccines were provided free of charge from the UK Government which resulted in significant savings against the estimated cost of delivery of the first two doses which had assumed procurement by the Government of Jersey. This saving enabled the cost of the first phase of the booster to be met from the initial allocation of £5.5 million. The extension of the use of this funding to cover the booster was approved by Ministerial Decision on 29 November 2021.

126. Using data on vaccinations delivered in 2021 and estimated delivery of vaccinations in 2022, I have calculated an estimated cost of administering the vaccines. This is shown in Exhibit 17.

Exhibit 17: Estimated cost of administering the vaccine

	2021 Actual numbers	2022 Estimate**	Programme Total
First dose*	81,550	11,215	92,765
Second dose*	77,133	15,632	92,765
Adult booster 1	52,744	33,035	85,779
Subsequent booster Q3/4 2022	0	92,765	92,765
Total	211,427	152,647	364,074
Cost	£5,003,000	£6,688,000	£11,691,000
Estimated cost per vaccine	£23.66	£43.81	£32.11

**Based on 80% population estimate of 106,000 in original business case*

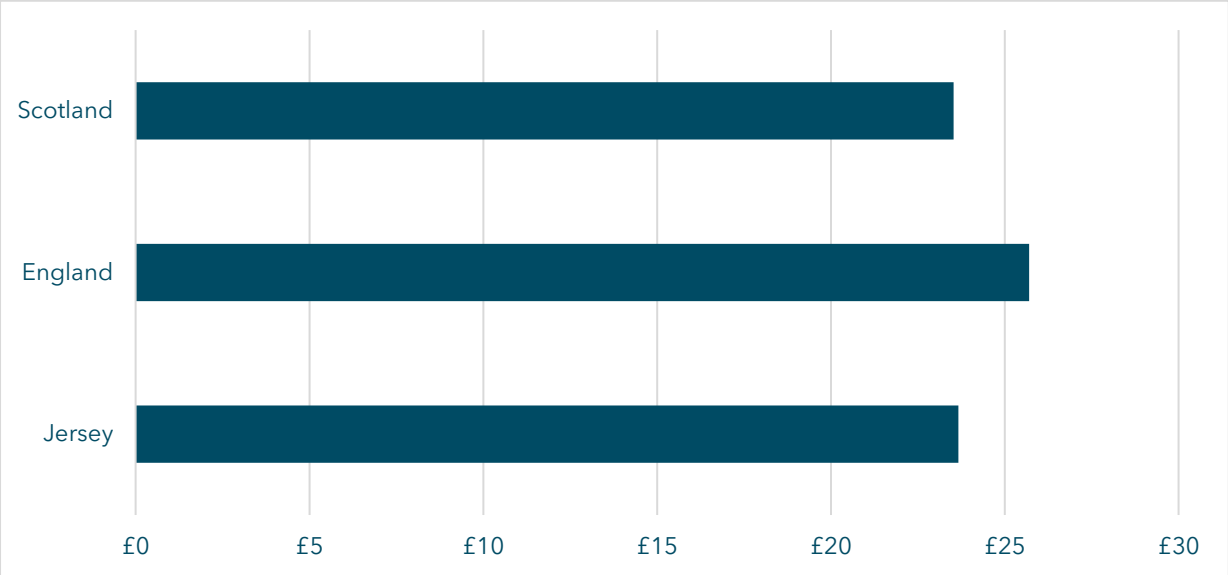
***Based on eligible population figure of 92,765 in business case*

Source: Jersey Audit Office analysis

127. The growth in average cost calculated for 2022 compared to 2021 reflects the inclusion in the model of the costs of the vaccine for the subsequent booster. The actual cost for 2021 did not include this due to the free provision by the UK Government.

128. I have compared the cost of delivering the vaccine in Jersey in 2021 to some UK jurisdictions. The costs of delivery in Jersey are line with Scotland and are lower than England. The values for Wales have been omitted as they do not include costs related to redeployed staff and are therefore not directly comparable. Exhibit 18 contains further details.

Exhibit 18: Comparative cost per vaccine delivered



Source: Jersey Audit Office analysis

129. Given that vaccines had been provided free of charge, the major cost of the Vaccination Programme in 2021 related to the workforce to deliver and administer the programme. Temporary staff were procured from the Government's staffing agencies under existing corporate contracts. Doctors were also engaged to support the Vaccination Programme on a fixed hourly rate.

130. The cost benefit to the Government of Jersey of the free vaccine provision from the UK Government is considered to be in excess of £3.5 million in 2021. This saving provided opportunity to deliver the first phase of the booster programme to adults in 2021 within the original programme cost estimate.

Technology to support the Vaccination Programme

131. The BATS was developed further to allow the booking of vaccinations and to provide vaccine status through the CSC module. The same development principles were followed for these developments as had been followed for the main BATS.

132. There was insufficient testing of the CSC module prior to the launch and 'go live' of the system. After launch, a security flaw was discovered and the CSC module was taken down on 20 October 2021 until 17 December 2021. Islanders were told to either:

- call the Coronavirus Helpline to get a PDF version of their CSC, including QR codes, emailed to them; or
- use the paper CSC document that was sent to Islanders in the post.

133. As a consequence of the discovery of the security flaw, additional systems development work had to be commissioned. In addition, external security testing of the application took place prior to the system being re-launched.

Operation of the Vaccination Programme

134. The objective of the Vaccination Programme was to '*maximise uptake, safely and with convenience*'. Delivery was managed by:

- vaccinating as fast as possible, in priority order
- following JCVI guidance
- bulk vaccine supply and purchase
- a delivery model aimed at delivering what was beneficial to clients and delivering convenience in order to maximise take-up; and
- monitoring operational delivery through reporting on progress.

135. A paper went to the CAM meeting on 25 November 2020 which recommended the Fort Regent site as the main centralised vaccination hub. This paper considered alternative options before making this recommendation. In practice, more community-based delivery did happen but it was risk managed and based on the needs of the entire population. For example, mobile vaccination in nursing and residential care homes was implemented, whilst ensuring that Fort Regent capacity was not adversely affected. Later on, pop-up or walk-in vaccination clinics were established, but again this was done when the throughput of large numbers at Fort Regent was not compromised.

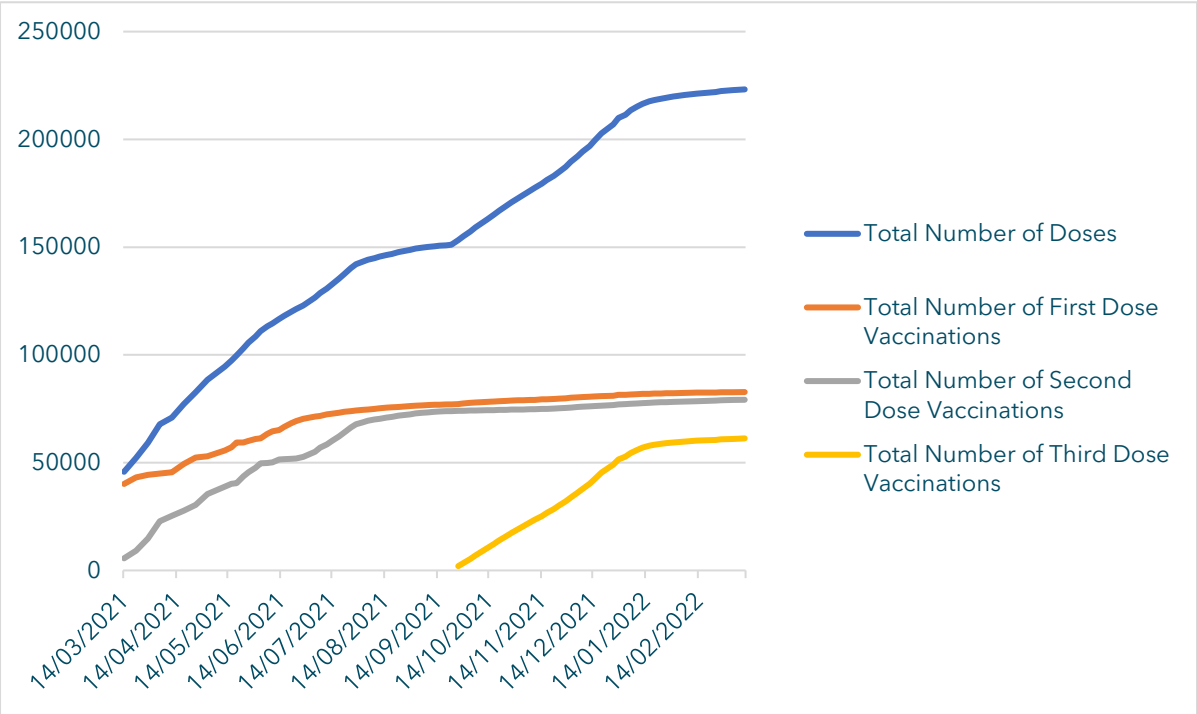
136. The delivery model was to administer 8,000 doses a week. In practice however the average was more like 4,000 due to problems in getting vaccine supplies. Jersey received 0.16% of the UK vaccine allocation and ordering and supply was based on a weekly cycle. These constraints did at times limit the availability of vaccine slots to book.

137. However, to maintain public confidence in the Vaccination Programme, a key priority was to ensure all booked vaccination slots were actually delivered. Therefore the decision to occasionally limit vaccination slots, to match the actual

supply of vaccine on the Island, was a reasonable decision and there was high public confidence in the programme.

138. As at 6 February 2022 the Island's Vaccination Programme has administered 220,629 vaccinations of which 82,377 are first doses, 78,403 are second and 59,849 are boosters (third dose vaccinations). Exhibit 19 provides more details.

Exhibit 19: Vaccination delivery

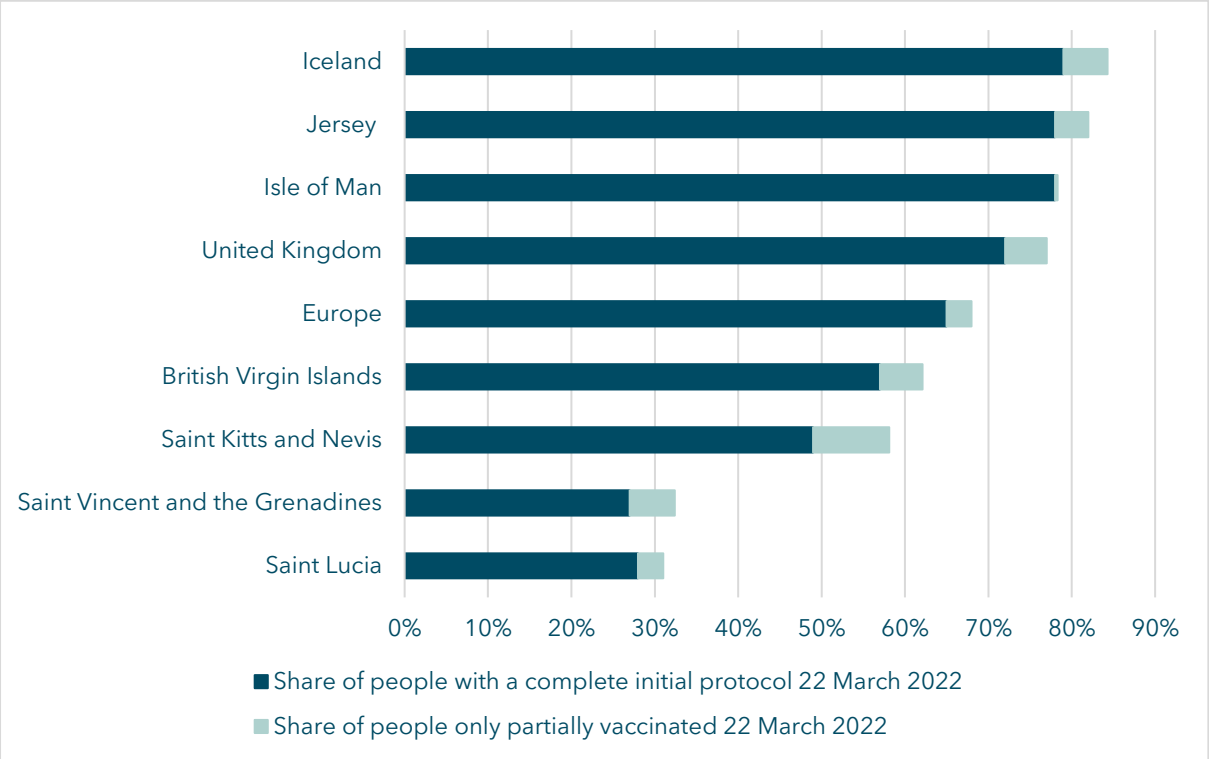


Source: Government of Jersey open data

139. With 78,403 people receiving a second dose the programme has achieved its initial target of 80% of the eligible population.

140. Exhibit 20 shows Jersey's performance in respect of vaccinations compared to a selection of other jurisdictions. It shows that Jersey has performed well in comparison to other jurisdictions.

Exhibit 20: Comparative performance of vaccination programmes



Source: Our World in Data

141. The potential inequalities of age (under 18 and older people) and disability were taken into account when planning and delivering the Vaccination Programme. Similarly, issues of 'disadvantaged groups' were also taken into account. I could not however find evidence of data on ethnicity being captured.

Recommendation

R12 Routinely seek to record ethnicity and race data in population based health programmes to assist in the reporting of any race inequalities.

Appendix One

Audit Approach

The review included the following key elements:

- review of relevant documentation provided by the Government of Jersey
- comparative data analysis using publicly available information; and
- interviews with key officers within the Government of Jersey and Digital Jersey.

The documentation reviewed included:

- COVID-19 Test and Trace Implementation Programme Board agendas, minutes and relevant papers
- COVID-19 Vaccination Programme operational protocols and standards manual
- COVID-19 Vaccination Programme Board agendas, minutes, Risk, Actions, Issues and Decisions logs (RAID logs) and programme updates
- COVID-19 Vaccination Programme and COVID-19 Test and Trace Programme business cases
- COVID-19 Vaccination Programme and COVID-19 Test and Trace Programme Ministerial Decisions and reports
- COVID-19 vaccination workforce cost model
- COVID-19 Vaccination Programme Project Initiation Document
- Sample of weekly operational oversight and project reports for the Vaccination Programme and for the Test and Trace Programme
- Agendas, minutes and relevant reports to CAM
- Financial ledger records for COVID-19 Vaccination Programme and COVID-19 Test and Trace Programme 2020 and 2021
- COVID Status Certificate Project Board reports
- COVID-19 Strategy, June 2020
- COVID-19 Winter Strategy Update 2021-2022, October 2021

The following officers were interviewed or provided written input:

- Medical Director, HCS Primary and Preventative Care Care Group
- Project Manager, COVID-19 Vaccination Programme
- Interim Director of Public Health
- Head of COVID-19 Vaccination Programme (until 31 December 2021)
- Head of COVID-19 Vaccination Programme (after 1 January 2022)
- Operational lead for COVID-19 Vaccination Programme
- Director General, HCS
- Deputy Medical Officer of Health
- Acting Director General, JHA
- Medical Director, HCS
- Director of Public Health
- Director of Test and Trace Programme
- Chief Nurse
- Director General, SPPP
- Chief Executive, Digital Jersey
- Group Director of Modernisation and Digital
- Head of Change Delivery, Modernisation and Digital
- Principal Policy Officer, Public Health
- Head of Finance Business Partnering
- Finance Business Partner
- Commercial Services Team

I would like to thank everyone who has contributed to this report. The fieldwork was carried out by affiliates working for the Comptroller and Auditor General.

Appendix Two

Summary of Recommendations

R1 Create and maintain a comprehensive live programme control document for long running emergency programmes that cover multiple activities and are initiated by a single programme business case. The live programme control document should record all business cases and decisions relating to the programme.

R2 Undertake a comprehensive review of the Test and Trace Programme communications, involving members of the public, representative community organisations and behavioural scientists, with the aim of creating a simple, robust communication plan for similar long running events of this type in the future.

R3 Require strategic programmes that fall outside the Public Finances Manual definition of a capital or major project to set out in a Project Initiation Document the way in which the programme will be controlled and managed.

R4 Ensure that a reconcilable audit trail is maintained between business cases and related expenditure for all significant projects when these might include changes over time.

R5 Review exemption and breach records in respect of expenditure on PCR testing and the on-Island laboratory and ensure breaches have been recorded in compliance with the Public Finances Manual.

R6 Ensure that the full range of requirements for all users is captured when compiling high-level IT systems specifications.

R7 Ensure that all IT and digital investments are validated by the Design Authority, so that there is a clear view of systems interdependencies and to avoid the unnecessary duplication of data.

R8 Ensure all future IT systems developments are tested rigorously, both functionally and non-functionally in-line with best practice principles.

R9 Require all major programmes to maintain a formal operational decision log.

R10 Ensure reporting to programme boards includes appropriate forward projections for the programme and a comprehensive assessment of potential future programme risks.

R11 Require all major programmes to document an inequalities impact assessment at the outset of the programme.

R12 Routinely seek to record ethnicity and race data in population based health programmes to assist in the reporting of any race inequalities.

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