

Report of the Chief Executive

Board Meeting October 2020

1 COVID-19 Test Trace Protect General Update

Maintaining and continuing our response to the COVID-19 pandemic and the Test Trace Protect programme remains the key priority for the organisation.

The last few weeks have been particularly busy across all of our key COVID-19 functions as the incidence of COVID-19 has increased across Wales. We have worked closely with the respective health boards and local authorities in areas where incidents and outbreaks are occurring and in relation to advising on the general increase in incidence in localities. We have also been working closely with colleagues in the Welsh Government across the breadth of our COVID-19 response to provide expertise and advice on specialist health protection, sampling and testing, population surveillance and the broader population harms resulting from COVID-19. This has included the provision of advice in relation to local and national restrictions.

However, at the time of writing, the scale of the health protection activity that is taking place across Wales is extremely challenging for our health protection response teams to maintain and we do have continued and significant concerns in relation to the well-being of our staff in sustaining this pace of response. We have raised our concerns in relation to the sustainability and resilience of our team with the Welsh Government, which is also a challenge for partners at a local and regional level, and we are in the process of developing a business case for additional resource that will be submitted to the Welsh Government for consideration. Meanwhile, our emergency response level remains at an enhanced response level. However, our activity is similar to what it was in the earlier stages of the pandemic and therefore we have returned to 'acting as if' we are in a major incident.

On Monday 19 October, the First Minister announced a 'fire-break' in Wales to commence on Friday 23 October until Monday 9 November. We are working closely with Welsh Government colleagues in considering the next phase of the pandemic.

A more detailed verbal update in relation to COVID-19 will be provided during the Board meeting.

2 Meeting with the Minister for Health and Social Services

On the 21 October, Jan Williams, Chairperson, and I met with the Minister for Health and Social Services and the Director General Health and Social Service/NHS Wales Chief Executive. We discussed a range of subjects including the health protection response, the Operational Plan and our essential services, the broader population health impacts of COVID-19 and our international horizon scanning reports.

3 Public Health Wales Data Breach

As previously reported in my September report, the independently commissioned investigation into the data breach is in the process of being concluded. We anticipate that we will shortly be in a position to consider the report of the investigation, and any associated recommendations for improvement, and develop and implement an action plan in response to the report.

We continue to support the Information Commissioners Office with their own investigation which aims to determine Public Health Wales' compliance with data protection legislation in relation to the reported breach.

At the time our proactive public statement was issued, we made available questions and answers, an email address and a telephone contact number, should a member of the public wish to have additional information or to discuss the data breach further. 22 members of the public have contacted us following this.

4 Evidence Session with the Health, Social Care and Sport Senedd Committee

On the 23 September 2020, Quentin Sandifer, Executive Director of Public Health Services/Medical Director, Giri Shankar, Professional Lead Consultant for Health Protection, and I gave evidence to the Health, Social Care and Sport Senedd Committee.

The evidence session covered the work Public Health Wales has undertaken in support of the Welsh Government's Test Trace Protect Strategy - reflections to date and lessons learned, preparations for the winter period and the role Public Health Wales will play in promoting the wider public health messaging to encourage the take up of the flu vaccination.

In addition to the areas set out above, the session also covered a wide range of topics including the Public Health Wales data breach, testing demand and capacity and working with the Welsh Government.

Our submission is attached as appendix 1.

5 Progress Update on Microbiology Recruitment and Testing Trajectories

Following the additional investment by the Minister for Health and Social Services in August, an extensive recruitment exercise has been undertaken in support of the planned Microbiology expansion. This will create an additional six 'hot' labs based in local hospitals across Wales to support the faster turnaround times for COVID-19 tests, and the introduction of 24 hour, seven days a week working (24/7) in our regional laboratories in Rhyl, Swansea and Cardiff to support high throughput COVID-19 testing.

167 full-time equivalent posts are in the process of being recruited to. To date, we have recruited to 152 of the required posts. 34 of those are from internal recruitments and promotions. There is ongoing activity to recruit to the remaining vacancies, which currently stands at 49 (15 new and 34 internal vacancies requiring backfill).

The Minister for Health and Social Services has also approved the development of a Public Health Wales laboratory in the Imperial Park site in Newport (IP5). As both the 'hot' labs and Imperial Park 5 laboratory become operational, the COVID-19 testing capacity within Public Health Wales will increase significantly. 24/7 working in our regional laboratories will be active at the end of October. All 'hot' labs are expected to be operational at the end of November. The handover of the IP5 new laboratory is currently expected to take place on the 7 December, when the high volume Perkin Elmer testing platform will also be operational. We are working with the contractors to see if this could be made operational by the 30 November.

The combination of the additional 'hot' labs, 24/7 regional working and Imperial Park laboratory capacity, NHS Wales laboratories will have a daily capability of 15,000 tests by early December 2020 or the end of November if we are able to bring forward the IP5 laboratory go-live date.

6 Queen's Birthday Honours: Public Health Wales

In the Queen's Birthday Honours, we are delighted to say that the following staff from Public Health Wales have been made Members of the Order of the British Empire (MBE) for efforts in the COVID-19 response:

- **Dr Eleri Davies**, Head of Healthcare Associated Infection, Antimicrobial Resistance and Prescribing Programme (HARP)
- **Dr Robin Howe**, Professional Lead Consultant in Microbiology
- **Gail Lusardi**, Nurse Consultant
- **Dr Catherine Moore**, Consultant Clinical Scientist, Wales Specialist Virology Centre, and Head of Molecular Service Development.

Dr Eleri Davies said: "I was very surprised and humbled to receive the news that I have been awarded an MBE for the COVID-19 response. It has been such a difficult time for so many and I have just been doing my job supporting the response in Wales as part of the Public Health Wales and wider NHS service in Wales.

"The team here in Public Health Wales has been working tirelessly, and I wish to dedicate this honour to them and to my family, who have supported me throughout. This is our job and it's what we train for, but being recognised in this way feels very special - Diolch."

Dr Robin Howe said: "I was shocked, and immensely proud when I heard I had been awarded an MBE.

"I know I've worked hard over the last many months of COVID, but I also know that the whole microbiology team across Wales have been working long hours and long weeks, under huge pressure to deliver high-quality testing. Pathology services, such as Microbiology, are the often-neglected 'back-room' specialists that underpin much of NHS activity, and I'm so pleased to accept this award as recognition of our whole team effort."

Dr Catherine Moore said: "I'm thrilled to receive an MBE but like everyone else in this pandemic, I have just been doing my job as I've always done throughout my career.

"I'm dedicating my MBE to my family who haven't seen me properly since January and everyone who I work with across Public Health Wales, especially in the Specialist Virology Centre in Cardiff. Their ongoing positivity and resilience throughout what has been an often difficult time for the laboratory team continues to inspire me."

We are so very proud of all of our people in Public Health Wales and we are especially proud of Eleri, Robin, Gail and Catherine and the professionalism, leadership, dedication and sacrifice they have shown in the response to COVID-19. Many of our people have gone above and beyond over the last few months, and continue to do so every day, and it is wonderful to see Eleri, Robin, Gail and Catherine being recognised as representatives of the whole organisation.

I would also like to thank our Strategic Directors and all of our Incident Director Group for their expert leadership throughout the pandemic.

7 BMJ Clinical Leadership Team of the Year

The Blood Borne Virus teams across Wales have received the British Medical Journal (BMJ) Clinical Leadership Team of the Year award 2020. The teams were recognised for their efforts in delivering treatment for Hepatitis C across Wales. The judges were impressed with the breadth and reach of

the team, the delivery of care in line with prudent health care, the elimination of post code prescribing, the cost saving and cost effective nature of the delivery programme and the patient focused approach.

The judges were unanimous in their decision and stated that the achievements were "breath-taking". The teams were also recognised for their willingness to deliver care where it was most needed using novel approaches. Public Health Wales was a key member of the team delivering a number of key functions. The national virology department provided innovative testing strategies that have greatly improved access to treatment.

Some notable achievements included the contribution of the Point of Care testing team to delivering elimination of Hepatitis C from Swansea prison, a UK first, delivery of testing on the Cardiff night bus and the development and delivery of diagnostic testing on a finger prick of blood. Public Health Wales members were also pivotal in the delivery of renal transplants from Hepatitis C positive donors to Hepatitis C negative recipients with subsequent eradication of the virus, another UK first.

Public Health Wales has also been responsible for overseeing a number of streams of work, which include a notification exercise to inform people that had previously tested positive about the availability of new treatments, development and management of the Network and development of a patient management tool with live reporting of patient outcomes. Those involved report being very privileged to be part of something so far reaching and patient focused.

Recommendation

The Board is asked to **receive** this information.

Tracey Cooper
CHIEF EXECUTIVE

PUBLIC HEALTH WALES' WRITTEN EVIDENCE ON COVID-19

Submitted to Health, Social
Care and Sport Committee

23 September 2020 v2

Health, Social Care and Sport Committee

Public Health Wales evidence session

Wednesday 23 September 2020

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1. Introduction

This written submission is made to the Health, Social Care and Sport Committee prior to Public Health Wales' evidence session on Wednesday 23 September 2020. The submission sets out the work Public Health Wales has undertaken in support of Welsh Government's Test Trace Protect Strategy - reflections to date and lessons learned, preparations for the winter period and the role Public Health Wales will play in promoting the wider public health messaging to encourage the take up of the flu vaccination.

As the national Public Health Institute for Wales, Public Health Wales has played a key role in supporting the public, the Welsh Government and the wider system during our response to the coronavirus pandemic. We have provided system leadership through the provision of specialist and expert public health advice, information, intelligence and support.

This has involved working with a range of partners within the UK and internationally.

This has included:

- Providing public health advice to the Welsh Government to support the development of policy
- Delivering key public health functions and services (e.g. health protection and microbiology outbreak response and management)
- Supporting health boards, local authorities and the Welsh Government in implementing the Test Trace Protect Strategy
- Developing and disseminating surveillance and intelligence to the wider system (e.g. COVID-19 surveillance reports)
- Undertaking research, evaluation and international evidence analysis to inform policy and support the Wales's ongoing response (e.g. national public engagement survey and international horizon scanning).

We would like to take this opportunity to formally thank our staff for their continued commitment and professionalism over the course of the pandemic. They continue to work tirelessly to protect the public and support Wales' response to COVID-19.

2. Current Epidemiology

2.1 Global numbers

The pandemic continues to affect countries across the world. As of 15.35hrs 17th September 2020, there were 29,737,453 confirmed cases and 937,391 deaths worldwide¹.

2.2 UK numbers

All four UK countries saw the peak of the first wave at the beginning of April 2020. Following the introduction of the lockdown measures, case numbers and fatalities dropped from mid-April onwards. From mid-July onwards, cases in the UK overall have risen at an increasing rate. As of the 17 September (15.45hrs Source: UK Govt COVID dashboard) September 2020, there were 381,614 cases identified in the UK. The number of people who have sadly died in the UK (17 September 2020) is 41,705^[2].

2.3 Wales' numbers

The peak of infection in Wales was during the first two weeks of April 2020. As of the 17th September 2020, there were 20,233 confirmed cases and 1,601 deaths^[3].

2.4 Epidemiology in Wales

The national incidence of confirmed cases in Wales increased during week 37 (ending 13 September 2020) compared to the previous week and is at a level last seen during May 2020. Increases were noted in different regions of Wales, but are most prominent in Caerphilly, Merthyr Tydfil, Rhondda Cynon Taff and Newport. Mobile community test sites were recently established and restrictions are currently in place in Caerphilly and Rhondda Cynon Taf. In most other areas of Wales daily numbers of confirmed cases are at low and stable levels. Age-specific incidence of confirmed cases is currently highest in those younger than 50 years. COVID-19 confirmed hospital admissions remained low and stable during week 37.

As at 1pm, 17th September 2020, there had been a cumulative total of 20,233 confirmed episodes of COVID-19 in Welsh residents, this includes testing from non-NHS Wales laboratories. Due to ongoing data cleansing following the merging of these datasets, there may be a small number of duplicate episodes included in this cumulative figure.

Of all cases confirmed in Wales, 23% were tested and confirmed in NHS Wales laboratories and were in-patients who provided samples while

¹ https://covid19.who.int/?gclid=EAlalQobChMIIntXk48zy6wIVjM_tCh1gqg-WEAAYASAAEgJTbPD_BwE

² https://coronavirus.data.gov.uk/?_ga=2.195989608.51722093.1600253429-1160851531.1600253429

³ <https://public.tableau.com/profile/public.health.wales.health.protection#!/vizhome/RapidCOVID-19virology-Public/Headlinesummary>

attending a hospital, 62% were from individuals in the community (including key workers tested through occupational health departments and community testing units, care home staff and residents, other closed settings and hospital outpatient departments). Additionally, 15% of cases were tested and confirmed in non-NHS Wales laboratories.

A proportion of individuals testing positive in the most recent weeks may have been identified through screening following outbreaks and incidents in a variety of settings, or through enhanced testing in the community by mobile testing units. In addition to actual symptomatic cases of COVID-19, some of the positive tests included may be low-level positive test results where the individual subsequently tested negative within a short time frame of approximately 2 to 3 days after the original sample, these may be interpreted as 'false positive' test results if the individual remained asymptomatic. These are currently not removed from surveillance datasets.

As at 13th September 2020, there have been 3,723 confirmed case admissions to hospital (i.e. positive test taken within 28 days prior to admission, or less than 2 days after admission). There have been 423 admissions to critical care. As at 13th September 2020 there were 53 confirmed cases currently in hospital wards, five of whom were in a critical care ward.

The mean age of patients confirmed with SARS-CoV2 in hospitals is 70.9 years and the mean age of patients individuals with SARS-CoV2 in other locations is 45.4 years, this may include screening tests for non-symptomatic individuals. During week 37, incidence increased across all age groups, with highest incidence being seen in those aged 30-49.

2.5 Incidents and outbreaks

As at 9am on 14th September 2020, provisional data indicates that there had been 783 respiratory/COVID-19 incidents in care homes reported to Public Health Wales since 1st March 2020 with 57% having one or more confirmed cases of SARS-COV2 linked to the incident in Tarian (the national case and incident management system). The cumulative number of staff and residents testing positive was 2,809. Policy and local implementation of testing strategies has changed over time and this could affect the number and trends in confirmed cases and incidents. Local incidents not recorded on Tarian are not included in these figures.

Across parts of Wales, there are cases that can be linked to clusters and outbreaks. These are in a variety of settings ranging from exposures in pubs, house parties, hospitals, imported infection from foreign travel, workplaces and factories.

Enhanced community testing has been set in place in parts of Caerphilly Local Authority and Rhondda Cynon Taf Local Authority, following increases in confirmed cases in the area. In Caerphilly and Rhondda Cynon Taf Local Authority restrictions have also been set in place and social distancing reinforced.

There were 45 new respiratory incidents recorded in the Tarian case and incident management system in week 37; this is an increase from week 36. Of the 45 respiratory incidents, 24 were in residential homes, 11 in other settings, 6 in school or nursery settings and 2 in hospitals and other community settings respectively.

2.6 Mortality

As at 17th September 2020, there were 1,601 deaths in confirmed cases reported to Public Health Wales through rapid mortality surveillance in hospitals and care homes. The mean age of fatal cases reported through rapid mortality surveillance was 79.1 years (95% CI 78.6 – 79.7). The weekly number of deaths reported through rapid mortality surveillance peaked during the week ending 12th April 2020 at 236, this was one week later than the peak week for the number of confirmed cases in Wales.

According to provisional death certificate data provided by ONS, there were 4 COVID-19 deaths in Welsh residents registered with COVID-19 mentioned on the death certificate during week 36 (ending 4th September 2020). This has decreased from a peak of 412 during the week ending 24 April 2020. Of the deaths registered during the week ending 4th September 2020, 3 are reported as having occurred in hospital and 1 at home. According to EuroMoMo analysis, the weekly number of all cause deaths in Wales has decreased and is at levels expected for this time of year.

Further information including the latest available data can be found using the following [Public Health Wales Rapid COVID-19 surveillance link](#) (*publically available*).

**Please note that the hyperlinks provided in the footnotes take you to information that is updated daily. As a result, the figures may differ to those included within this paper.*

3. Test Trace Protect Arrangements

3.1 Background

On the 13th May 2020, the Minister for Health and Social Services published the Welsh Government's *Test Trace Protect Strategy*. This was informed by the expert public health advice within the Public Health Protection Response Plan submitted by Public Health Wales. The Strategy sets out detailed system-wide action that will be undertaken to support the Welsh Government's Framework for Recovery.

The roles and responsibilities of a range of agencies and the public are set out within the Strategy. Those identified for Public Health Wales are described as:

'Providing leadership and specialist advice on public health approaches. Responsible for coordinating contact tracing, advising on sampling and testing, laboratory analysis of tests, health surveillance and providing expert health protection advice and analysis of the spread of the virus in our communities through a range of health surveillance indicators'.

A Welsh Government Test Trace Protect Programme Oversight Group has been established to oversee the implementation of the Strategy. In addition, Public Health Wales established an internal programme to implement its contribution to Test Trace Protect. The Public Health Wales Response Programme was established in early May 2020, which consisted of a series of work streams, including:

- contact tracing and case management
- sampling and testing
- surveillance
- communications and engagement
- digital
- people
- international learning and intelligence
- research and evaluation
- quality, safety, information governance and risk
- finance and supply chain.

A Stage 1 Plan (which ran until early June 2020) and Stage 2 Plan (from June to end of August 2020 - subsequently extended to the end of September 2020) incorporated the outputs of the work streams. We implemented a programme management approach that utilises recognised methodologies and specialist integrated planning resources. This allowed us to develop a robust staged implementation plan, to deliver at pace, a number of key products required for us to mount an effective response to COVID-19.

A mid-stage assessment of the plans was undertaken during late July/early August 2020, which provided the opportunity to review progress, highlight achievements and inform the next stage of planning.

A further plan to take the organisation into 2021 is currently being developed. This will incorporate our ongoing health protection response to the pandemic, focused work in relation to the broader non-COVID related

harm to the population's health and well-being, the reactivation of our services and our organisational recovery.

The plan aims to enable the safe reactivation of defined services while recognising that the ongoing health protection response will be our key priority for at least the remainder of 2020. As at the 18th September 2020, Public Health Wales continues to operate at the 'enhanced' emergency response level as set out within our Emergency Response Plan.

Regular progress reports on the implementation of the Plan are reviewed by the Public Health Wales Gold Group, the Executive Team and the Board. As previously reported to the Committee, the Public Health Wales' Board and Committees continue to operate within Welsh Government guidelines and in line with the All-Wales Governance Principles, with some approved variations to Standing Orders. From March 2020, the Board has operated remotely and has met virtually with increased frequency. The Board recommenced live streaming its meetings in July 2020.

3.1.1 Providing expert health protection advice and support

As part of our statutory health protection role, Public Health Wales has provided specialist advice and support to a wide variety of partners and response structures, including NHS Wales, local authorities, emergency services, the Criminal Justice system, education, social care and voluntary services. During each phase of the response, Public Health Wales has, and continues to provide specialist public health advice to the Welsh Government and partners.

Public Health Wales also attends the twice-weekly Chief Medical Officer Team briefings, which is complemented by regular engagement between Public Health Wales' Executive Team and the Chief Medical Officer several times a week. These continue and are underpinned by weekly engagement between named senior leads.

Other notable examples of support to Welsh Government include:

- Specialist advice on infection prevention control and personal protective equipment, including supplementary guidance for health care and social care professionals
- Public Health guidance to residential care homes as described earlier
- Guidance to Environmental Health Officers in relation to prevention actions in care home and enclosed settings
- Specific advice on the development of critical worker testing to inform Welsh Government policy
- Advice to inform and consider international learning from COVID-19 and the broader indirect harm that is impacting on population health and well-being.

3.2 Public Health Wales' support of Test Trace Protect (TTP)

A substantial amount of work has been undertaken by the organisation to support the implementation of Test Trace Protect. Key deliverables to date are set out below.

3.2.1 Support to the development and delivery of the contact tracing service

Public Health Wales has provided active support to the development and delivery of the contact tracing service established in Wales including the development of job profiles, an e-training package for contact tracing, operational notes, scripts, standard operating procedures, flowcharts and data sets.

In addition, modelling advice and support was provided to inform the potential activity of cases and contacts and resulting resource requirement.

To fulfil its national role in Test Trace Protect, Public Health Wales is responsible for producing an operating framework for contact tracing that enables specialist public health protection advice and support to the regional and local level.

3.2.2 Contact tracing management digital system (Microsoft Dynamics)

Public Health Wales provided significant technical support to support the development of the contact tracing management digital system (Microsoft Dynamics).

This involved working closely with the Welsh Government and the NHS Wales Informatics Service (NWIS) in providing technical expertise and advice for the design and build of the Customer Relationship Management system (CRM) to support contact tracing across Wales

3.2.3 Establishment of a National Contact Centre and National Health Protection Response Cell

The COVID-19 Phase 2: Case Finding and Contact Tracing Operating Framework produced by Public Health Wales for the Contacting Tracing Service in Wales, sets out the three-tier model agreed for contact tracing and outlines the detailed operating arrangements. The Framework is intended to support the public health and public service system in Wales to deliver a common approach based on evidence and expertise. The three-tiered approach across Wales at a national, regional and local level is supported by a digital infrastructure to enable real-time information sharing.

This enables an agile approach to responding to clusters, incidents and outbreaks of COVID-19 due to the consistency in training, the digital system and model of delivery. This has been invaluable over the recent

weeks and months in providing 'mutual aid' for contact tracing capacity from any part of Wales to regions where incidents and outbreak are occurring.

The National Response Tier is delivered by Public Health Wales and is responsible for the development of the national operating framework, including guidance, Standard Operating Procedures (SOPs), contact tracing scripts, protocols and supporting materials. The national tier coordinates at an all Wales level, and supports the Welsh Government with advice to enable them to strategically manage the pandemic; ensuring access to Health Protection specialist advice for all the Regional Response Cells.

The National Response Tier also provides a point of contact for the sharing of intelligence across Test Trace Protect teams in Wales and information between Wales and other nations in relation to positive cases and/or contacts and other cross border issues including those relating to port health.

In *Test Trace Protect* Public Health Wales' role in contact tracing is therefore to provide specialist advice, guidance and training to partners; provide access to specialist resource to advise and give appropriate support to the regional level on complex cases, complex clusters, complex incidents and outbreaks; provide technical advice to the Welsh Government and to provide a number of functions at a national level including a helpline for professional enquiries. The functions include the following, which will be subject to review and ongoing activity analysis to ensure the model is proportionate to demand.

The Public Health Wales National Tier of response is delivered through a National Contact Centre which provides a single point of contact for all public and professional enquiries into Public Health Wales and a National Health Protection Response Cell. The National Health Protection Response Cell:

- Provides expert advice and appropriate support to the *Test Trace Protect* programme on the future development of contact tracing
- Provides specialist resource to advise on and give appropriate support to complex clusters, incidents and outbreaks
- Contributes specialist Health Protection advice to policy and guidance in response to COVID-19.

The Cell uses a range of staff including Consultants in Communicable Disease Control (CCDC), Consultants in Health Protection, Health Protection Nurse/Practitioners, Consultants in Public Health, Specialist Practitioners and administrative support. Whilst there is a range of roles, the overall numbers of staff with specialist health protection expertise is very small especially when considering the broad call on their time and skills. Therefore, to support these specialist staff, Consultants in Public Health and Public Health Nurses/Practitioners support the CCDCs, Consultants in

Health Protection and Specialist Health Protection nurses and have been mobilised to the Cell and have received specialist training to enable this.

The National Health Protection Response Cell supports the regional tier both proactively and reactively, offering advice and appropriate support in response to complex cases or scenarios, and close working relationships have been established.

To support Test Trace Protect, Public Health Wales has mobilised a large proportion of staff resource from across the organisation to support the roles described above. The organisation will ensure that this resource will be agile, with the ability to respond to changing challenges across Wales, including the potential of response to the management of multiple concurrent incidents and outbreaks as we progress through this phase of the pandemic.

3.2.4 Sampling and Testing

3.2.4.1 Sampling

Since the outset of the pandemic, Public Health Wales has been building capacity for COVID-19 testing in Wales and supporting the capacity building for sampling centres (run by health boards) and web-based sampling. The scope of Public Health Wales' sampling and testing work to date has included:

- supporting health boards to increase sampling capacity for antigen and antibody testing across NHS Wales to meet the requirements of the Welsh Government's testing plan
- increasing the testing capacity in Public Health Wales laboratories and accessing additional capacity from across the UK
- working with the Welsh Government and health boards (managing sampling centres) to create a simple end-to-end referral and results process for Wales
- working with the Welsh Government, health boards and Local Resilience Forum (LRF) partners to help them to maximise the sampling capacity in Coronavirus Testing Units, Population Sampling Centres and Mobile Testing Units and any additional capacity that may be required.

There is now a mixed-model for sampling that includes health board-run Coronavirus Testing Units (CTUs), Population Sampling Centres (PSCs), commonly referred to as 'drive-throughs' and mobile testing units (MTUs). Mobile Testing Units transferred from the military at the end of August 2020. 15 of the units are with the health boards, supported by a Department of Health and Social Care (DHSC) in England defined commercial provider. A further three units are stationed with the Welsh Ambulance Service NHS Trust (WAST), responding to outbreaks. Discussions are currently taking place with the DHSC regarding walk-in

sampling sites. These will add further sampling capacity in addition to providing better access to sampling in certain locations within Wales.

3.2.4.2 Testing

Since the start of the pandemic, Public Health Wales' microbiology service has built on its system leadership responsibilities and, together with the Welsh Government, has sought to procure both platforms and reagents on behalf of all medical microbiology services in Wales (there are seven Public Health Wales and three health board medical microbiology laboratories within Wales). This was undertaken to ensure that we have sufficient provision across Wales in order to meet the testing capacity needs throughout the pandemic. The intention has been to have centralised platforms that can do large volumes of tests, at a given time, and then provide local capacity to support quicker turnaround times for results through medium-sized platforms and rapid antigen testing machines across Wales.

To enable Public Health Wales to do this, in very challenging situations, we have had to adapt to the situation to secure sufficient testing capacity. This has included working with partners such as the Life Sciences Hub and the Welsh Government to identify and procure platforms that are more technically demanding and require an increased workforce and new skills in addition to pursuing the fulfilment of commercial agreements to bring new platforms into the UK.

Despite these challenges, Public Health Wales has actively continued to increase the testing capacity for Wales. This has been through the addition of high throughput platforms at the University Hospital Wales and Magden Park, along with the proposed provision of medium-sized and rapid PCR (antigen) machines in each of the medical microbiology laboratories in Wales.

In August 2020, in response to a request from the Minister for Health and Social Services, a business case to increase laboratory capacity and turnaround times across Wales was submitted and approved. The proposal will deliver rapid (under 4 hours) testing capacity for COVID-19 on all acute hospital sites plus timely (less than 12 hours) high throughput testing regionally.

The changes to the service will include:

- additional staff and equipment for Public Health Wales' regional laboratories based at University Hospital Wales (Cardiff), Moriston Hospital (Swansea) and Ysbyty Glan Clwyd (Rhyl) testing laboratories, so that they can operate 24 hours a day, seven days a week
- the creation of six additional Hot Labs at hospitals across Wales, which will have rapid, under four hour, testing equipment and new testing equipment for other conditions to free up staff to work on COVID-19

testing. These will operate from 08.00 – 22.00 hours, seven days a week.

Up to 170 Whole Time Equivalent (WTE) new jobs will be created across the service as a result of the changes. Public Health Wales has launched a recruitment drive to fill these positions. A project Board has been established to oversee the recruitment and it is anticipated (subject to successful recruitment processes) that 90% of the appointments and all bar one of the hot labs will be complete by the end of November 2020. Recruitment will be undertaken on a regional basis to enable maximum flexibility of appointments. This will better enable cross cover between the hot labs and the regional labs and provide additional resilience for testing within Wales.

Additional benefits will include testing for a range of respiratory pathogens (including influenza). The proposal is complementary to the development of the laboratory at Imperial Park 5, which is primarily focused on delivering serological testing for COVID-19.

Platform and test kit capacity has risen slowly but has been boosted through the operationalisation of the PerkinElmer platforms. The use of this platform is not without challenges, due to the need for significant space and temperature control.

3.2.4.3 Capacity

Since the start of the pandemic Public Health Wales has been seeking to increase its testing capacity for Polymerase Chain Reaction (PCR) tests². This capacity has been further bolstered through Welsh Government's decision to utilise the UK Lighthouse Laboratories set up by the Department of Health and Social Care.

At the present time, samples from Population Sampling Centres, Mobile Testing Units and the majority of care homes are being processed through Lighthouse Laboratories. To date, this has enabled the Public Health Wales capacity to be focussed on supporting in-hospital testing, Coronavirus Testing Units (to test key workers), along with supporting the testing for outbreaks.

More recently, there have been a number of issues with the processing of tests within Lighthouse Laboratories. This has led to delays in their turnaround of results. There have been a number of reasons for this including increased demand for testing, reduced Lighthouse Laboratory capacity and backlogs of testing of care homes. This is expected to continue for a number of weeks to come. The Welsh Government is working closely with the Department of Health and Social Care and the UK Government to resolve this. At the same time, Public Health Wales is supporting the Welsh

² A PCR test is a diagnostic test that checks to see if someone is infected with the coronavirus.

Government in further developing a sustainable solution for Wales which will optimally combine Welsh and UK Lighthouse Laboratory testing capacity.

With the current Lighthouse Laboratory testing challenges, Public Health Wales is currently working with the Welsh Government to support the sampling and testing of the population by best utilising the existing Welsh testing capacity. This will mean that a proportion of tests that would have normally been processed within Lighthouse Laboratories, will now be processed within Public Health Wales laboratories. When the situation in the Lighthouse Laboratories is resolved, Public Health Wales laboratory capacity will be switched back to its more focused purpose in responding to rapid surge requirements for incidents and outbreaks where mass population sampling in a rapid turnaround time is required.

Public Health Wales is advising the Welsh Government and the wider system on demand management and the flow of samples through the different testing capacity to help ensure that the tests are undertaken based on clinical and system priority. For example, hospitalised patients, key workers, symptomatic citizens, care home routine screening.

3.2.4.4 Overall Activity

The figure below shows the weekly number of PCR tests that have been analysed in NHS Wales labs and non-NHS Wales labs respectively.

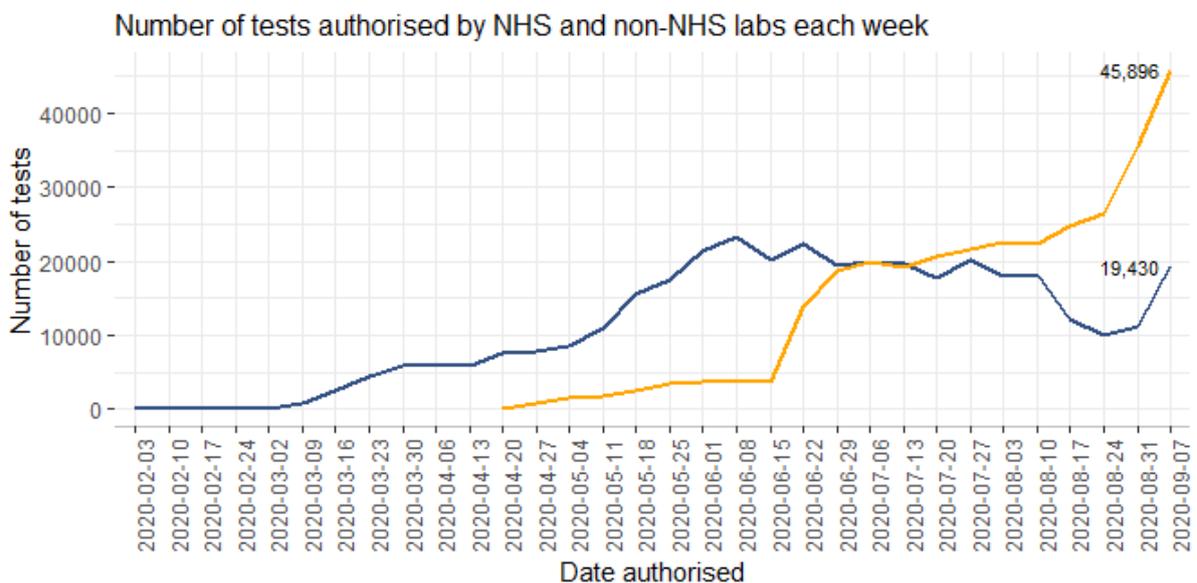


Figure 1: Number of tests authorised in NHS Wales and non-NHS Wales laboratories

3.2.4.5 NHS Wales Laboratories

For activity being channelled through NHS Wales laboratories, the information is reported by broad 'sampling pathways', that are visible within the scope of the underlying datasets. The sampling pathways are:

- Community
- Hospital

➤ Other

The 'Community' category includes specimens collected at Community Test Units (CTU) and Population Sampling Centres (PSC). Public Health Wales monitors tests collected at community locations by further sub-categories of "Asymptomatic keyworker and resident screening" or "Community Symptomatic Tests" which is to reflect the policy of regular screening testing in Care Home settings. Hospital refers to tests conducted on in-patients.

The 'Other' category includes tests collected at locations such as Prisons and GP Surgeries or where the collection location is unknown (missing, illegible etc).

The table below shows the number of tests authorised in NHS Wales laboratories from the 7 September to the 13 September 2020, split out by sampling pathway.

Sampling pathway	Weekly total
NHS Wales lab - Community tests	13688
NHS Wales lab - Hospital tests	5406
NHS Wales lab - Other or unknown tests	336
Total	19430

There has been a recent increase in NHS Wales laboratory activity. This is the result of increased sampling demand in addition to the switching over of some activity from Lighthouse Laboratories to NHS Wales laboratories.

3.2.4.6 Non-NHS Wales Laboratories

Tests that are analysed by Non-NHS Wales laboratories (often referred to as Lighthouse Laboratories, although this does include laboratories that are not formally part of the Lighthouse partnership) are reported by the 3 sampling pathways:

- Non-NHS Wales lab – Community
- Non-NHS Wales lab - Home delivery
- Non-NHS Wales lab - Organisation Portal; (previously Care Home Test).
(Community refers to samples collected at community sites such as Regional Test Sites (e.g. Abercynon)).

The Organisation Portal was originally only for use by Care Homes in order to bulk order test kits. As of the end of August 2020, its use has expanded to any registered organisation that needs to bulk request test kits.

However, it is still mostly Care Homes that utilise this requesting mechanism.

For the week commencing 7th September 2020, 45,896 tests were analysed by non-NHS Wales laboratories.

3.2.4.7 Turnaround Times

For pandemic surveillance to work most effectively it is essential that samples are processed rapidly and results conveyed both to the public and contact tracers as quickly as possible. There has, therefore, been a strong focus on turnaround times (TAT) during the outbreak.

At the present time Public Health Wales monitors turnaround times for samples tested in Wales as well as samples tested in UK lighthouse labs.

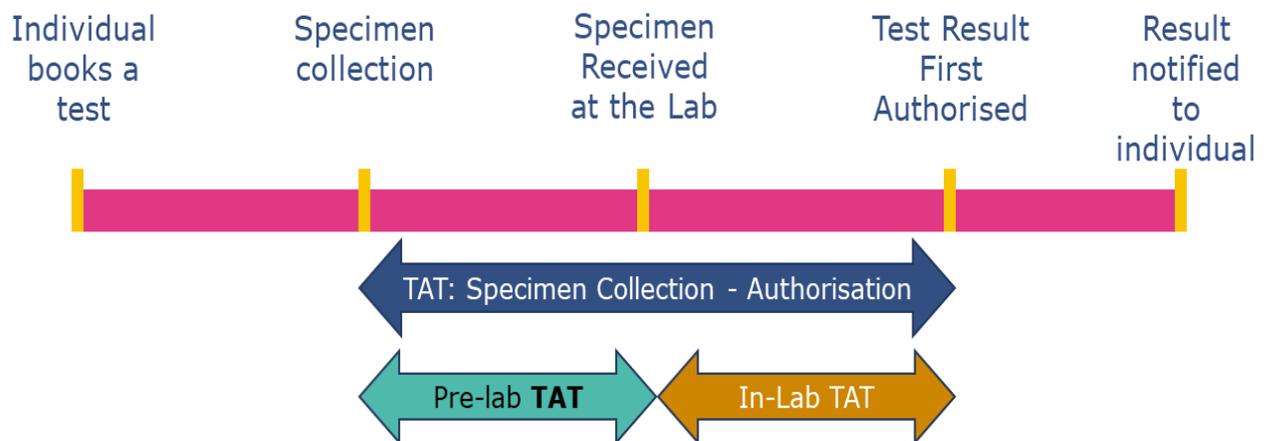


Figure 2: Turnaround times for critical time intervals

For samples tested in Wales the data collected enables the analysis of:

- the sample collection at a sampling centre, to the specimen result and authorisation in the laboratory. This is indicative of the end-to-end process. Public Health Wales continues to work with Welsh Government and DHSC to gain access to data to monitor the full end process
- the pre-lab process – from sample collection at sampling centre to specimen received in the laboratory. This helps in providing an understanding of any issue external to laboratories, such as couriating of samplings or batching;
- the in-laboratory process – from sample reception to authorisation of the test result in the laboratory.

Turnaround times are generally reported as a proportion of tests authorised within 1, 2, or 3 days of the starting timestamp (often specimen collection).

3.2.4.8 NHS Wales Laboratory: Turnaround Times: Collection to First Authorised

The turnaround time NHS Wales test results is shown below and is based on all tests authorised since early February 2020. This is indicative of the 'end to end' process for sampling and testing. It will include any in-laboratory issues in addition to external issues such as batching of samples and any delay in conveying samples into the laboratories.

Public Health Wales has been working closely with the Welsh government and partners to improve the process, and consequently the turnaround time.

Turnaround time NHS Wales Test Results (all tests authorised since early February 2020)

Sampling pathway	Number of tests	1 day	2 days	3 days
NHS Wales lab - Community tests	258,898	41.9%	72.9%	89.4%
NHS Wales lab - Hospital tests	92,012	80.8%	96.8%	99.1%
NHS Wales lab - Other or unknown tests	16,684	57.3%	84.4%	94.2%
Total	367,594	52.4%	79.4%	92.0%

Figure 3 below, shows the percentage of tests authorised within 1, 2 and 3 days of specimen collection over time for NHS Wales labs across all sampling pathways.

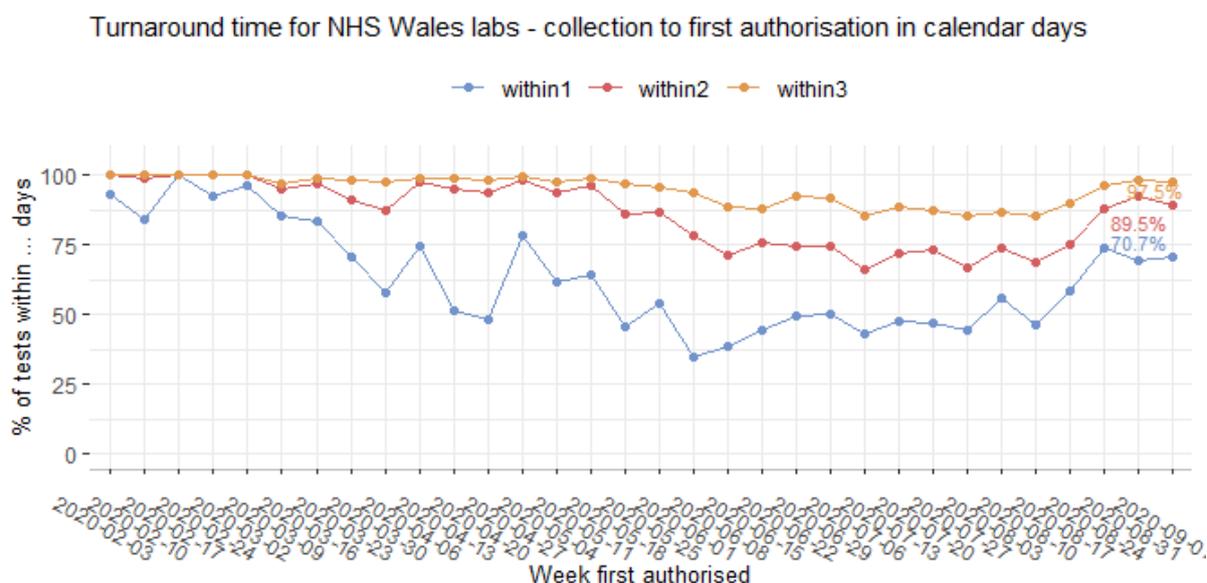


Figure 3: Percentage of tests authorised within 1, 2 and 3 days of specimen collection by week for NHS Wales labs

The proportion of tests being authorised within 1 day of specimen collection is currently circa 70% (similar to the previous fortnight). This is noteworthy

given the unplanned sudden increase in testing volume for the week commencing 7 September 2020.

Much work is being undertaken to understand TAT for the asymptomatic screening for keyworkers and residents and also to understand TAT by health board that operate the sampling facilities. For example, Figure 4 shows the percentage of tests authorised by NHS Wales labs within 1 day of specimen collection shown by the number of samples collected at community locations by health board.

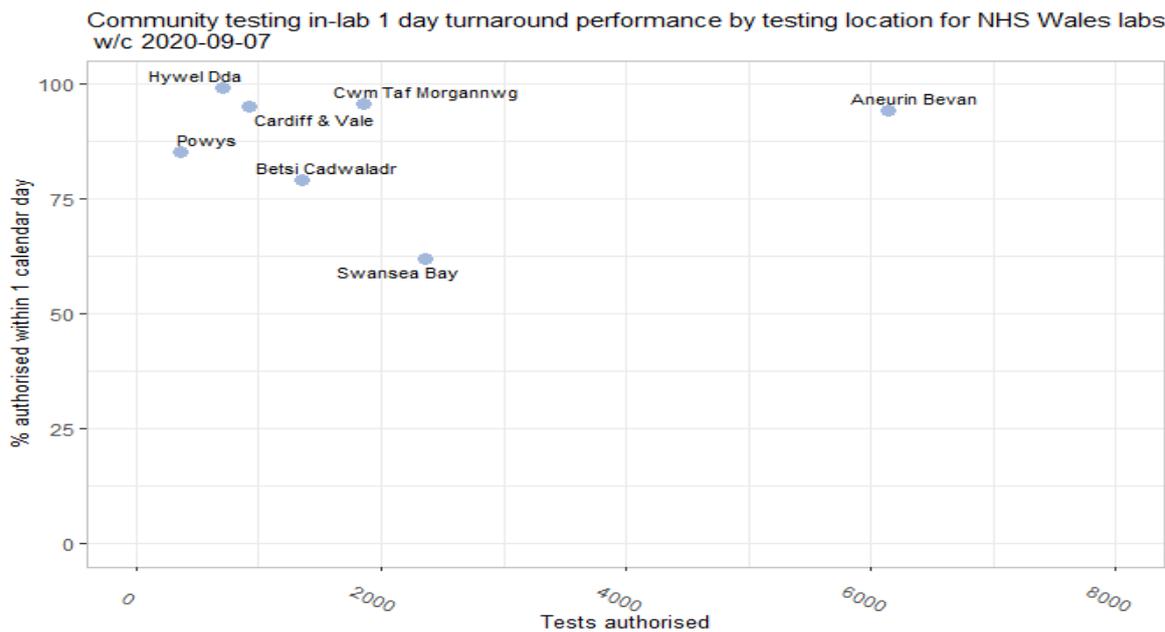


Figure 4: Percentage of tests authorised by NHS Wales labs within 1 day of specimen collection shown by the number of samples collected at community locations by health board

It indicates that for the week commencing the 7th September 2020, a lower proportion of samples collected within the Swansea Bay community facilities were authorised within 1 calendar day of being received at the laboratory. The reasons for this are currently being investigated.

3.2.4.9 NHS Wales Laboratories: In-Laboratory Turnaround Times

As noted above, 'In lab' turnaround time is calculated from when the specimen is received at a NHS Wales Laboratory and booked onto the electronic system, to when the result is first authorised. It is reported as a proportion of tests authorised within 1, 2, or 3 days of specimen being received by a laboratory.

Figure 5 and the table below indicates the proportion of tests being authorised in 1, 2, or 3 days from being received at an NHS Wales laboratory by the sampling pathway, since February 2020.

Sampling pathway	Number of tests	1 day	2 days	3 days
NHS Wales lab - Community tests	258,898	85.5%	98.1%	99.6%
NHS Wales lab - Hospital tests	92,012	90.5%	98.6%	99.6%
NHS Wales lab - Other or unknown tests	16,684	76.4%	91.5%	97.5%
Total	367,594	86.3%	98.0%	99.5%

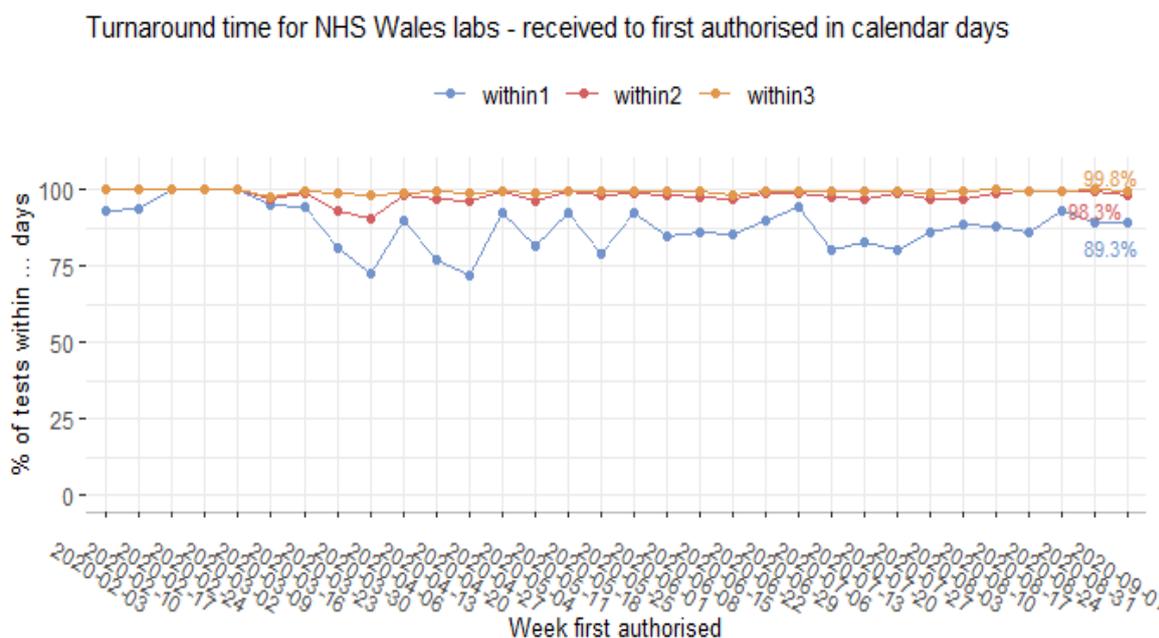


Figure 5: Percentage of tests authorised within 1, 2 and 3 days of being received at an NHS Wales lab by week

For the past few weeks, in-lab turnaround for NHS Wales has been maintained at nearly 90% of specimens being authorised within 1 calendar day of reception at a laboratory.

By sampling pathway, the in-lab turnaround is evenly balanced. Understandably, a higher proportion of hospital tests are authorised within 1 calendar day of being received by the laboratories.

3.2.4.10 Non-NHS Wales Laboratories - Turnaround Times: Collection to First Authorised

The turnaround times from specimen collection to first authorised is similarly calculated for tests analysed by the Non-NHS Wales laboratories, from when the individual provides a specimen to when the laboratory authorises the result. For home delivered kits, the start time is the point at which the details are submitted on the returns portal for home tests, and at test centres, it is the time the person was scanned as leaving.

The turnaround time to date for non-NHS Wales test results based on all tests (since testing commenced) is shown in table below and over time in Figure 6.

Location	Number of tests	1 day	2 days	3 days
Total	313,469	46.6%	69.3%	85.8%

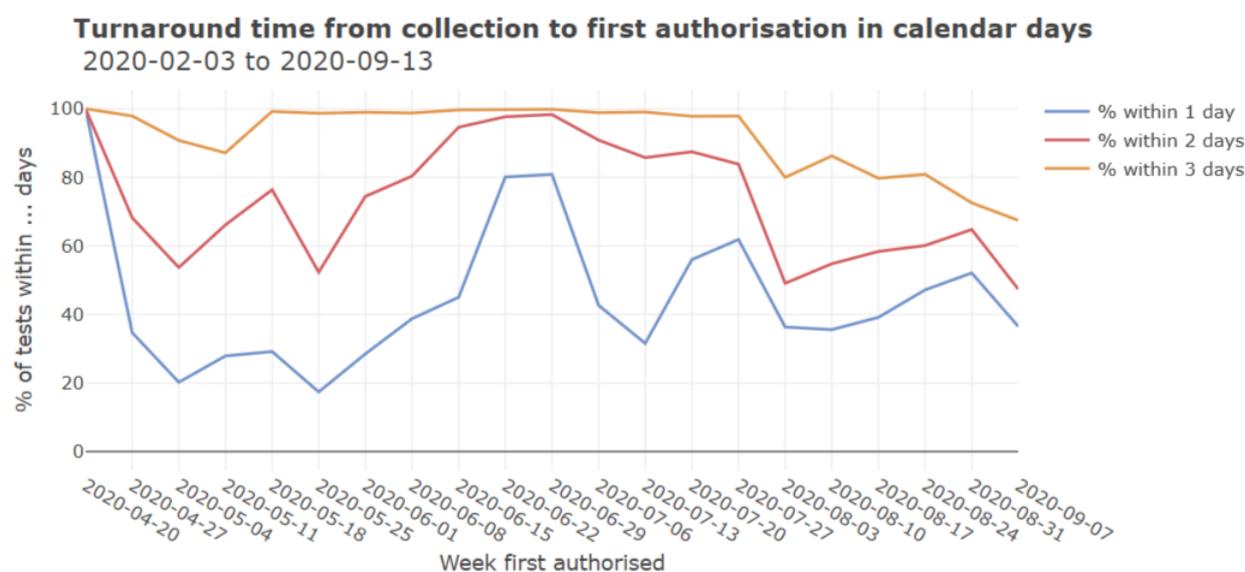


Figure 6: Percentage of tests authorised within 1, 2 and 3 days of specimen collected by week for Non-NHS Wales

As a general rule for the past few weeks, non-NHS Wales laboratories have prioritised tests collected through test centres in place of tests ordered for home delivery or through the organisation portal. It is perhaps disingenuous to report this overall value as the sampling pathway has clearly influenced the turnaround performance, but is the best in light of the current inability to appropriately discern tests by pathway.

The data provided by non-NHS Wales laboratories does not include an equivalent 'Specimen received at lab' timestamp and therefore, it is not possible to calculate an in-lab turnaround time for tests analysed at non-NHS Wales labs.

3.2.4.11 Non-NHS Wales labs – Indeterminate results

In recent weeks, there has been growing concerns regarding the rate of indeterminate or void results being issued by non-NHS Wales laboratories.

This is where the test result is not identified as 'positive' or 'negative' and therefore, often leads to the individual having another test. For the week commencing 7th September 2020, 4% of results were issued as Indeterminate.

However, there is variance by day and by testing laboratory. Certain laboratories have higher throughput on certain days of the week and other laboratories are recording a high proportion of indeterminate results. By

way of comparison, circa 0.5% of results are classed as Indeterminate by NHS Wales laboratories. Therefore, this raises concerns of quality of testing at non-NHS Wales laboratories and will be monitored.

3.2.4.12 Antibody testing

The majority of antibody testing³ capacity and activity is the responsibility of health boards and is subject to a UK allocation process for kits from Abbot, Roche and Euroimmun. An Antibody Task and Finish Group has been established by the Welsh Government which sits under the National Sampling and Testing Group, chaired by the Welsh Government.

3.2.4.13 Activity

The following figure shows the number of antibody tests that were analysed in NHS Wales laboratories by the date of first authorisation.

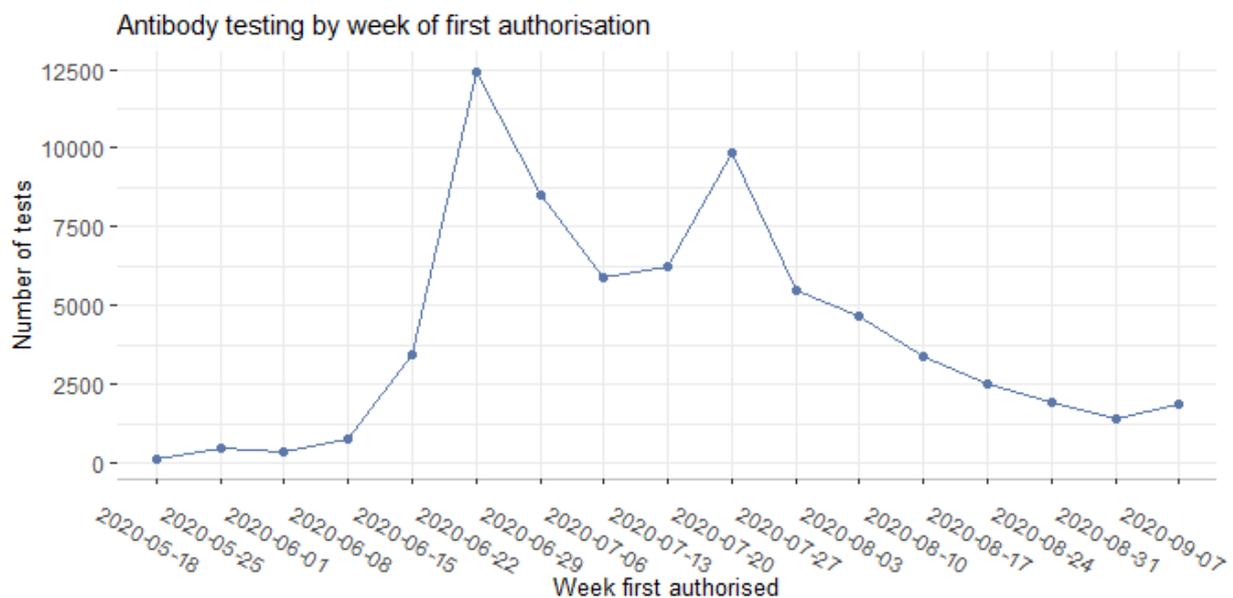


Figure 7: Number of serology tests analysed in NHS Wales labs by week

This figure does not include any information relating to lateral flow antibody tests as the results are not currently available to the WLIMS information system. This equates to circa 13,000 test results, with the majority from Cardiff and Vale University Health Board. There are plans to add Lateral flow results to provide a rich picture of serology results.

3.2.5 Results

At the start of the outbreak, the provision of results to key workers and employers was a manual process undertaken by Public Health Wales and health boards. As the volume of tests increased, an alternative solution was developed. In late April 2020, Public Health Wales developed a mobile phone text solution for key workers. This was piloted at Rodney Parade and

³ An antibody test is a blood test to check if someone has had coronavirus (COVID-19)

Cardiff City Stadium, whereby the result was texted to the key worker who had been tested. All health boards and trusts are using the text service for results, which is part of a Public Health Wales contract.

3.2.6 Business Case for a new Laboratory

In May 2020, Public Health Wales submitted a business case to the Welsh Government to create additional laboratory space to undertake Antigen and Antibody testing. This was approved at the beginning of June 2020 and work progressed with Shared Services with a view to having the site at Imperial Park 5 (IP5) operational from the beginning of August 2020.

Subsequently, in late June 2020, the Department for Health and Social Care (DHSC) approached Welsh Government to house a UK Lighthouse Laboratory in South Wales. IP5 was identified as a possible site and, following visits from the DHSC and the Welsh Government, it was agreed that the Lighthouse Laboratory would go into the planned Public Health Wales (Lab1) site. The Welsh Government confirmed that funding for Lab 1 would still be available for Public Health Wales to create its own laboratory for Wales (Lab 2). A second laboratory was identified within IP5 as a laboratory for Public Health Wales to progress Antibody testing. It is anticipated that this will be operational from the beginning of 2021.

3.2.7 Support to the Welsh Government Tactical Advisory Group

Nine senior members of Public Health Wales staff sit on the Welsh Government Tactical Advisory Group. These members including our experts in microbiology, surveillance and health protection. The group provides active professional and technical support to the Welsh Government.

3.2.8 Public Health Wales Surveillance Dashboard

Public Health Wales has developed surveillance for several aspects of the COVID-19 infection, alongside existing surveillance for acute respiratory infections. A public-facing dashboard provides details of new cases, tests, rapid deaths reporting, indicators of symptom reports from primary care, and information on hospital-onset cases of COVID-19. In addition, we produce a weekly epidemiological COVID-19 report, bi-weekly updates of rates by local authority, and individual analyses for incidents and outbreaks. We are also working to implement focus reports for areas of concern to describe cases more completely.

The COVID-19 Surveillance system has the following components:

- Sensitive surveillance to describe the pattern of infection and to identify clusters, outbreaks and geographic spread
- Monitoring the rate of transmission by area in real time using modelling (for impact of control measures)
- Surveillance and analysis for risk groups for death and poor outcomes
- Serological surveillance and the identification of immune individuals

- Monitoring the impact on the health and social care system (through hospital, community outbreak and occupational health elements).

We work with Test Trace Protect teams on reporting and incidents with occupation and 'place of work' data recently being added to the system to enable the identification of clusters in a particular workplace (including schools). Further developments are being considered.

3.2.9 Communication

'Risk communications' is a public health intervention in its own right and Public Health Wales has undertaken extensive communications and engagement activity from the outset of the pandemic situation. Whilst Welsh Government has led on the development of the Test Trace Protect communications campaign, Public Health Wales has played a key role in supporting the campaign's development and dissemination. Specifically, we have advised on behavioural insights and evaluation and have proactively disseminated key information to support Welsh Government's Test Trace Protect through stakeholder networks, social media and traditional media.

At the same time, the Public Health Wales Communications Team have played a critical role in leading and coordinating communications in support of the outbreaks and clusters which have emerged since lockdown has ended. We have executed this work in line with the All Wales Communicable Disease Control Plan and have undertaken workshops across the four Local Resilience Forum Media Cells to ensure each of the TTP areas has a clear understanding of roles and responsibilities in the context of outbreak control.

We will continue to support Test Trace Protect through:

- Applied behavioural science and evaluation to help shape the messaging
- Providing communications leadership and targeted communications support to outbreaks and clusters
- Maximising reach through the use of a range of channels, including digital channels and through our stakeholder engagement network to reach a wide range of groups and communities

In January 2020, we started publishing a daily statement providing an update on our response for the media and public. This allowed us to meet the demand for information proactively. The daily statement became the mechanism for Public Health Wales to notify the public and media of new cases of coronavirus in Wales, and also on the number of fatalities, prior to information becoming routinely available on the data dashboard.

We set up a dedicated COVID-19 website, which is designed to carry up-to-date public messages, as well as guidance for health and social care workers.

In April 2020, Public Health Wales launched a wellbeing campaign to help mitigate the negative impacts of Covid-19 on people in Wales. Our 'How

Are You Doing?’ campaign was developed with expertise from our behavioural science unit and was designed to provide evidence-based support and advice to address mental, physical and social wellbeing. This campaign continues to run, with a focus on supporting the public and third sector partners, using two-way feedback to inform messages. Particular emphasis is given to supporting vulnerable groups and communities with specific needs.

3.2.10 Regular Publications

The Public Health Wales World Health Organization Collaborating Centre (WHO CC) aims to proactively gather, monitor, assess and synthesise COVID-19 related learning, data, public experience and emerging evidence; providing real time actionable intelligence for policy and decision making.

In this respect, Public Health Wales is providing support in four main areas:

- COVID-19 Health Impact Assessments (HIAs)
- National Public Engagement Survey on well-being and behaviours
- International Horizon Scanning and Learning
- Dashboard of broader health indicators.

The WHO Collaborating Centre has (and continues to) developed a series of rapid Health Impact Assessments (HIAs), which build a picture of the range of impacts of COVID-19 and the policy responses on health, wellbeing and equity in Wales for the short, medium and longer term. Topics include; ‘Staying at Home and Social Distancing Policy’ in Wales in response to the COVID-19 pandemic (June 2020); COVID-19 and a post pandemic world: HIA of Home and Agile Working in Wales (2020); Housing Security and Homelessness in Wales in the time of COVID-19: A HIA (2020) and Climate Change in Wales – Health Impact Assessment (2021).

The purpose of the reports is to support Public Health Wales, decision makers and partner organisations to prioritise actions that can promote and protect health by mitigating negative impacts and identifying opportunities during the acute response and recovery phase.

Over recent months, the WHO CC has conducted interviews with thousands of people aged 18 or over across Wales, to understand how COVID-19 and related response measures affect the wellbeing of people in Wales. The results of these surveys are intended to inform and support Public Health Wales, the Welsh Government and other key stakeholders’ decision-making processes.

A number of reports focusing on people’s views on lockdown and recovery have been completed. In addition, special reports have been published on Deprivation, Age and Gender and on Ethnicity. Further work is planned to follow up with a proportion of the individuals who responded to the initial survey.

The WHO CC has established a joined-up approach and sharing of intelligence with the Welsh Government Office for Science, which aims to provide a gateway to and from global, European and UK networks and agencies. This includes the WHO and International Association of National Public Health Institutes (IANPHI). Public Health Wales is also working closely and supporting WHO and Welsh Government by examining health equity, social and economic impacts of COVID-19.

The key messages emerging from the international socio-economic work include that:

- COVID-19 pandemic outbreak is having an enormous economic impact, including on employment and working practices
- COVID-19 response and recovery are likely to exacerbate inequalities and deprivation, mental health problems, lack of societal cohesion and can destabilise communities over generations.
- the focus should be on balancing and mitigating wider public health, health service, social and economic impacts, including equity and vulnerability
- a sustainable economic recovery is possible only with COVID-19 transmission under control by giving priority to investing in health and social protection and avoiding the harmful impacts of austerity. There is an opportunity to 'build back better' - developing a different economy that is more equal and inclusive'.

Public Health Wales is examining routine data sources on health-related issues that may be affected by COVID-19 or the restrictions related to its control. These will be incorporated into the Public Health Wales COVID-19 dashboard with other direct measures of infection and testing. Results from the National Public Engagement Survey and the work from the Violence Prevention Unit will also form part of emerging broader dashboard of public health indicators.

Going forward, Public Health Wales will include in its plan for the remainder of the year a focus on addressing population impacts of COVID-19, including employment, vulnerable groups and mental wellbeing.

3.3 Data Breach

On the afternoon of Sunday 30th August 2020, Public Health Wales inadvertently published a report on a public facing website which contained personal data relating to 18,105 people who had tested positive for COVID-19 since February 2020. Although the website was public facing, it is not one generally accessed by members of the public, but by trusted partners. After being alerted to the breach the document was removed at 09.55 hours the following morning (31st August 2020) and in the time it was available it viewed 56 times.

In the majority of cases (16,179 people) the information consisted of people's initials, date of birth, geographical area and sex meaning that the

risk they could be identified is low. However, for 1,926 people living in nursing homes or other enclosed settings such as supported housing, or residents who share the same postcode as these settings, the information also included the name of the setting. The risk of identification for these individuals therefore is higher but is still considered low.

There is currently no evidence that the data has been misused. The Information Commissioner's Office and the Welsh Government were informed on the 2nd September 2020, and an external investigation has been commissioned and has commenced into the full circumstances surrounding the data breach and any lessons to be learned.

In the meantime, immediate steps have been taken to prevent a similar incident from happening again. These include establishing an Incident Management Team to instigate remedial actions which have already resulted in changes to our standard operating procedures so that any data uploads are now undertaken by a senior member of the team. We have also informed our health board and local authority partners and have kept them up to date with the position.

A set of Frequently Asked Questions has been developed (available at www.phw.nhs.wales) together with a dedicated email and phone number for people to contact us if they have concerns.

A formal press release was issued on the 14th September 2020 and the Chief Executive gave a number of press interviews on the subject.

We would like to take the opportunity once more, through this submission, to apologise profusely for this breach of people's personal details. We have already taken immediate action to prevent it happening again and the investigation will provide further detail as to how it occurred, whether further actions are required and what lessons must be learnt.

4. Learning to date on Test Trace Protect

Set out below are a number of examples of learning relating to our response to the pandemic. These are not intended to be exhaustive and reflect our views which are not necessarily the views of others. .

4.1 Sampling

In response to the pandemic, the UK Government developed a digital booking solution, drive through centres and home delivery of testing kits to individuals. The UK solution presented significant challenges at that time if used within Wales including different sampling methods and results would have been stored in England with no opportunity to report back into Wales. This highlighted the need to obtain a digital solution to support mass testing within Wales. This resulted in the development of electronic test requesting. Use of electronic test requesting has been transformational for data collection and was a key enabling factor in scaling up test capacity within Wales labs.

4.2 Contact Tracing Cell

As part of the COVID-19 response, Public Health Wales activated a Contact Tracing Cell (CTC) on the 27th February 2020, during the containment phase, in response to a single travel-related confirmed case diagnosed in Wales. The Cell scaled up rapidly as the case definition changed during the containment phase. By 12th March 2020, the UK moved into the delay phase of the outbreak. Lessons identified from this rapid scale up included; the need to be clear on the essential skills and knowledge required to support this work, the benefit of tailored staff training to meet this need and the value the public placed in communicating directly with the staff during the contact tracing process. These lessons were implemented as staff were deployed to the National Contact Centre and subsequent Health Protection Response Cell.

4.3 Enclosed Setting Cell

On the 25th March 2020, Public Health Wales established its Enclosed Settings Cell, as a result of becoming aware, through the notifiable disease system, of incidents (of both confirmed COVID-19 and undiagnosed respiratory infections) in care homes across Wales. This cell became fully operational at the end of March 2020 and was set up to enable staff within enclosed settings to have access to relevant Infection Prevention and Control advice and identify pathways, where required to escalate issues so local teams could offer more intensive support.

Due to the rapidly developing nature of the pandemic, policy and guidance was issued regularly by Welsh Government. The effective operation of the Cell involved a range of functions and tasks, which evolved over time, whilst the rest of the system established the ability to respond to care homes locally and as policy was changing for the sector. The learning also enabled advice to be provided and guidance adapted from the Department of Health and Social Care in England for use in Wales as appropriate. There was also close engagement with Care Forum Wales, the NHS, local authorities and Care Inspectorate Wales - which included an exchange and learning process in relation to the information reported to each organisation.

As the emerging evidence highlighted the need for a focus on prevention, a specific proactive and preventive intervention was developed with Environmental Health Officers in all 22 local authorities to ensure that those homes that had not yet been affected by COVID-19 received high quality preventative advice and risk assessment.

As the response to the pandemic has evolved, the Enclosed Settings Cell has now been incorporated into the National Health Protection response cell.

4.4 Research

Public Health Wales is currently participating in three open research studies. These include the Phase II/III Trial of ChAdOx1 nCoV-19 vaccine, COVID-19 Genomics UK Consortium: large scale and rapid severe acute respiratory

syndrome coronavirus 2 sequencing capacity to the four UK Public Health Agencies and a Precarious Employment survey and Impact of Covid-19. In addition, we are also a partner in two awarded funding applications to the National Institute for Health Research (NIHR)/UK Research and Innovation (UKRI) COVID-19 Rapid Response Rolling Funding Call. These are:

- COVID-19 Genomics UK (COG-UK) consortium: A collaboration between Public Health Wales/Cardiff University /University of Edinburgh /Cambridge University / Sanger Institute
- Controlling COVID19 through enhanced population surveillance and intervention (Con-COV): a platform approach: A collaboration between PHW and Swansea University.

A number of other bids are currently awaiting a decision.

Learning from these research studies will be shared both internally and externally once available.

4.5 Multi-Agency Exercises

Public Health Wales has organised and facilitated a number of multi-agency exercises.

These have included:

- Exercise *Seren City* on 3rd March 2020 for all category 1 responders in Wales, which explored the multi-agency response to a request to put an urban setting in lockdown in response to COVID-19
- Two 'walk through' exercises to support health boards and local authorities with the implementation of the Test Trace Protect strategy
- Exercise Barod: an examination of how The Communicable Disease Outbreak Plan for Wales can be used by Outbreak Control Teams, Strategic Coordinating Groups and Recovery Coordinating Groups in response to COVID-19. The exercise took place on 07 August 2020 and one hundred and twenty one colleagues participated from across agencies in Wales.

These have provided key stakeholders with the opportunity to identify any key issues and learning that need to be addressed during the various phases of the pandemic.

4.6 Early learning from clusters/ incidents and local outbreaks

Public Health Wales provided support to the Welsh Government to identify early learning from cluster/incidents and local outbreaks that occurred prior to July 2020. This early learning was circulated to all NHS organisations, Local Authorities and Local Resilience Forums in Wales.

Learning included:

- the requirement to reinforce the use of the Communicable Disease Outbreak Plan for Wales

- recognition that the Outbreak Control Team (OCT) should be seen as the strategic partnership mechanism through which all decisions on declarations of incident/outbreak and 'control actions' and communications are agreed
- the value of clear and timely multi-lingual guidance to the public
- the importance of regular surveillance of background community infection rates
- the need for accurate data gathering during mass sampling and testing.

4.7 International Learning

The International Horizon Scanning and Learning work stream focuses on COVID-19 international evidence, experience, measures, transition and recovery approaches, to understand and explore solutions for addressing the on-going and emerging health, wellbeing, social and economic impacts (potential harms and benefits).

The learning and intelligence is summarised in weekly reports to inform decision-making. These may vary in focus and scope, depending on the evolving COVID-19 situation and public health / policy needs. This work is aligned with and feeding into the Welsh Government Office for Science and into Public Health Wales Gold Command. It is part of a wider Public Health Wales' systematic approach to intelligence gathering to inform comprehensive, coherent, inclusive and evidence-informed policy action. The focus of the reports has included areas such as obesity, BAME, employment and the environmental and social economic impact of PPE.

4.8 Approach to systematically capturing and using organisational information and learning

Public Health Wales has approved an approach to the systematic capture and use of organisational information and knowledge from COVID -19. The approach sets out how key information about Public Health Wales' input into the pandemic response will be captured, stored and used. In addition, the approach sets out how, through an agreed framework, we will support organisational learning from COVID-19. All of these components will enhance our knowledge of the pandemic; provide organisational learning and strengthen our repository of information which would assist future inquiries.

4.9 Corporate Analytics

Our Covid-19 response to-date has shown the value of high-quality, robust performance information that is presented in accessible ways. Through our Corporate Analytics Team, we have developed a new corporate Performance and Assurance Dashboard that utilises cutting-edge business intelligence tools and data visualisation techniques.

The Dashboard will provide an analysis of key information to provide knowledge and actionable insights to the Board and Executive Team on a

monthly basis. It does this by integrating key corporate information around a number of areas to support effective decision-making and assurance. This includes: finance, people, risk, quality, COVID-19 and the delivery of our key public health services.

We have delivered this work through an agile project approach, which focuses on understanding stakeholder needs, delivering value early through minimum viable products and iteratively improving based on feedback. In delivering this work, we have worked to recognised data and analytical quality standards.

5. Preparations for the Winter Period

Public Health Wales' preparations for winter focuses on prevention (further information below) and support of the flu campaign across Wales. This year this also includes the potential for a COVID -19 vaccine programme.

Earliest assumptions for the delivery of a COVID-19 vaccine programme are that it would commence prior to the end of 2020. This period coincides with the delivery of flu vaccine in primary care which, with infection control processes for COVID-19 in place, is estimated will take longer than normal to deliver, some estimates up to three times longer although recent guidance that a sessional mask and hand hygiene between patients is appropriate for most immunisations will ease this. As a result, existing primary care venues and staff are unlikely to be able to accommodate a COVID-19 programme at the same time, and data allowing the vaccines to be given simultaneously are unlikely to be available at that time. Therefore planning assumes an alternative workforce, venues and logistics will be required.

Prioritisation of groups for vaccination is based on the advice of the UK Joint Committee for Vaccines and Immunisations, who currently recommend frontline health and social care workers and followed by those at increased risk of serious disease and death from COVID-19 infection stratified according to age and risk factors should be vaccinated first.

An established infrastructure exists for immunisation delivery planning in the NHS, with extensive experience of delivering large vaccination programmes in primary care, schools and to NHS staff. The process of introducing new immunisation programmes is led by Welsh Government and Public Health Wales' Vaccine Preventable Disease Programme (VPDP), in collaboration with health boards and trusts. A Wales COVID-19 Vaccine Delivery Programme Board (Wales CVB) was formally convened on 4th June 2020 and established a number of work streams.

All health boards have carried out a table top planning exercise for the delivery of COVID-19, supported by Public Health Wales. Health boards are provided with a regularly updated planning document outlining likely delivery parameters relating to immunisation processes, vaccine handling and storage and other logistics. The resource documents and a report on

the exercises to date have been made available to all health boards to assist them in planning their own exercises.

Public Health Wales has collaborated with the Welsh Government funded Small Business Research Initiative to issue an invitation to industry to develop innovative commercial solutions to some of the challenges of immunisation in this context. The process is complete and unfortunately no suitable solutions were identified.

The Public Health Wales Evidence Service has undertaken a rapid assessment of the literature on mass vaccination, focussing on six key areas including intelligence on novel delivery methods such as drive through clinics, and these reviews have been made available to health boards and trusts, and shared with other UK public health agencies to support their planning. It is important to note that there remains significant challenges to be overcome in relation to COVID-19 vaccination, including recruitment of immunisers and support staff, data management and call / recall of clinical risk groups.

Prior to winter 2019, Public Health Wales produced a report⁴ recognising the health impacts of winter weather and identifying the actions required to mitigate poor health during winter. The document was aimed at supporting policy makers, health and care services and third sector organisations, in addition to the public to plan for winter, improving the health of current and future populations. The document was circulated widely to NHS organisations, local authorities and third sector organisations at the time of publication and has subsequently been recirculated.

6. Role of Public Health Wales in Promoting the Flu Vaccination

The COVID-19 pandemic has impacted significantly on the health of the population of Wales and on the delivery of health services, and is expected to continue to impact well into 2021. The groups most vulnerable to COVID-19 are similar to those most vulnerable to influenza and for whom annual flu vaccination is recommended every autumn.

It is likely that in the winter of 2020/21 we will see co-circulation of influenza and COVID-19, therefore achieving a high flu vaccine uptake to protect those at increased risk and reduce impact on health services is a strategic priority. With the possibility of a COVID-19 vaccine being available at the same time as the flu vaccination during this winter, flu programme planning and COVID-19 vaccine planning are being jointly planned to enable efficient planning and service delivery.

Public Health Wales Vaccine Preventable Disease Programme (VPDP) leads on the national planning, delivery and evaluation of the national component of the NHS annual influenza programme for Wales.

⁴ <https://phw.nhs.wales/news/winter-health-how-we-can-all-make-a-difference/report/>

Collaboration and support are key themes with open dialogue between health boards, NHS trusts and Public Health Wales, and other key partners. Proactive and reactive support, guidance and communication underpin the campaign in Wales. A key element of the planning cycle is reflection on feedback and lessons learned, and an ability to adapt, to help strengthen this annual programme.

The Welsh Government has extended eligibility for flu vaccination to the household members of those on the shielding list and, subject to additional vaccine being available in November and December, to those 50 to 64 years of age, to be confirmed at the time. Public Health Wales has secured additional funding of £198,500 from Welsh Government for a business case to support this enhanced influenza programme.

The necessary measures to ensure flu vaccinations can be administered safely in line with social distancing and Infection Prevention and Control guidance has been agreed and published. Access to sufficient PPE is being planned centrally as 'once for Wales'.

VPDP team members and Welsh Government colleagues attend and contribute to the UK Flu Programme Board led by Public Health England, to ensure the annual flu programme for Wales is well engaged with UK flu programmes. VPDP is represented in membership of the Wales Immunisation Group, convened by Welsh Government. This is a platform to raise and discuss immunisation issues in Wales, and a valuable opportunity to ensure the annual flu programme is aligned to other immunisation programmes.

The National Influenza Action Group, convened by Public Health Wales, is an opportunity to share expert advice and intelligence between organisations, and for Public Health Wales to facilitate and coordinate the influenza campaign in Wales. Membership includes all NHS Wales organisations and other key partners. The group enables efficient working in influenza immunisation programmes across the system including Welsh Government, health boards and trusts, third sector organisations, professional bodies, and local authorities, supporting local and national conversations on governance and accountability. It is a forum for timely discussion and resolution of issues related to influenza and delivery of the influenza immunisation campaign in Wales. The group make recommendations for action to members and a range of stakeholders as appropriate. Feedback is that the National Influenza Action Group meetings demonstrate and support strong leadership. Weekly emails are sent to members during the flu season and as required prior to the season to keep everyone informed of new information and resources in a timely way.

The COVID-19 Programme Board has met since June 2020 and considers the enhanced flu vaccination programme and the strategic issues around planning and delivery of the enhanced programme as well as the COVID-19 vaccination programme.

A detailed, comprehensive communications plan has been developed in partnership with Welsh Government. Monthly flu planning and progress meetings are convened by VPDP, with communications, Welsh Government, and Immunisation Coordinator representation. A number of strategies (Communications, Digital and Stakeholder) are in the process of being developed.

It is proving difficult to engage with some key professional groups as their work patterns and availability has been affected with COVID-19 work. However, partnership working continues with others such as Care Inspectorate Wales, Social Care Wales, Care Forum Wales, Community Pharmacy Wales and Asthma UK/British Lung Foundation.

Injectable flu vaccines supply in primary care is ordered directly from manufacturers and suppliers by practices and pharmacies. In addition, the Welsh Government are securing additional stocks to support higher uptake and extension of the programme.

7. Appendix A: Test Trace Protect Implementation Plan Stage 2

Please see separate attached document.