Rapid, focused external review of the Public Health Agency (PHA) for Northern Ireland's resource requirements to respond to the COVID-19 Pandemic over the next 18 - 24 months

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Dec 2020

Acknowledgements

I am grateful for the support provided by the PHA to conduct the review in a short time frame. Staff and stakeholders gave freely of their time. I am particularly indebted to NR and Name Redacted for administrative support and to Dr Paul Mc Gurnaghan for the comparison of Public Health Agencies.
Olive MacLeod, Hugo Van Woerden and Stephen Bergin provided valuable advice and support.

Context

The SARS-CoV-2 pandemic has impacted global society both in terms of the direct disease but also the social and economic consequences. There will be much for Governments and Public Health bodies to reflect on as the pandemic recedes. For now, the pandemic continues and sustaining an effective response whilst preparing for the post pandemic phase is crucial.

This rapid review arose from a desire to plan for the next phase, informed by the events of 2020, with the aim of securing a sustainable and strengthened Public Health function in Northern Ireland (NI).

The Terms of Reference of the review are at appendix A. Specifically, I was asked to provide a concise report to identify the short term (18-24 months) actions necessary to respond to the Covid-19 pandemic.

Background

The PHA in NI was established in 2009 under section 12 (1) of the Health and Social Care (Reform) Act (Northern Ireland) 2009.

As stated in the Management Statement – *"The overall aim of the PHA is to improve the health and social well-being of the population and the quality of care provided, and to protect the population from communicable disease or emergencies or other threats to public health. As well as the provision or securing of services related to those functions, the PHA will commission or undertake programmes of research, health awareness and promotion etc.*

This aim will be delivered through ***three core functions*** *of the PHA:*

1 *securing the provision of and developing and providing programmes and initiatives designed to secure the* ***improvement of the health and social well-being of and reduce health inequalities*** *between people in Northern Ireland,*
2 ***protecting the community (or any part of the community) against communicable disease and other dangers to health and social well-being*** *including dangers arising on environmental or public health grounds or arising out of emergencies; and*
3 *providing professional input to the* ***commissioning of health and social care services which meet established quality standards and which support innovation.***

The PHA also has a general responsibility for promoting improved partnership working with local government and other public sector organisations to bring about real improvements in public health and social well-being on the ground and anticipating the new opportunities offered by community planning."

This rapid review is set in the context of the scope of responsibility of the PHA and consideration of the response to the Covid -19 pandemic so far.

During the rapid review, conducted between mid-November and mid-December 2020, I interviewed a wide range of staff and stakeholders. In total I conducted 25 staff, individual or group, interviews including Board members and Directors and I undertook 12 external, individual or group, stakeholder interviews. In addition, I contacted senior public health officials in other United Kingdom (UK) / Republic of Ireland (RoI) Public Health organisations. In total, I spoke with around 50 people. All interviews were conducted by Zoom or telephone.

In addition, I reviewed PHA reports and drew from comparisons with Public Health Agencies across the UK and RoI, completed as a desk top exercise by Dr Paul Mc Gurnaghan, Registrar in Public Health.

The aim was not to conduct a detailed review of pandemic management but to use the experience gained during 2020 to inform future plans.

Findings

As the Regional Public Health organisation, the PHA has mounted an unprecedented health protection response in support of the direction set by the Northern Ireland Executive to manage the pandemic. The agency provided a range of services, including specialist public health advice, data and epidemiology, public information and established a new Contact Tracing Service.

So far in the pandemic, Northern Ireland has the lowest death rate of the four UK countries, at 59.6 per 100,000 population for deaths within 28 days of a positive test (Table 1) and also where Covid-19 is mentioned on the death certificate as one of the causes of death.

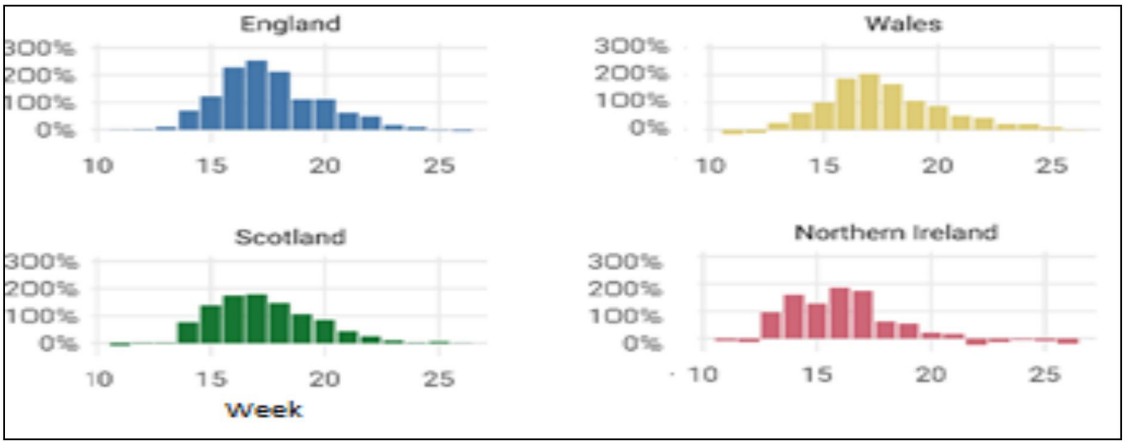
Table 1: Cumulative deaths within 28 days of a positive test, for the four UK countries per 100,000 population, to 14 December 2020

Country	Rate per 100,000 population
Wales	91.4
Scotland	75.2
Northern Ireland	59.6
England	100

Source: Deaths in the United Kingdom.
https://coronavirus.data.gov.uk/details/deaths

It was reported that Northern Ireland made a concerted effort to reduce Covid-19 care home deaths. When the rise in care home deaths was first identified, staff described how the PHA worked intensively with the care home sector on a wide range of measures to contain the spread of the virus and prepare care homes. Research shows that after week 17 there was a notable fall in death rates in Northern Ireland, which coincided with strong collective leadership efforts to protect the care home sector co-ordinated by the PHA (Figure 1).

Figure 1: Death Rates for England, Wales, Scotland and Northern Ireland during the first wave of the pandemic.



Source: Bell D, Comas-Herrera A, Henderson D, Jones S, Lemmon E, Moro M, Murphy S, O'Reilly D and Patrignani P (2020) COVID-19 mortality and long-term care: a UK comparison. Article in LTCcovid.org, International Long-Term Care Policy Network, CPEC-LSE, August 2020.

Additionally, Northern Ireland was the first of the UK nations to develop and put into operation a new Contact Tracing Service after wave one. An IT support system was designed from scratch, and Northern Ireland was also the first country in the UK to have a functioning proximity app.

The PHA has expanded the Contact Tracing Service at a rapid pace over the last four months, almost doubling the workforce, in terms of headcount.

Although vaccination against Covid -19 started in Dec 2020, the PHA will continue to be in incident response for many months to come and will have a role in the recovery phase as the wider impacts of the disease on health and wellbeing emerge.

The PHA has had temporary leadership arrangements for some years. A new interim CEO and a new Director of Public Health came into post as the first wave of the pandemic took hold. They faced a substantial challenge to pick up the reins of the organisation at such a crucial time and when the organisation had to embrace remote working at speed whilst mounting an effective response. There were vacancies in senior posts and a number of temporary appointments. For example, the Health Improvement function had 46% of its staff in temporary posts, as a result of delays to approval mechanisms at regional level.

The pandemic response has involved mobilising all staff in the health protection function as well as drawing on staff from across the agency to provide surge capacity. This has involved staff working well outside their comfort zone to help the response to the pandemic.

Staff were pleased with many aspects of their response, describing it as a supportive team in health protection. Others reported having been able to develop new data analyses and learning new methods 'on the job' had been pleasing.

Staff felt that they had done their best in the circumstances and were proud of many achievements. Examples cited included the education cell to support schools, data and professional support for care home outbreak management, testing co-ordination, contact tracing, communications and the work on case definition for children. Staff stepped up to help from across the organisation, though some said they didn't immediately feel welcomed. Training was necessary to work in the Duty Room and this added to the pressure, even if it ultimately helped provide support. Many described individual staff as 'very able'. The PHA employed a significant number of locum junior doctors to increase the capacity of the Duty Room, which helped to manage the rapidly expanding workload.

However, it is evident that the prolonged incident has put substantial strain on many of the staff involved. This effort has come at the expense of personal and family time with the added impact of new ways of remote working, adopted at pace. Some have found home working acceptable and effective, though IT support was critical to this.

Staff spoke of working 7 days a week for months during the first wave, with no let up. Public Health Registrars were at the front line of response in the Emergency Operations Centre for much of the early weeks in Feb – March 2020. They describe feeling under supported and overwhelmed with demand. Others also described the demands as being unmanageable and therefore giving rise to tensions and frustrations for both stakeholders and the service when the expectations were not met. Some staff are tired, frustrated, and anxious about blame. At times staff felt undermined when their professional advice was questioned by key stakeholders. Stakeholders understand the pressure but expected a more pro-active response to their needs – there was reported to be a strain, at times, in the relationship with some external stakeholders.

The most consistent, and widely mentioned, term used to describe working practices in the PHA was 'silo working', although some staff have felt that Covid-19 has had the converse effect and helped to reduce the silos. Staff from all parts of the organisation wanted more 'joined up effort' with better use of skills. In particular, staff felt there could be more use of project management support.

More generally, strategic planning was needed both in the pandemic response (which was described as reactive not proactive) but also in the PHA as a whole. Work was undertaken early in the pandemic, through a series of workshops, to develop multidisciplinary, multi-agency 'cells' to support more effective horizontal working. These cells operated across the PHA/HSCB under the SILVER tier of the national emergency response and were recognised as making a beneficial impact. A Business Continuity Plan was also rapidly developed and has been reviewed regularly by the senior management team. Work to produce a strategic plan is underway though not all staff were aware of this.

Feedback on service areas

The next section summarises some of the issues reported by participants in response to the specific areas of the terms of reference.

Health Protection Service and Emergency Preparedness

There was consistent reporting that the health protection service was under resourced to sustain the emergency response in the duty room; in providing specialist advice; and for emergency planning and response.

Specific points raised:

- Whole organisation surge capacity was not historically planned and trained for
- Overstretched staffing and insufficient training budget in Emergency Prevention, Preparedness, and Response (EPPR)
- Insufficient capacity to manage NHS / Care home outbreaks
- Duty room model changed – needs evaluating
- Strategic work paused
- Staff need a recovery period – 'no time for leave as no-one else to do the role'
- Lessons learnt so far not yet undertaken – no time to reflect
- Stretched business management / project management support– staff working below skill level
- Limited capacity to keep documentation and standard operating procedures up to date
- Limited supervision and support of Registrars
- Many temporary appointments – 'takes time to train them'
- IT inadequate – hardware and software, phones and internet crashing
- Working environment poor (Under discussion with landlord for some time)

➢ **Infection Prevention and Control**

- Capacity severely overstretched
- Pressure to service all Outbreak Control Teams
- Need access to sufficient genome sequencing and epidemiology to investigate nosocomial spread
- Roles and responsibility blurred between respective agencies (RQIA/HSCB/Trusts) especially for care homes
- Limited cross-divisional working/ support for professionals without relevant health protection qualifications
- Working environment poor – IT and accommodation

➢ **Contact Tracing Service (CTS)**

- Initial service extremely stretched by demand
- Insufficient project management in initial phases
- Pleased been able to get new CTS up and running quickly
- New IT system established at pace
- Links between Health Protection Service and CTS unclear initially but improving

- Strengthened leadership in place and business case for sustainable resource developed
- Need to further evaluate the model for CTS

The effective use of evidence, health information, epidemiology and research

The need for *timely* surveillance and epidemiology data to support decision making has far exceeded capacity. The response has also required rapid *new* surveillance analyses. Other essential surveillance schemes will have been impacted, having diverted all available resource to Covid -19. This risks missing other infectious disease outbreaks or changes to the incidence of other important infections. Staff recruitment was attempted with limited success, due to a lack of sultably qualified staff existing in Northern Ireland. A range of extenal staff were brought in to provide support including around six academic staff and two veterinary epidemiologists.

Specific points raised:

- Epidemiology and surveillance team overwhelmed with multiple demands and criticised / challenged
- Some of the skills and software needed for analysis were not available
- IT equipment inadequate e.g. 2 hour run times for analyses
- Analysts spread across the organisation with different priorities
- Short term funding for posts e.g. Antimicrobial Resistance
- Limited modelling skills available in PHA (despite some academic supplementation)
- Research was commissioned in support of the clinical and public health response (behaviour change advisory group established)
- Unclear publication policy and approach to open data
- Opportunity to further develop data science and modern data approaches
- General lack of awareness of plans to develop science and evidence capability – does not drive the work of the organisation
- PHA does not have direct access to the data in record linkage system and access to primary care data needs to be improved
- Reports could be more tailored to the audience and their desired impact

Communications including social media and online communication to enhance public messaging

There was general support for the way communications had been managed both with the public and professionals.

Specific points raised:

- Generally, thought to be a good response though severely over stretched

- Good collaboration with Department of Health
- Mainstream media expectations substantial
- Relied heavily on a few individuals as spokespeople
- Social media methods used but could do more segmentation and behaviour change work
- Website not easy to navigate – not 'click through' nor up to date
- Could have anticipated what information different sectors needed and made them accessible for direct access or download – some felt they were answering the same questions repeatedly
- Good engagement with voluntary sector – desire to build new relationships post pandemic and focus on community assets
- Public and professional awareness of PHA has increased significantly during the pandemic and this should be built upon.

Ensuring a strong and vibrant professional public health community in Northern Ireland.

The health protection service has been under strength for some time and is currently supported by a number of locum consultant posts. A minimum number of consultant posts is needed to deliver a 24/7 service and therefore more staffing pro rata is needed for a smaller population. The Faculty of Public Health has recently made a case for 30 consultants per million population. Northern Ireland currently stands at an estimated 15.3 consultants per million, whereas similar public health agencies such as Wales and Scotland stand at 24.8 and 22.7 respectively. This suggests that NI is under resourced at present and some way from the Faculty's future staffing goal.

Specific points raised:

- Many temporary posts
- Opportunity to strengthen multidisciplinary public health skills
- Limited succession planning
- Limited academic links
- Silo working between some professional groups
- Specialised functions with result that drawing in more skills for the surge response was difficult
- Working below skill level due to lack of support staff
- Training & career development needed
- Public Health training impacted by supporting the service response
- Masters programme for public health affected by availability of staff in PHA
- Good operational / individual links across UK agencies and some developing ones with RoI
- Some strategic development and training links outside NI

General comments

- **Context**

A comparison of the 5 agencies in UK and ROI showed that, up to 2020, all had responsibility for the 3 elements of public health (health protection, health improvement and service development). The creation of the National Institute of Health Protection (NIHP) in England will change the system but is still in development. Public Health England has an UK wide remit and it will be important for NI to clarify how the new arrangements in NIHP will continue to provide specialist support for NI.

The governance arrangements differ in each country but Public Health Scotland and Public Health Wales are similar to PHA NI.

Funding is not easily compared as each agency has a different mix of services and hosted functions. However, as stated earlier, it is clear that PHA NI has the lowest specialist public health staffing rate per million population in the UK. (A more detailed paper has been developed by Paul McGurnaghan and a summary page is included at Appendix B)

Organisational issues

Many of the points raised on the specific areas of the terms of reference have implications for the whole organisation.

- **Strategy** – Interviewees were keen to have a shared vision for the organisation and a clear strategic direction. Some raised concern that the PHA would become focused solely on health protection in future. There was a recognition that data and evidence are crucial to public health practice and that further strengthening of the strategic approach is needed to develop effective use of data science.

- **Governance** – issues raised with regard to governance included:

- It was suggested that the structure of the organisation might better follow key functions and thereby align to strategy
- Information governance - needed to review systems, especially in light of new data collection systems and need for data sharing.
- Multiple Freedom of Information requests – opportunity to further strengthen publication policy and management of FOIs
- The business continuity plan was insufficient for the pandemic response, given the substantial nature of the pandemic
- The agency has a range of 'hosted services' – respondents wanted clarity about the interface with such services, for example, related to child protection
- It was not evident that a stakeholder survey had been undertaken in recent times to inform partnership working

- The Board is undertaking development work in line with the new handbook on Arms-Length Bodies. The role of the Board during a prolonged Civil Contingencies emergency incident merits exploration.
- There was a desire to have more outcome / impact focus to Board reports and stronger performance monitoring against an agreed strategy

➢ **Workforce -** Many of the issues raised with regard to specific services were in relation to workforce.

Specific points raised:

- It was reported that the PHA has an out of date workforce plan
- Substantial concern was expressed about staff wellbeing in an overstretched system
- It was felt that the agency needed more HR support to recruit staff in a timely way
- A cultural assessment survey, reported in Feb 2020 showed the PHA to be mid-range on most scores but with lower scores on 'Vision, Quality and Innovation'
- A new survey will be completed in Dec 2020
- An organisational development plan was produced in early 2020 but not progressed because of the pandemic. Many of the areas identified for development work have been magnified negatively during the pandemic response.
- There is an appetite for leadership development at all levels and a recognition that there is a need for more succession planning
- Specific skills gaps were noted such as behavioural science (for which a business case has been developed), health economics, data science
- There is a need for more project management capacity to support delivery
- Public Health training has been disrupted because of the pandemic
- Staff across the agency wanted the opportunity to develop their skills
- It was reported that more in-house IT support was needed as well as up to date IT systems.
- Office accommodation was described as unsuitable and overcrowded
- Remote working had been established quickly and some would like it retained

➢ **External partnerships**

There was consistent evidence that there had been good collaboration with other Public Heath institutions, both before and during the pandemic, especially at individual and operational service levels. Strategic links had fallen back a little because of the pressure of the pandemic.

The interrelationship with the Health and Social Care Board (HSCB) ensures that public health is able to contribute to improving population health outcomes through health needs assessment and service planning. This is valued by the health and care system. The proposed changes to the HSCB, provide an opportunity to re-think

how public health inputs to community planning, integrated care partnerships and any future commissioning arrangements.

Despite the strain on the whole system, the NHS felt supported by the PHA. Information had been accessible and there was good communication with professionals. Also recognised that there was much to learn and incorporate into future plans e.g. roles and responsibility in regard to care homes, rapid communication of guidance, emergency plans etc. Specific, practical, issues also merited reflection such as staff needing Fit test assessments for different masks and ways this could be streamlined in future.

Local Authorities valued the work of the PHA. Outside the pandemic, there was joint working at local level on health improvement but less so on health protection. Relationships at a strategic level had been less actively managed by the PHA in recent years.

During the pandemic response, public health input at incident meetings was essential. More could be done to provide tailored public health support to LAs especially when guidance changes. LAs have a role in the recovery phase and early engagement to consider wider health impacts would be valuable.

The Department of Health is the strategic sponsor of the PHA. There is regular interaction between staff in both organisations and regular high-level monitoring. During the height of the pandemic there was a mismatch in expectation and available resource to deliver, which at times led to strain.

The Voluntary and Community sector supported the pandemic response in several ways such as when the contact tracing app was being developed and at community support level. The importance of using the experience of public involvement and connecting with community assets was emphasised. (The PHA provides regional leadership for PPI across Northern Ireland via the Nursing Directorate).

The academic sector was able to mobilise staff with specific skills to support the pandemic response. It was noted that more could be done to support staff development such as joint appointments and research development.

Conclusions and recommendations

The PHA has been subject to temporary leadership arrangements for some years and this, along with resource constraints, has slowed the development of the organisation. Covid-19 has challenged the health and care system and affected the whole PHA. There is an opportunity now to learn from the experience and design a public health system able to respond to future health threats. Although the Terms of Reference for this rapid review were focussed on the immediate challenge of Covid-19, it is apparent that action is needed at a number of levels to address the longer-term strategic challenges faced by the organisation.

Recommendation 1

Strengthen the public health system in NI

1.1 The PHA has a broad remit to promote and protect the health of the public – this should continue with a strengthening of the agency's capability and clarity about its roles and responsibilities, especially in relation to partner agencies such as health and social care and Local Government. The planned changes to the Health and Social Care Commissioning Board provide an opportunity to create a stand-alone, independent PHA, focussed on protecting and improving the public's health and wellbeing, and which continues to provide an effective population health input into service development and quality improvement.

1.2 The PHA should aim to be a modern, effective Public Health organisation. In order to do this, it must set out a clear vision and ambitious strategic direction in collaboration with the DoH. **A strategic plan is needed in order to set priorities and develop organisational capacity and capability.** It is recommended that the strategic plan is supported by a three-year investment programme with senior transformational change management support.

1.3 A modern public health system encompasses 10 essential public health services (appendix C). The PHA should self-assess its capability to deliver these services. The International Association of National Public Health Institutes has a range of tools and resources that could help to guide development as well as a peer support network. It is important that the Agency looks ahead to plan for global health challenges. For example, further pandemics, impact of climate change, antimicrobial resistance and delivering the UN Sustainable Development Goals. These issues should be set in the context of delivering the Northern Ireland Executive's ambitions for health and wellbeing.

1.4 It is unlikely that the Agency will be able to access all the necessary skills and should therefore seek to strengthen strategic and operational networks with the relevant UK agencies, in line with existing Memoranda of Understanding. It should continue to develop academic networks and strengthen all Ireland collaboration.

1.5 The interim CEO has been able to steer the Agency through the pandemic response but has made it clear that the interim role will come to an end in mid 2021. However, the transformation programme will require sustained leadership and

therefore the recruitment of a permanent CEO to lead the development of the agency for the longer term should be commenced now in order to ensure an effective handover.

The incoming CEO should have substantial strategic transformational skills, be an outstanding communicator and have a clear understanding and commitment to protecting and improving the public's health.

1.6 In the context of the pandemic and its aftermath, the Agency's strategy should address the following areas:

1 Strengthen health protection capability.
2 Assess health impacts arising from the pandemic and seek to address them, drawing on research, intelligence and international evidence.
3 Reactivate core public health services affected by the pandemic, taking the opportunity to refresh models of delivery where needed.
4 Develop the Organisation.

The wider health inequality impacts of the pandemic will require a range of policy and service responses over the short and medium term. There is also a requirement to restart core public health services as soon as practicable. These areas are not within the scope of this report but are, nevertheless, an important part of pandemic response and recovery.

There is a need to act now to improve specific functions. The rest of the report will focus on this and the 4th objective of organisational development.

Recommendation 2

Strengthen health protection capability

2.1 There is an urgent need to expand the current capacity of the specialist health protection team, infection prevention and control capacity and emergency planning functions. A business case has been prepared for consideration and this should be negotiated and implemented as soon as possible in order to ensure a sustainable service and allow staff time to reflect and refresh following a prolonged period in incident response.

2.2 The Associate Head of Health Protection has a large number of direct reports. Additional staffing will add managerial workload. Management arrangements could be strengthened, in line with existing plans, to ensure optimal staff support, whilst enabling leadership development and succession planning.

2.3 The duty room staffing arrangements have been adapted during the pandemic. These should be evaluated from a staff and user perspective to inform ongoing and future needs. There should be clear accountability for quality assurance of processes and advice. The education cell provided an effective model of support for the sector. The model could be replicated to provide tailored advice and support for other key sectors.

2.4 The Contract Tracing Service will need to be sustained for months to come. Leadership and accountability for the service is in place. Consideration of how best to sustain a flexible response is needed and confirmation of the appropriate resources. Further evaluation of the current system will enable strategic consideration of requirements for ongoing contact tracing systems and how to scale up capacity in future incidents.

2.5 Lessons learnt from the spread of Covid-19 in health and care settings should inform a refresh of approaches to prevention of health and care acquired infection. Review of roles and responsibility for action in these settings is needed with sufficient capacity to provide a preventative approach and to service outbreak control teams.

2.6 The sustained operational incident response has led to deferment of strategic work. Steps should be taken to re-start strategic health protection work as the pandemic response allows. Job roles may need to be reviewed to consider the balance of operational and strategic work in a future prolonged incident. Environmental health protection should continue to be developed along-side infectious disease prevention and management.

2.7 Modern public health practice relies, increasingly, on genome sequencing to enable tracking of spread in time and space. The HSCB should strengthen capacity and capability for genome sequencing and ensure it is strongly linked to health protection activity. Strengthened public health links to microbiology services are needed.

2.8 Learning from the pandemic incident response should be captured and used to inform and strengthen EPPR arrangements. Surge capacity was provided from across the organisation. This should be documented and codified into a business continuity plan with systematic training and development for the relevant roles. All relevant staff should have a minimum standard level of health protection training and knowledge of systems and processes.

2.9 IT systems and accommodation require attention and will be covered in the general section later.

Recommendation 3

Develop science and intelligence capability

Evidence and data are the 'life blood' of public health practice. The PHA should be a leader in developing and using science and intelligence to inform its work. Modern public health practice requires access to a broad base of sciences, such as epidemiology, microbiology, behavioural, economic and data sciences to name a few.

Data sources should include quantitative and qualitative methods. New methods of analysis should be developed as well as using record linkage opportunities. Digital

Health and Care Northern Ireland has an ambitious programme to enhance digital systems and PHA should ensure that it participates fully in exploiting the opportunities of this work. There should be a focus on 'horizon scanning' to anticipate future health trends and active participation in research & development.

3.1 The PHA should develop a strategic ambition, and plan to be, an evidence and data driven organisation to inform policy and practice. A science advisory board would help to bring a range of inputs to developing the strategy.

3. 2 In order to deliver such an ambition, there is an immediate need to develop analytical capacity and invest in skills such as behaviour change, data science, modelling and health economics.

3.3 The PHA already has a range of analytical skills and these should be brought into one team to enhance the overarching capability of the function. This will require strong leadership and a Chief Information Officer should be appointed to lead the function with alignment to the proposed Director - Research & Intelligence (see later 4.8).

3.4 The PHA should invest in digitising its collection, storage and processing methods. The emphasis should be on real time data collection and analysis. Data flows should be reviewed. For example, there was reported to be limited access to primary care data. The epidemiological surveillance function is an important asset which needs development.

3.5 Reporting of data should be reviewed against 'best in class' and with user feedback to ensure that products and publications are achieving maximum impact on public health outcomes.

3.6 The UK government has a new digital strategy with an ambitious goal to *encourage innovative uses of data by making it easier where possible to access and use data held by both government and businesses, within new legal frameworks and to ensure data is used to its maximum potential within government to provide more efficient and responsive public services*. The PHA should consider how best to develop an open data approach to its work and review its publication scheme to support openness and transparency.

3.7 Information governance is crucial to ensure high standards of data storage and usage. Some data sets are held by the Business Support Organisation and PHA should review access arrangements to these essential data sources as well as ensure all personal data in the PHA are held securely.

3.8 There is scope for the PHA to be a more research active organisation, both in identifying research questions and encouraging staff to engage in active research. A Northern Ireland public health research network already exists and staff should be enabled to participate fully in such work. Existing proposals for a Public Health R&D Director should be accelerated in line with para 4.8

3.9 At a basic level, analytical staff need higher computing power to do their work – this is covered in a later section.

Recommendation 4

A modern, effective and accountable organisation

4.1 The PHA has a substantial opportunity to learn from the pandemic as a whole organisation. No part of the organisation was untouched by the experience. It is important that the whole organisation undertakes a 'lessons learnt' debriefing exercise as soon as practicable to capture the experiences and learning in real time.

4.2 As part of its strategy to protect and improve the health and wellbeing of the population of Northern Ireland the PHA should optimise the use of scarce skills and resources and aim to create the best working environment.

There is much to be done to maintain the Covid-19 response and recover from the prolonged incident.

In terms of Organisational Development (OD), the areas that need early attention are:

- Culture
- Accountability
- Capacity and capability
- Working environment
- External relationships

➢ Culture

4.3 The health and wellbeing of staff has been impacted. There was evidence of severe pressure on individuals, some of whom also felt disempowered and undermined at times. These concerns should be addressed.

4.4 An organisational development (OD) plan was started and this should be activated as soon as possible. The second cultural assessment survey, due to be completed in Dec 2020, should be used as a platform to drive change.

➢ Accountability

4.5 Structural form should follow function. The organisation's core business is public health (covering health protection, health improvement and service quality development) and this should be centre stage in all its strategy, systems and structures.

4.6 There is an imbalance in the organisation's leadership team. The DPH role spans 2/3rds of the budget of the PHA and acts as Medical Director in the HSCB. This is a very wide role for one person and should be reconsidered.

4.7 The directorates should be arranged around the key functions to be delivered. Accountability should align with strategic objectives, with more visibility of health protection at Board level.

4.8 The DPH role will need to focus on strategic development of the public health function and external relationships. In order to strengthen leadership, support effective delivery and succession planning, I recommend three deputies to lead the respective functions of:

- Health protection director
- Health improvement director
- Health research & intelligence director

4.9 There are a number of hosted functions within the PHA which should be reviewed in due course to ensure they align with the Agency's core purposes. However, in the short term more collaboration with hosted functions would bring benefits. For example, with R&D to further support evidence-based practice and innovation and with the Quality Improvement function to drive innovation and improvement in public health services.

- **Capacity and capability**

4.10 The PHA should update its workforce plan so that it is aligned to its strategy.

The workforce plan should cover the development of current staff to upskill in their specific roles and ensure a basic level of public health skills for incident response and collaborative working. The plan should include an ambition to be a learning organisation.

4.11 The plan should ensure that ways of working within the agency address concerns about professional silo working, for example, by ensuring that all senior staff have adequate public health training. There should be more cross fertilisation of roles and ideas as well as joint project working focussed on shared outcomes. A leadership development programme is essential. Use of mentoring and coaching should be encouraged.

4.12 Specific public health, epidemiology and analytical training will need to be increased to replace staff as they retire / leave. The current public health training programme is recruiting and the PHA should seek funding for a one-off increase in multidisciplinary recruits as well as develop a longer-term plan for future numbers of specialist staff needed to be sustainable.

4.13 The epidemiology Fellows scheme should continue to be supported.

4.14 The training programmes should seek to maximise placement opportunities within and outside NI to ensure public health registrars are exposed to a wide range of approaches and areas of practice that may not be available in house. These could include placements in the Northern Ireland Executive and with local government to help develop public health practice in support of policy development and decision-making. Academic research opportunities should be readily available.

4.15 Joint service-academic appointments can help to attract candidates for roles, support research and innovation in practice and strengthen the training programme.

More should be done to enhance links with Universities. Similarly, joint appointments with other public health agencies would foster collaboration and make best use of scarce resources.

4.16 Public health centred communications and engagement is a vital part of delivering improved health outcomes. There was a call from stakeholders for more engagement. The communications function should be supported and enhanced. The appointment of a Director of Communications and Engagement would provide the leadership needed to develop this capability.

4.17 More use should be made of digital communication and behaviour change expertise. The website requires an upgrade to be more 'user accessible'.

4.18 There was a call for more overarching co-ordination within the organisation and a need to enhance strategic and operational planning. The recently retired Director of Operations role should be replaced to encompass these functions and support the CEO in the daily running of the business. Project management and business support roles should be reviewed to ensure sufficient capacity and focus on programme delivery. The high level of temporary posts should be reviewed to ensure retention of necessary skills.

4.19 The IT and HR functions should be enhanced to support efficient and timely recruitment as well as an upgrade of IT functionality.

- **External relationships**

4.20 Partnerships are a crucial part of public health practice. As recommended above, a Director of Communications and Engagement would bring strategic leadership to this work.

A stakeholder survey should be undertaken to identify areas of strength and areas for improvement.

Whilst there is local engagement for health improvement activity in community planning, it should also be strengthened for health protection as well as for involvement in Integrated Care Partnerships, and including primary care.

- **Working environment**

4.21 The working environment needs improvement. An estates plan is underway and this should be underpinned with a strategic approach to future working methods. A survey of how people want to adapt their working arrangements after Covid-19 should inform decisions. Even before the pandemic, other public bodies have achieved substantial transformations in creating flexible, 'location agnostic' ways of working which enhance staff engagement and wellbeing.

Implementation

The four high level recommendations in this report are supported by detailed actions that are necessary to re-invigorate the public health function in order to continue the response to Covid-19 and prepare for future health threats. Further work is underway to re-start other public health services which was not in the scope of this report.

The immediate priorities are to:

- Finalise and agree relevant business cases to ensure current service sustainability
- Commence appointment of the CEO
- Agree an investment and transformation plan

My recommendations constitute a major change programme which requires investment and leadership. The interim CEO should be supported to start the delivery of this programme forthwith, with assurance provided by PHA non - executive Board oversight.

Appendix A

Terms of Reference for a rapid, focused external review of the Public Health Agency for Northern Ireland's resource requirements to respond to the COVID-19 Pandemic over the next 18 - 24 months

Background

1. The Public Health Agency for Northern Ireland (PHA) is facing an unprecedented COVID-19 pandemic. Rapid, focused advice on the resource requirements to respond to the current situation over the next 18-24 months would be valuable.

2. Whilst the Agency has clearly responded well to most of the issues raised by the pandemic, it is also clear that the scope, scale, pace and complexity of the challenges will only increase and the Agency must be ready to respond with agility and with the capacity and capability required.

3. Furthermore, it is more than ten years since the Agency was established under the second phase of Review of Public Administration and such a review would be timely in any case.

4. An investment in public health – particularly in health protection – is likely to be required if we are to ensure a Public health Agency fit to deal with future challenges over the next decade. These include, but are not limited to:

- Pandemic threats such as COVID-19;
- The effective use of evidence, health information and epidemiology in a digital age;
- Analytical and epidemiological work including research
- Infection Prevention and Control
- The best use of public engagement, co-production, communications including social media and online communication to enhance public messaging; and
- Ensuring a strong and vibrant professional public health community in Northern Ireland.

Proposed Approach

1. The rapid review will be led by Dr Ruth Hussey, OBE, a previous CMO in Wales.

2. The recipient of the review will be: The Chef Medical Officer for Northern Ireland, the Chair of the Agency, and the Chief Executive of the Agency.

3. The Chief Executive of the PHA will ensure, with the support of the Director of Public Health, that Dr Hussey is provided with all the practical help required to undertake the review.

4. The review will aim to provide a concise report that can rapidly be undertaken to address the COVID-19 pandemic over the next 18-24 months.

5. The report will aim to have a draft available for comment by 31 December 2020.

6. Dr Hussey will be free to develop and structure the review as she sees fit, in discussion with the three recipients of the report and to engage other external advice, if she deems this advisable.

Appendix B

Information available online was used to describe the public health service arrangements across the five nations of Northern Ireland, Scotland, Wales, England, and Ireland. Each nation is set within its own context and subsequently direct comparisons between them are not easily achieved.

All of the services are explicit in stating their focus on protecting and improving the health and wellbeing of the population, and on reducing inequalities. The provision of each nation's service is also broadly framed around the three main domains of public health practice (health services, health improvement, and health protection). All services exhibit cross-sectoral and multi-disciplinary working. The systems in Ireland and England are undergoing periods of significant transition. Scotland's public health service - in its current form - was only created in Spring of this year.

There are differences in the organisational models adopted by each service - but, when each nation's service is taken as a whole (including any delegated public health functions), the types of output are similar. In turn, with regards to the scope of their Health Protection work, the composite functions appear comparable between nations. Close partnership between Microbiology services and Health Protection services is a feature for all nations. In Wales and England some Microbiology services are managed by the Public Health organisation.

The size of the population is likely to be a significant factor determining the scale of the service available. Funding is not easily compared as each agency has a different service mix. However, it is clear that Northern Ireland has the lowest specialist staffing rate in the UK, including having fewer Directors of Public Health per head of population.

All nations have responded to the pandemic by adapting pre-existing models of service delivery. During the pandemic, there has been close co-operation between all of the five nations. Collaboration between the agencies was also an important feature prior to COVID-19.

Selected elements of the five public health services

	Ireland	Wales	Scotland	England	Northern Ireland
Population	4.9 million	3.2 million	5.5 million	56.3 million	1.9 million
Number of specialists / consultants (per million)*	-	79.4 (24.8)	125 (22.7) *estimated*	1007 (17.9)	29 (15.3)
Directors of Public Health (per million head of population) &	8 (1.63)	7 (2.19)	14 (2.55)	134 (2.38)	1 (0.53)
Budget / expenditure 2018-19[†]	Euro 241m (2019)	£135m *Includes all Wales' microbiology services*	£71m *This is an 'opening budget' for the new organisation, Public Health Scotland*	£4,013.0m *This represents net expenditure for Public Health England - about ¾ of funding is for local government public health*	£113m *Includes hosted services such as R&D for health and social care*

[†] Note that each agency's budget may not be comparable due to differences in their functions.
*Figures taken from Representation to the Comprehensive Spending Review 2020 (Faculty of Public Health)
[&] Figures taken from Association of Directors of Public Health (UK) (www.adph.org.uk/). National Directors may not be included in figures.

Appendix C

Essential Public Health Services (Revised, 2020)

The 10 Essential Public Health Services provide a framework for public health to protect and promote the health of all people in all communities.

1. Assess and monitor population health status, factors that influence health, and community needs and assets
2. Investigate, diagnose, and address health problems and hazards affecting the population
3. Communicate effectively to inform and educate people about health, factors that influence it, and how to improve it
4. Strengthen, support, and mobilize communities and partnerships to improve health
5. Create, champion, and implement policies, plans, and laws that impact health
6. Utilize legal and regulatory actions designed to improve and protect the public's health
7. Assure an effective system that enables equitable access to the individual services and care needed to be healthy
8. Build and support a diverse and skilled public health workforce
9. Improve and innovate public health functions through ongoing evaluation, research, and continuous quality improvement
10. Build and maintain a strong organizational infrastructure for public health

https://www.ianphi.org