

Public Health Agency

COVID-19 Management Framework

Version 7.1
14 August 2020

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Glossary of Terms

CE – Chief Executive

CMO – Chief Medical Officer

CTC – Contact Tracing Centre

DoH – Department of Health

DPH – Director of Public Health

EH – Environmental Health

EHO – Environmental Health Officer

HPC – Health Protection Consultant

HSENI – Health and Safety Executive Northern Ireland

IAO – Information Asset Owner

IMT – Incident Management Team

OCT – Outbreak Control Team

PHA – Public Health Agency

PHE – Public Health England

Introduction

1. This document sets out how the Public Health Agency (PHA) will work to identify cases (ie those people with a confirmed diagnosis of SARS-CoV-2/Covid-19) and trace their close contacts; to recognise potential clusters and/or outbreaks early and to respond appropriately; to contain and manage any outbreaks and clusters as required. It describes the relationship with various stakeholders and the information and intelligence flows as well as the operational plan.
2. This plan sets out the current arrangements in Northern Ireland. However, it is recognised that the situation is rapidly changing; researchers and clinicians are working hard to understand the disease and the most effective medical approaches to combating it; the guidance, regulations and legislation are changing to reflect the disease prevalence; the impacts and consequences of Covid-19 in communities are still evolving; and we are still all learning how best to live with it. This plan should therefore be seen as a living document. It will be kept under review and be updated to reflect changes as the situation and the measures to test, trace and protect evolve.
3. The Test, Trace & Protect programme has been established to break the chains of Covid-19 infection and support the return to a more normal way of life for the people of Northern Ireland. This framework is necessary to provide assurance that local outbreaks and clusters are identified, risk assessed and contained in an effective way.
4. This document has been prepared by the Chief Executive of the PHA as Accounting Officer with responsibility for the operational out workings of the Agency's statutory functions which include protection of the community (or any part of the community) against communicable disease, in particular by the prevention or control of such disease¹.
5. Recognition, identification and management of incidents and outbreaks have been a function of the PHA business since its inception. The *Infectious Disease*

¹As set out in article 13 of the Health and Social Care (Reform) Act (Northern-Ireland) 2009

*Incident/Outbreak Plan (September 2018)*² outlines the process for identification, risk assessment and management of incidents or outbreaks of infectious diseases and forms the basis for this framework. It is based on recognised best practice within the international health protection community³. The principles, aims and objectives are aligned, but the novel nature of Covid-19 and the risk posed makes it necessary to have a specific management plan and associated standards to provide assurance to the various stakeholders.

Stakeholders

6. Stakeholders include:

Northern Ireland

- Northern Ireland population
- Northern Ireland Executive
- The Northern Ireland Assembly Health Committee/Party Spokespeople
- Northern Ireland Assembly
- Department of Health
- Health and Social Care Trusts
- Patient and Client Council
- Independent health and social care establishments including nursing and residential care homes
- Other Northern Ireland government departments
- Food Standards Agency in Northern Ireland
- Health and Safety Executive
- Education Authority
- District Councils – Environmental Health
- Queen’s University and Ulster University
- All COVID-19 response and working groups
- Services Management Board and its subgroup on Winter Pressures
- Media

² The plan can be accessed at https://www.publichealth.hscni.net/sites/default/files/2018-10/Infectious%20Disease%20Incident%20and%20Outbreak%20Plan%20September%202018_0.pdf

³ PHE Communicable disease outbreak management operational guidance, which can be accessed at <https://www.gov.uk/government/publications/communicable-disease-outbreak-management-operational-guidance>

- Community and voluntary sector originations
- Trade Unions

Republic of Ireland

- Department of Health
- Health Service Executive

UK

- Department of Health and Social Care
- Public Health England
- Joint Biosecurity Centre
- NHS Scotland (including Public Health Scotland)
- NHS Wales (including Public Health Wales)

7. The novelty of the disease and its impact so far on the health and wellbeing of the population of Northern Ireland has understandably increased the scrutiny under which the PHA operates and the need for information to and intelligence from a variety of stakeholders. This framework sets out how these information flows will be managed and necessary assurance provided internally to the PHA Executive and externally to the Chief Medical Officer and others, with whom there are close links, including to a Modelling Group and a range of international groups in the UK, Republic of Ireland and across Europe. These are helpful in learning the lessons from elsewhere.

Principles and Objectives

8. The principles underpinning our approach are:
- Public health and public safety are paramount and the primary responsibility is to maintain these.
 - We have adopted a systems approach which utilises existing public health expertise at scale and pace.
 - Our approach will be evidence-based and risk assessed.
 - We will work in partnership with decision makers to support strategy and policy direction.

- We will be open, honest and transparent with our decisions and share data to support everyone to make decisions to protect themselves and others.

9. These principles in turn reflect those identified by the Association of Directors of Public Health for the design and operationalisation of local COVID-19 Management Plans which state they should:

- Be rooted in public health systems and leadership;
- Adopt a whole system approach;
- Be delivered through an efficient and locally effective and responsive system including being informed by timely access to data and intelligence; and
- Be sufficiently resourced⁴.

10. The aim of this framework is to ensure an effective and co-ordinated approach to recognition, identification and management of incidents and outbreaks from initial detection to formal closure and review of lessons identified. It promotes and ensures a consistent approach across all levels within PHA and includes sets of standards for outbreak response.

11. The objectives of the process are:

- To protect public health by identifying the source of infection.
- To implement control measures to prevent further spread or recurrence of infection.

Definitions

12. There are two key definitions:

- ***A cluster is currently defined as two or more laboratory-confirmed cases of COVID-19 among individuals associated with a key setting, with illness onset dates within a 14 day period. Key***

⁴ <https://www.adph.org.uk/wp-content/uploads/2019/12/What-Good-Looks-Like-for-High-Quality-Local-Health-Protection-Systems.pdf>

settings include workplaces, educational, retail or hospitality premises, domestic gatherings, and sporting settings.

- ***An incident (which may later be defined as an outbreak) - where two or more cases of Covid-19 have a highly probable or confirmed epidemiological link***

These definitions will be refined over time based on emerging evidence and national consensus, for example, in relation to the use of confirmatory tests for SARS-CoV-2.

Roles

13. There are established arrangements within the PHA for identifying, risk assessing and managing incidents, outbreaks and clusters of communicable disease. Covid-19 represents a particular challenge in terms of the scale, pace and scrutiny arising. However, the basis for the Covid-19 management plans is founded in established practice. There are a range of PHA internal roles involved; as well as external organisations who will liaise with us in the identification and management of outbreaks.

14. Internal roles and responsibilities are described at a high level in the table below.

Job Title	Overview of Role	Role in Outbreak Management
Clinical Contact Tracer	Operates the contact tracing process – calling index cases to identify close contacts who are then contacted to advise to isolate.	Provides general advice on management of single cases. Identifies potentially linked cases in course of tracing work. Records data on CRM system. Advises Acute Health Protection Team.
Contact Tracing Clinical Lead	Oversees response to complex contact tracing issues, and manages any clinical concerns. There will be a clinical lead on duty at all times.	Responsible for considering any possible links between cases and for handing over clusters or potential outbreaks to the Health Protection Acute Response team for assessment.
Health Protection	Be available for immediate	Assesses cluster or potential cluster to

Job Title	Overview of Role	Role in Outbreak Management
Acute Response Consultant/ Contact Tracing Consultant Lead	health protection advice.	determine if it is an outbreak. Informs the Assistant Director for Health Protection or the on call Director of Public Health of all potential outbreaks.
Assistant Director of Public Health (Health Protection) during working hours (or DPH or Acting Director of Public Health out of hours)	Agrees and co-ordinates the activities involved in the management, investigation and control of a serious or significant outbreak.	Assess public health risk; decides whether to set up an Incident Management Team or Outbreak Control Team meeting.
Incident Lead	A Health Protection Consultant with significant experience of previous outbreak management who leads the risk assessment, investigation and management of incidents, clusters and/or outbreaks.	Leads the investigation of the cause, vehicle and source of the cluster or outbreak; implements oversees implementation and assurance of control measures; determines when outbreak or cluster is over and prepares written report. Chairs all the meetings of the Incident Management Team (IMT), and if an outbreak is called, chairs the Outbreak Control Team (OCT). Responsible and accountable for leadership of the IMT/OCT and associated decisions and actions.
Communications Team	Managing internal and external corporate communications.	Develops and implements communications plans with relevant stakeholders. Ensures Chief Executive and Executive Team appropriately briefed and advised. Liaises with and answers media queries, prepares and issues public statements, oversees social media messaging, and manages public affairs activity with open and transparent messaging. Oversees video production, publications process and public information campaigns.
HP Surveillance/ Analytical Team	<ul style="list-style-type: none"> i) Assesses / monitors all appropriate data sources; ii) Ensures local intelligence is used to inform and underpin the response; iii) Provides epidemiological and analytical support to the 	Provide the agreed datasets to support internal decision making, on behalf of the Assistant Director of Public Health (Health Protection), and supports routine reporting of data to external bodies. Integrating data from a range of internal and external sources to provide a full picture of the issues at play including the production of an epicurve of the incident/outbreak.

Job Title	Overview of Role	Role in Outbreak Management
	iv) IMT/OCT Liaises with surveillance and epi colleagues in other areas to inform and assist the local response.	
Testing Cell	Oversight of testing capacity and resource deployment.	Advises on readiness to deploy mobile testing units to high risk area. Manages and prioritises deployment.
Health Improvement Teams	Supporting vulnerable people and diverse communities.	Work with high risk groups and their representatives to help them understand the key public health messages and support them to self-isolate if required. Liaise with partners in this work. Ensure adequate supports are in place to meet the needs of diverse communities.
Director of Public Health (DPH)	Overall responsibility for the public health management of the health protection response.	Chairs the Public Health Management Team which coordinates the response across different public health divisions. Provides accountability for health protection to the PHA Board, the Chief Executive and the CMO. May chair the Outbreak Control Team for large outbreaks.
Chief Executive	Accounting Officer with responsibility for oversight of all PHA activity.	Briefs internal and external stakeholders including Minister, Executive, and PHA Board. Accountable for operational success of PHA.

Outbreaks in non-domestic settings

15. Covid-19 outbreaks or clusters in specific non-domestic settings require consideration given the potential impact for spread of the disease in these areas. These include:

- HSC Trusts (Including NIAS)
- Residential Care and Nursing Homes
- Domiciliary Care Agencies
- Schools and higher and further education establishments
- Food processing businesses
- Prisons and other places of detention
- Homeless hostels or shelters, refuges and similar residential settings

- Other high risk workplaces, communities and locations.
16. The PHA is not accountable for the management of clusters or outbreaks within Health and Social Care Trusts although we may be asked to join and advise Outbreak Control Teams in such Trusts. Microbiology and Infection Control teams in each Trust lead the internal investigation of all possible incidents. There are established processes for close collaboration with PHA's Health Protection service where an outbreak spans HSC and community contexts.
 17. Environmental Health (EH) departments in local government have a key role in the investigation of food-related outbreaks and emergency planning – such as environmental hazards, legionella, and water borne incidents. There are longstanding arrangements in place for collaboration between the Health Protection service and EH departments in relation to the decision as to whether to invite EH for any given local authority to join an OCT is made by the Incident Lead with advice from the OCT. The main reasons for involving EH in an outbreak are around situations where environmental health powers are relevant or EH expertise supplements the wider expertise on the OCT. Environmental Health Officers (EHOs) sometimes act as a conduit of information to the senior management team in the local authority, where executive level local authority action may be required to assist with investigation and/or management of the outbreak.
 18. Examples of situations where EHOs may play a key role include the use of their legal powers to enter premises for a variety of health protection reasons; or access to environmental tests that are best accessed via local government - eg microbiological or viral testing of environmental samples such as food stuffs.
 19. EHOs have expertise in using questionnaires and other tools to investigate outbreaks that complement public health protection skills. There are situations where several local authorities may need to be involved in an outbreak and in such situations it on occasions it may be prudent to have a distinct environmental health group meeting to take actions forward. In some outbreaks there is also an interface with the Health and Safety Executive (HSENI) and tripartite action between public health, environmental health and the HSENI may

be necessary. Other regulators such as the Regulation and Quality Improvement Authority and the Food Standards Agency may have roles. Emergency services including ambulance, police, coastguard etc are occasionally part of an OCT and may also have a role to play.

20. Effective communication is a central tenet of the management plan. Datasets will be agreed with the Department for information sharing and publication in accordance with our principle of transparency.

Daily Oversight

21. Daily team huddles are held in the Contact Tracing Centre (CTC) led by the Health Protection Consultant (HPC) on duty. These are designed to discuss any observed patterns and to spot clusters or potential clusters, backed up by epidemiological analysis and geospatial mapping.

22. Outbreak investigation requires analytical support. Where required the Health Protection Surveillance team will provide a geographical map of the cases. Network maps describing the links between cases are also used. In-depth statistical analysis of patterns may be undertaken. The Health Protection Acute Response team has a daily briefing each weekday morning which will highlight any clusters identified by the CTC.

Graduated Support

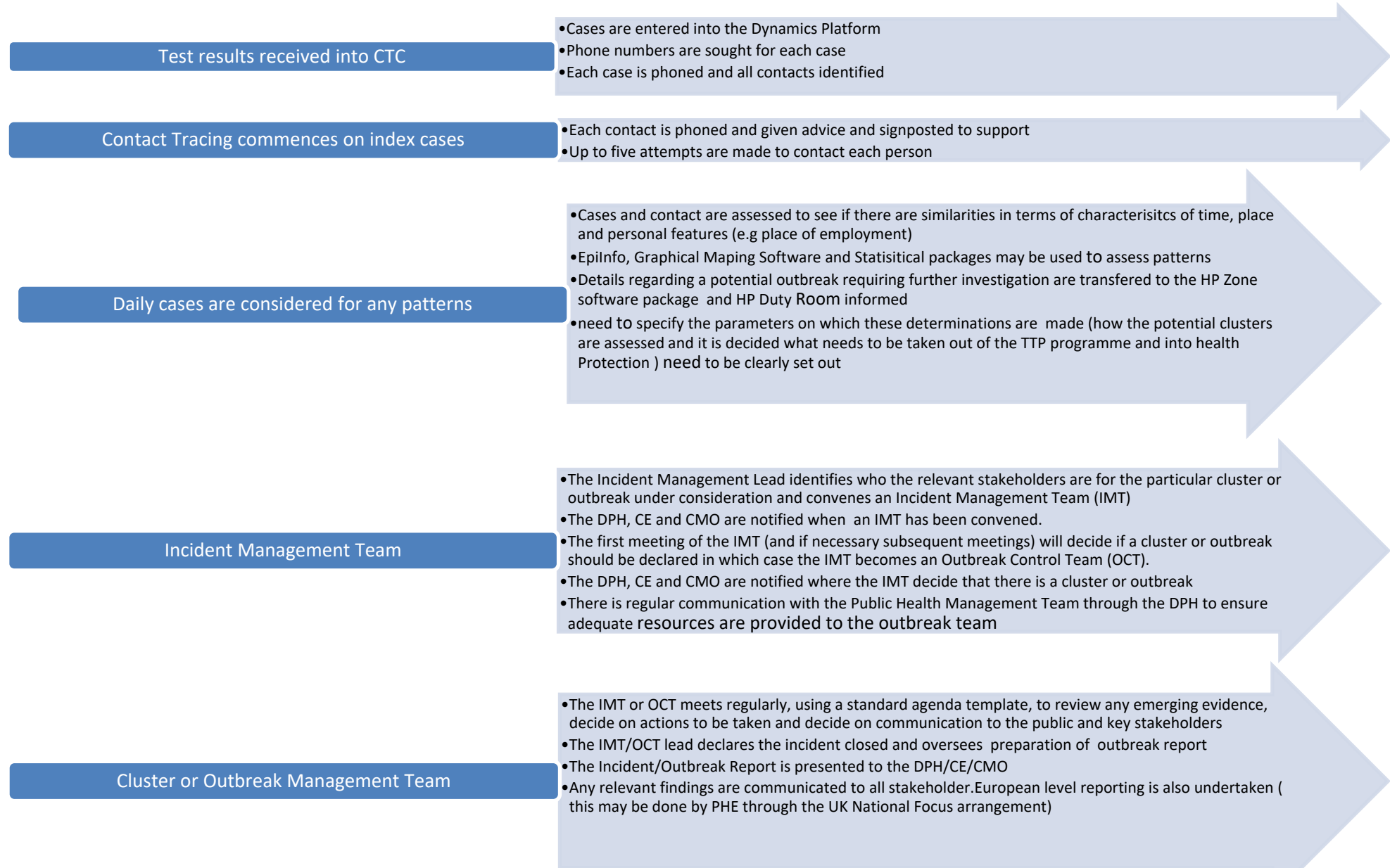
23. The generic response of the Health Protection team is designed to flex from single complex cases to very large clusters/outbreaks. In practice this can be seen as a multi-level response:

- Very minor incidents – in which the response is led from within the Duty Room (in the same way as the Duty Room is responding every day to minor clusters of other diseases such as meningococcal Strep A etc);
- The next level is where a possible cluster or a small cluster may only require one IMT/OCT meeting;
- The next level is where a OCT operates over a few days or weeks;

- The largest level requires not just an OCT but a whole organisation response based on invoking business continuity measures as outlined in the PHA Business Continuity Plan. This may be associated with the use of BRONZE/SILVER/GOLD emergency planning infrastructure, in line with the PHA Emergency Response Plan.

A Covid-19 outbreak or cluster may require a response at any of these levels.

24. The process for identifying and managing outbreaks is summarised on the page below.



25. The HPC or Clinical Lead in the CTC will examine the possibility of a cluster or outbreak using the following methodology:

- Consideration of the extent of the increase in the number of cases;
- Consideration of two or more people diagnosed with Covid-19 which are linked in time and place;
- An in-depth evaluation of evidence (including where necessary additional interviews with cases) to ascertain any common links between cases (household contacts, postcodes, place of employment, travel, leisure activities);
- Where cases are re-interviewed, they will be asked about contacts in the previous 7-14 days. These are recorded on MS Dynamics CRM⁵.

26. Where the contact tracing team have concerns regarding the possibility of an outbreak, they will transfer the records of any relevant individuals to HP Zone and inform Health Protection Acute Response via the Duty Room.

Responsibility for the next steps then passes to Health Protection Acute Response Consultant. The evidence is considered in conjunction with the Assistant Director of Public Health (Health Protection) or the on call Director of Public Health (if occurring out of hours).

27. A decision may be made to appoint an Incident Management Lead and to hold an Incident Management Team meeting to assess the available evidence as to whether a potential cluster or outbreak is occurring. The Incident Management Lead will consider which stakeholders need to be invited to the meeting and will send out the relevant invites. It can take more than one meeting for an IMT to decide whether there is a cluster or outbreak. A representative of the communications team must be included on the IMT. Comprehensive records are kept in minutes of the meeting.

⁵ There are future plans to introduce enhanced contact tracing or reverse contact tracing where all cases will be asked on the first contact tracing call about settings visited and other exposures in the 7 days before the onset of symptoms.

28. There is evidence for the use of the Dynamic Risk Assessment Model⁶ to ascertain the risk posed by the evidence considered. The risk assessment for Covid-19 cases is undertaken by two HPC staff (or one HPC and other clinician).

Identification of an Outbreak

29. Where the IMT considers that the incident should be considered an outbreak, the IMT becomes an Outbreak Control Team (OCT). The membership of the team may be revised at this or any point. The Incident Management Lead will notify the DPH.

30. The DPH is responsible for immediate advice to the PHA Chief Executive as to the outbreak – including a detailed written briefing setting out the rationale for the declaration of an outbreak. The Chief Executive is responsible for alerting DoH. An electronic folder is maintained which holds records of all outbreak reports and related documents.

31. The chair of the OCT will ensure that communication with the public and relevant stakeholders is considered at each meeting.

32. A regular update on all significant clusters and all declared outbreaks is provided to the PHA Director of Public Health (DPH). The DPH is responsible for updating the Chief Executive on at least a daily basis. The DPH is also responsible for updates to DoH on an agreed frequency as set following the early notification.

33. The primary responsibility of an Incident Management or Outbreak Control Team is to protect the public and, as appropriate, to initiate, implement, oversee and assure actions, in conjunction with relevant bodies, to curtail the spread of Covid-19 in the community. This will usually involve working with a wide range of statutory agencies including the Health and Safety Executive, Environmental Health Departments, hospital laboratories etc. Additional advice and support

⁶ The Dynamic Risk Assessment Model can be found on page 69 at the following link:
https://www.publichealth.hscni.net/sites/default/files/2018-10/Infectious%20Disease%20Incident%20and%20Outbreak%20Plan%20September%202018_0.pdf

may be sought from a range of national or international agencies as appropriate/required.

34. The OCT will oversee the investigation, management and control of the Covid-19 outbreak. Broad principles outlined in the *Infectious Disease Incident/Outbreak Plan (September 2018)* (Appendices 7-15) should be followed. The nature of the Covid-19 pandemic means that specific communication arrangements apply.
35. The IMT/OCT will provide advice to a range of government departments as required in respect of managing and containing localised and/or extensive community spread. Actions, not all of which are within the control of PHA, may include accelerated testing of specific populations (including asymptomatic individuals); closure of certain businesses or venues; cancellation of events; issuing guidance or increased communications to improve preventative measures and provide public and stakeholder reassurance including local campaigns using techniques such as door to door knocking, targeted Facebook adverts etc. that have been used in previous outbreaks and most recently used in Leicester. Targeted local restrictions may also need to be utilised.
36. The types of issues that may merit involvement of the DoH or other government departments include:
- A local outbreak that leads to the closure of a number of care homes in a district;
 - An increase in a local hospital's admissions for COVID-19 with significant impacts on the service;
 - A significant increase in the number of deaths in an area;
 - An agency providing a critical function suffers a significant reduction in its workforce due to an outbreak and can no longer carry out the function;
 - Three or more settings in a district are working within business continuity arrangements to deliver essential services only;
 - Any other unexpected consequences in the community are reported - or there is potential for such consequences;

- A significant issue requiring escalation to national government is identified;
- There is a requirement for mutual aid which cannot be addressed through agreed/ established/existing arrangements;
- An issue which compromises essential service delivery, including a threat to delivery of this plan (eg through compromising public health services); or
- Concurrent emergency (eg flooding).

Outbreaks in Health and Social Care Trusts

37. HSC Trusts have established mechanisms for managing outbreaks of communicable disease. The particular nature of Covid-19 requires additional consideration and this is currently under consideration via a working group established by the PHA.

38. Trust Occupational Health and Infection Control Teams are responsible for risk assessment and managing incidents, outbreaks and/or clusters occurring in or related to Trust services and facilities. This includes internal patient and staff contacts. The CTC is responsible for the tracing of community and household contacts of index cases originating from Trusts and/or Trust services (patients or staff).

39. Through the mechanism of a short life working group Trusts will ensure that contacts requiring tracing are captured in a standardised format using a mechanism that will allow uploading to the CTC MS Dynamics CRM system. This will allow for population level analysis of cases and contacts across Northern Ireland.

Management Oversight

40. By 16:00 hrs each day, the Health Protection Consultant in the CTC will report any new incidents, clusters or outbreaks to the Chief Executive and DPH or alternatively give an assurance that - on the basis of all evidence considered

that day - that there have been no potential incidents, clusters or outbreaks reported. These reports will be shared with the DoH where appropriate.

41. Potential clusters and/or outbreaks will be reported by the PHA DPH to the Chief Executive. The report will include:

- The rationale for declaring it so;
- The extent of the cluster or outbreak;
- Any initial hypothesis relating to source and spread of infection;
- Immediate risks and mitigating measures taken; and
- Next steps.

42. An early notification of any potential cluster or outbreak will be shared with DoH. If appropriate minutes of the Cluster or Outbreak Meetings are shared as the investigation proceeds. (These may be partially redacted if they contain confidential patient information.)

43. Where relevant we will share appropriate information with local councils and MLAs in line with our principle of transparency. We will also publish a weekly bulletin that will provide information for a wider audience.

44. Where appropriate we will share information with colleagues in Republic of Ireland and UK jurisdictions should an outbreak have wider implications or lessons that have been learned. There are established data sharing arrangements for this purpose.

Consequence Management

45. As the Test, Trace and Protect processes are developed and established, measures will also be needed to minimise the impact of clusters and/or outbreaks on communities and to continue to provide support. We also have an action plan for vulnerable groups. Managing the consequences of contact tracing at scale and clusters, outbreaks and/or incidents will be a key focus at the local level:

- Working closely with communities to gather their knowledge and experience about cases in the community;

- Ensuring common and consistent messaging to communities to give reassurance and promote confidence in the response that is being implemented;
- Where other wider organisational and community or cross border impacts are identified or additional partner agency support is required, these issues will be escalated through established sponsorship and policy lines in DoH; and
- Considering the impacts of closures and/or staff absences on critical public services such as schools, primary care, utilities, essential council services including enabling mutual aid where required.

Communication

46. Communication is considered a central tenet of the Covid-19 management framework. There are various levels:

- General advice and guidance on the prevalence of the disease and preventative measures;
- Data on disease prevalence, testing, deaths, the wider pattern of clusters and outbreaks;
- Explanations of the implications of clusters and outbreaks and what this means for the public at large as well as those directly affected; and
- Information for businesses and venues impacted by control measures (e.g. if closed voluntarily or by enforcement).

47. The reporting of positive test results by local council area can lead to assumptions and misinformation about clusters and outbreaks; and may contribute to undue community tension and fear of the disease. Most clusters are in households. It would clearly be inappropriate to identify individual households; but as much information as possible will be published on the pattern of household clusters without compromising confidentiality. A weekly bulletin will be also be produced which will provide a range of relevant information.

48. Covid-19 tool kits and information resources setting out guidance and advice will be provided as appropriate as part of specific cluster or outbreak management.
49. The PHA Communications Manager has templates that can be deployed to support the messaging during an outbreak based on previous experience. We will work closely with DoH and Executive communications teams to ensure effective public messages.
50. The PHA has well-established links with the digital StopCovidNI and CovidCareNI products and will use these links to increase our reach.
51. We will engage early with key stakeholders at local and national level during investigation and management of a cluster or outbreak, including local community representatives. Such stakeholders include local representatives; community and voluntary groups; and local media. The purpose of such engagement, which will be face to face where possible, is to spread relevant messages, answer questions about the outbreak and reduce the risk of the spread of misinformation.
52. The NI Direct CovidCareNI call centre could be utilised to provide additional information to callers as required. We have retained the 111 service which can provide an overflow service if the number of callers exceeds the resource available locally.

Information Governance

53. The contact tracing/outbreak and cluster management services will operate in compliance with PHA Information Governance policies and procedures (in line with the General Data Protection Regulations [GDPR] and the Data Protection Act 2018). The Assistant Director for Health Protection is the Information Asset Owner (IAO) for all data (including personal and special category data) collected, stored and processed within, and in support of, the contact tracing service and management of outbreaks and clusters.

54. Data protection impact assessments are being conducted in respect of the COVID 19 Contact Tracing Service and associated new information systems with on-going liaison with the Information Commissioner's Office. These will be kept as 'live' documents, and be regularly revised and updated by the IAO and his staff (taking advice from PHA information Governance staff as appropriate), to ensure the security and protection of the personal data held, and that data protection risks continue to be assessed and mitigated in the light of changes to the contact tracing service and its associated information systems.

Updating

55. The context within which the pandemic is operating continues to change as schools return and this document will need to be treated as a live document that is updated on a regular basis.

Linkage to wider stakeholders

56. There are wider interfaces with stakeholders that are out with the remit of this document. Local government has a key role in responding to aspects of the pandemic, as to a range of government departments under Civil Contingencies. A wide range of public sector, voluntary and community sector organisations also have key roles that sit out with the remit of this document.



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