

# **Greater Glasgow and Clyde Outbreak and Incident Management Plan**

**Version 4.3**

**January 2022**

**NHS Greater Glasgow and Clyde**

**East Dunbartonshire Council**

**East Renfrewshire Council**

**Glasgow City Council**

**Inverclyde Council**

**Renfrewshire Council**

**West Dunbartonshire Council**

## **Approvals**

**Version 4 of the plan was approved by NHS GGC Corporate Management Team on 5<sup>th</sup> March 2020, and updated version 4.2 on 7th October 2021**

**Version 4.3 (this version) includes minor updates to terminology, reordering of paragraphs and correction of typographical errors to improve clarity.**

## Abbreviations

<b>APHA</b>	Animal and Plant Health Agency,
<b>ARHAI*</b>	Antimicrobial Resistance and Healthcare Associated Infection (Group)
<b>CBRN</b>	Chemical, biological, radiological and nuclear (usually refers to deliberate releases)
<b>CMO</b>	Chief Medical Officer
<b>CPH(M)</b>	Consultant in Public Health (Medicine)
<b>DPH</b>	Director of Public Health
<b>DWQR</b>	Drinking Water Quality Regulator for Scotland
<b>EDC</b>	East Dunbartonshire Council
<b>EHO</b>	Environmental Health Officer
<b>EPO</b>	Emergency Planning Officer
<b>ERC</b>	East Renfrewshire Council
<b>FSS</b>	Food Standards Scotland (formerly Food Standards Agency (Scotland))
<b>GCC</b>	Glasgow City Council
<b>HPS*</b>	Health Protection Scotland
<b>HSE</b>	Health and Safety Executive
<b>ICD</b>	Infection Control Doctor
<b>IMT</b>	Incident Management Team
<b>IMTSG</b>	Administrative Incident Management Team Support Group
<b>IPCT</b>	Infection Prevention and Control Team
<b>LA/EHS</b>	Local Authority/Environmental Health Service
<b>MST/EG</b>	Management Support Team/Executive Group
<b>NHSGGC</b>	NHS Greater Glasgow and Clyde
<b>OCP</b>	Outbreak and Incident Control Plan – this document
<b>OCT</b>	Outbreak Control Team – synonym for IMT
<b>OCTSG</b>	Outbreak Control Team Support Group – synonym for IMTSG
<b>OMST</b>	Outbreak Management Support Team – synonym for MST/EG
<b>PAG</b>	Problem Assessment Group
<b>PF</b>	Procurator Fiscal
<b>MedVet Group</b>	The Greater Glasgow and Clyde Public Health (Health Protection) Liaison Working Group which consists of public health doctors, health protection nurse specialists, EHOs, medical and non-medical microbiologists, Scottish Water and veterinarians with an interest in public health issues relevant in the NHSGGC area; and which owns the authorship of this plan
<b>PHPU</b>	Public Health Protection Unit, NHSGGC
<b>PHS*</b>	Public Health Scotland
<b>PRO</b>	Public Relations Officer
<b>SRUC</b>	Scotland's Rural College
<b>SEPA</b>	Scottish Environment Protection Agency
<b>SOP</b>	Standard Operating Procedure
<b>STAC</b>	Scientific and Technical Advisory Cell
<b>SWHP</b>	Scottish Waterborne Hazard Plan
<b>WDC</b>	West Dunbartonshire Council

\*Health Protection Scotland split in 2020, with most functions moving to the new national agency (PHS) and infection control going to the new ARHAI Group in National Services Scotland

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## Introduction

The first edition of the NHS Greater Glasgow and Clyde Outbreak Control Plan for Food and Waterborne Gastro-intestinal illness (including GI infection) brought together the two outbreak control plans that operated in the former NHS Greater Glasgow and NHS Argyll and Clyde. It was revised in 2012, and again in 2015.

The fourth edition of the plan has had more significant updates to the text; however, the key principles of outbreak control remain the same. The plan has been expanded to cover all incidents which would be covered by the key national guidance on the subject - *Management of Public Health Incidents: Guidance on the Roles and Responsibilities of NHS led Incident Management Teams (MPHI)*.

This plan was developed in conjunction with the Public Health (Health Protection) Liaison Working Group. It is endorsed by all six local authority departments of environmental health and by Scottish Water.

The purpose of the plan is to provide those responsible responding to incidents and outbreaks, and those responsible for monitoring that process, with an agreed understanding to facilitate effective and consistent response. It should be read in conjunction with other local and national guidance, including *MPHI*.

Though most of the plan is written from the perspective of a generalised community incident, in other contexts the principles should be construed appropriately for the setting.

We hope this fourth edition proves as useful to those responsible for preventing and controlling food and water borne outbreaks as the previous editions. We would welcome feedback on the usefulness of this document at any point in the future in order to help us improve on it for future updated versions.

Dr Iain Kennedy

Chair

Public Health (Health Protection) Liaison Working Group,

Greater Glasgow & Clyde

(The “Med-Vet Group”)

## A. Operational response

### Tiered response

- 1 **This incident management plan is part of a tiered response to incidents across local and national agencies.**
- 2 **Incidents are usually locally led for tiers 0, 1 and 2. Tier 3 may be locally or nationally led dependent on the incident. The tier of an incident depends on the threat to the public health – complexity, severity, geography. The tiers are intended as a guide only, and the response taken may vary depending on the individual circumstances and risk assessment carried out by the Incident Management Team (IMT) managing the incident. Definitions of the tiers and suggested responses, as detailed in *MPHI*, are contained in appendix 1.**

### Recognising a possible outbreak or incident

- 3 **Any agency which suspects that an outbreak or incident may be occurring should contact the on-call CPHM at the earliest opportunity. Monday to Friday 0900 – 1700: 0141 201 4917, option 3. Out of hours and bank holidays: via NHSGGC switchboard 0141 211 3600, ask for “GGC public health on-call”. For in hospital outbreaks contact should be made with the relevant IPCT, or the on-call microbiologist out of hours.**
- 4 It is recognised that some public agencies have statutory or other responsibilities for the provision of emergency/immediate actions to protect life and control the incident, and that these may take precedence over informing PHPU. However, the CPHM should be contacted as soon as these initial control steps have been taken.
- 5 There is a myriad of ways that an outbreak can be suspected or identified. Information which draws attention to the possibility of an outbreak may come to the attention of any of the following:
  - Local Authority’s Environmental Health Service
  - Diagnostic and reference laboratories
  - Infection Prevention and Control teams
  - Local GPs
  - Local clinicians (in hospitals or clinics)
  - Departments of Public Health (NHSGGC and others)
  - Scottish Water
  - PHS
  - Care homes, schools and nurseries
  - Food Standards Scotland
  - Members of the public

- 6 Each organisation has its own procedures for surveillance, detection and control. PHPU carries out surveillance activities, including the monitoring of incidence of specified pathogens on a weekly basis (mumps, measles, campylobacter, cryptosporidium, salmonella), and daily coincidence alert and context surveillance of HPZone data. IPCT carry out surveillance within Acute Care and Mental Health areas to detect hospital infections.
- 7 Additionally, PHPU clinical staff flag cases and enquiries where there are unusual features, such as clustering of cases or severe clinical presentations. The increased use of molecular diagnostics, such as Whole Genome Sequencing (WGS), mean disease clusters that would not previously been recognised are being identified. These clusters are more likely to cross geographical boundaries.

### *Definition of outbreaks and incidents*

- 8 Public health incidents are defined in *MPHI* :

A **public health incident** may arise in the following situations:

- a single case of a serious illness with major public health implications (e.g. botulism, viral haemorrhagic fever, XDR-TB) where action is necessary to investigate and prevent ongoing exposure to the hazardous agent;
- two or more linked cases that could indicate the possibility that they may both be caused by the same known or unknown agent or exposure i.e. an outbreak;
- higher than expected number of cases or geographic clustering of a serious pathogen;
- a high likelihood of a population being exposed to a hazard (e.g. a chemical or infectious agent) at levels sufficient to cause illness, even though no cases have yet occurred (e.g. contamination of the drinking water supply).

All these definitions also apply to non-biological hazardous agents

- 9 **The Public Health (Scotland) Act 2008** includes a legal definition of a public health incident, which is summarised in *MPHI*.

### **Initial response**

- 10 An initial assessment is required to determine if an outbreak or incident is taking place. This may be carried out by the CPHM/IPCT, or through a Problem Assessment Group (PAG).



- 11 The initial assessment will be based on available information. It may not be possible to make a decision on the information available immediately and further investigations may be required. A PAG may not always be required, and it is not necessary to hold a PAG prior to activating an IMT.

### **Role of a PAG**

- 12 The CPHM/IPCT may choose to hold a PAG if it is unclear if there is a threat to public health. A PAG may be face to face, or via teleconference. The membership is usually smaller than an IMT. There is no defined membership, but the CPHM/IPCT will need to ensure appropriate expertise to help guide decision on future management is available. The purpose of the PAG is to assist the CPHM/IPCT in making a decision on whether there is an incident, and if so, what further action is required. Questions to guide that process are included in box 1.
- 13 PAG outcomes may be:
- No significant risk to public health, PAG stood down, monitoring continues
  - Significant risk/interest/need for close management – IMT required
  - Remains uncertain – further investigations agreed, and decision to stand down or hold IMT pending those results. In this case it is essential the timescale is agreed.
- 14 A PAG will only meet once – if a further meeting is required, this will be an IMT.
- 15 PAGs are often described as “informal”. Whilst they do not have the full framework of an IMT, it is important that decisions, including whether to stand down or move to full IMT, and the rationale for those decisions, are recorded.

#### **Box 1: Key Questions for CPHM/Problem Assessment Group**

- Are there or could there be a large number of cases?
- Is there a possibility of further cases?
- Is the source or transmission route uncertain?
- Are additional control measures required?
- Is co-ordination necessary?
- Is the suspected organism unusually pathogenic or has other unusual features?
- Is communications and media management required?

**If the answer is “yes” to any of these, an IMT may be warranted.**

## Incident Management Teams

### *Purpose*

- 16 The IMT is an independent<sup>1</sup>, multi-disciplinary, multi-agency group with responsibility for investigating and managing the incident. The IMT provides a framework, response and resources to enable the NHS board and other statutory agencies to fulfil their remits which are to:
- reduce to a minimum the number of cases of illness by promptly recognising the incident, defining how cases have been exposed to the implicated hazard, identifying and controlling the source of that exposure, and preventing secondary exposure;
  - minimise mortality and illness by ensuring optimum health care for those affected;
  - inform the patients, actually or potentially exposed groups, staff, clinical and management colleagues, public, their representatives and the media of the health risks associated with the incident and how to minimise these risks; and
  - collect information which will be of use in better understanding the nature and origin of the incident and on how best to prevent and manage future incidents.
- 17 The IMT will agree and co-ordinate the activities of the agencies involved in the control and investigation of the outbreak in order that the aetiology, vehicle and source of the outbreak are identified and control measures are implemented as soon as possible and if required, legal advice sought.
- 18 The IMT is not simply an advisory group but an independent group set up specifically to investigate and manage the response to a public health incident. As such it is empowered to make both decisions on control measures, and recommendations to partner agencies on control measures or other matters related to the outbreak or incident (see Decision making, below)

### *Membership*

- 19 The three core members of an IMT for a community incident are:

1 \_\_\_\_\_

<sup>1</sup>Whilst independent of Department/Sector/Divisional management structures, the IMT gains its authority from, and remains responsible to, the Chief Executive and Board through the mechanisms described in this document, and the Board's wider clinical and care governance structures

- CPHM
  - EHO
  - An expert on the (known or presumed) causative agent – such as microbiologist, scientist or toxicologist.
- 20 These core members should each nominate a deputy who will be regularly and fully briefed on progress.
  - 21 The CPHM and EHO will be expected to be responsible for any action under the Public Health etc (Scotland) Act 2008, and therefore they should be Competent Persons under the meaning of the Act and subsequent regulations. If they are not designated Competent Persons then a further suitably qualified CPHM or EHO as appropriate should be included in the IMT.
  - 22 For most incidents, a communications officer and a representative of PHS will also be invited.
  - 23 Other members of the IMT will depend on the nature of the incident/outbreak. A non-exhaustive list of possible members is included in Appendix 3.
  - 24 In complex incidents, consideration should be given to the membership including a second member from the same discipline/organisation as the chair (for example, CPHM or ICD depending on chairing arrangements), so that there is no expectation that roles of chair and of provision of specialist expertise will fall on a single individual.
  - 25 The IMT should review membership at every meeting to ensure that it continues to meet the needs of the incident. It is important that membership should not become so large as the IMT loses focus and direction. In general agencies/departments should have no more than two, and an absolute maximum of three, members of any IMT.
  - 26 Members must be of sufficient seniority to implement decisions and allocate resources. At the first IMT (or when a member is asked to join subsequently) the status of IMT members (full member/in attendance/observer) should be confirmed. This will include the roles and responsibilities for IMT members.
  - 27 Individuals who are not full members may continue to attend the IMT by invitation, but should not expect to have equal rights in terms of determining the conduct of the investigation, the advice given to the public, the content of press statements, or the final IMT report.
  - 28 Members should also be asked to declare any potential conflicts of interest. The interest and the determination of the IMT in handling that interest will be recorded in the minutes. A potential conflict may alter that individual's membership status.

- 29 The Chair, in consultation with the IMT, reserves the right to invite other experts as required.
- 30 IMT members in regulated or registered professions are expected to maintain the standards of their respective professional and organisational codes. For IMT members who are not covered by such codes, the Good Public Health Practice Framework can be used as an expected standard
- 31 <https://www.fph.org.uk/media/1304/good-public-health-practice-framework - 2016 final.pdf>

### *Administration*

- 32 Arrangements will be made to ensure sufficient administrative support for the IMT. The investigation of an outbreak can involve a large amount of work under pressurised conditions. It is essential that adequate administrative and secretarial support be offered by the NHSGGC's Corporate Services or PHPU, or by the lead NHS Board if not NHSGGC.
- 33 This should include an experienced minute taker who is accustomed to dealing with outbreaks and incidents. As far as possible there will be continuity in the minute taker.
- 34 In addition, a member of the administration team should, ideally, be appointed from the relevant NHS Board to organise/oversee the entire process in terms of booking meeting rooms, circulating agendas and minutes, updating action logs, taking calls during meetings, etc.
- 35 Room used for IMTs should be of suitable size and layout with necessary information and communication technology facilities. IMTs should be given priority in room booking. Consideration should be given to block booking rooms for IMTs.
- 36 In exceptional circumstances, the Chair (or another IMT member with delegated responsibility), in consultation with the IMT, may need to discuss the need to convene an administrative IMT Support Group (IMTSG) with NHSGGC's lead officer, the DPH. A separate IMTSG plan is prepared by NHSGGC PH Directorate.
- 37 To enable efficient working, video/teleconference facilities will be provided for all IMTs.

## *Operations*

- 38 The chair of the IMT should be agreed at the first meeting. This will usually be the CPHM (or ICD in hospital outbreaks) however it may be another IMT member if appropriate. For example, in land contamination incidents, or incidents with prolonged recovery phase, this may be a local authority officer.
- 39 In especially complex incidents, the chair of the IMT may discuss with the DPH the need for a suitably qualified and experienced senior clinical manager (such as Head of Health Protection, Deputy DPH or Deputy Medical Director) to take on the role of chair.
- 40 The first meeting must be held no more than 72 hours after decision to convene an IMT. Most incidents will require a faster response.
- 41 At the first meeting terms of reference should be agreed, a preliminary risk assessment conducted and incident level confirmed (appendices 1 and 2).
- 42 A communications strategy should be agreed early and reviewed as necessary
- 43 The IMT should regularly review available resource to ensure appropriate response can be maintained.
- 44 The IMT will be chaired so that all members are able to participate, and all relevant aspects of the incident are tabled. This includes supporting a culture which balances acknowledgement of roles and expertise, and 'respectful challenge'.
- 45 The IMT may wish to set up subgroups (or "cells") to carry out detailed investigations or completion of tasks to allow the full IMT to maintain focus on strategic priorities and the overall incident management. Any subgroup will have a named lead who will be a full IMT member, and a terms of reference detailing the remit, scope and limits of delegated authority of the subgroup. Subgroups may include members who are not members of the full IMT. Membership will be agreed, in consultation with the IMT, between the Chair and the cell lead.
- 46 Any subgroups will report directly to the IMT. The IMT will not normally rehearse the detail of discussions in the subgroup, but will expect clear and regular reporting of any decisions/actions/recommendations to the IMT, and detailed recording of the rationale of those decisions, to provide assurance/oversight, as the IMT retains responsibility for the activities of the subgroup.
- 47 Common cell types include:

- Food – Used when food chain investigations are required. Usually chaired by Local Authority. Further details are contained in the *MPHI* foodborne illness supplementary guidance.
  - Epidemiology – carry out detailed epidemiological investigation, generally only used in very large outbreaks or if complex analytical studies are required.
  - Media – brings together communications officers from all involved agencies to ensure clarity and consistency of message. Probably the most commonly used subgroup. Led by the senior communications officer from the IMT lead agency.
  - Technical – necessary when there are detailed engineering or other technical specialist investigation or control measures.
- 48 There may be occasions where external pressures bear on the IMT in a way which detracts from the IMT’s central role of the investigation and control of hazards to public health. In these circumstances additional resource, for example the activation of resilience partnerships, or a senior NHS corporate response through a setting up of a Management Support Team/Executive Group. The role of a corporate response is not to replace the IMT’s responsibility for investigation and control of the incident, but to support the IMT in management of wider organisational responses. These may include service or financial impacts of recommended control measures, or management of external relationships when there are high levels of public or political interest.
- 49 Whilst correct IMT membership will minimise the need for external consultation on decisions, there may be situations where there are significant operational or financial consequences for partner agencies, and these recommendations should be discussed with executive colleagues, to mitigate against knock on impacts on service delivery and operational stability that may be disproportionate to the risk the action is intended to manage.
- 50 Similarly, if work escalates or goes beyond the scope of the IMT, consider seeking support through LRP/ RRP / Regional Resilience Coordinator and other personnel.
- 51 In the event of requiring to establish a resilience partnership this will be through existing arrangements, NHS Greater Glasgow and Clyde hold contact details of the relevant agencies. If a resilience partnership is established the DPH/Deputy DPH, NHSGGC Head of Civil Contingencies, West of Scotland RRP co-ordinator and Scottish Government Outbreak team must be informed. The initial chair of the resilience partnership will be the Director of Public Health or nominated deputy. This will be consistently reviewed as the situation develops
- 52 The IMT has a right to request legal advice. The IMT will need to consider if there is a need for enforcement, or other legal action, or if there is possibility of a crime having

occurred, and to contact Police or Procurator Fiscal, and consider other actions as necessary on their advice.

- 53 Incident management is intensive and can be long running. Agencies/departments should make arrangements to allow rotation of staff, including rotation of the IMT chair, to prevent fatigue and maintain efficient working.

### *Decision making*

- 54 It is expected that the IMT will reach collective decisions but it may be necessary for the IMT Chair to make difficult decisions if the IMT cannot resolve an issue by consensus or if urgent decisions are required between IMT meetings. Where time allows, if consensus cannot be reached, the Chair should consider if allowing additional time for discussion or gaining additional information will assist the IMT reach a decision. When taking a decision as IMT Chair, the Chair should consider peer support from another key IMT member or senior from their own organisation. The final decision on action rests with the IMT Chair.
- 55 All members of the IMT must recognise their individual roles as a member of the IMT and that they should be in a position to commit to act on behalf of their organisation.
- 56 If a member is not supported by their organisation to agree to the consensus position, and this cannot be resolved by the IMT chair, then it must be escalated to a higher executive level, the DPH/HAI executive lead in the first instance, and if necessary to the chief executives of the organisations involved.
- 57 Decisions must be clearly documented. The record must include not only the decision made, but the alternative options considered and the rationale for the choice(s) made must be also be documented. A template is available in *MPHI* annex H.

### *Data sharing*

- 58 Discussion of patient identifiable information at IMT meetings should be kept to a minimum, but can be unavoidable. All IMT members should be reminded of their duty on confidentiality of information shared in the IMT at the start of each meeting, and IMT documents marked appropriately.
- 59 It is a fundamental breach of IMT protocol for information gained at the IMT to be shared without permission of the IMT chair.
- 60 Information will need to be shared between partner agencies in the course of responding to the incident or outbreak. In doing so, there will have to be a balance between the responsibility to protect personal information with the responsibility to protect the health of the population. IMT members should ensure they are aware of

their organisational policies on data sharing in outbreaks. Further detail is included in *MPHI Annex E*.



## B. Incident investigation

61 Whilst the stages of investigation and management of an incident are laid out in a logical order below, many of these activities can and should occur in parallel, and they should not be treated as a strict chronological path.

### Case definition

62 A good case definition is essential for successful investigation. It should be agreed by the PAG/IMT at the first meeting, and should be reviewed regularly as further information becomes known.

63 IMT may decide degrees of case definition – confirmed, probable, possible. The term “suspected case” is sometimes used to describe a patient who might be a case but for whom sufficient information to classify correctly is unavailable (for example refused to be interviewed)

64 Case definition should include clinical, and epidemiological (time, place, person) factors. In some incidents a definition of population at risk/cohort (i.e. those who attended a particular function) can be included.

65 Specific risk factors should not be used to define the population at risk – “attended wedding” is acceptable, “attended wedding and ate the chicken liver parfait” is not.

66 Where a laboratory diagnosis is available (i.e. causative organism or chemical has been identified) this should be included in the case definition. Other laboratory tests may be useful in differentiating between possible and probable cases.

67 The case definitions can also include exclusion criteria

68 It may also be necessary to agree definitions for contacts of cases. These definitions may also be stratified (i.e. household/shared space/transient/healthcare etc)

### Case finding

69 Initial notifications of cases may represent only a small proportion of individuals, so the IMT should consider options for identifying further cases.

70 There are several reasons to carry out active case finding which can include:

- Gaining additional epidemiological, microbiological or risk information to better characterise and therefore control the incident
- Identify individuals who require medical intervention
- Monitor effectiveness of control measures
- Support decision to declare incident over.

71 Case finding can be through:

- Enquiry of household and other close contacts of known cases;

- review of other notifications/lab results;
- raising awareness with health and social care staff to identify further cases;
- enquiry of other groups who may be collecting useful information (such as occupational health departments or school absence rolls);
- and rarely other techniques such as media appeals or population screening.

## Investigation

### *Epidemiological*

#### Descriptive

- 72 Descriptive epidemiology, sometimes referred to as “data orientation”, is central to understanding the incident. The descriptive epidemiology is the basis for generation of hypotheses for the causes of the incident, and will help direct control measures.
- 73 Data should be collected on all cases, including by interview if appropriate. Consideration should be given to the use of an appropriate data collection tool – this may be the standard enteric form, disease specific enhanced surveillance form, or an incident specific data collection tool.
- 74 Line listing should be prepared. Line listing is a type of epidemiological database, laid out like a spreadsheet, with one row per case, and columns being variables such as case identifiers, demographic, clinical and microbiological factors (including those in the case definition) and exposures. Templates are available in PHPU.
- 75 Data should be summarised or “oriented” in terms of time, place and person. This should include the preparation of an epidemic curve. Other methods of displaying data, such as detailed timelines or geographical mapping of cases may also be helpful.
- 76 Once prepared, the data will need to be interpreted in the context of the clinical, microbiological and environmental results – this is the process of turning data into intelligence.

#### Analytical

- 77 Analytical epidemiology is a means to test hypotheses developed by the IMT during the investigation. While it is best practice to carry out analytical epidemiology where possible, many incidents do not progress to analytical study. This may be because causative hazard, route of transmission and control measures are clear from descriptive epidemiology and other investigations, or there are too few cases (incident ends). Analytical studies are resource intensive, and the IMT needs to consider the value of an analytical study in the context of the outbreak or incident.

78 Prior to starting an analytical study, descriptive epidemiology and hypothesis generation must be completed and a written study protocol must be prepared. The most common study types are case-control and cohort studies. Support for analytical studies should be taken from PHPU and PHS. The PHE Communicable Disease Outbreak Management operational guidance also has useful information on analytical studies and study protocol development. Other more exotic analytical study types are occasionally used, but should only be carried out in conjunction with PHS.

### *Microbiological*

79 There should be an investigation into the nature and characteristics of the implicated hazard. This will often be microbiological, but may be toxicological, radiological etc.

80 It is essential to involve scientific expertise, especially diagnostic laboratories, as early as possible in the investigation of an incident. The scientific specialist on the IMT should advise on the taking of appropriate specimens and arrange for relevant investigations. This should include liaison with the relevant reference laboratory in Scotland, or other specialist laboratories in the UK if necessary.

81 Microbiological testing should not occur in a haphazard way. The IMT, on advice of the microbiologist or other laboratory specialist, will determine a sampling plan.

82 This advice should also include guidance for staff on correct sample type and technique, and labelling to allow prompt identification of incident samples on receipt at the laboratory.

83 Non-human samples should go to the relevant laboratory (public analyst or veterinary) as appropriate.

84 The IMT should consider best use of lab resources, taking into account of relevant issues such as turn around times and reporting

85 Molecular microbiological techniques, including Whole Genome Sequencing, may be considered, and advice should be sought from the relevant reference laboratory.

### *Environmental*

86 There should be specific investigation into how cases were exposed to the infective agent or other hazard, and to trace back to the probable source of infection, infestation or contamination. Along with other investigation strands, this will aid in generation of hypotheses and application of control measures.

87 Environmental investigation is usually led by LA Environmental Health, but depending on the circumstance may be another agency (such as FSS for food chain investigation, or infection control in the hospital setting.)

- 88 The investigation may include the taking of relevant samples, such as food, water or environmental swabs. Similar to microbiological investigation, this needs to be undertaken in a planned manner, with clear rationale, considering advice from relevant specialists
- 89 Other aspects of environmental investigation may include inspection of physical environment; review of documents, policies, procedures and records; and tracing of food or other materials.

### **Risk assessment**

- 90 There are two different, but complimentary aspects to risk assessment, the specific, considering investigatory findings and generating hypothesis to support decisions on interventions, including deciding if the risk has been adequately controlled; and the general, global judgement on the situation.
- 91 Risk assessment is a dynamic process and risk assessments should be regularly reviewed by the IMT.

### **Hypothesis generation**

- 92 In this assessment the IMT will review the information available from the investigations so far, as well as knowledge from national/international guidance, previous incidents and the published literature. It may take into account points such as the nature of the hazard, the nature of the exposure, the population exposed, if the exposure has ceased or is ongoing, existing mitigations and the likely effectiveness of available control measures.
- 93 One framework for this assessment, associated with use in environmental incidents, is shown in Fig 1. Other similar schema include 'host - vector - disease/agent'; 'source - pathway – receptor'; and 'chain of infection' (Figure 2)
- 94 It is important that the hypothesis generation step is carried out in detail, as it will guide control measures. It is also essential that brings together clinical, epidemiological, microbiological, environmental, and other investigations. Relying on just one or two of these strands can be misleading.
- 95 In some outbreaks it will be possible to formally test the hypothesis through analytical study (see Analytical epidemiology above). This step should be carried out if at all possible. However, this is often not possible due to factors such as not enough cases/outbreak over; resource or time constraints;

### **Global**

- 96 A global judgement on the incident allows the IMT to assess effectiveness of response, and consider if escalation/de-escalation or further communication and alerting is required.

97 The risk assessment module of HPZone can be used for this risk assessment and is based on the following criteria:

**Severity:** Dynamically assessed risk of the degree of foreseeable harm that may be caused to individuals or to the population and possible issues with recovery.

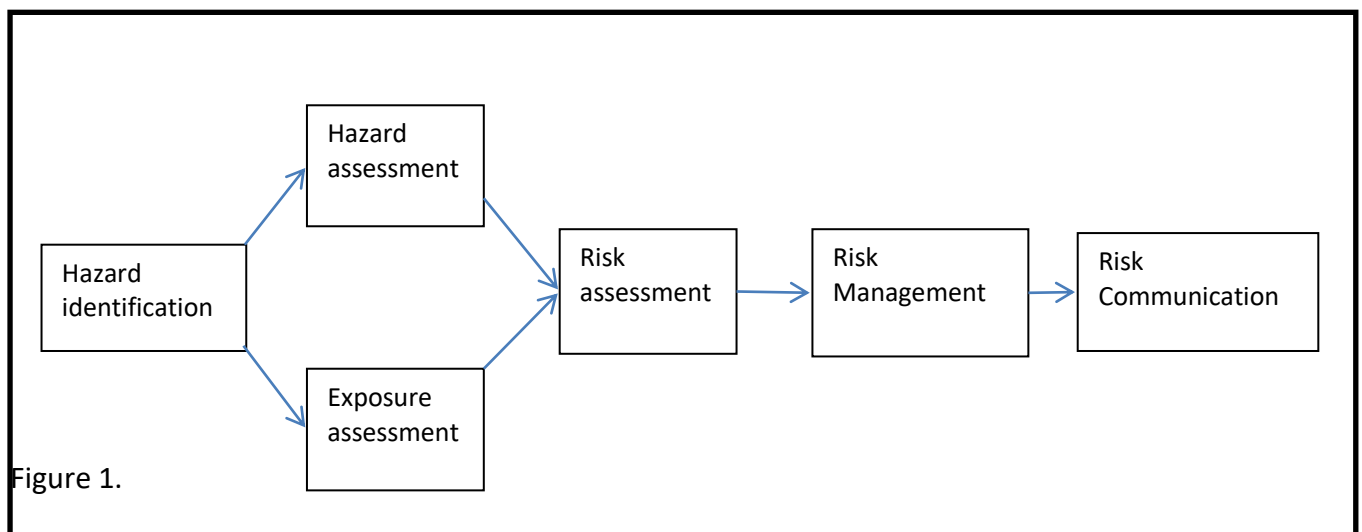
**Confidence:** Knowledge, derived from all sources of information that confirm the existence and nature of the threat and the routes by which it can affect the population.

**Spread:** The size of the actual and potentially affected population.

**Interventions:** The availability and feasibility of population interventions to alter the course and influence the outcome of the event.

**Context:** The broad environment, including media interest, public concern and attitudes, expectations, pressures, strength of professional knowledge and external factors including political decisions.

98 For incidents in healthcare settings, the HIAT tool should be used.



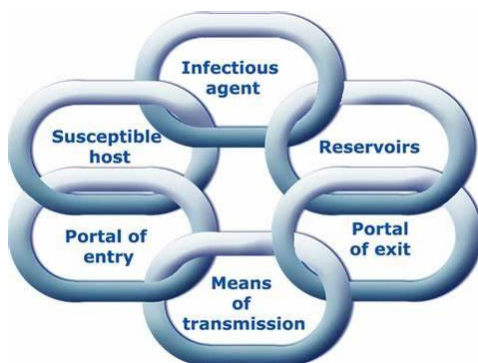


Figure 2: Chain of infection

## Risk management

### *Patient/People care*

99 Throughout the incident, it should be remembered that the purpose of the response is to protect the health of the public. There will be individual patients/citizens and communities who are affected.

100 Therefore, care of people/patient update will be included on the agenda of every meeting of the IMT.

### *Control measures*

101 Given the varied nature of incidents, it is not possible to give a comprehensive list of possible control measures. Some examples are listed below. Some examples could be included under more than one of these categories.

102 Control measures agreed upon should be documented with clear responsibilities and timescales for implementation.

103 Control measures can be considered under a series of broad headings, and should be linked back to the hypotheses and framework used in hypothesis generation.

#### Control of source

- Food recall
- “boil water” notices/provision of alternative supplies
- Contaminated land remediation
- Disinfection or decontamination
- Isolation of patients

#### Protect people at risk

- Chemoprophylaxis
- Vaccination or immunoglobulin

- Shelter in place/evacuation
- Ward closures

#### Prevention/reduction of spread

- Hand hygiene/SCIPS
- Disinfection or decontamination
- Exclusion/restriction/quarantine
- Transmission based precautions

#### Prevention of recurrence

- Recommendations to stakeholders or other bodies for improved preventative measures
- Education
- Guidance development
- Enforcement action

## Risk Communication

### *Principles*

- 104 How any incident, the potential risk involved, and subsequently the utility and acceptability of control measures are perceived depends on the communication during the incident and outbreak.
- 105 Key principles for communication during outbreaks and incidents as described in WHO communications guidance are contained in box 2 below.
- 106 The CDC Field Epidemiology Manual describes that the key points of trust and credibility are supported by communications which demonstrate:
- Empathy and caring,
  - Honesty and openness,
  - Dedication and commitment, and
  - Competence and expertise
- 107 During an outbreak or incident the roles and responsibilities of organisations and individuals in communications should be established and agreed by the IMT. Similarly a communications plan should be agreed early by the IMT, based on the described principles. NHS GGC will develop a generic outbreak communications plan to support the development of incident specific plans
- 108 The IMT should also consider the potential requirements for communication under statutory or professional duty of candour, bearing in mind that statutory duty of candour will in most instances fall to the service, rather than the IMT. The chair of the IMT may wish to seek additional advice from the Board Clinical and Care Governance lead.

109 Notwithstanding the specific functions of individual agencies to protect public safety, it is a fundamental principle of incident management that no communications should be made without the approval of the IMT chair, and that all communications must follow the communications plan agreed by the IMT. If the IMT Chair is not available then an appointed Deputy or the DPH/HAI executive lead can approve communications on their behalf.



## **Box 2 – Principles for outbreak communication**

### **1. Trust**

The key principle of outbreak communication is to communicate in ways that build, maintain or restore trust between the public and outbreak managers. Without this trust, the public will not believe, or act on, the health information that is communicated by health authorities during an outbreak.

### **2. Announcing early**

Proactive communication of a real or potential health risk is crucial in alerting those affected and minimizing an infectious disease threat. Announcing early - even with incomplete information – prevents rumors and misinformation. The longer officials withhold information, the more frightening the information will seem when it is eventually revealed, especially if it is revealed by an outside source. Late announcement will erode trust in the ability of public health authorities to manage the outbreak.

### **3. Transparency**

Maintaining the public's trust throughout an outbreak requires ongoing transparency, including timely and complete information of a real or potential risk and its management. As new developments occur over the course of an outbreak they should be communicated proactively. Transparency should characterize the relationship between the outbreak managers, the public and partners as it promotes improved information gathering, risk assessment and decision-making processes associated with outbreak control

### **4. Listening**

Understanding the public's risk perceptions, views and concerns is critical to effective communication and the broader emergency management function it supports. Without knowing how people understand and perceive a given risk and what their existing beliefs and practices are, decisions and required behavior changes necessary to protect health may not occur and societal or economic disruption may be more severe.

### **5. Planning**

Public communication during an outbreak represents an enormous challenge for any public health authority and therefore demands sound planning, in advance, to adhere to the principles described above. Planning is an important principle, but more importantly, it must translate into action.

From: World Health Organization outbreak communication planning guide – 2008 edition.

### **Box 3 - What to Include When Developing Outbreak-Related Messages**

- An expression of empathy.
- What's known and a call for action, including Who? What? When? Where? Why? How?
- What's known and what's not known, and how answers will be obtained for what's not yet known
- Explanations of what public health actions are being taken and why.
- A statement of commitment.
- When additional information will be provided.
- Where to find more information in the meantime.

From CDC Field Epidemiology Manual Chapter 12.

### ***Types of communication***

110 IMT should consider communications in terms of specific groups, including:

- Patients/cases/contacts
- Members of the public (by which is meant direct communication for those members of the public where there is a potential risk, need for action, or information for reassurance)
- Professional/staff (both clinical and non-clinical. It should be remembered that there may be staff groups outwith the NHS)
- Media
- Senior management/PHS/Government

111 Whilst the communication to these groups may differ (for example professional groups may need more detail on control measures so they can be successfully implemented), the messaging should be consistent, and it should be remembered that any communication may end up in the public domain.

### ***Ending the incident***

112 The IMT will decide when the public health response to an incident can be stood down, and if appropriate will make a public statement to that effect.

113 Criteria for standing down the public health response should be clearly documented. Examples of these criteria include:

- There is no longer a risk to the public health that requires further investigation or management of control measures by an IMT.
- The number of cases has declined.
- The probable source has been identified and withdrawn.

- 114 A hot debrief should be completed as soon as possible following the close of the incident. The Board civil contingencies team or RRP Learning and Development Co-ordinator can be asked to assist in the debrief process, but the IMT remains the sponsor of the debrief, and the debrief report will be “owned” by the IMT Chair.
- 115 Subsequent to the debrief an incident report should be prepared. The format will be decided by the IMT chair in consultation with the IMT. Advice on which format to use is included in *MPHI*. The format will be one of:
- SBAR (Situation, Background, Assessment, Recommendations) report (*MPHI* Annex J)
  - Full IMT report standardised data set (*MPHI* Annex L)
  - Full narrative report.
- 116 The draft report should be produced within three months of the incident stand down.
- 117 The IMT should agree the report, and where consensus is not reached, any disagreements should be noted in the report.
- 118 Considering the incident investigation, debrief and draft report, the IMT should develop targeted recommendations with timescales. The Board, via the IMT Chair or DPH, will ensure there is a response from the organisation(s) responsible for implementing a recommendation, and where necessary an action plan developed. Further guidance on follow up of recommendations, including reporting to Scottish Government, are included in *MPHI*.
- 119 The incident report may need to be restricted in circulation/delayed if there is ongoing enforcement/legal action.
- 120 Consideration should also be given to submitting a report for peer reviewed publication if there is learning relevant to a broader audience. PHPU can provide guidance on reporting.

## C. Supporting information

121 This part summarises some of the key points around supporting information, but does not replace the detailed content of national documentation and these documents should be referred to for full detail.

### Roles and responsibilities

122 Roles and responsibilities are detailed in *MPHI*. Key organisational responsibilities for are summarised below. Responsibilities of individual core IMT members from these organisations are included in appendix 1

### NHS GGC

123 NHS boards have statutory responsibilities under the National Health Service (Scotland) Act 1978 and the Public Health etc (Scotland) Act (2008). As the lead agency for protecting health, the Board is responsible for the overall integrity of the arrangements for planning for public health incidents and for the effectiveness of the incident response, including leading the response and the related IMT.

124 Within NHS GGC this responsibility is provided by PHPU on behalf of the DPH. PHPU includes CPHMs, Health Protection Nurse Specialists, Programme Managers and administrative staff who can all be called on to support incident response. In the context of incident and outbreaks managed by the IPCT this would be ICD, ICNs and their support staff.

### Local authority

125 Environmental Health Officers constitute the prime LA resource in health protection. They also have the principal local responsibility for reducing the risks from many environmental hazards.

126 Advice will be taken from a senior EHO of the appropriate local authority, or authorities. Support from EHOs might include assistance with interviewing cases of illness using the standard or disease-specific questionnaire agreed with the PHPU; investigating food hygiene practices and taking samples from food premises; advising on and enforcing public health legislation including the Food Safety Act, etc.

127 The active participation of an EHO is considered a critical component of any IMT, which should not be allowed to make crucial decisions without such local authority representation.

128 In addition, it is important to ensure that at least one EHO representative is invited from each local authority affected by the outbreak.

## **Governance**

- 129 Within each organisation there should be a senior responsible officer for incident/outbreak management. In NHS GGC that role is fulfilled by the DPH.
- 130 In NHS led incidents the IMT chair is operating on delegated authority from the DPH on behalf of the Chief Executive and the Board.
- 131 It should be remembered that the IMT is and of itself a governance mechanism, and can be supported in this by NHS Board and partner agencies senior officers, and the Board's clinical governance team. If it is failing in that role then IMT performance should be reviewed
- 132 Related processes are also included under Decision making, Reporting, and Performance management.

## **Reporting**

- 133 Agency/department representatives are responsible for ensuring their senior managers are updated as appropriate.
- 134 The Chair of the IMT has responsibility for ensuring Scottish Government is informed of outbreaks and incidents. Whilst in practice this is on occasion done by PHS/ARHAI on behalf of the IMT, the responsibility of reporting to government remains with the Board.
- 135 For healthcare incidents, the agreed national reporting mechanisms should be used.
- 136 The IMT chair will give consideration to using a formal 'executive update' reporting template in incidents that are likely to be long running/more complex.(Appendix 7)
- 137 Outbreak/incident reports will be tabled at the Board Clinical Governance Forum, and other committees as required to ensure recommendations are followed up and lessons learned. This also provides the opportunity for any patterns in recommendations to be identified.

## **Documentation**

- 138 In common with all territorial health boards, NHSGGC PHPU uses the HPZone case management system.
- 139 Minutes, action logs and reports from the IMT will all be collated and retained by the agency responsible for chairing the IMT. These documents will be stored in an accessible and indexed fashion to allow easy retrieval.
- 140 For hospital incidents, documentation will be held by Infection Prevention and Control Team, and shared with ARHAI/PHS as per Chapter 3 of National Infection Prevention and Control Manual. The IPCT will update via the ARHAI online reporting tool

- 141 All agencies should be aware of, and follow, their policies on document retention, giving due consideration to possible future legal/enforcement action.
- 142 In general IMT documents should be considered as confidential, and dependent on circumstances, some may require to have protective marking. IMT documents may be subject to freedom of information requests. Advice should be sought from Board FOI/Information Governance teams as necessary.

### **Training**

- 143 Every three years a full exercise involving a broad range of partners/larger cohorts of staff will be held.
- 144 Signatories to the plan commit to ensuring those responsible for outbreak/incident response have sufficient opportunity to keep up-to-date
- 145 Training will be provided to those who may be expected to chair an IMT, and other senior officers as appropriate.

### **Special circumstances**

#### ***Similar incidents***

- 146 Where there are multiple similar incidents consideration should be given to whether a single IMT or separate IMTs are required.
- 147 When it is necessary or beneficial to have separate IMTS, careful consideration should be given to identifying any shared controls, recommendations or learning.

#### ***Hospital outbreaks***

- 148 Outbreaks in healthcare settings, most notably hospitals have additional complicating features, such as the demographics, underlying health/vulnerability of the population, semi-closed setting, and additional challenges in implementing control measures.
- 149 These outbreaks are normally led by an infection control doctor or other consultant microbiologist. Consideration will be given to the IMT being chaired by PHPU if there is one or more of: wider community involvement; involvement of external (non-NHS) agencies; conflict of interest.
- 150 Detailed procedures are included in NIPCM chapter 3 and the NHS GGC IPCT Incident Framework SOP.
- 151 Environmental health officers do not normally attend IMTs for incidents limited to the hospital setting. EHO representation should be considered if there is community interest (such as community cases or potentially implicated food businesses), if the incident is thought to be foodborne, or if the incident is an outbreak of an organism where community follow up would usually be carried out by the EHO.

- 152 Any issues with incident management, or requests for PHPU support beyond “business as usual”, will be resolved through discussion between DPH and HAI executive lead.

### *High-consequence infections*

- 153 HCID include diseases such as viral haemorrhagic fevers, MERS and other high risk emerging pathogens.
- 154 These cases require special management, and close working between PHPU, infectious diseases, infection control, virology, microbiology and PHS. For confirmed cases of HCID, it is likely that PHS will take over chairing of the IMT.

### *Major incidents*

- 155 All organisations should have their own plans for major incidents and mutual aid. Activation of resilience partnership structures are likely in these circumstances.

### *Water incidents*

- 156 Where there is a potential or significant impact on the public water supply that may / will impact public health the multi-agency Scottish Waterborne Hazard Plan (SWHP) held by Scottish Water will be invoked. Where any potential / actual impacts are restricted to the NHS GG Board’s area any Problem Assessment Group (PAG) and subsequent Waterborne Hazard – Incident Management Team (WH-IMT) set up will be chaired by a CPHM from NHS GGC. Where any potential / actual impacts are spread over a number of NHS Board areas a CPHM from NHS Greater Glasgow will represent NHS GG on any PAG and WH-IMT formed with the CPHM who will chair these allocated as detailed in the SWHP.
- 157 Similar way for significant pollution events that originate from and / or impact Scottish Water assets the multi-agency Pollution Incident – Risk Management Guidance (PI-RMG) will be used. Under the PI-RMG the Chair of the Risk Management team being held by the Lead CPHM where there are significant potential or actual public health risks, or the Lead EHO when environmental risk predominate.

### *Animal incidents*

- 158 Incidents involving animals or zoonotic infections must include involvement of APHA. As well as providing support and advice, APHA have statutory responsibilities for notifiable animal infections.

### *Performance assessment*

- 159 The DPH will oversee an assessment of the IMT performance. The aim is to demonstrate the use of essential good practice and structure processes employed in controlling the outbreak. It may be appropriate to ask external assessors to undertake this work to ensure transparency and answer concerns that may arise about conflict of interest.

160 The key indicators for incident management are detailed in *MPHI*:

- A state of preparedness;
- Clarity of purpose and integrated working;
- An early and effective response;
- Effective communication with the public and among agencies;
- Learning from experience; and
- A prepared workforce.

161 Should any member of the IMT be unhappy with the way the team is functioning, they are encouraged to raise this with the group or with the IMT chair in private. If their concerns cannot be resolved satisfactorily they are free to raise them with their senior manager who in turn can raise it with the chief executive of their agency. That chief executive has the option of raising it with the chief executive of the NHS Board leading the investigation who will ultimately bring it to the attention of the chair via their DPH, involving the relevant counterparts of any other agency involved in the dispute. The lead officer for the NHS Board is responsible for resolving these issues, preferably within the framework of the multi-agency IMT.

162 Suggested standards for audit of IMT performance are included in Appendix 8. These are a combination of audit standards collated from *MPHI* with additional items from the PHE operational guidance. It should be noted these are newly included in this plan.



## Appendices

### Appendix 1 - Incident response tiers

0	<b>Initial identification of potential incident</b> - significance in public health terms not clear	NHS board led Problem Assessment Group (PAG)	Local HP team and LA staff	Consider PHS Consider SGHSCD HIIAT in HAI	Consider hot debrief template if any significant learning identified
1	<b>Limited local impact</b> - no significant risks to public health beyond the immediate group/setting affected in a single NHS board area	NHS board led IMT	Local NHS Board and LA staff as required.  Support from PHS and other agencies as required	PHS Consider PHS Alert  DPH and senior managers in NHS board and LA as appropriate  HIIAT in HAI  SGHSCD  Consider briefing LRP if appropriate	Hot debrief template  SBAR to PHS and NHS board/LA

2	<p><b>Significant local impact</b> - significant risk to public health beyond group/ setting affected mainly in single NHS board area</p>	<p>NHS board led IMT with links to other NHS boards as required</p> <p>Consider need for Resilience Partnership co-ordinated response if wider consequences</p>	<p>Local HP team and LA staff</p> <p>Consider need for corporate response and/ or mutual aid</p> <p>Support from PHS and other agencies as required.</p>	<p>PHS Consider PHS Alert</p> <p>HIIAT in HAI</p> <p>DPH/senior managers in NHS/LA;</p> <p>SGHSCD according to protocol; Consider briefing RRP/ LRP partners &amp; elected members</p>	<p>Hot debrief template</p> <p>SBAR or full incident report for NHS board/ LA and PHS</p>
3	<p><b>Significant wider impact</b> - significant risk to wider public health affecting more than one NHS board</p>	<p>NHS board or PHS-led IMT with input from affected NHS boards as required</p> <p>Consider need for RP co-ordinated response if wider consequences</p>	<p>Local HP Team and LA staff</p> <p>Support from other agencies as required</p> <p>Consider need for corporate response and/ or mutual aid C</p> <p>Consider need to activate Business Continuity Plan (BCP) or Major Incident Plan (MIP)</p>	<p>PHS Alert</p> <p>HIIAT in HAI</p> <p>Consider UK / EWRS / IHR alert</p> <p>DPH/senior managers in NHS/LA;</p> <p>SGHSCD</p> <p>Consider briefing RRP/ LRP partners and elected members</p>	<p>Hot debrief template</p> <p>Full incident report for NHS board/LA and PHS</p>

4	<b>Severe local or wider impact</b> - major ongoing risk to wider public health affecting one or more than one NHS board with significant disruption of services	NHS board led Civil Contingencies response RP if impact in one NHS board area. or SG led RP response if more than one NHS board area is involved	All available public health resources in the NHS board(s) and LA staff deployed.  Request mutual aid  Consider PHS  Activate BCP and/or MIP	PHS Alert  UK / EWRS / IHR alert as appropriate  DPH/senior managers in NHS/LA  SGHSCD  RRP/LRP partners and elected members	Hot debrief template  Full Incident report for NHS board/LA and PHS
5	<b>Catastrophic impact</b> - major ongoing impact on public health with major disruption of normal societal functions	SG led RP	All available public health resources in the NHS board(s) and LA staff deployed  MIP activated	PHS Alert  UK / EWRS / IHR alert as appropriate  DPH/senior managers in NHS/LA; RRP/LRP partners;  SGHSCD  elected members	Hot debrief template  Full Incident report for NHS board/ LA and PHS

## Appendix 2 - IMT template Terms of Reference

Incident Management Team for [INCIDENT]

The lead agency and Chair of the IMT will be agreed at the first meeting

The membership of the IMT will be agreed at the first meeting and regularly reviewed

The purpose of the IMT is to provide resource, framework and response for the investigation and management of the above named incident, with the aim of meeting its remit as described in the NHS GGC Outbreak and Incident Plan.

It will do so by the following actions:

- ensure that systems are in place to collect and collate all relevant information and verify, review and interpret its significance;
- carry out a risk assessment and decide on courses of action necessary to protect the health of the public;
- co-ordinate the investigation and management of the incident within the protocols and codes of practice of the agencies involved and having regard to extant legislation;
- liaise with PHS, SGHSCD and other relevant agencies to share information, draw on their expertise and ensure the agencies implement the actions that they are responsible for.
- co-ordinate the issuing of advice and information to the public directly and through the media, liaising as necessary with the SGHSCD communications team;
- ensure arrangements for the care of patients are in hand, and keep all relevant clinical professionals updated;
- agree criteria for standing the IMT down and declaring the end of the incident; and
- produce a full IMT report or SBAR for the NHS board Clinical Governance Committee normally within three to six months of the debrief. The report should be shared with SHPN if appropriate to ensure lessons identified are captured and shared

IMT Members will:

- Contribute to investigation, control and review of the incident, to the fullest extent of their organisational role, expertise and competence
- Have sufficient authority to agree to decisions of the IMT and commit resources to agreed actions.
- Maintain the confidentiality of the IMT and follow the agreed communications protocol.
- Ensure any challenge is respectful, and raise any questions or concerns with the IMT Chair or through the mechanisms described in the Board Incident Management Plan or other organisational processes.
- Make themselves familiar with the Board Incident Management Plan and follow to the best of their ability any other requirements the plan places on IMT members

## Appendix 3 Core IMT roles and responsibilities

### *CPHM*

- (a) On behalf of the NHS Greater Glasgow and Clyde to take the lead in managing community outbreaks of infection including implementing this plan. To ensure that an appropriately qualified professional is able to take the lead in managing hospital-based outbreaks of infection including implementing this Plan in conjunction with hospital OCPs. To take the lead in hospital-based outbreaks if required inline with agreed protocols.
- (b) After appropriate consultation to determine whether an outbreak/incident has occurred and the incident tier
- (c) To inform the relevant agencies, NHS hospitals and general practitioners when an outbreak has occurred.
- (d) To convene and chair the IMT inviting additional members as necessary and to report all relevant information to the IMT.
- (e) To ensure appropriate epidemiological, microbiological and environmental investigations are carried out.
- (f) To ensure that control measures are agreed and implemented.
- (g) To ensure that the necessary communications and consultations occur, including liaison with General Practitioners and all aspects of public relations.
- (h) To monitor progress.
- (i) To allocate resources to enable the efficient control of the outbreak/incident and report on this to the IMT.
- (j) To decide when the incident is over (after consultation).
- (k) To ensure a final report is written, circulated and submitted to the appropriate agencies/individuals.

### *LOCAL AUTHORITY ENVIRONMENTAL HEALTH OFFICER OR NOMINATED OFFICER*

- (a) On behalf of the Local Authority to take the lead in managing community outbreaks of infection including implementing this plan.
- (b) To allocate resources to enable the efficient control of the outbreak and report on this to the IMT.
- (c) To report all relevant information to the IMT.
- (d) To ensure that the following are undertaken in line with this plan and Departmental procedures (after appropriate consultation):
  - premises relevant to the outbreak are inspected;
  - necessary samples and swabs etc are taken and submitted in the appropriate manner;
  - appropriate epidemiological and environmental investigations are conducted (together with the CPHM);

- at risk persons receive adequate and suitable advice;
  - contaminated or potentially contaminated material(s) are disposed of or rendered safe;
  - appropriate pest control measures are enacted;
  - there is effective liaison with EHOs in adjacent authorities as necessary;
  - appropriate Elected Representatives are kept informed;
- (e) To consider the evidence collated by LA officers and consider legal proceedings where necessary.

### *CONSULTANT MICROBIOLOGIST*

- (a) To ensure appropriate early response by laboratory staff to suspected outbreaks and provide information and assistance at the request of the CPHM.
- (b) To act as a core member of the IMT
- (c) To advise on appropriate clinical, food and environmental specimens, including sampling, transportation and storage, in consultation with the microbiologist at Glasgow Scientific Services
- (d) To perform, or arrange for, relevant microbiological investigations on samples
- (e) To liaise with the relevant reference laboratory and arrange for further identification, typing and characterisation of isolates
- (f) To advise on further sampling in the light of initial results
- (g) To report and interpret results of microbiological analyses to the IMT
- (h) To advise on further samples, clinical treatment and/or antibiotic prophylaxis of affected patients and contacts
- (i) To make contact with and seek specialist microbiological advice, if required, from a centre of expertise (depending upon organism)
- (j) To communicate with the relevant Medical Director(s), other NHSGGC Infection Prevention and Control Teams and Divisional Director, in particular about hospital implications
- (k) To provide epidemiological information from laboratory computer systems
- (l) To advise on risk to public, in consultation with CPHM
- (m) To activate hospital outbreak SOP if anticipated large numbers of patients requiring tests, treatment or hospitalisation or if outbreak is thought to be of hospital origin

## Appendix 4 - PAG agenda template

### Agenda - Problem Assessment Group

[LOCATION]

on

[DATE] [TIME]

1. Introduction & Confidentiality
2. Minutes of the last meeting
3. General Statement of Situation
4. Clinical Reports
5. Investigations
  - Microbiology
  - Environmental
  - Epidemiology
6. Risk Assessment
7. Risk Management (including further investigation and control measures)
8. Communications
9. Summary of Actions
10. Date of Next Meeting (if applicable)

## Appendix 5- IMT agenda template

### Agenda -Incident Management Team

[INCIDENT]

[location]

on

[date]

1. Introduction (Reminder of confidentiality and need for accurate records)
  - a. **[first meeting only – Agree Chair and terms of reference]**
2. Declarations of interests
3. Items not on the agenda
4. Minute of last meeting including review of actions agreed **[if applicable]**
5. Incident/Outbreak Update:
  - a. General situation statement;
  - b. Patient report;
  - c. Epidemiology
  - d. Microbiology/Toxicology;
  - e. Environmental Health;
  - f. Other relevant reports.
6. Case definitions
7. Risk Assessment:
8. Risk Management/Control Measures:
  - a. Patients;
  - b. Public Health;
  - c. General;
9. Care of Patients - Hospital and Community



10. Further Investigation:

- a. Epidemiological;
- b. Environmental;
- c. Microbiological / Toxicological.

11. Risk Communication:

- a. Agree common data set;
- b. Patients
- c. Professionals
- d. Public
- e. Media
- f. Executive management/Elected members;
- g. Inform other authorities e.g. PHS; Scottish Government;  
Procurator Fiscal.

12. Review (standing agenda items):

- a. Appropriate membership;
- b. Resourcing;
- c. Framework (incident management structure);
- d. Obtain contact details of all key personnel within and outwith  
hours;
- e. Assess effectiveness of action;
- f. Other management groups formed or required;
- g. Duty of Candour

13. AOCB

14. Action list with timescale and allocated responsibility

15. Date and time of next meeting

**16. [Future activity - final meeting only - collation of documentation,  
reporting, possibility of future inquiries]**

## Appendix 6 - Possible IMT members

NB. This is a non-exhaustive list

- NHS GGC Public Health Protection Unit (CPHM, HPNS, Admin)
- Local authority Environmental Health Officer
- Microbiologist/virologist
- Communications officer
- Health Protection Scotland
- Clinical teams responsible for care of cases
- Infection Prevention and Control team
- Other clinical staff as appropriate to expertise required
- NHS Board and/or Hospital General Management
- Relevant Reference Laboratory
- West of Scotland Specialist Virology Centre
- Glasgow Scientific Services
- Health and Social Care Partnership
- Other Local Authority departments, for example Education
- Other NHS Boards and Local Authorities in incidents which cross boundaries
- UK Health Security Agency
- Scottish Environment Protection Agency (SEPA)
- Food Standards Scotland
- The Care Inspectorate
- Healthcare Improvement Scotland
- Scottish Water
- Animal and Plant Health Agency
- Scotland's Rural College (SRUC) Veterinary Services
- Drinking Water Quality Regulator
- Police Scotland (if the outbreak is deemed to be the result of a criminal act, a deliberate release of a CBRN agent, or a need to control public disorder or protect assets, etc. )

- Other 'blue light' agencies
- Others, as dictated by the outbreak/incident

## Appendix 7 - SitRep template

[Incident title]

[Update no #]

Date and time:

Author:

IMT Chair:

### **Introduction and incident background**

This update was produced using data available at [date and time]

[Background to incident, including response tier, case definitions, completed investigations and risk assessment]

### **Common data set**

[Key information agreed by IMT– no. Of cases/contacts/hospitalisations/deaths/recoveries etc]

### **Objectives**

[Current principle objectives of the IMT]

### **Agencies/departments:**

Participating in IMT

Receiving updates

### **Summary of control measures**

### **Summary of ongoing investigations**

### **Operational Issues**

### **Forward look (including de-escalation plan)**

### **Communications**

### **Requests for additional support (including legal issues)**

## Appendix 8 - Audit standards

1	The NHS board has undertaken a risk assessment following receipt of initial information.
2	The NHS Board has recorded whether there is a significant risk to public health; <ul style="list-style-type: none"> <li>• scale of problem;</li> <li>• severity of problem;</li> <li>• possible cause of incident/outbreak;</li> <li>• initial actions to be taken and why.</li> </ul>
3	Decisions on whether the situation should be declared an incident/outbreak, and whether an IMT should be called recorded.
4	All agencies/disciplines involved in investigation and control represented at IMT meeting
5	Roles and responsibilities of IMT members agreed and recorded
6	Lead organisation with accountability for incident management agreed and recorded
7	Case definition agreed and recorded
8	Descriptive epidemiology undertaken and reviewed at IMT. To include: number of cases in line with case definition; epidemic curve; description of key characteristics including gender, geographic spread, pertinent risk factors; severity; hypothesis generated
9	Decisions on microbiological and environmental investigations agreed by IMT and recorded
10	Analytical study considered and rationale for decision recorded
11	The IMT has kept records of decisions made about incident control measures and documented: whether these measures have been applied; and <ul style="list-style-type: none"> <li>• if not, the reason why;</li> <li>• if yes, by whom, when and where they have been carried out;</li> <li>• any further action arising from above.</li> </ul>
12	The IMT has reviewed the impact of control measures at each IMT meeting and documented its view on this.
13	The IMT has reviewed the risk to public health arising from the incident and the likely overall impact of control measures on it
14	Communications strategy agreed at first IMT meeting and reviewed throughout the investigation.
15	The IMT has agreed a single press spokesperson and press officer who have regularly reported to the IMT on the tone and content of communications and responses to them.
16	The IMT Chair has ensured that there is a check maintained on the above aspects of incident management and that this is recorded in the IMT minutes.
17	The IMT Chair has regularly reported on the incident to relevant senior management of the LA and NHS board.
18	The IMT has agreed criteria for stepping down the IMT, and recorded when these criteria have been met
19	The IMT Chair has conducted a debrief immediately at the conclusion of the response phase. (within 2-4 weeks of step down)
20	The IMT Chair has arranged for a report, in the format agreed in consultation with the IMT, and submitted the report to the relevant NHS board committee (within 3 months of step down)
21	The IMT Chair has forwarded the report to relevant organisations with responsibility for taking forward its recommendations and has agreed with the DPH means of ensuring recommendations are followed up.