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Large scale contact tracing – the basics

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Why contact trace?

COVID-19 is an **emerging infectious diseases** capable of spreading rapidly through susceptible populations as seen in China.

Person-to-person transmission from UK residents who were exposed overseas has been observed

Containment of this disease relies on identifying, isolating and treating any cases in the UK as soon as possible.

Preventing the spread of COVID-19 in the UK relies on identifying who has been in contact with any new cases as quickly as possible so prompt action can be taken.

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Contact tracing definitions and functions

Contact tracing is defined as the process of **identification, listing, risk assessment** and **follow-up** of individuals who have had sufficient exposure to an infectious or harmful agent to merit public health action.

Contact tracing is defined as **large-scale** if it demands time/ resource/ personnel/ expertise **beyond the routine day-to-day capacity** of the PHE team(s) responding to the incident.

For example

- Identification of contacts involves complex arrangements and/ or multiple data sources
- A large number of contacts are identified
- Contacts are geographically dispersed
- The incident involves exposure to an **unusual or novel agent**
- The incident/contact tracing involves substantial communication with international organisations (such as the World Health Organization and the European Centre for Disease Prevention and Control) or with other countries including via the International Health Regulations National Focal Point

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The functions to be delivered during large-scale contact tracing include:

- Leadership, management and co-ordination of contact tracing activity
- Setting case and contact definitions
- Definition of risk assessment parameters and the population at risk
- **Identification of contacts**
- **Data collection regarding risk factors (passive and/ or active)**
- **Risk assessment of individuals identified for contact tracing**
- **Data management: documentation of contact details through line-lists**
- **Follow-up of individuals at risk**, including international liaison with organisations and other countries
- Data analysis including descriptive epidemiology, mathematical modelling, GIS mapping and/or other analyses where appropriate
- Production of situation reports (SitReps)

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Centres and Regions

Health Protection Teams (HPTs) routinely deal with situations requiring contact tracing. They have a key role in ensuring follow-up and public health action to protect the health of at-risk individuals.

Contact details, risk assessments and public health actions are documented by the HPT using the PHE secure electronic case management system. Contacts that are not within the geographical boundaries of the responding Centre are generally referred to the appropriate HPT or specialist service for follow-up.

HPTs typically work closely with other PHE services within the Centre geographical area may also draw on resources from neighbouring Centre-level services via mutual aid agreement to ensure business continuity during incident response.

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Figure 1 Stages and decisions in large-scale contact tracing activities

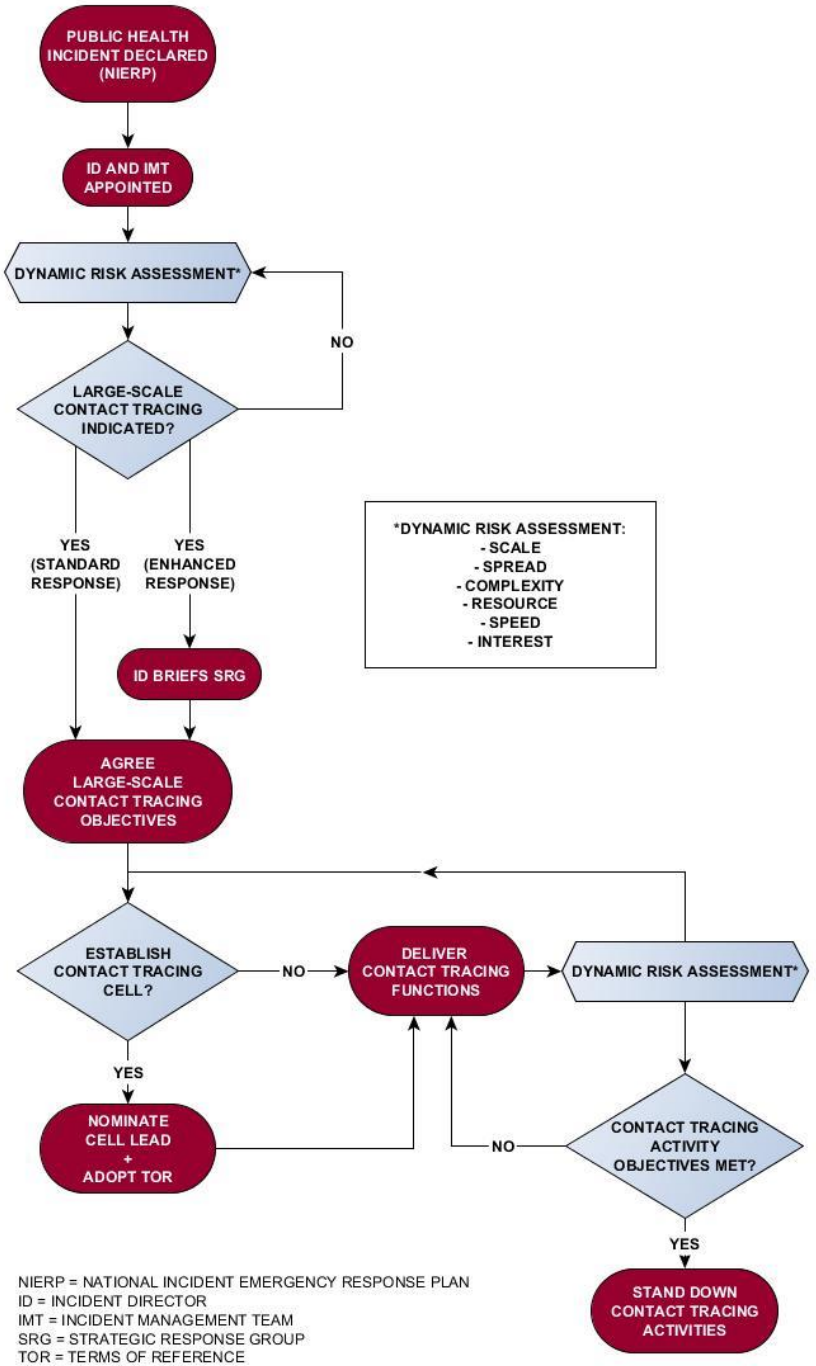

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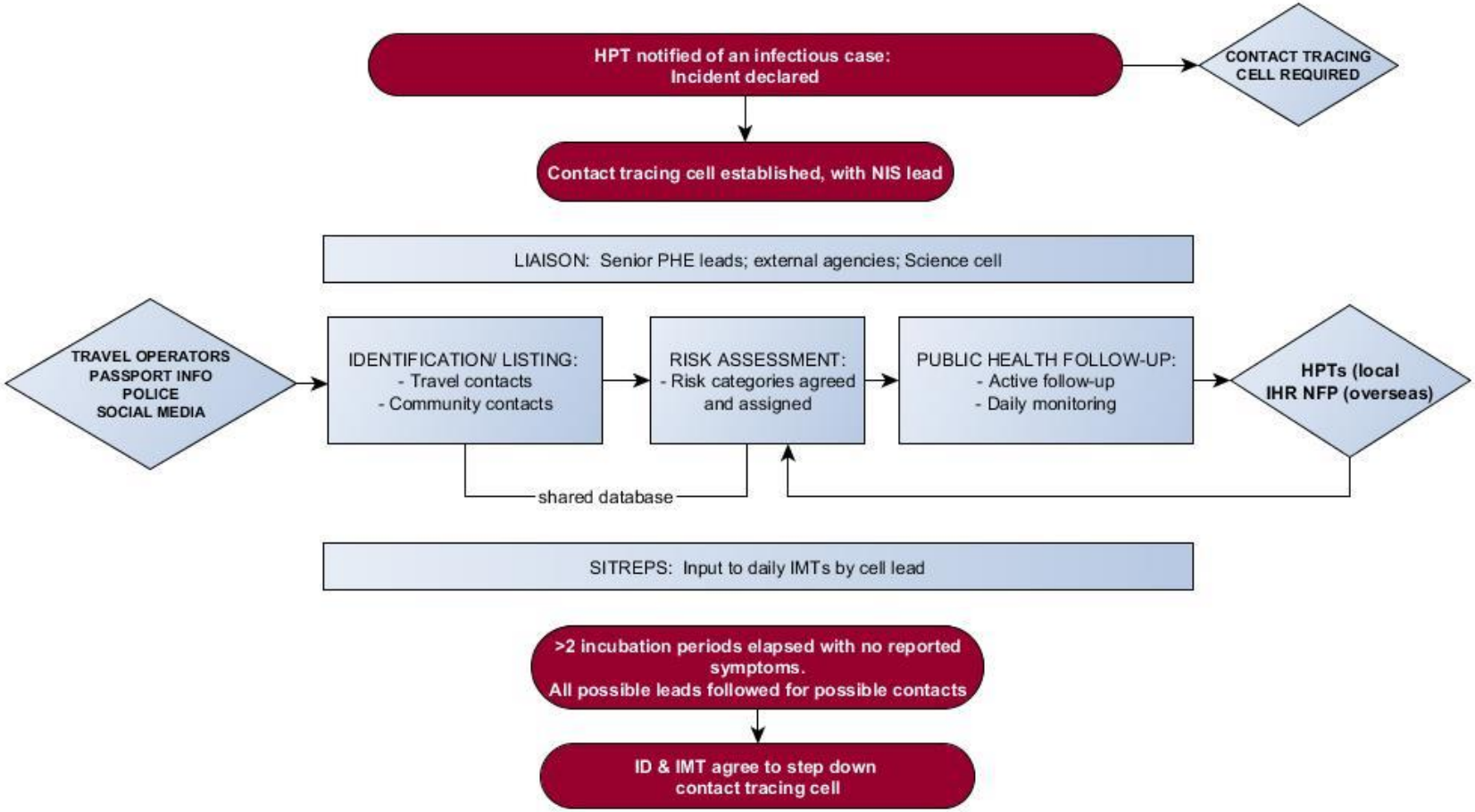
Figure 2 Infectious case reported to HPT

Illustration of contact tracing operations in response to a national Enhanced incident. Contact tracing cell established at the outset, managed by NIS with input from HPTs, the IHR NFP and external agencies. Cell lead responsible for communicating with other incident leads/ cells and for daily SitReps to the ID via IMT.



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What is contact tracing and why is it important ?

Contact tracing Video

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Contact tracing cell ToR

Aims & Objectives

The aim of the contact tracing cell is to identify those potentially at risk of adverse health outcomes following exposure to an infectious or harmful exposure in order to initiate public health action. The objectives are to:

Define case/ contact categories to risk assess individuals according to their need for public health follow-up

Establish a protocol to govern the operational processes of the large-scale contact tracing activities

Compile a list of cases/ contacts, along with relevant epidemiological risk factors and contact details necessary to fulfil the requirements of public health action

Deliver the operational processes to identify individuals who meet the case/ contact definitions, provide public health advice and support delivery of any interventions as appropriate

Produce situation reports (SitReps) and communicate these through the appropriate incident response governance structure

As appropriate, communicate with the relevant national or international public health authority to ensure public health follow-up of cases/ contacts who are not resident in England or British nationals

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Records Management

All information gathered for the purposes of contact tracing activity should be collected, stored and used in compliance with the

- Data Protection Act 2018
- PHE Data Protection and Information Governance Policies
- PHE Information Security policy
- PHE records management policy

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Information Governance:

Staff are expected the follow the principles for record management and information sharing set out in the PHE: Guidelines for large-scale contact tracing 2018. Staff are asked to ensure that:

- All email communication to be channelled through the agreed generic team inbox
- Any email communication containing personal identifiable information to be sent by one of the following 2 methods ONLY:
  - Between phe.gov.uk email addresses
  - From [generic team inbox] to email addresses which are NOT phe.gov.uk using Egress OFFICIAL-SENSITIVE (Encrypted) option
  - Colleagues without a phe.gov.uk address or an Egress account will be asked to create one to enable communication of Patient Identifiable Information
  - Centres who have an agreed process for using the NHS.Net accounts locally with NHS staff please see local policies.
  - All files with personal identifiable information to be password protected with a unique password.
- Messages left on answerphones or sent via SMS or email should be limited to asking the named individuals to contact PHE on a specific phone number.
- **All** sensitive information including line lists containing personal identifiable information should be saved on a secure drive and not on local computers, personal drives or portable memory devices e.g. memory stick.

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Practical Session - Contact tracing: Scenarios

The Scenario

It is Friday afternoon and you have been called to an urgent teleconference. You have been notified that the result from a 'possible case' of COVID-19 who is currently in hospital and awaiting results has become positive.

Please consider what information that you need from the possible case? There are forms available to support you with this, but please consider broadly what information you might need.

(Consider in some small groups)

(This is to illustrate broad principles only… guidance changes rapidly; please check local and national procedures)

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- The aim of gathering the information is to identify individuals who have had sufficient exposure to merit public health action
- There are forms available to help with this (duty doctors pack)
- Support will be available by local contact tracing lead (CCDC) and advice provided by National Cells
- This information will be gathered as soon as possible from the index case or their close contacts if they are not able to provide a history
- Broadly, the Cell will be trying to build a timeline of events….

  - Where did they stay?
  - Who did they spend time with?
  - Where have they travelled to?
  - Where have they shopped / eaten?
  - Group activities?
  - Healthcare?
  - Etc.…

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Your local epidemiology team summarises the basic information into a timeline.

- The case flew from an endemic area and became symptomatic on the flight two days ago.
- They ignored warnings from the port health authorities and did not disclose their symptoms
- They went from the airport to a hotel and stayed overnight, eating at the hotel restaurant
- The following day they attended a conference attended by twenty other people from across the country
- In the evening their clinical condition deteriorated, and they attended the local A&E.

Which groups might have been exposed here? Discussion

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Possible exposures:

- **Flight**: passengers / aircrew/ airport staff
- **Travel**: how did they travel? Public transport?
- **Hotel**: hotel staff? Other guests? Any leisure activities?
- **Restaurant**: staff? Proximity to other guests?
- **Travel**: how did they get to the conference?
- **Conference**: Conference staff? Other guests? Other conferences?
- **Travel:** from Conference to A&E: mode of transport?
- **Healthcare**: PPE used? Other patients exposed?

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The cell lead divides the room into the exposure contexts (Please divide into two groups)… we haven't time for all the exposures here!

For the Aircraft Group you are given a pdf with **names, dates of births** and **seat position** of all passengers, and a full list of crew (and their contact details) That is all the information you have.

- How would you assess who is at risk?
- What data sources might you consider to get contact details of these individuals?
- What would the next actions be?

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The **Conference Centre** group: The conference centre does not have a list of attendees contact details; only their **names** and **a list of company email addresses** (mainly admin teams) who booked the places on the conference. The centre has a list of all staff.

- What would your next steps be?
- How would you assess who had been at risk? What groups are potentially at risk?
- What are your options for contacting these individuals?

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AIRCRAFT GROUP

Assess level of risk using the appropriate guidelines

- http://phenet.phe.gov.uk/Resources/duty-doctors/Documents/Contact_management_protocol.pdf

What data sources might you consider:

- Any additional information from airline (Booking references?)
- PDS (GP information)
- UK Nationals… Passport office
- Non-EU Nationals… Border Force (Dis-embarkation cards)

etc…

What would the next actions be:

- Classification of contacts
- Contacting them… constantly reviewing the information

etc…

Advice and support is available.. this will be a team approach; key decisions will be made by the Incident Management Team.

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CONFERENCE CENTRE

This will be a team activity and advice and support will be on hand.

Always check local and national guidance

Information gathering from conference centre: http://phenet.phe.gov.uk/Resources/duty-doctors/Documents/Contact_management_protocol.pdf

Would need to contact the firms who booked; internet searching for emergency contact details of the companies, other methods; utilising partner agencies…

Gather information of staff who worked and likely proximity to case...

Classification of contacts

Decisions are dependent on risk assessment at the time; often **IMT decisions**

Consider decontamination issues for conference centre

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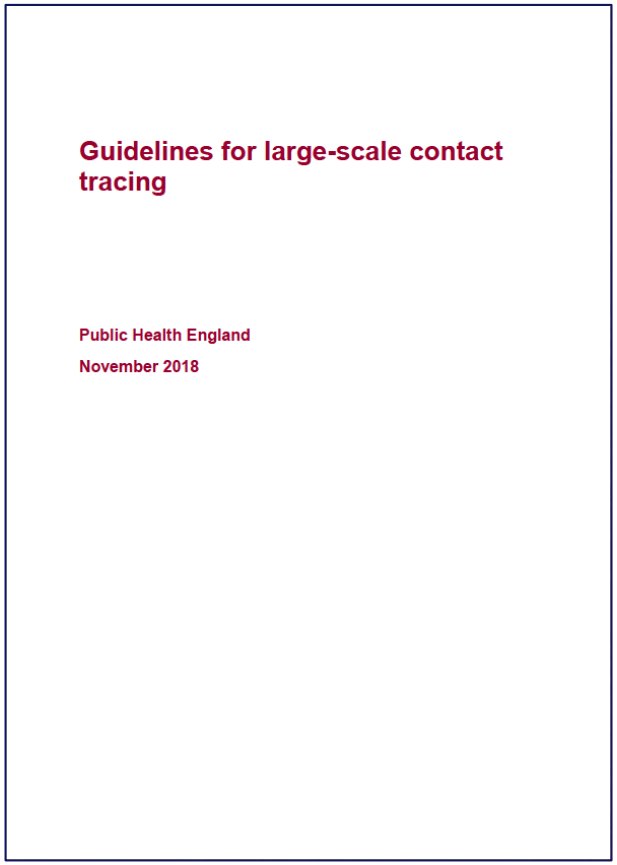
PHE Guidance



Link to Contact Management Guidance Covid- 19 (6 Feb 2020)

http://phenet.phe.gov.uk/Resources/duty-doctors/Documents/Contact_management_protocol.pdf