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England

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Common exposure and postcode coincidence reports: tools to support COVID-19 cluster detection & response

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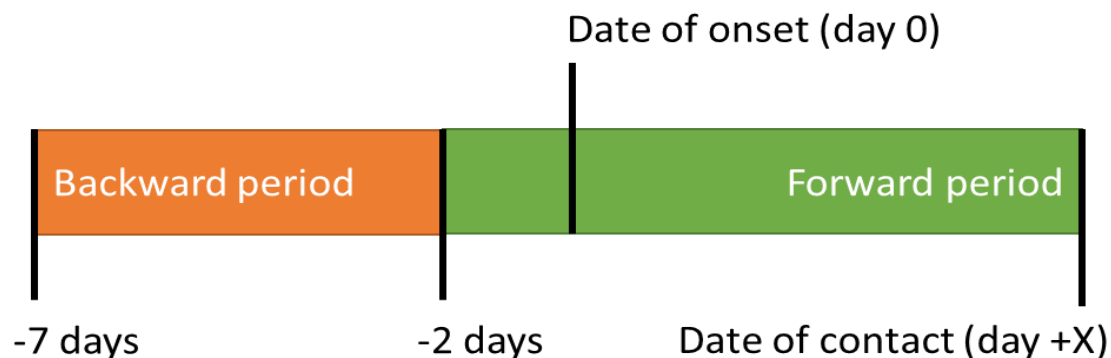
Session overview

- Overview of enhanced contact tracing
- Description of what reports are available and how to use them
- What can / can't these reports tell us
- Example of the reports being used in practice
- Future perspectives for contact tracing data analysis

What is enhanced contact tracing?

Enhanced contact tracing data collection on:

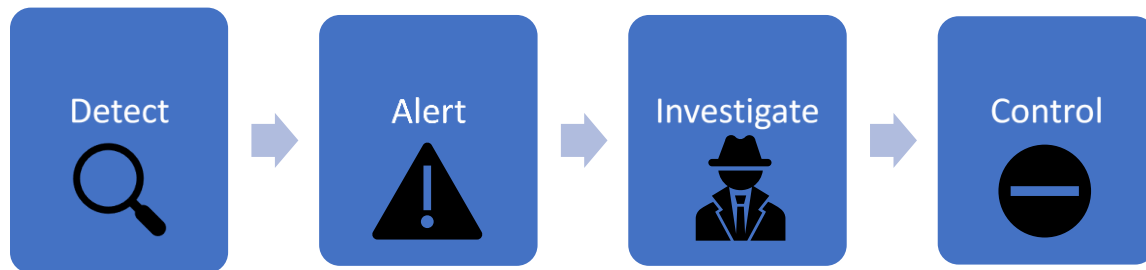
- Workplace, activities and residence attended the period 3 days to 7 days before symptom onset (“Backward period”)
- **Used proactively** identify high risk COVID-19 exposure settings/activities
- **Used reactively** Identify and share settings with suspected clusters of COVID-19



How is enhanced and standard contact tracing data used for?

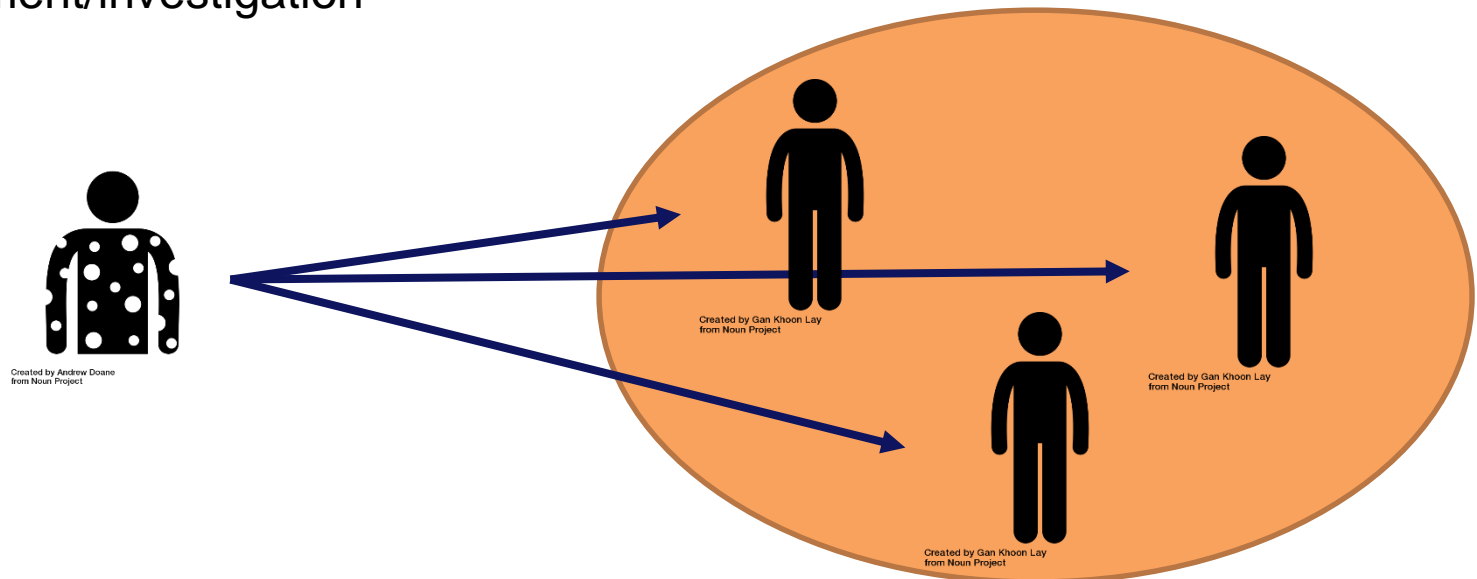
Provide information to:

1. Target local public health action more effectively by identifying possible sources of infection and chains of transmission
2. Provide insights on where transmission could be occurring to inform local/regional interventions and national policy
3. Generate venue alerts through the NHS COVID-19 app



Common exposure reports – enhanced contact tracing

- Common exposure - two or more cases reporting attendance at an event/setting with the postcode in the period 3 days to 7 days before symptom onset (28 day window)
- Provide an indication of where people might have **acquired** their infection – identify locations where transmission may be occurring to facilitate local assessment/investigation



What can common exposure reports tell me?

- Where people visit during a defined time period **prior** to symptom onset/getting tested
- A list of "potential" places where cases may have **acquired** their infection and the frequency of attendance
- A location that warrants **further assessment / investigation**

What can't common exposure reports tell me?

- An exact location where a person **acquired** their infection - its a list of potential transmission settings that require further investigation
- High chance of **false linkages**- time and postcode
- Biased by the frequency in which people visit places, i.e. people go to supermarkets more frequently so these will commonly appear

Common exposure - Accessing Reports

PowerBI dashboard:

- Common Exposure Summary - provides all postcode matched areas. Each row represents a common exposure.
- Common Exposure Line List – provides all individual events that make up common exposure summary. Each row represents an event

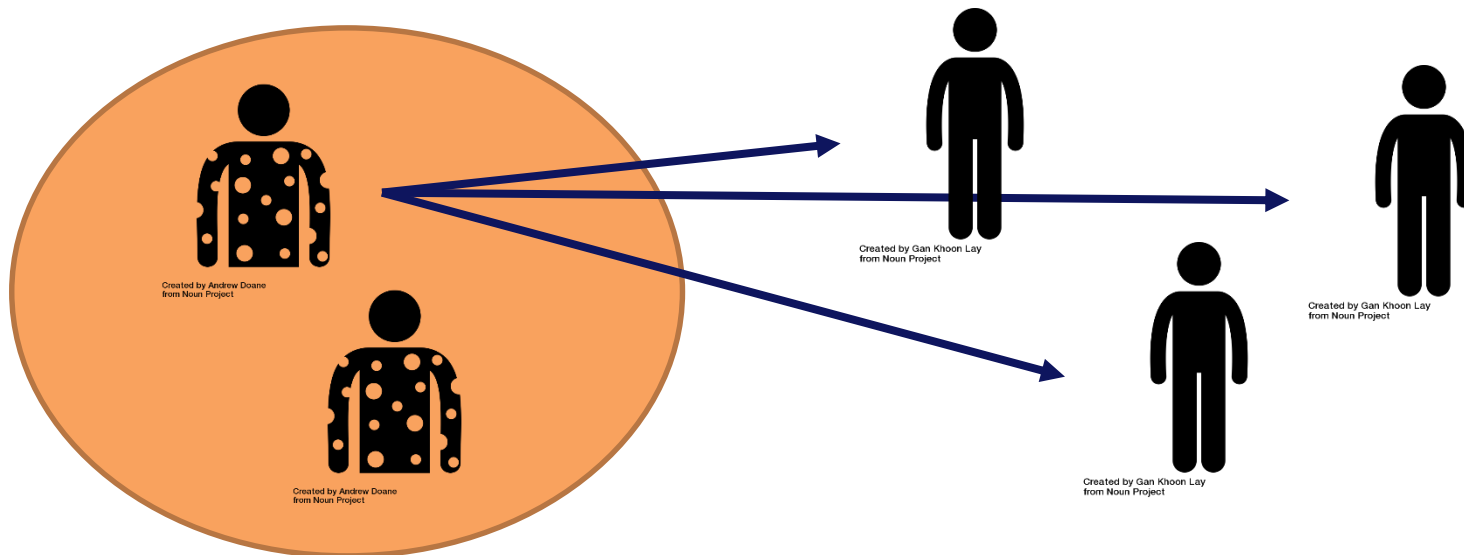
The screenshot displays a PowerBI dashboard titled "COVID-19 Situational Awareness Explorer" with a sub-report "Line List - Common Exposure Report - DPH...". The dashboard is divided into several sections:

- Location of Common Exposure:** A dropdown menu currently set to "All".
- COVID-19 Common Exposures Summary:** A table with columns: UTLA of Common Exposure, First LA, Main LA, First HPT, Main HPT, Current Status, Common Exposure ID, and Exposure Group. The table contains 25 rows of data, mostly for Barking and Dagenham, with one row for Waltham Forest and one for Breckland. The "Current Status" column includes values like "Active" and "New".
- Current Status:** Radio buttons for "Active" and "New".
- Navigation Panel (Left):** A list of menu items including "Introduction", "COVID-19 Epidemiology", "Outbreaks, Clusters & Sett...", "Modelling and Forward Pl...", "Local Authority Access to ...", "DPH Access to Record Lev...", "Line List - Positive Tests ...", "Line List - Negative & V...", "Line List - Contact Trac...", "School Helpline Data", "Line List - Common Exp...", "Data Handling", "Data Guide", "Data Fields", "Common Exposures Sum...", and "Common Exposures LineList". The "Common Exposures Sum..." and "Common Exposures LineList" items are highlighted with an orange box.

UTLA of Common Exposure	First LA	Main LA	First HPT	Main HPT	Current Status	Common Exposure ID	Exposure Group
Barking and Dagenham	Barking and Dagenham	Barking and Dagenham	hptnel	hptnel	Active	811644	shopping: supermarket_morrisons
Barking and Dagenham	Barking and Dagenham	Barking and Dagenham	hptnel	hptnel	Active	903860	shopping: supermarket_asda
Barking and Dagenham	Barking and Dagenham	Barking and Dagenham	hptnel	hptnel	Active	904503	shopping: supermarket_asda
Barking and Dagenham	Barking and Dagenham	Barking and Dagenham	hptnel	hptnel	Active	979256	retail_sector: supermarket
Barking and Dagenham	Barking and Dagenham	Barking and Dagenham	hptnel	hptnel	Active	1092154	attending_childcare_educational_s
Barking and Dagenham	Barking and Dagenham	Barking and Dagenham	hptnel	hptnel	Active	1180901	attending_childcare_educational_s
Barking and Dagenham	Barking and Dagenham	Barking and Dagenham	hptnel	hptnel	Active	1225476	attending_childcare_educational_s
Barking and Dagenham	Barking and Dagenham	Barking and Dagenham	hptnel	hptnel	Active	1252119	social_care: care_home
Barking and Dagenham	Barking and Dagenham	Barking and Dagenham	hptnel	hptnel	Active	1266170	transport: train
Barking and Dagenham	Barking and Dagenham	Barking and Dagenham	hptnel	hptnel	Active	1419560	attending_childcare_educational_s
Barking and Dagenham	Barking and Dagenham	Barking and Dagenham	hptnel	hptnel	Active	1489104	attending_childcare_educational_s
Barking and Dagenham	Barking and Dagenham	Barking and Dagenham	hptnel	hptnel	Active	1532360	other_occupational_sector
Barking and Dagenham	Barking and Dagenham	Barking and Dagenham	hptnel	hptnel	Active	2151279	attending_childcare_educational_s
Barking and Dagenham	Barking and Dagenham	Barking and Dagenham	hptnel	hptnel	Active	2441106	warehouse_or_distribution: wholes
Barking and Dagenham	Barking and Dagenham	Barking and Dagenham	hptnel	hptnel	Active	2943121	living_alone_or_with_family: hous
Barking and Dagenham	Barking and Dagenham	Barking and Dagenham	hptnel	hptnel	Active	3239464	living_alone_or_with_family: hous
Barking and Dagenham	Barking and Dagenham	Barking and Dagenham	hptnel	hptnel	Active	3583214	shopping: supermarket_lidl
Barking and Dagenham	Barking and Dagenham	Barking and Dagenham	hptnel	hptnel	Active	3946413	healthcare: other
Barking and Dagenham	Barking and Dagenham	Barking and Dagenham	hptnel	hptnel	Active	3970927	living_alone_or_with_family: hous
Barking and Dagenham	Barking and Dagenham	Barking and Dagenham	hptnel	hptnel	New	1116503	teaching_and_education: seconda
Barking and Dagenham	Barking and Dagenham	Barking and Dagenham	hptnel	hptnel	New	1173359	teaching_and_education: primary_
Barking and Dagenham	Waltham Forest	Barking and Dagenham	hptnel	hptnel	Active	1172527	attending_childcare_educational_s
Barking and Dagenham	Breckland	Breckland	hpteeo	hpteeo	Active	2263869	other: other

Postcode coincidence report – standard contact tracing

- Instances where two or more cases report attendance at a setting/event in the same postcode area in the period 2 days before symptom onset to date of contact by NHS TT (potential infectious period)
- Provide an indication of where cases might have **transmitted** their infection – identify locations where further public health action may be required



What can postcode coincidence reports tell me?

- Where confirmed cases visited during a defined time period when they were **potentially infectious**
- A list of "potential" places where cases may have **transmitted** their infection and the frequency of attendance
- Settings that may require further public health action
- Detailed information on:
 - Setting
 - Exposure time
 - Number of cases

What can't postcode coincidence reports tell me?

- Proof that a case **transmitted** their infection - its a list of potential transmission settings only
- High chance of false linkages- time and postcode
- Biased by the frequency in which people visit places, i.e. people go to supermarkets more frequently so these will commonly appear

Examples of contact tracing data in action

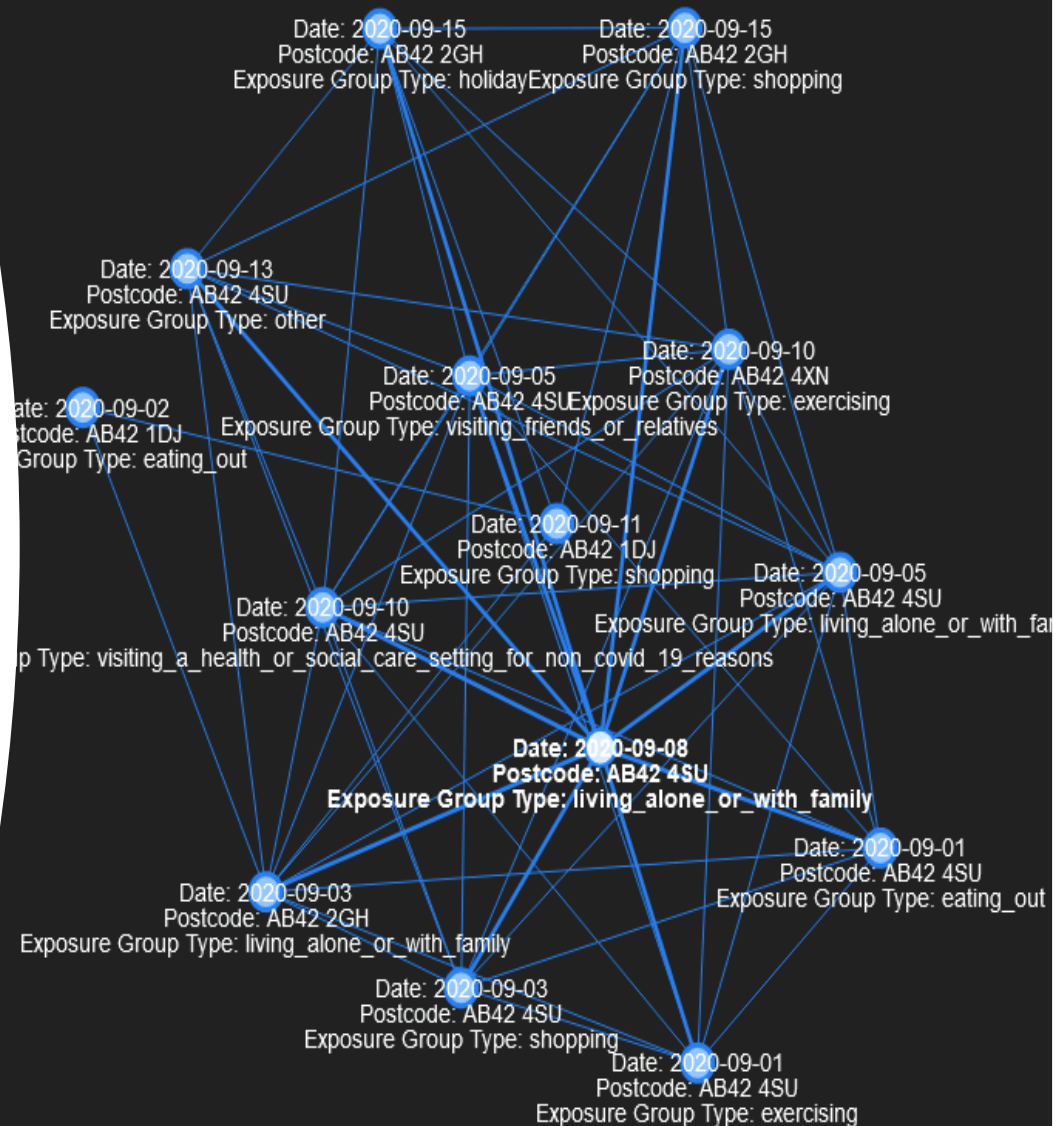
Context	<ul style="list-style-type: none">• Bristol City
How this was identified	<ul style="list-style-type: none">• Surveillance data indicated spike in cases in the city.• A deep dive was performed to review of the postcode coincidence reports and the common exposure reports from CTAS data.
Action taken	<ul style="list-style-type: none">• Postcode coincidences since August was obtained were crossmatched with the data from the common exposures report on power BI.• Data was presented as an aggregate total of cases attending specific postcodes in their 'forward' and 'backward' contact tracing periods.• This was also plotted on a map .
Outcome	<ul style="list-style-type: none">• Added intelligence of where there may be opportunity for transmission, in particular locations with high numbers attending during both their forward and backward contact tracing.• The importance of hospitality venues was highlighted, particularly in certain areas of the city.• Information on specific venues which particularly high levels of activity reported were passed to the local authority for review/intervention.

What are we working on now?

- Validation of common exposure alerts
- NHS COVID-19 App venue alerts
- Provide regular insights on where transmission is occurring – Transmission Group
- Working with partners to implement an operating model for ECT
- Working with partners to implement guidance/SOPs and tools to support the use of CE alerts

What plans are there for enhanced contact tracing data?

- PHE – JBC joint work stream
- Improved common exposure definition
- Improved data communication
- Combine forward and backward events
- Identify potential transmission events



Summary

- Enhanced contact tracing provides useful information on where a case may have acquired their infection
- Postcode coincidence and common exposure reports provide a way to use contact tracing data to inform local actions
- Data can be used for:
 - Situational awareness – potential places where persons have acquired their infection
 - Public health action – identification of locations where onward transmission is occurring