

Radical Statistics Conference 2021

How a Director of Public Health Has Engaged with Data During COVID and What Issues Have Been Experienced

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Leicestershire - The Dog and Fox





Leicestershire:

- @800,000 population
- Two tier, County Council, seven district councils, two CCGs
- A doughnut around Leicester City Council

Me:

• Seven years as DPH LCC

COVID19 case rate LLR v England



Figure 2: Trend in weekly Covid-19 incidence rates (per 100,000 population) in Leicester, Leicestershire and Rutland - All Ages



Source: Public Health England, Power BI, Covid-19 Situational Awareness Explorer Portal (2021). Cases Line Lists and ONS Mid-2019 Population Estimates.

The three stages of COVID19 data



First national lockdown

• The age of no data/paucity of data

The local lockdown

• The dawn of decent area data

Run up to the second national lockdown onwards

• From Famine to Feast...but...



March 6th – May:

The first national lockdown - The age of no data/paucity of data



March 6th – May: The First national Leiceste lockdown - The age of no data/paucity of data

Data available:

• Pillar 1 testing data, deaths data

Pros:

Achieves an effect

Cons:

- A 'snapshot' of cases
- Essentially a map of care homes

Interventions:

• Minimal/universal comms. Focussed on 'issues' –notably PPE



The end of June:

The local lockdown - The dawn of decent area data

The local lockdown - the dawn of decent area data



Data available:

- Before local lockdown Initial contact tracing data
- Early June first upper tier data available detailing numbers contacting CTAS contacts, etc,
- Later pushed down to lower tier level

Interventions:

- Initial conversations
- Area based interventions

Local lockdown





First 'local lockdown' in Leicester at the end of June, including 100,000+ Leicestershire residents

Prevention is better than cure...(?)

Leicester lockdown: Boundary lin 🗙 🕂

→ C 🏠 🌢 bbc.co.uk/news/uk-england-leicestershire-53247817

Join conversation

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Leicester lockdown: Boundary line branded 'stupid' by residents

By David Pittam BBC News, Leicester

() 1 July 2020









Sturgeon unveils 'cautious' route out of lockdown

Scotland's stay at home rule could be lifted on 5 April, with the economy starting to reopen later in the month.

③ 2 hours ago

Woods in surgery after car crash

🕓 9 minutes ago

Salmond will not appear before MSPs on Wednesday

() 37 minutes ago

Features

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Covid in Scotland: A route map to the starting point

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20:43

23/02/2021



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Public perception



I believe that the use of the M1 as a convenient line for the boundary is misguided, ill-informed and not based on science or statistics. Instead it was thought up as easy to draw by a team working late at night and under pressure who then have had to develop some highly dubious reasoning for this decision.

I maintain that this data is a shambles and so is this lock down. But we expect the authorities to know what they are doing which clearly is not the case here.

Better run and hide before the people of Leicester and oadby and Wigston find you tonight.



In the Leicester Live communication received today at 18:47 you were urging people to stick to social-distancing to try to prevent the need for potentially harsher restrictions to come in.

We have noticed that the public whether old or young are not observing social distancing in the street, supermarkets or in the public areas. Until they realise this the COVID19 cannot be brought under control. Also are you aware howe many people are walking the streets, visiting supermarkets, restaurant, etc. who may have the virus and have not isolated themselves

Covid-19 Cases by Age in Leicestershire



70 years median age*

38 years median age*

* median age is the middle value in a range - half of the cases are younger than this age and half are older

13

Leicestershire

County Council

1101

Fortnightly Rate of Cases by MSOA





Confirmed COVID-19 rates per 100,000 population by MSOA

All other areas in the county have a count of cases of 7 or less in the last fortnight so have been suppressed

Local lockdown reflections on data Leicestershire and narrative

- Data in advance builds confidence in actions taken
- Area based data drives an area based narrative
- An area based narrative drives area based behaviours
- An area based narrative drives area based interventions
- Disjoin between outbreak control and public narrative/care case data



July/August onwards:

From Famine to Feast...but...



Available data now:

Incident management team considers:

- Case data by age group, ethnicity, ward level data
- PHE outbreak data
- Line list data
- Local intel community outreach
- Whistle blowers
- Contact tracing data
- Common exposure data
- Postcode coincidences

Other: mobility data Waste water testing

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Feb-18

Feb-11

Date

IMD decile

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Jan-28

Feb-04

18

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Data is grouped by 7 day period. The most recent 14 days may not have complete data yet. Data: Common exposures line list from CTAS data, Public Health England.

19

Exposure routes



Exposure group type	 All Ages - 	All ages p _→ ↓ 0-1	15 - 0)-15 Pr(-	16-29 👻	16-29 pi 👻	30-44 🔻	30-44 pr 🔻	45-59 👻	45-59 propor 👻	60+ 👻	60+ Proj 🔻
shopping	289	27.4%	9	10.3%	75	26.3%	76	24.4%	86	30.1%	43	51.8%
warehouse_or_distribution	229	21.7%	1	1.1%	89	31.2%	81	26.0%	51	17.8%	7	8.4%
attending_childcare_educational_setting	135	12.8%	75	86.2%	25	8.8%	20	6.4%	14	4.9%	1	1.2%
manufacturing_or_construction	66	6.3%			19	6.7%	24	7.7%	17	5.9%	6	7.2%
other_occupational_sector	62	5.9%			15	5.3%	24	7.7%	20	7.0%	3	3.6%
social_care	55	5.2%			17	6.0%	8	2.6%	24	8.4%	6	7.2%
healthcare	53	5.0%			12	4.2%	17	5.4%	16	5.6%	8	9.6%
food_production	51	4.8%			8	2.8%	21	6.7%	20	7.0%	2	2.4%
teaching_and_education	30	2.8%			9	3.2%	11	3.5%	9	3.1%	1	1.2%
transport	18	1.7%			3	1.1%	10	3.2%	4	1.4%	1	1.2%
retail_sector	16	1.5%			7	2.5%	4	1.3%	3	1.0%	2	2.4%
emergency_services	11	1.0%			1	0.4%	5	1.6%	4	1.4%	1	1.2%
exercising	8	0.8%			1	0.4%	1	0.3%	4	1.4%	2	2.4%
prison	6	0.6%			2	0.7%	1	0.3%	3	1.0%		
living_alone_or_with_family	4	0.4%	1	1.1%			2	0.6%	1	0.3%		
financial_services	3	0.3%			1	0.4%			2	0.7%		
arts_entertainment_or_recreation	2	0.2%					2	0.6%				
civil_service_or_government	2	0.2%					2	0.6%				
eating_out	2	0.2%							2	0.7%		
holiday	2	0.2%							2	0.7%		
hospitality	2	0.2%					1	0.3%	1	0.3%		
military	2	0.2%			1	0.4%	1	0.3%				
visiting_a_health_or_social_care_setting_for_non_covid_19_reasons	2	0.2%							2	0.7%		
visiting_friends_or_relatives	2	0.2%	1	1.1%					1	0.3%		
other	1	0.1%					1	0.3%				



Coronavirus: Melton Mowbray sto X +		- 0 ×
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Coronavirus: Melton Mowbray steps	Top Stories	_
up testing after rise in cases	Harry and Meghan not return	ing to

() 5 August 2020







Harry and Meghan not returning to Royal Family

"Service is universal", the couple say, after the Queen confirms they will not continue with duties.

🕓 12 minutes ago

Hancock acted 'unlawfully' over Covid contracts

🕑 17 minutes ago

Princess Latifa 'being cared for' -Dubai royals

🕓 8 minutes ago

Features









Third age reflections

- Data now gives us a rich picture
- PHE's epi reports are really good now. We often take the story from them when we need to investigate before diving into our own additional analysis. They tell the story in an understandable order to decide whether something actually is a 'concern' or not.
- Local intel/qualitative data adds meaning to the local action
- Public narrative/discourse still focusses on the place not the routes.
- An area based narrative drives area based interventions
- Disjoin between outbreak control and public narrative/case data



Concluding thoughts

- The data journey has been a long one but is getting there.
- Data/narrative/interventions one can argue the causality but there is a need to use data to shape the public discourse on infection
- From place to determinants
- Infection data works best when integrated across the response partnership
- Statistical literacy!!!