



Reducing the crime harms of the coronavirus pandemic

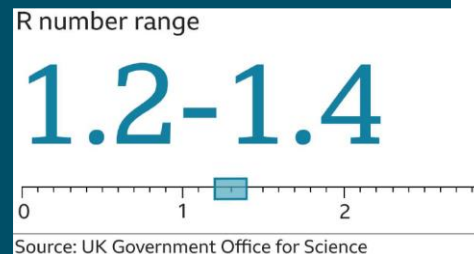
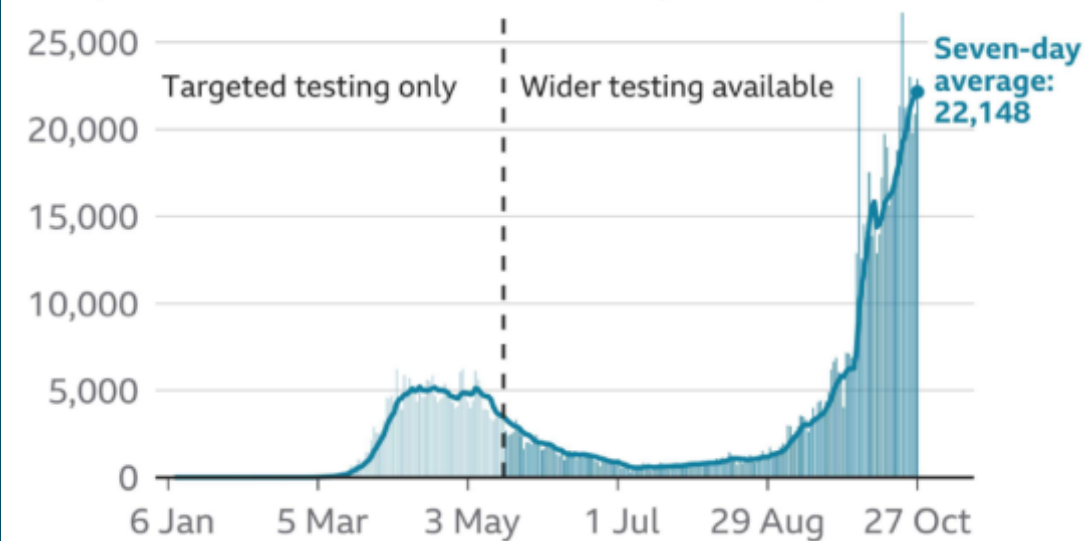
Graham Farrell
Professor of Crime Science
University of Leeds

PIER Public Lecture series

Anglia Ruskin University, 28 October 2020

Daily confirmed cases continue to rise

Daily confirmed coronavirus cases by date reported



Overview



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Introduction

1. Shopwindow
2. National lockdown March-May
3. Local lockdown & Tiers
4. Six months crime trends E&W
5. Comparison to Sweden

Conclusions





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Introduction



Meet the team





Investigators

- Dan Birks
- Kate Bowers
- Graham Farrell
- Shane Johnson
- Nick Malleson
- Nick Tilley

Researchers

- Anthony Dixon
- Sam Langton
- Manja Nikolovska

- Many thanks to Emily Sheard

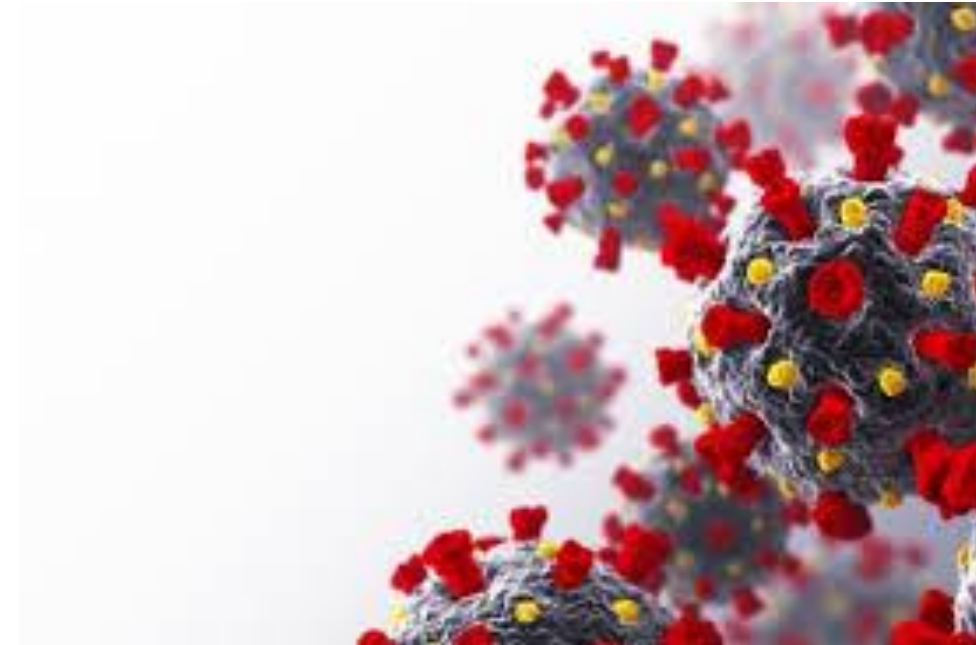
National partners including

- Home Office
- National Police Chief's Council
- College of Policing
- Metropolitan Police Service
- Lancashire Constabulary
- Durham Constabulary
- International partners in Australia, Netherlands, Sweden, US
- British Transport Police
- DEFRA

- Engaged with Op Talla

Research Aim:

- Reduce crime harms of pandemic



Deliverables and impact



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3 publication series

- *Crime Science* special collection
- *JDI Special Papers on COVID-19*
- *Statistical Bulletin on Crime and COVID-19*

Policing Insight

Focal point for research +
Impact via engagement



Tilley & Laycock (Eds.) JDI Special Papers on COVID-19

Reducing the Crime Harms
of the COVID-19 Pandemic

Supported by UKRI Economic and Social Research Council grant ES/V00445X/1



Briefs to inform practice
and policy

24 in series to date

At least a dozen
reproduced in

Policinginsight

A screenshot of a web browser showing the UCL JDI COVID-19 Special Papers website. The browser address bar shows 'ucl.ac.uk/jill-dando-institute/research/covid-19-special-papers'. The website header includes navigation links for 'UCL Home', 'Prospective students', 'Current students', 'Staff', and 'Give'. Below the header is the text 'UCL JILL DANDO INSTITUTE OF SECURITY AND CRIME SCIENCE' and the UCL logo. A secondary navigation bar contains links for 'Home', 'Study', 'Research', 'News and events', 'People', and 'About'. The main content area features a breadcrumb trail: 'UCL Home > UCL Jill Dando Institute of Security and Crime Science > Research > COVID-19 Special Papers'. A yellow button labeled 'COVID-19 Special Papers' is on the left. To the right is a large image of a virus particle. Below the image is the title 'COVID-19 Special Papers' and a paragraph: 'A series of papers focused on the implications of the COVID-19 pandemic for police agencies and other organisations with an interest in the topic.' At the bottom, there is a paragraph of text: 'The JDI publishes an occasional series of short, research-based papers intended to support practitioners with topical advice on current issues and to inform practitioner and policy-maker thinking. Each paper is highly specific and follows a standard format. Content is based on the best available evidence or appropriate theoretical perspective. Papers are not formally peer-reviewed, although in most cases experienced practitioner colleagues or academics will have commented on'.

Crime Science special collection on COVID-19

5. 'Show this thread': Police use of Twitter in the pandemic*
4. Minor covid-19 association with crime in Sweden
3. Crime and coronavirus: social distancing, lockdown, and the mobility elasticity of crime*
2. Routine activity effects of the Covid-19 pandemic on burglary in Detroit, March, 2020
1. Initial evidence on the relationship between the coronavirus pandemic and crime in the United States

Jill Dando Institute COVID-19 Special Papers

24. Preventing a Vaccine Crime Wave*
23. Covid facemasks as crime facilitators*
22. Types of crime change in the pandemic*
21. Forensic pathology in the pandemic
20. Self-selection policing
19. Models of crime after lockdown*
18. Securing voluntary compliance*
17. Bio-Assaults*
16. School bullying
15. Package theft
14. Bio-crime
13. Terrorism
12. Residential burglary
11. Policing a pandemic
10. Medical counterfeits*

Statistical Bulletin on Crime and COVID-19

11. Rail Network Crime Time and Place* (20Oct20)
10. Rail Network Crime and Passenger Travel* (20Oct)
9. Six Months In: Pandemic Crime Trends* (12Oct20)
8. Still Far from Normal: Crime through July* (02Sep20)
7. The First Local Lockdown* (28Aug20)
6. Recorded cybercrime and fraud trends* (14Aug20)
5. Anti-social behaviour trends in the pandemic* (31Jul20)
4. Bouncebackability?



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Shopwindow

Tasters.



Vaccine-related Crime Wave (JDI Special Paper #24)



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- Yesterday: 6 approved for limited use; 0 full use (NYT vaccine checker). How long?
 - Mass production - months or years?
 - Distribution to 7.8 billion customers globally
 - Crime reflects high demand (CRAVED) & high illicit price
 - (Espionage); Shipment theft & robbery – stick-ups, hijacks; Counterfeits; fraud; illegal resale markets; systemic violence and corruption
 - Speculative – virus-spreading to prime mkts?



Vaccine crime wave – Some ideas in response

(JDI Special Paper #24)



ASIS
Foundation

ASIS FOUNDATION

CRISP REPORT

Connecting Research in Security to Practice

Situational Crime Prevention and Supply Chain Security

Theory for Best Practice

Harald Haelterman, PhD

1. Rapid reviews of best practice

- NCA, Border Force, National Trading Standards, Medicines and Healthcare Regulatory Agency; crime futures work in govt depts. International: WHO, UNODC, Interpol?

2. Crime concentrations: hotspots, repeats, MOs

3. Light-touch distribution admin - fast but risky

4. Overcome crime market failure = Incentivise industry re: Online fraud/resales (Amazon, FB, Google); pharmaceutical industry; distributor

- Act now or soon too late: Crime will delay distribution and cause more deaths



Nikolovska et al. *Crime Sci* (2020) 9:20
<https://doi.org/10.1186/s40163-020-00129-2>


Crime Science

RESEARCH

Open Access



“Show this thread”: policing, disruption and mobilisation through Twitter. An analysis of UK law enforcement tweeting practices during the Covid-19 pandemic

Manja Nikolovska , Shane D. Johnson and Paul Ekblom

Abstract

Crisis and disruption are often unpredictable and can create opportunities for crime. During such times, policing may also need to meet additional challenges to handle the disruption. The use of social media by officials can be essential for crisis mitigation and crime reduction. In this paper, we study the use of Twitter for crime mitigation and reduction by UK police (and associated) agencies in the early stages of the Covid-19 pandemic. Our findings suggest that whilst most of the tweets from our sample concerned issues that were not specifically about crime, especially during the first stages of the pandemic, there was a significant increase in tweets about fraud, cybercrime and domestic abuse. There was also an increase in retweeting activity as opposed to the creation of original messages. Moreover, in terms of the impact of tweets, as measured by the rate at which they are retweeted, followers were more likely to ‘spread the word’ when the tweet was content-rich (discussed a crime specific matter and contained media), and account holders were themselves more active on Twitter. Considering the changing world we live in, criminal opportunity is likely to evolve. To help mitigate this, policy makers and researchers should consider more systematic approaches to developing social media communication strategies for the purpose of crime mitigation and reduction during disruption and change more generally. We suggest a framework for so doing.

Keywords: Crime reduction, Crime prevention, Police, Twitter, Covid-19, Disruption, Crisis communication, Evidence-

Nikolovska, Johnson and Ekblom (2020):

- Use and nature of tweets
 - Natural experiment
- Do tweets track or anticipate crime?
- Can we improve social media strategies?

Towards evidence-based social media engagement strategy for policing



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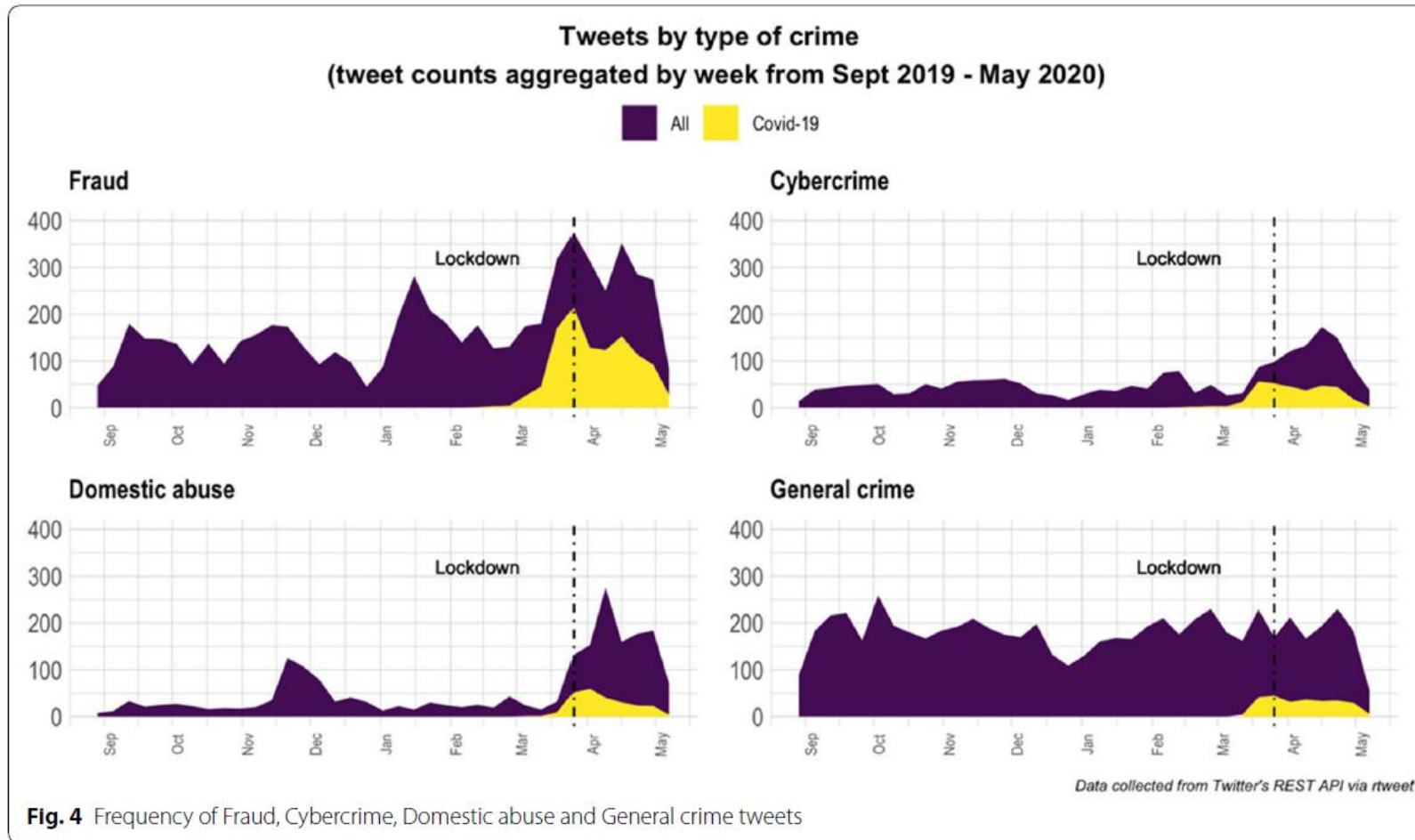


Fig. 4 Frequency of Fraud, Cybercrime, Domestic abuse and General crime tweets

Nikolovska, Johnson & Ekblom (2020)

- Twitter trends anticipated crime
- Some factors increase retweets
- Identify those to engage the public?

Types of crime effects of pandemic

JDI Special Paper #22



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Category	Examples
1. Physical mobility (movement restrictions) <ul style="list-style-type: none">• <i>Reduced crime opportunities</i>• <i>Increased crime opportunities</i>	<ul style="list-style-type: none">• Theft, robbery, assault, public disorder, criminal damage etc.• Domestic abuse; child abuse in home.
2. Virtual mobility (increased online activity - remote work, school, leisure, shopping etc. – reflects movement restriction) <ul style="list-style-type: none">• <i>Existing cybercrimes facilitated</i>• <i>New forms of cybercrime facilitated</i>	<ul style="list-style-type: none">• More available suitable targets online for existing crimes• Cybercrimes, esp. vulnerable people (incl. elderly, disabled), online child sexual abuse; online bullying; exposure to terrorist propaganda.
3. New means of commission (modus operandi) <ul style="list-style-type: none">• <i>Facilitation of existing crimes</i>• <i>Facilitation of new crime forms</i>	<ul style="list-style-type: none">• Fraud online/offline. Furlough fraud. Business loans fraud. Fake medical products• Bio-assault (cough, spit, touch, threats, incl. terrorism)
4. Product prices <ul style="list-style-type: none">• <i>Health-related crimes made more attractive</i>• <i>Non health-related crimes made more attractive</i>	<ul style="list-style-type: none">• Theft and counterfeits of pandemic medical products (medicines, PPE, facemasks)• Goods in short supply – theft, price-gouging.
5. Civil law breaches <ul style="list-style-type: none">• Breach of lockdown restrictions• Crime provoked by covid-related law change	<ul style="list-style-type: none">• Lockdown breaches; Meeting limits; No-mask• Fly-tipping (increased as refuse tips closed)



Crime effects of national lockdown March to May

Halford, Dixon, Farrell, Malleson and Tilley. 2020. Crime and coronavirus: Lockdown, social distancing and the mobility elasticity of crime, Crime Science, 9(11); 1-12.



National Lockdown

(Halford et al. 2020)



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Mobility by area

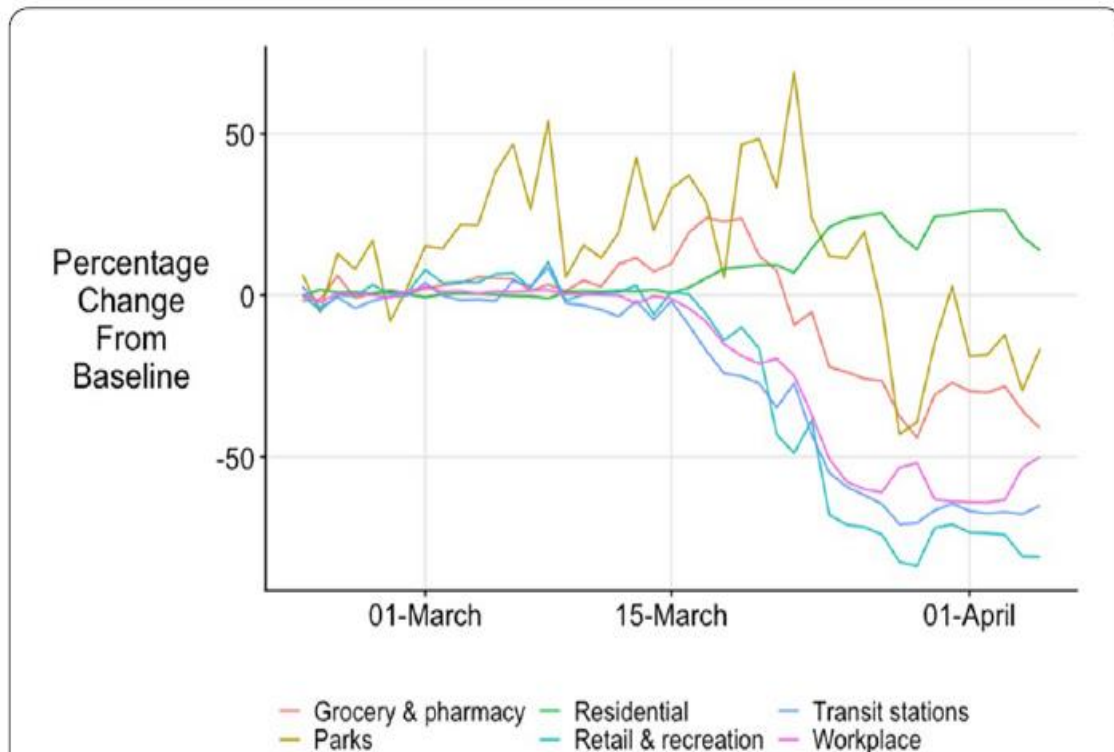


Fig. 5 Mobility changes by area relative to baseline expected rate

All recorded crime

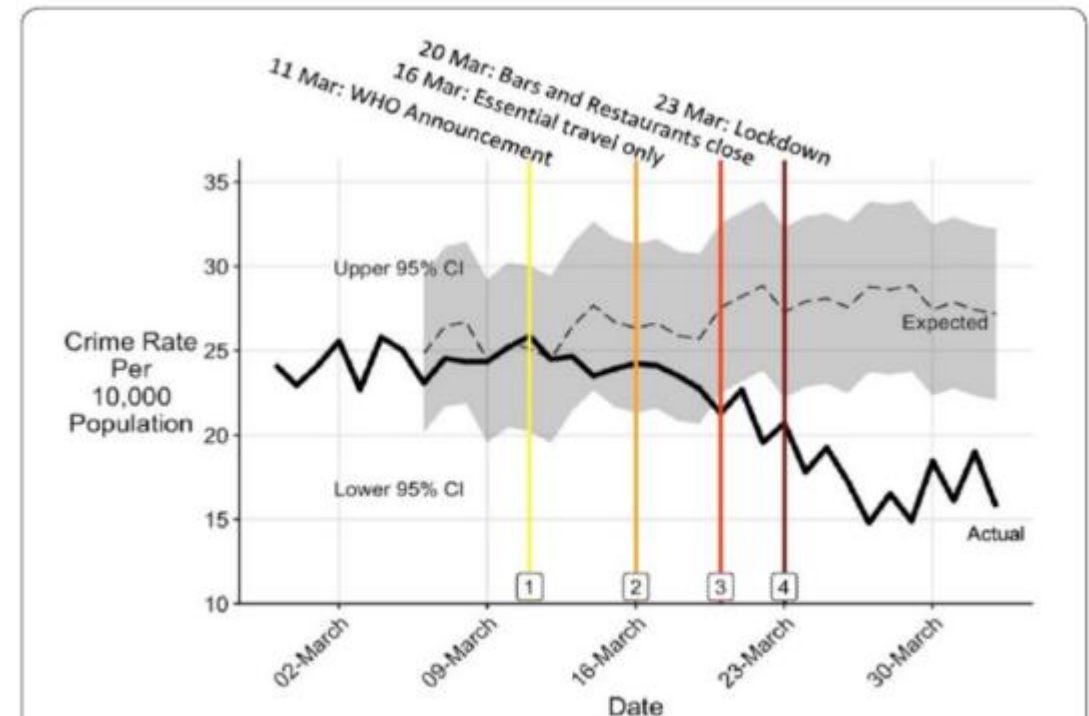


Fig. 2 All crime—comparison of March 2020 actual and expected rates

- *Note: ARIMA – analysis to control for seasonal and long-term trend (used throughout)*
- Sequence and trajectory:
- Reflects policy timeline and mobility change e.g.
 - Public disorder, assaults, declined with pub/restaurant closures
 - Shoplifting and theft plummeted with retail closures

Crime and place mobility

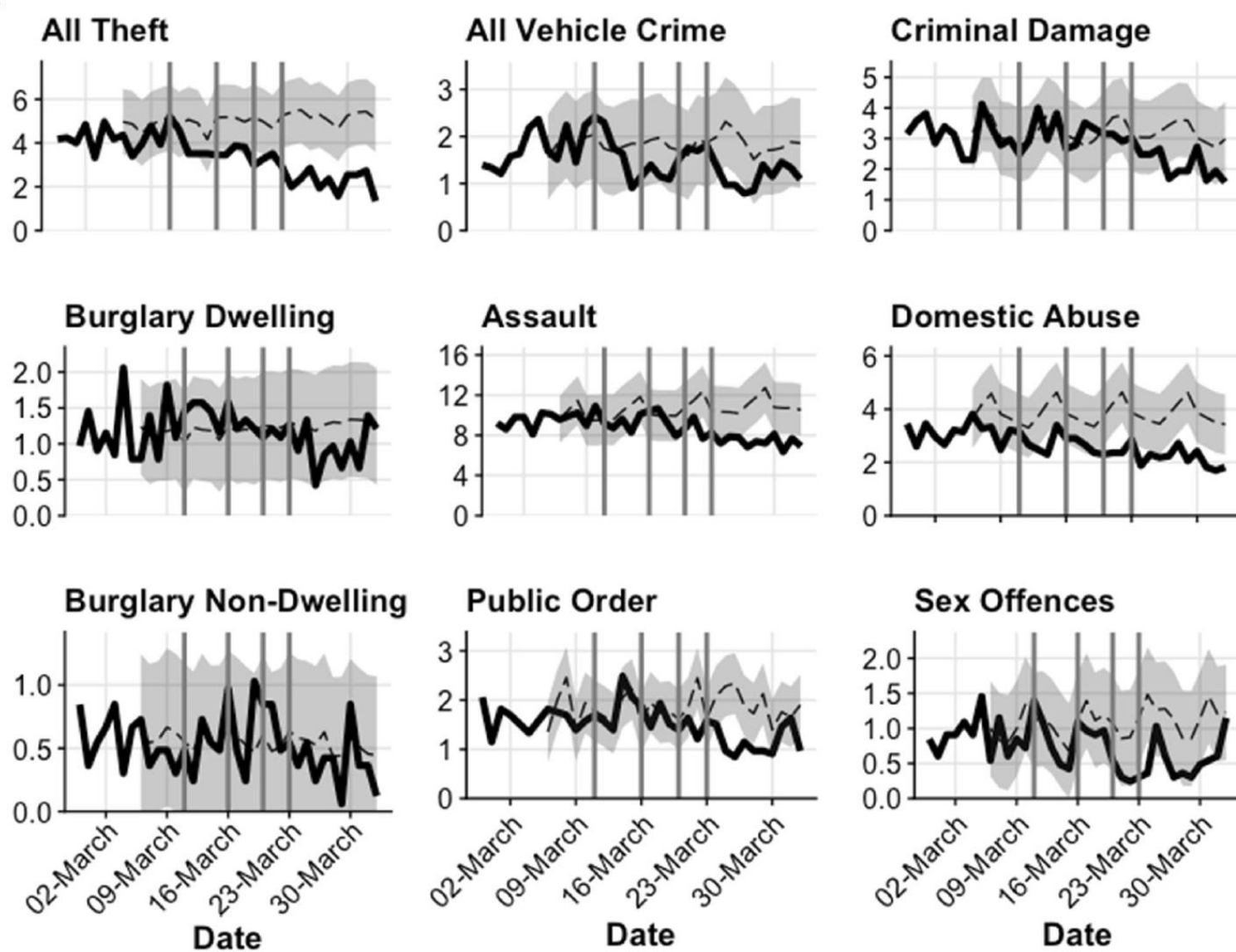
- Residential burglary occurs in residential areas
- Shoplifting occurs retail areas
- Assaults most likely in workplace (most popular in CSEW – around half)
- Theft from vehicle most likely in residential areas (CSEW)
 - Need crime-specific and area-mobility-specific analysis

By crime type

(Halford et al. 2020)



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Crime v mobility (Halford et al. 2020)



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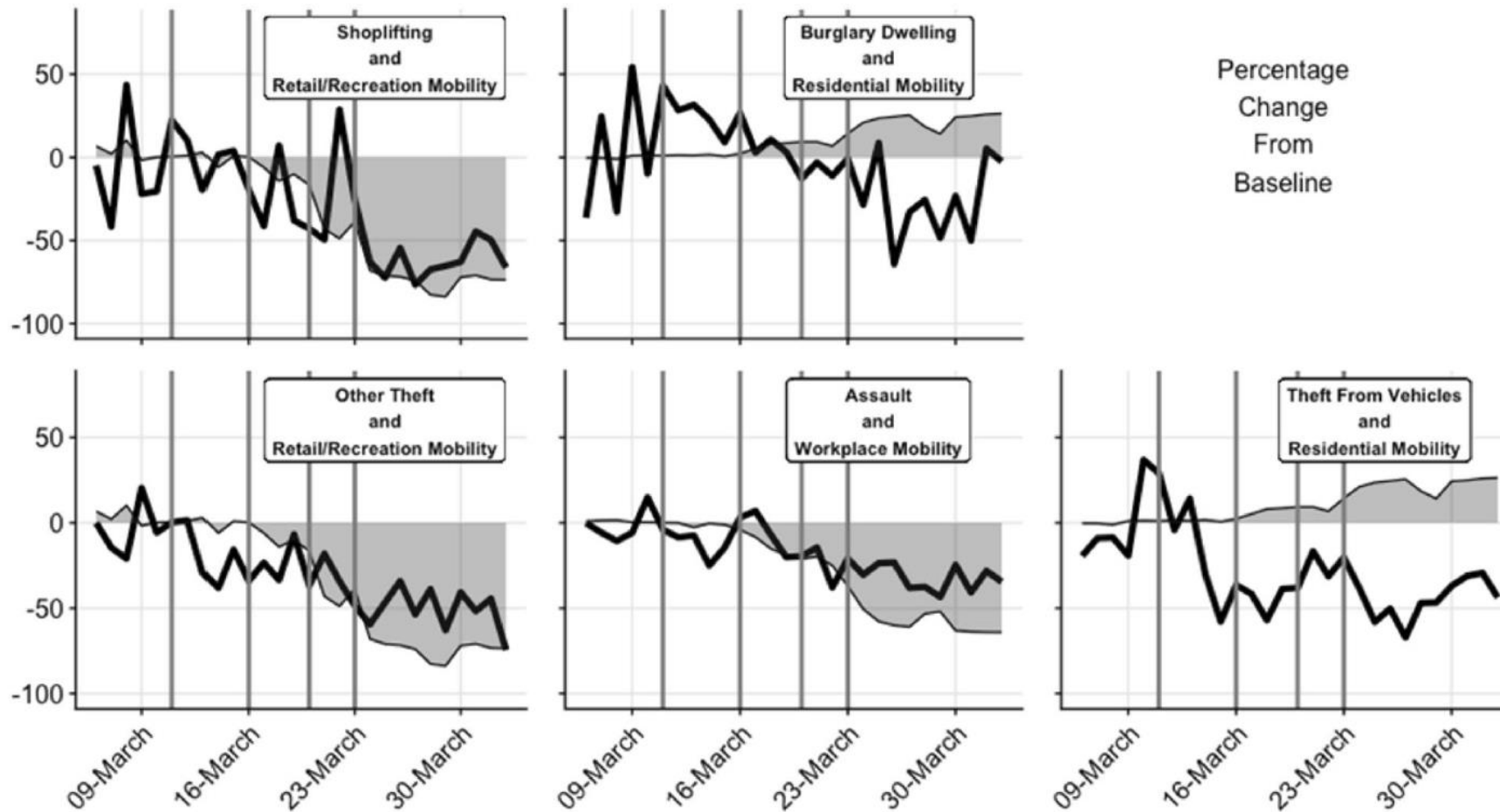


Fig. 6 Comparison of changes in crime and mobility (relative to baseline expected rates) for crime-mobility pairs used in elasticities analysis and shown in Table 2

Mobility elasticity of crime

The % change in crime due to 1% change in mobility

Burglary: -1.04

Shoplifting: 0.84

Other theft: 0.71

Assault: 0.56

Theft fr vehicle: -1.74



The First Local Lockdown



Dixon, Bowers, Tilley & Farrell. 2020
Stats Bulletin on Crime and COVID-19,
Issue 7.



28 August 2020

STATISTICAL BULLETIN ON CRIME AND COVID-19

Issue 7

The First Local Lockdown

Anthon Dixon, Kate Bowers, Nick Tilley, Graham Farrell

A 'local lockdown' was introduced in Leicester city on 29 June: the city had < 1% of the UK population but 10% of all positive COVID-19 cases the week before. We examine recorded crime in July, the first month.

Local lockdowns: Tiers 1-3



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Core policy tool to contain virus
To reduce local flare-ups

Last week June 2020: City of
Leicester = 10% of national new
positive virus tests, but 1% of
population

Has become the Tier 1, 2, 3
system

Lessons from Leicester wrt crime
and policing?

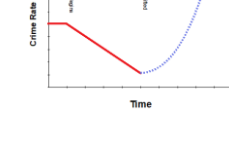
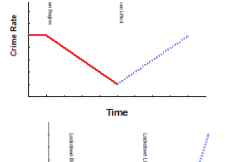
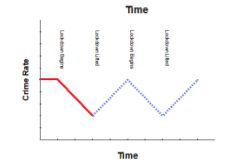
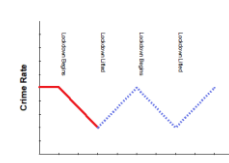
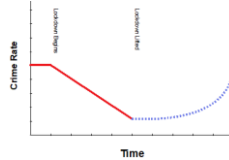
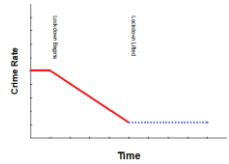


Anticipatory Models for Crimes that Decreased

(Farrell and Birks - JDI Special Paper #19)



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Model	Effect	Impact
L shape	Crime is kept at low levels (due to consolidation efforts promoted by policy and practice) – (the opposite of an upward ratchet effect)	Positive <-----> Negative
U shape	Crime remains at lower levels for some time but gradually returns to pre-pandemic levels	
W shape	Further covid-19 spikes cause re-introduction of movement restrictions, with crime rates responding in turn	
Local W	Local covid-19 outbreaks cause varying and intermittent local lockdowns, local crime rates varying in return	
V shape	Crime bounces back quickly to pre-pandemic levels	
J shape	Crime bounces back to rates <i>higher</i> than before the pandemic, as offenders <i>make up for lost crime</i>	

Models for crimes that decreased are largely mirror images – see JDI Special #19

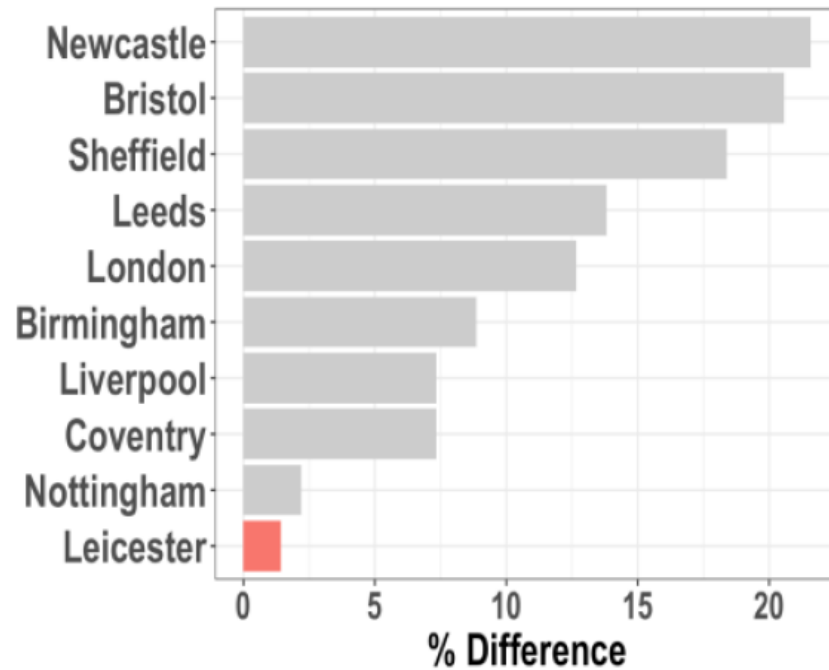
Relative crime reduction in July

(all recorded crime)



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Fig 1: Ten largest cities: monthly % change in all recorded crime in July

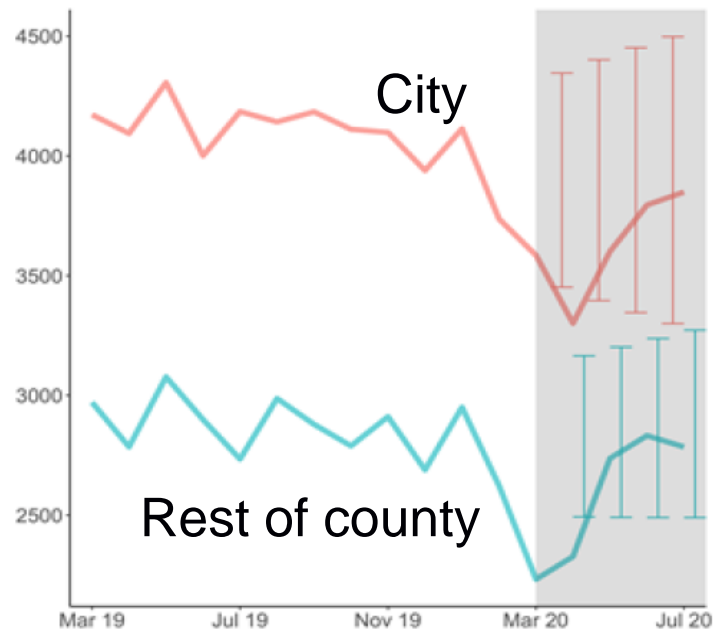


Displacement and Diffusion of Benefits?



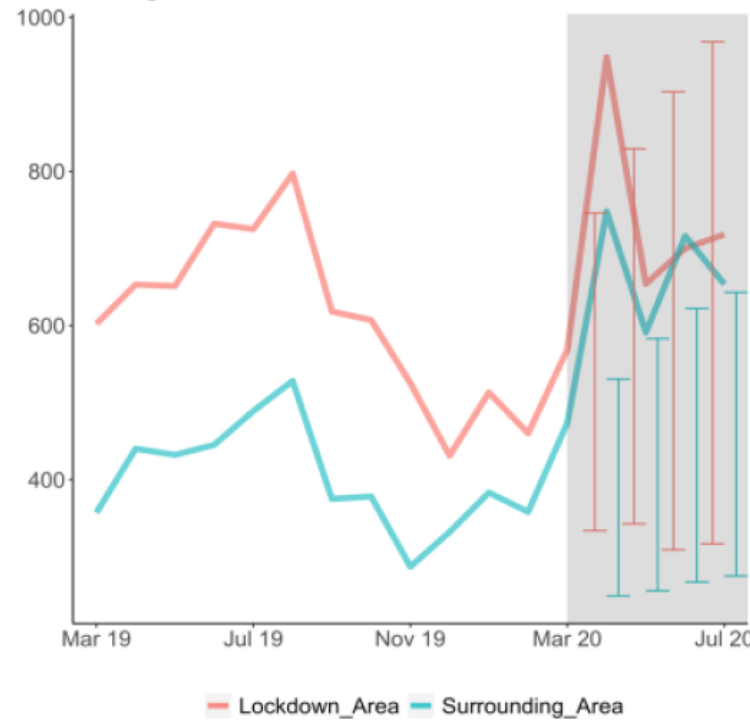
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Fig 2: Crime in city (red) v rest of Leicestershire



March 2019 to July 2020

Fig 3: ASB in City (red) v rest of county



March 2019-July2020

- No evidence of displacement to rest of Leicestershire for July
- Slight decrease elsewhere difficult to interpret

Fig 4: Crime types previously decreasing nationally in lockdown (% change in July on June)

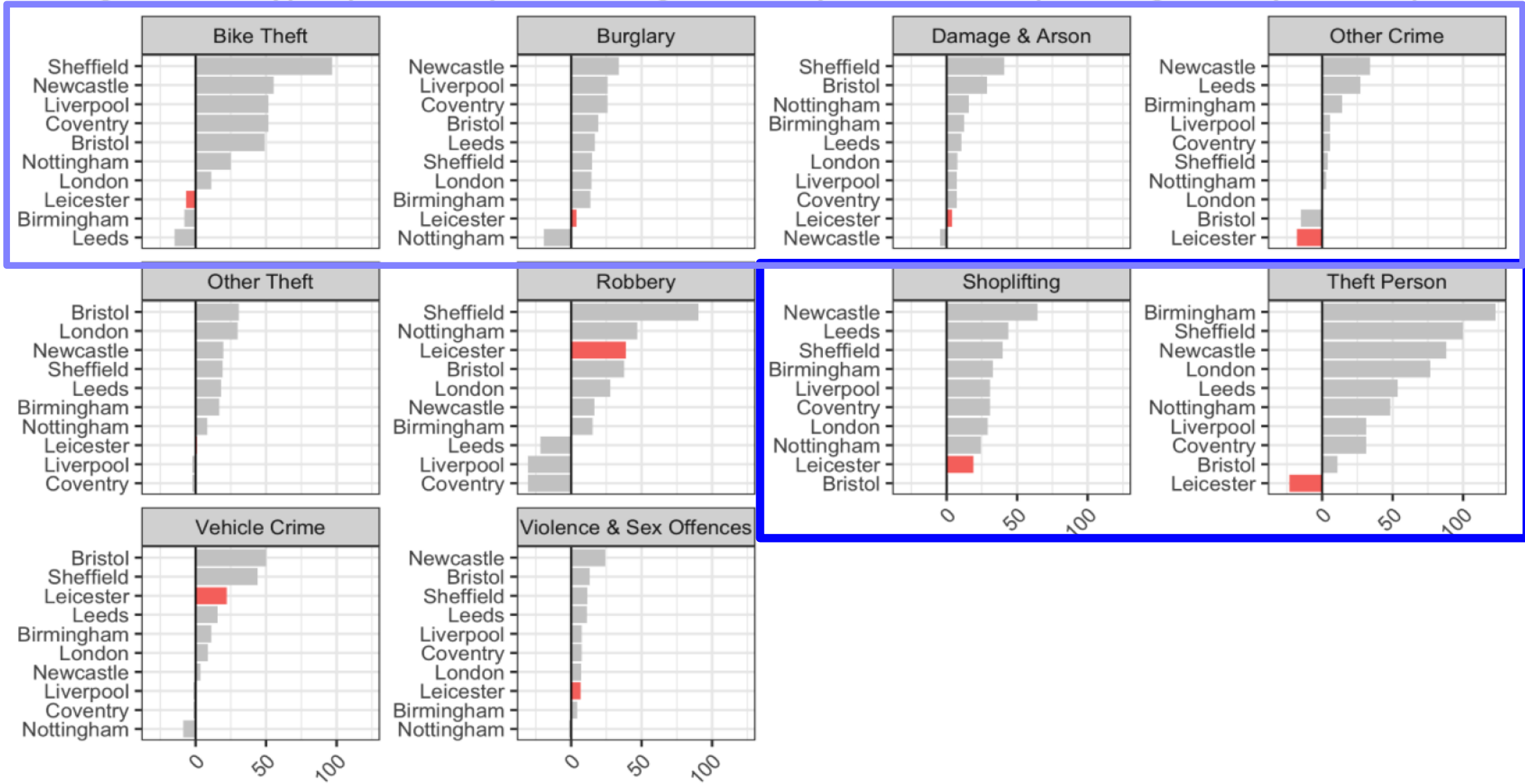
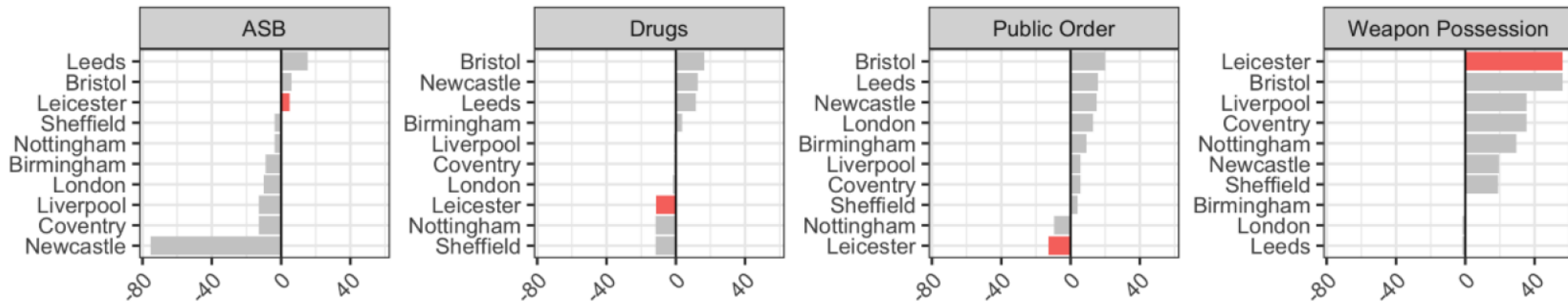




Fig 5: Crimes and ASB previously increasing nationally in lockdown (% change in July on June)



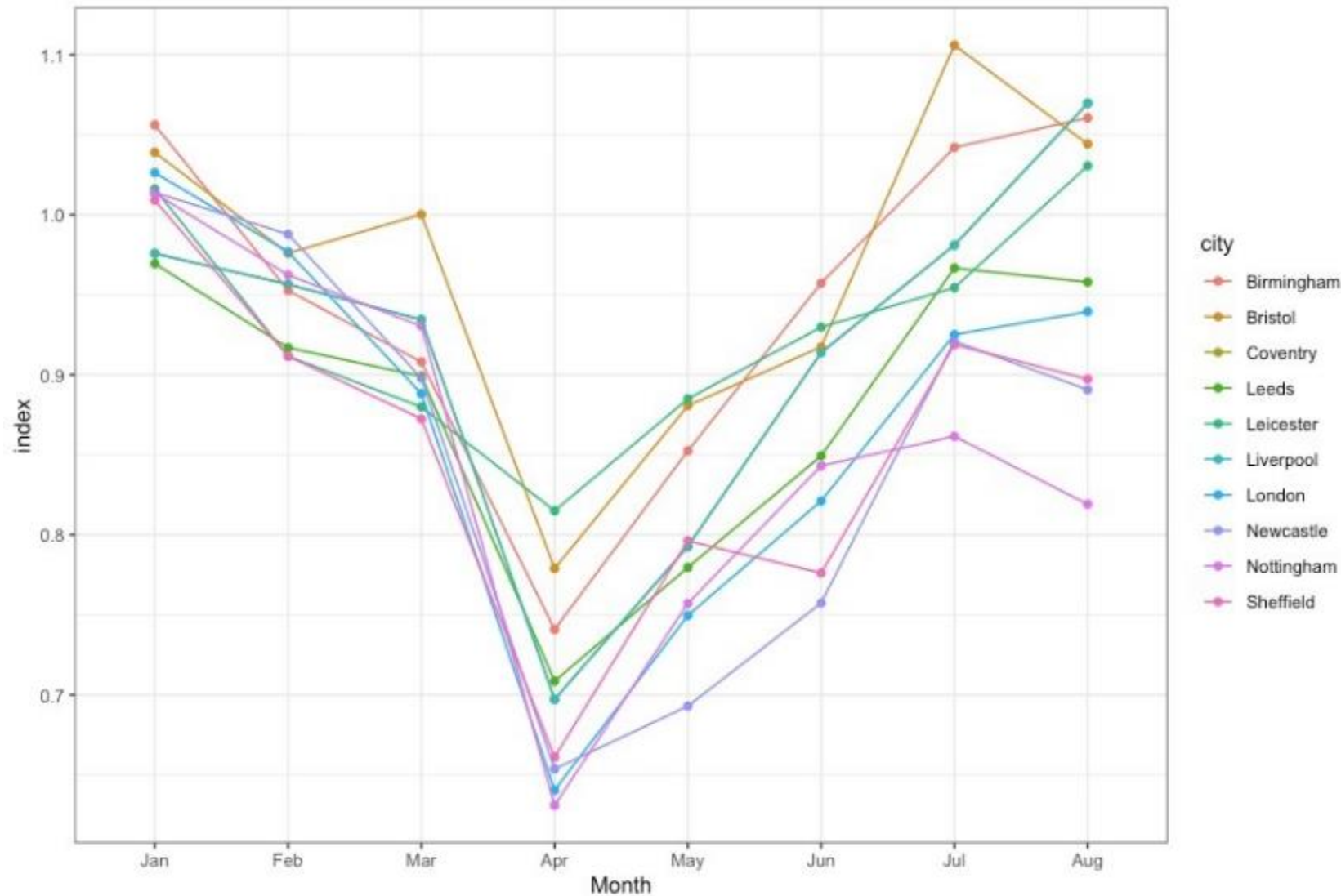
Preliminary findings consistent with expectation of prolonged lockdown effect on crime

Top 10 Largest Cities in England and Wales

(excl. GMP)



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- BUT Leics had smallest crime decline in national lockdown
- Perhaps greater movement meant more covid and more crime?

Local lockdown



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Preliminary findings consistent with prolonged lockdown effect

- many crime types constrained
- weapons possession offences increase – perhaps more police checks?

Consistent with a need for a focus on ASB

- risk to violence and public order as lockdowns lifted



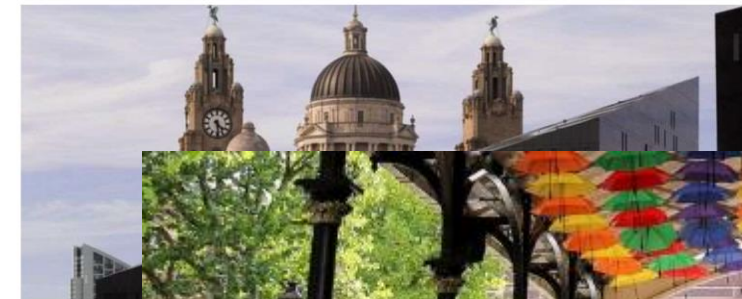
Reality Check

Covid tiers: Why are some areas facing tougher restrictions?

By Reality Check team
BBC News

7 days ago

Reality Check



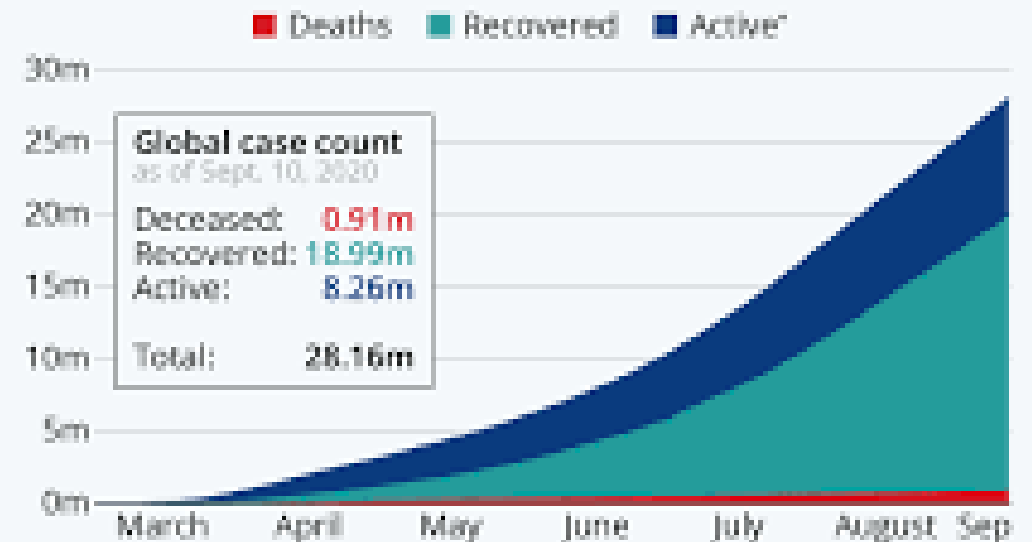


Six Months In

Six month pandemic crime trends in England and Wales

6 Months Into the Pandemic Global Cases Hit 28 Million

Global confirmed COVID-19 cases by patient outcome



* Active cases, i.e. cases still awaiting outcome, derived by deducting deaths and recoveries from total cases

Source: Johns Hopkins University



Policinginsight

My Account Log out

Hello, g.farrell@leeds.ac.uk your access is REGISTERED - Upgrade?



MENU

ANALYSIS:

Six months in: Pandemic crime trends in England and Wales to August 2020

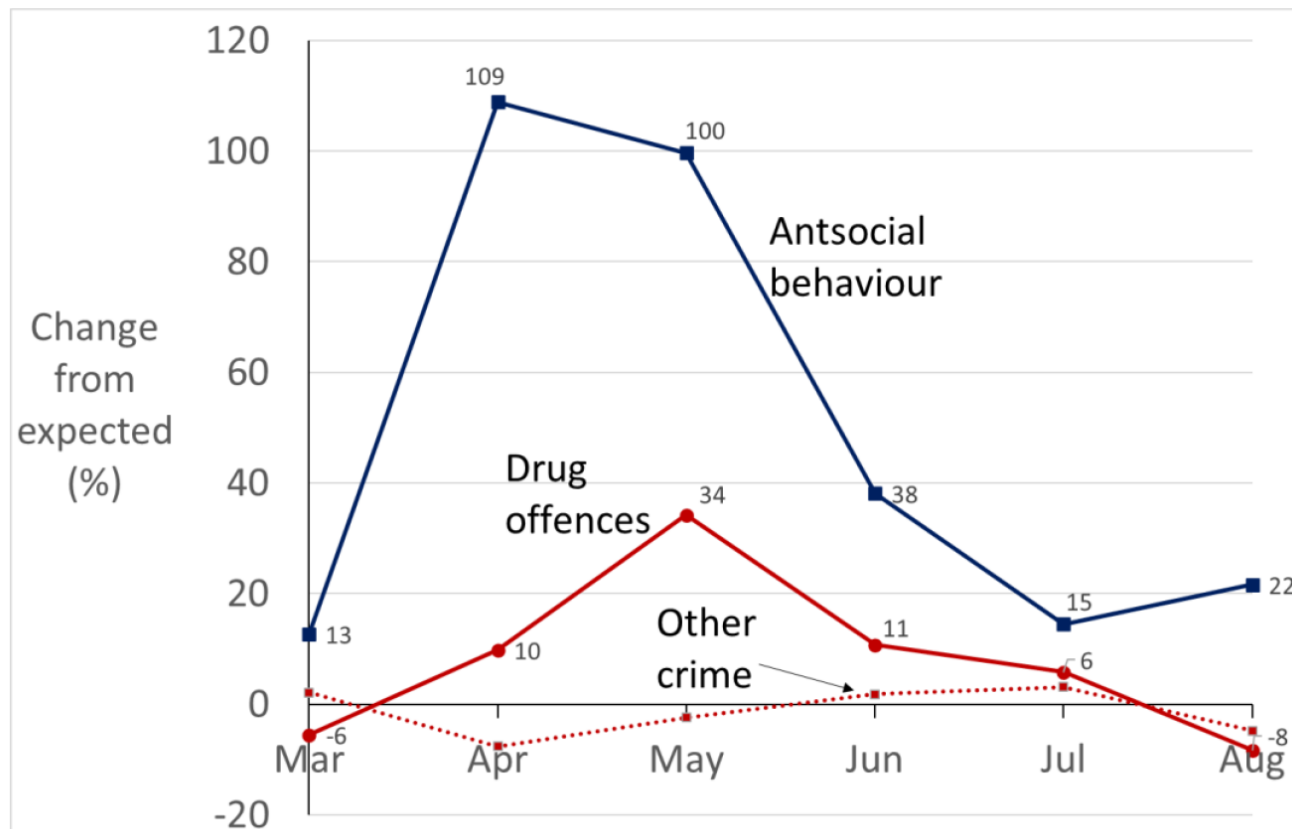
Langton, Dixon and Farrell. 2020.
Policing Insight, 19 Oct (and
Stats Bulletin issue 9).

ARIMA analysis. Data.police.uk. All regional forces except GMP



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Box 1: Drug offences, other crime, and antisocial behaviour



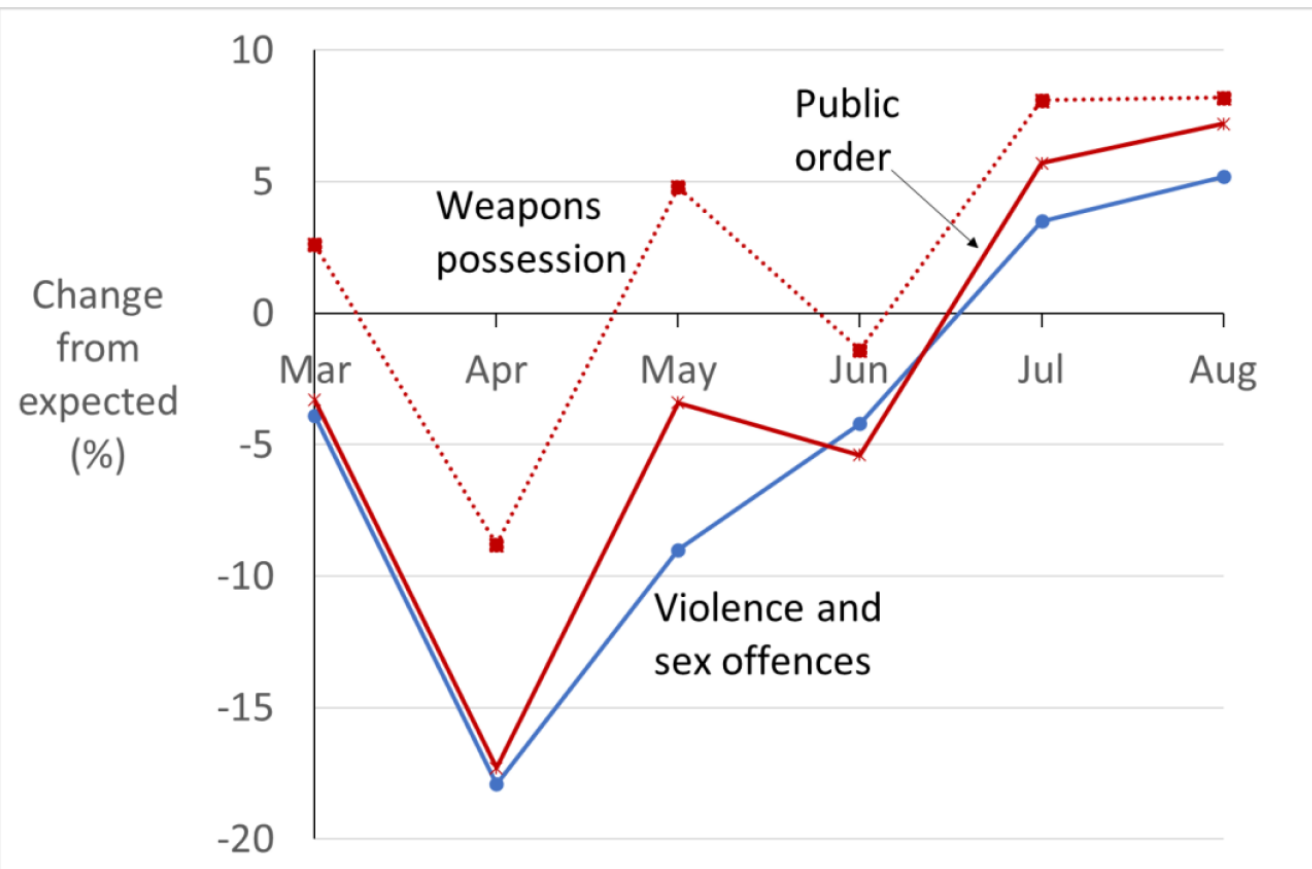
ASB and drug offences the only 2 increases

ASB = likely lockdown breaches

Drugs = police activity?



Box 2: Violence and sex offences, public order and, weapons possession offences



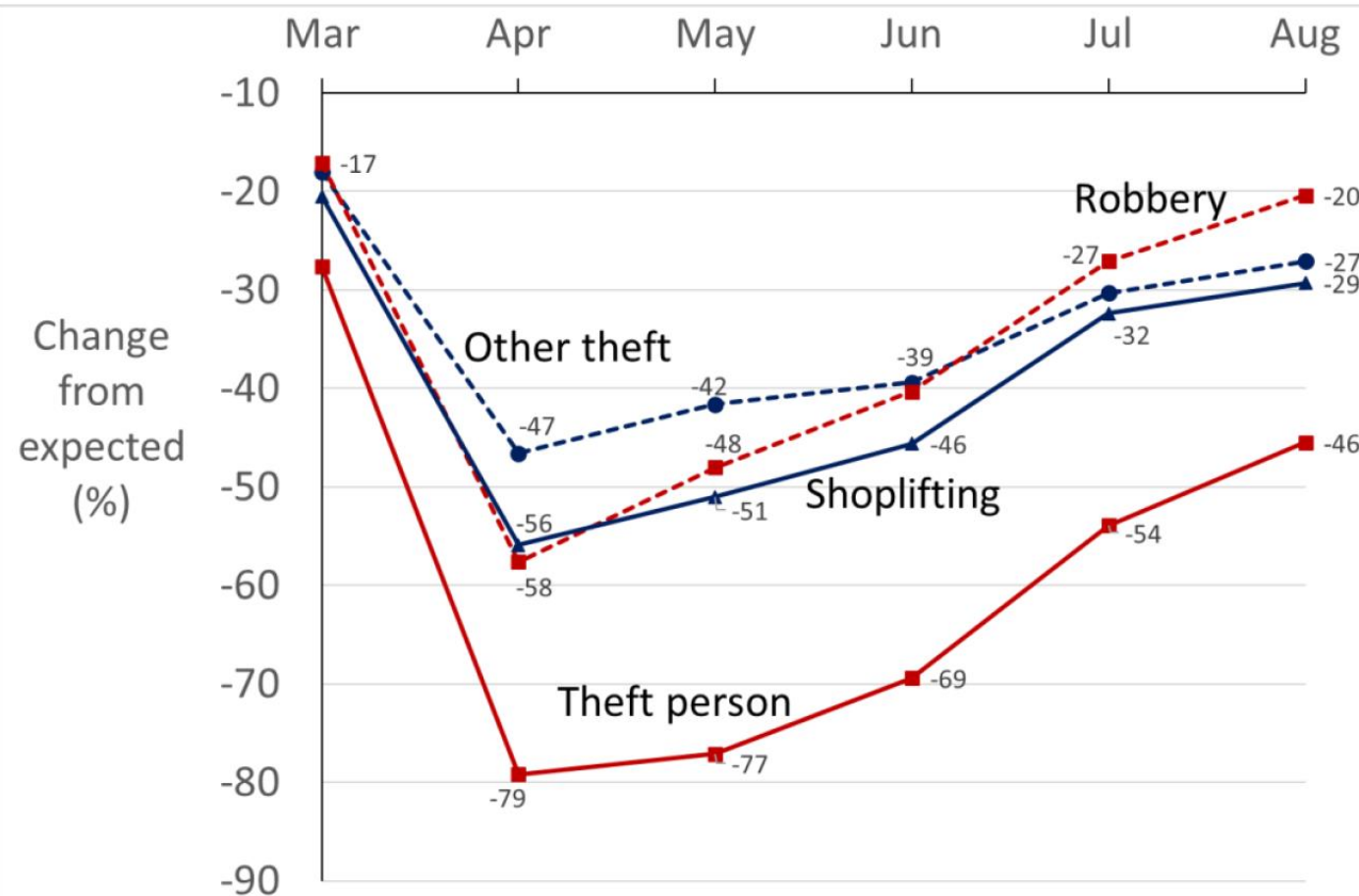
Violence and public order declined sharply

Similar trend for weapons

The only ones moving to above-expected in July – fits with pubs and bars reopening on 4 July



Box 3: Crime occurring disproportionately in retail and entertainment areas



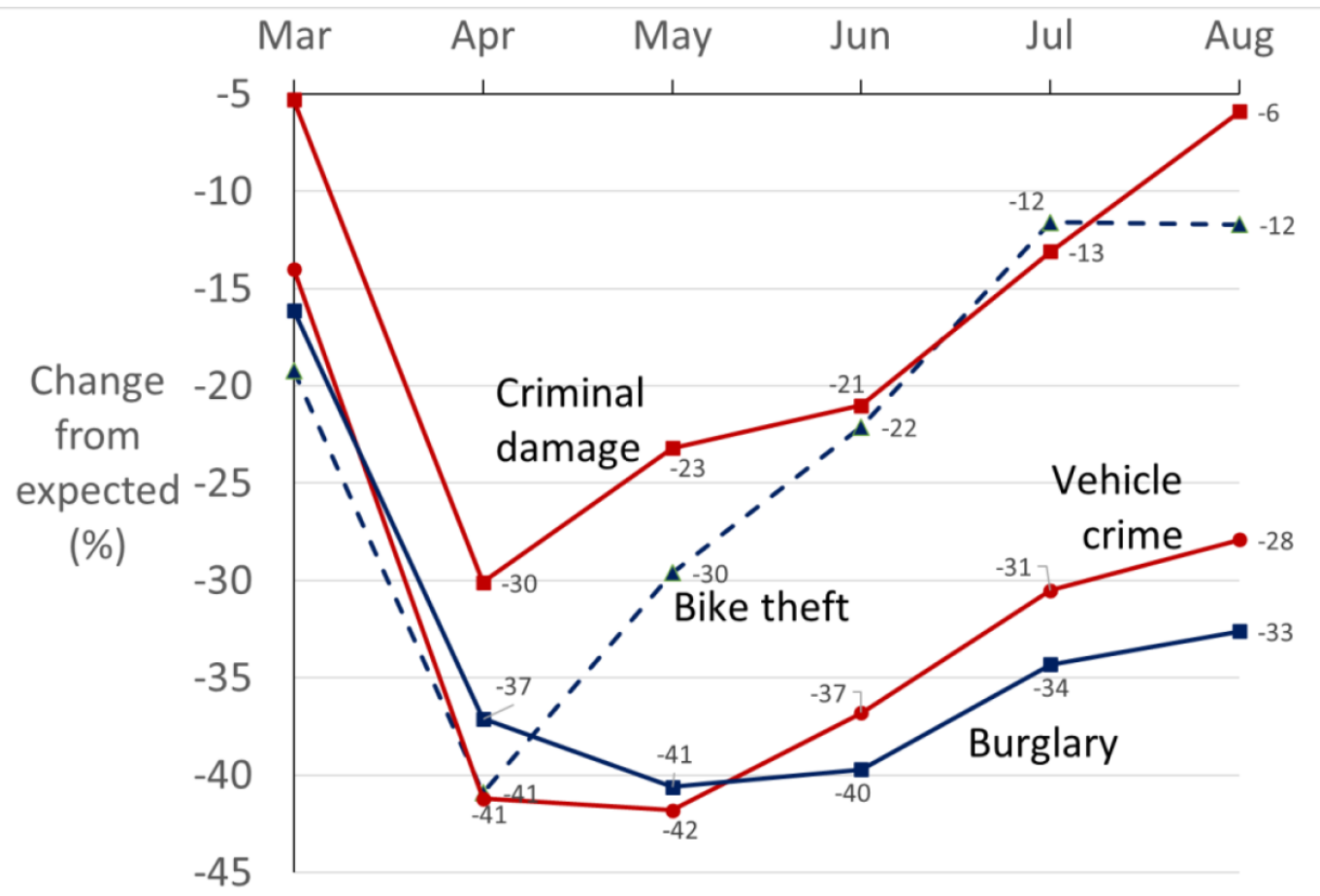
Steepest declines in thefts

Gradual bounceback

Reflects return to retail and recreation areas



Box 4: Crime in and around residential areas



Burglary and car theft declined as people stayed home – guardianship in residential areas

Bounced back as movement returned

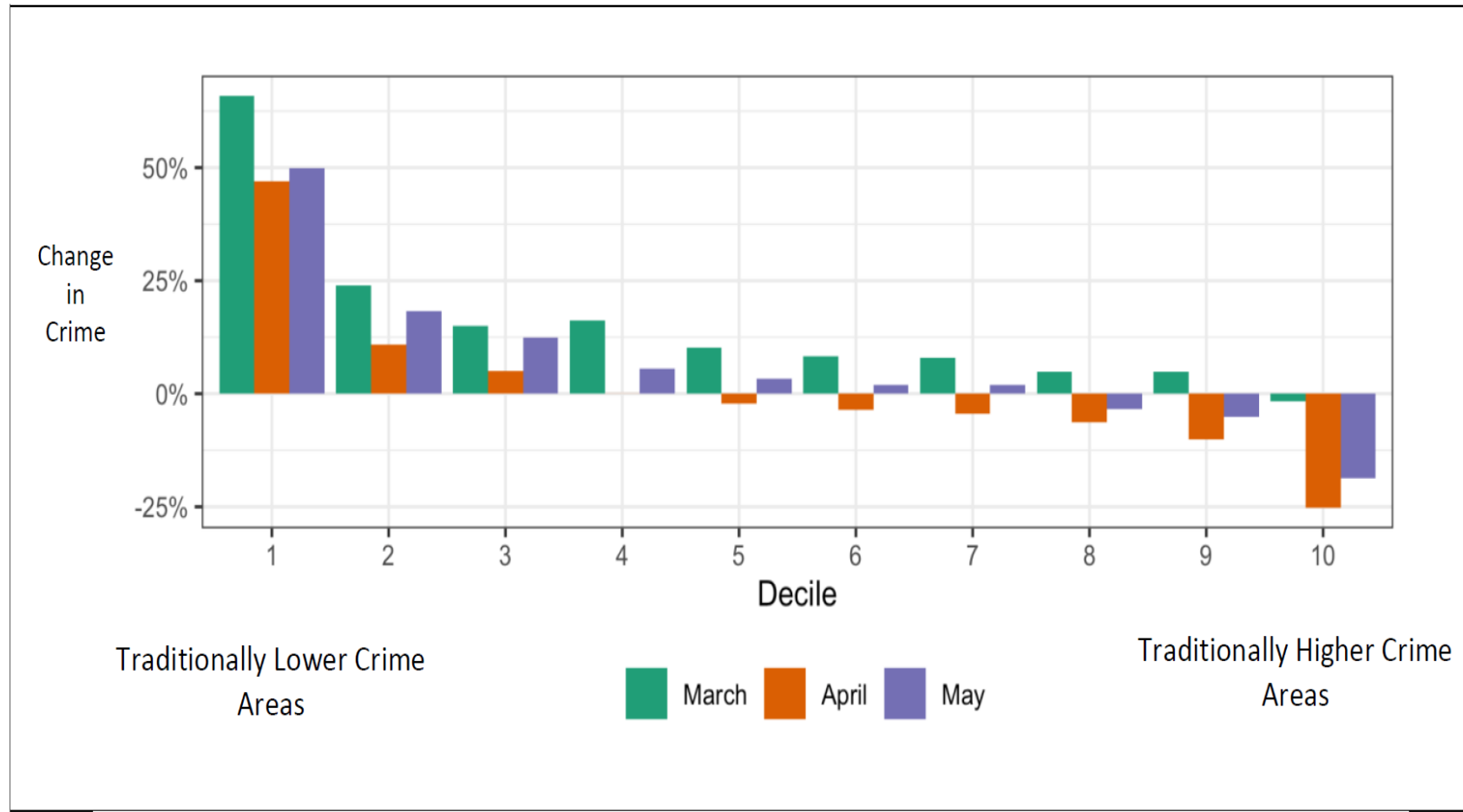
Bike theft unusual – demand for bikes

Spatial distributive justice and pandemic crime

(Statistical Bulletin on Crime and COVID-19, Issue 2)



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All recorded crime
Grouped at LSOA (~600
hhds)

- Crime fell most in high crime areas
- Crime increased most in low crime areas

British Transport Police recorded crime

Dixon, Adamson & Tilley (2020): *Stats Bulletin 11*



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Figure 2: Network Rail Crime and Number of Passengers: Percent Change from Expected Rates in Pandemic

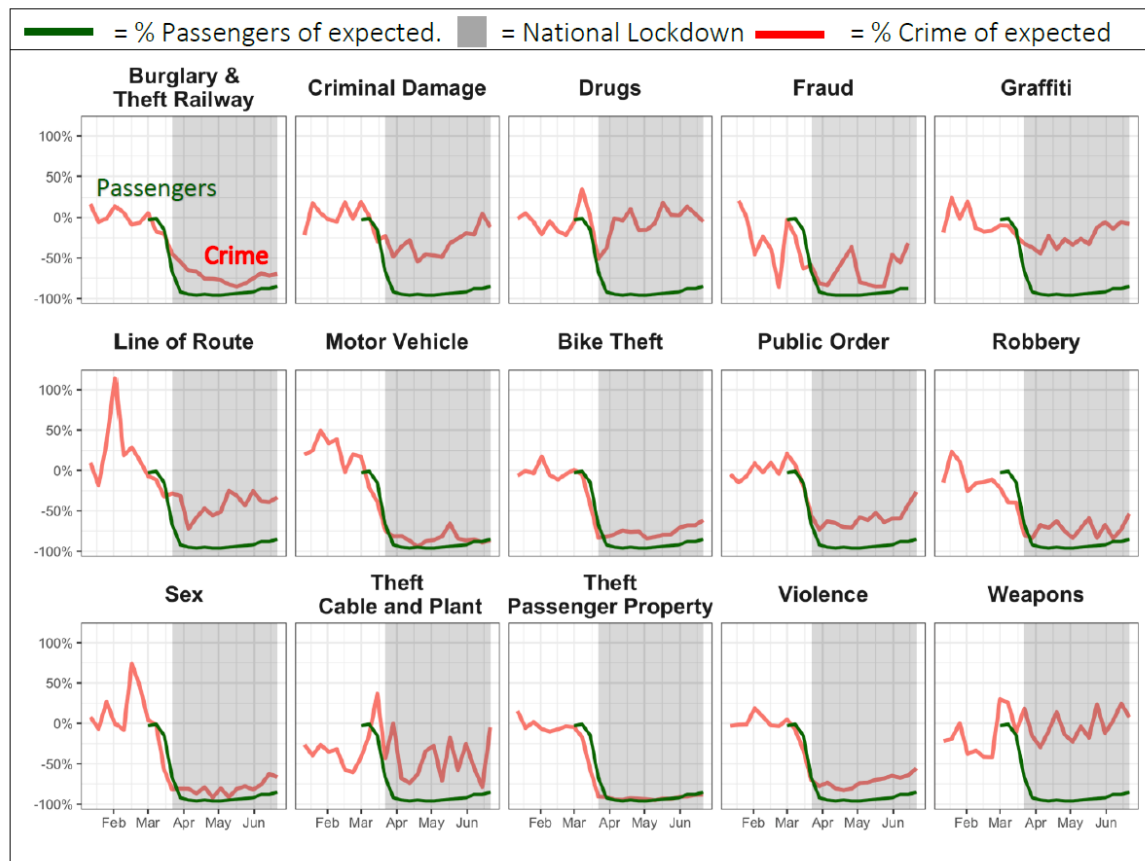
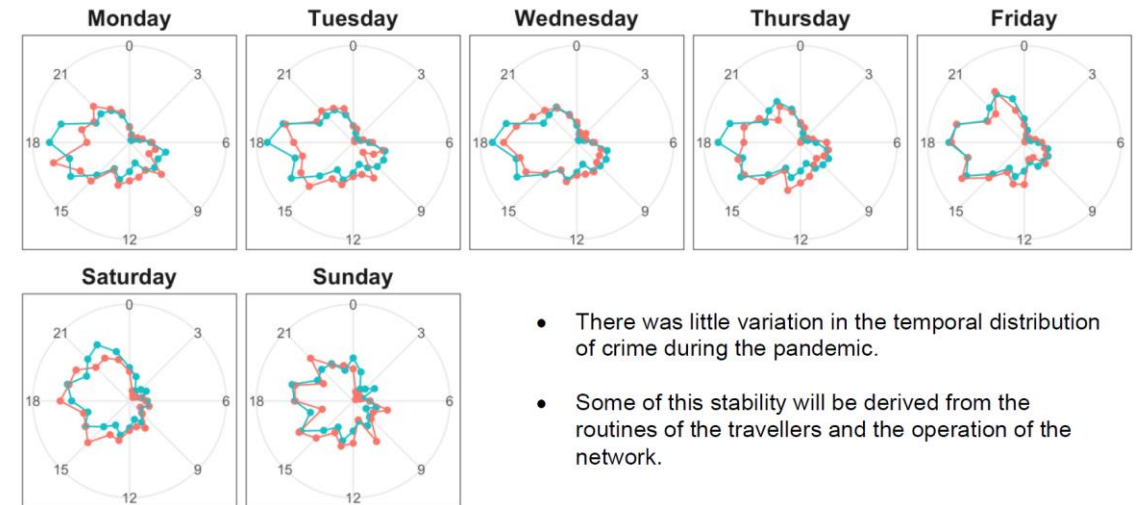


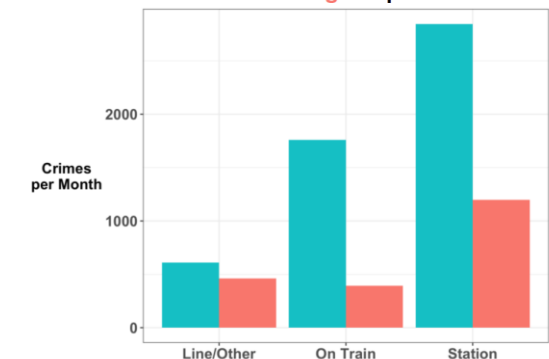
Figure 1: Temporal distribution of BTP recorded crime, before and during the pandemic.



- There was little variation in the temporal distribution of crime during the pandemic.
- Some of this stability will be derived from the routines of the travellers and the operation of the network.

Figure 2: Location distribution of BTP recorded crime before and during the pandemic.

- As expected, with the reduction in passenger numbers, the biggest changes occurred on the trains and at the stations.
- However, crime did drop in all locations due to the wider reductions in ambient population.



Other things in the pot



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- Waste crime
- NW survey of household fraud
- Comparison to Swedish crime rates
- Further local lockdown analysis
- Further BTP analysis
- Footfall comparisons (Local Data Co.)

- Evolving research



Conclusions



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Understanding crime: crime opportunities are the main cause of crime

For policing – a time of uncertainty

For research – different environment

Policing COVID-19 Tiers:

- Local-W model of crime
- Areas ascending Tiers 1-2-3: Pre-lockdown 'last-fling' spike in violence and public order
- Areas descending Tier 3-2: violence and public order resume as pubs and bars open
- Beware a vaccine-related crime wave
- Fraud – furloughs and business loans



Economic and Social Research Council