

# Local geography of the COVID-19 crime drop: the first six months

## Introduction

- An evidence-base has begun to emerge around the impact of the COVID-19 pandemic on crime and anti-social behaviour.
- Findings have tended to demonstrate a widespread decline in police-recorded crime, although the extent to which this holds true varies by crime type.
- But, most studies have focused on macro-level units of analysis, such as cities or countries.
- A recent study took a ‘look back’ on the first six months of lockdown using police-recorded crime data aggregated to England and Wales.
- The macro-level longitudinal patterns observed were consistent with opportunity perspectives on crime.
- Here, we disentangle this macro-level trend using localized data aggregated to neighbourhood units across England and Wales.
- We focus on the extent to which localized areas remained stable, or were subject to volatility, amidst the nationwide change in police-recorded crime.
- This includes a descriptive analysis of concentration, an identification of the ‘drivers’ of the lockdown crime drop, and the characteristics of localized areas driving the change.
- In doing so, we disentangle the macro-level crime trends observed during lockdown in England and Wales.

## Background

- Overview of findings on lockdown crime to date.
- Note that a key missing component relates to spatial concentrations, and the extent to which macro-level trends mask underlying, localized variation.
- These discussions have proved vital to crime and place research, and our understanding of criminal opportunity and routine activities theory (e.g. law of crime concentration).
- Localized analysis may also shed light on policing and resource allocation during lockdown.
- In England and Wales, we already have a reasonable understanding of the macro-level trends.

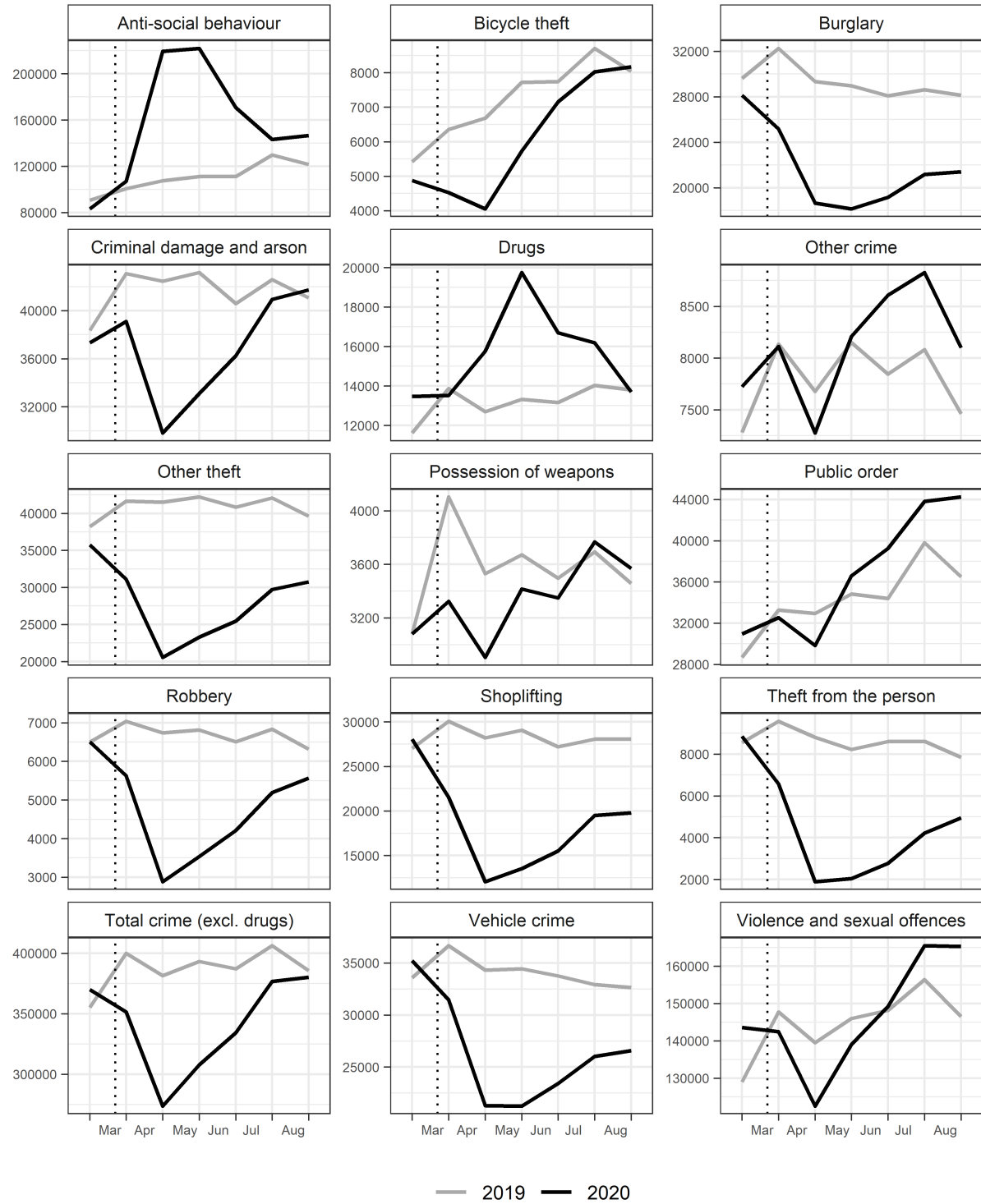


Figure 1: Macro-level crime trends in England and Wales during the lockdown period in 2020.

## Data and Method

- Generalized Gini coefficient for all offence categories.

- Focus on two broad categories: notifiable offences and anti-social behaviour (ASB).
- Decile change to establish whether previously high-crime/ASB areas remained, ceased or became increasingly problematic during lockdown.
- Non-parametric longitudinal clustering (k-means) used to disentangle the macro-level trends observed during the lockdown, and identify the ‘drivers’ of the dramatic drop and subsequent resurgence.
- This speaks to existing literature and methods deployed in crime and place research.

## Results

### Gini

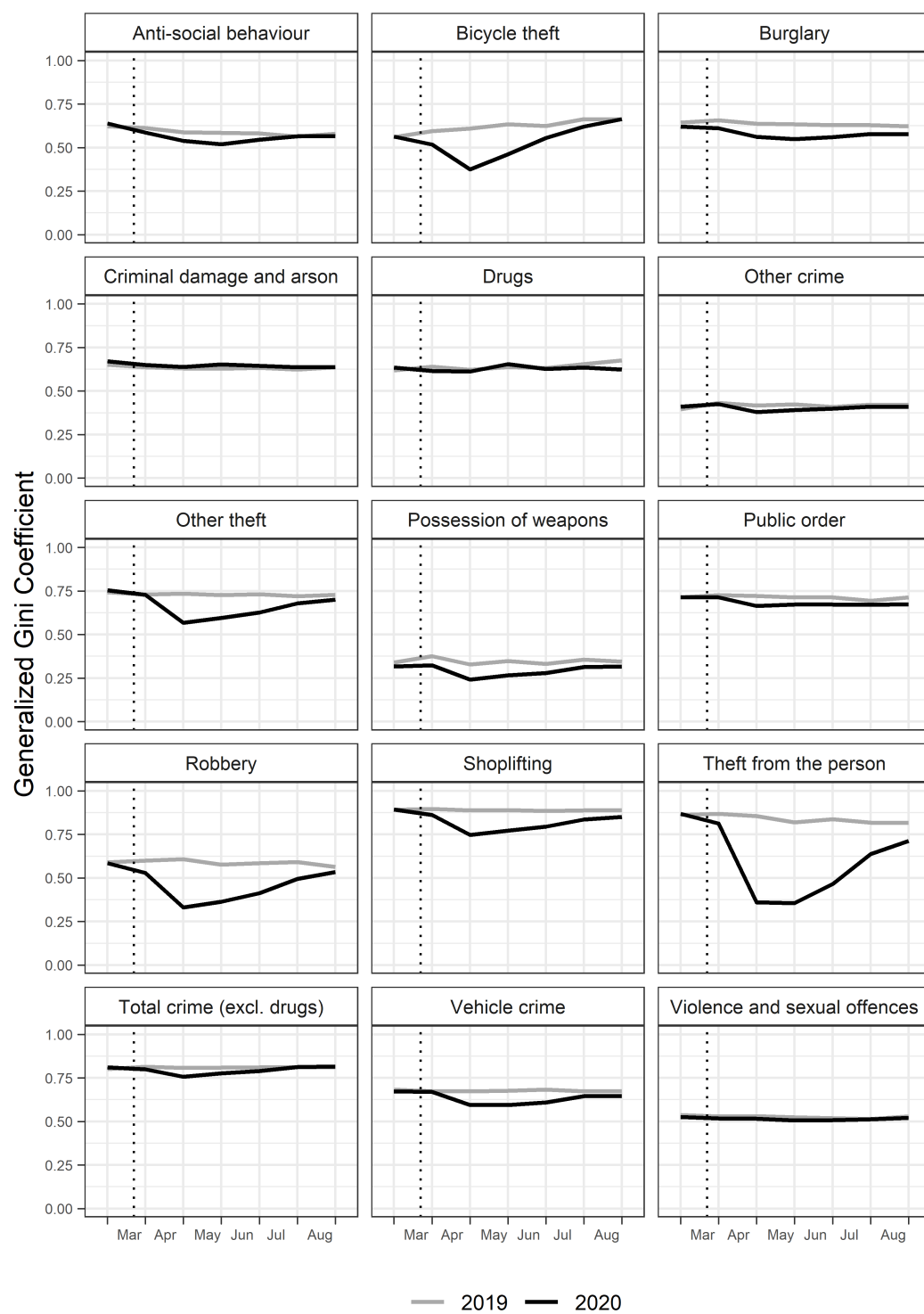


Figure 2: Measure of concentration using the generalized Gini coefficient during the lockdown period.

## Deciles

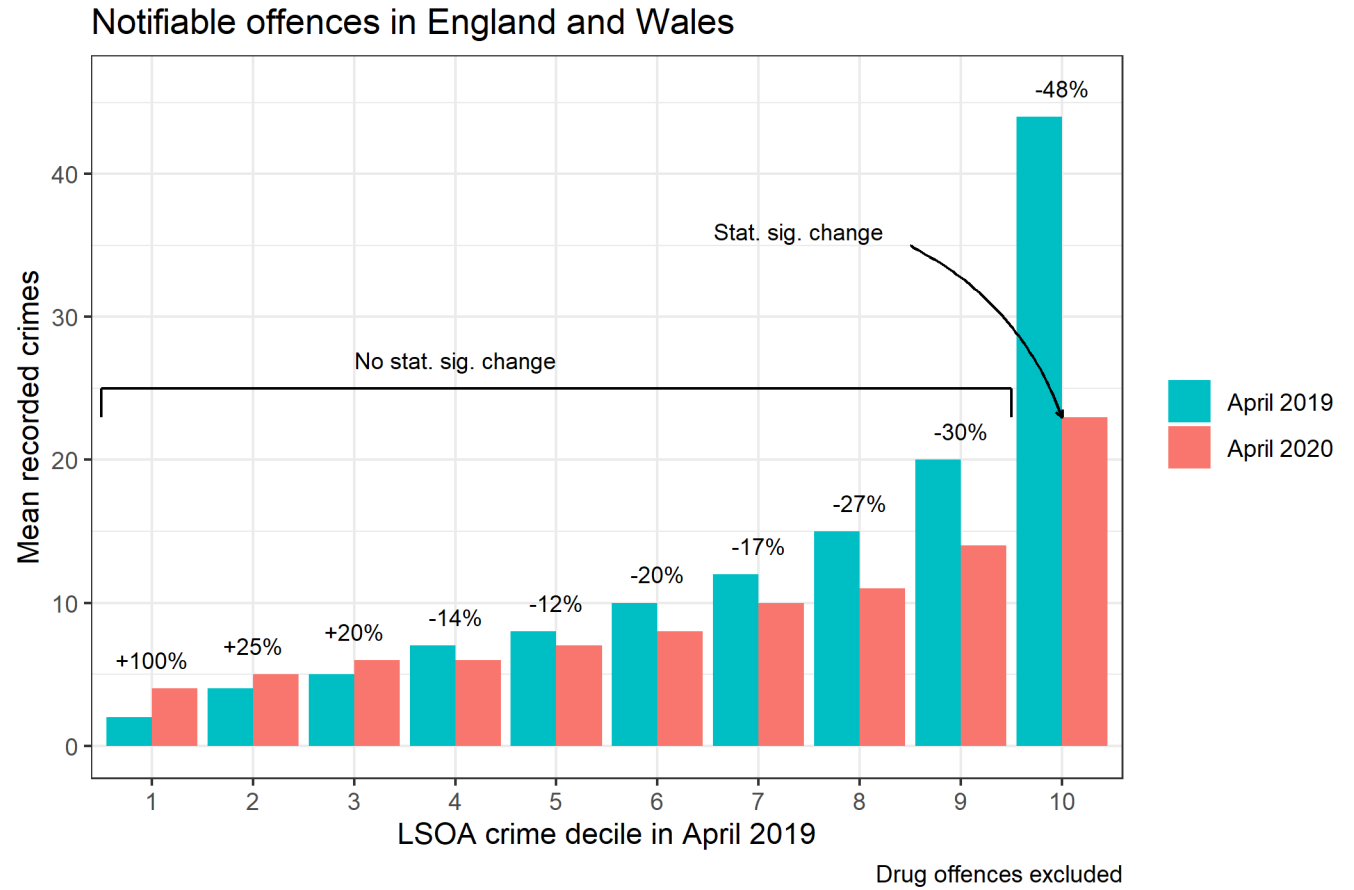


Figure 3: Decile changes in notifiable offences.

## Anti-social behaviour in England and Wales

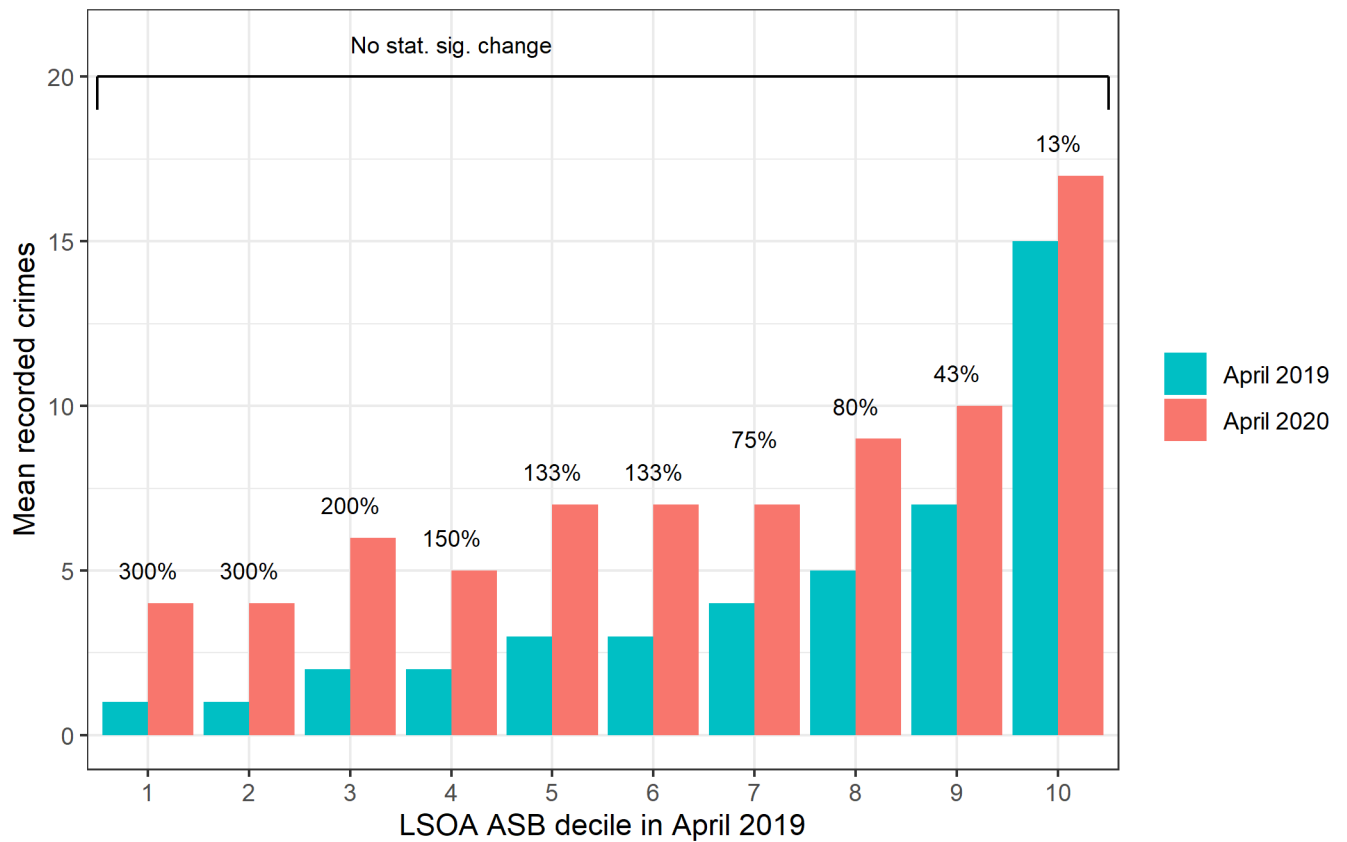


Figure 4: Decile changes in anti-social behaviour.

## Longitudinal clustering

### Notifiable offences

- General conclusion: most of the lockdown crime drop can be attributed to a small number LSOAs.
- Most localized areas actually experienced minimal crime change during the pandemic.
- The proportion of total crime attributable to very low and very high crime clusters fell into April, while mid-crime areas increased their proportion.
- All clusters converged back to 'normality' by the end of August.
- Remarkable stability given the absolute change that occurred during this study period.

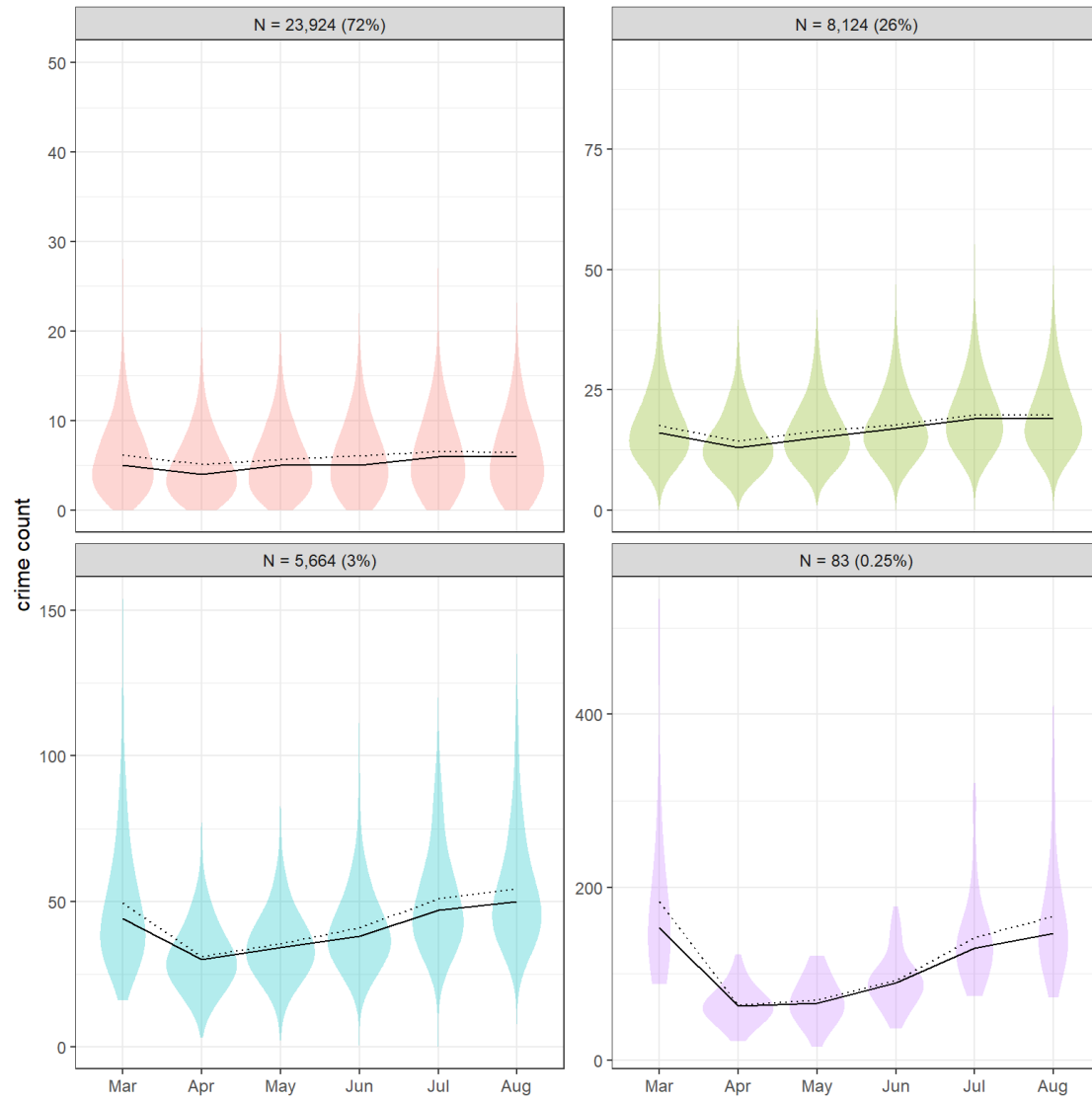


Figure 5: K-means cluster solutions for LSOA notifiable offences.

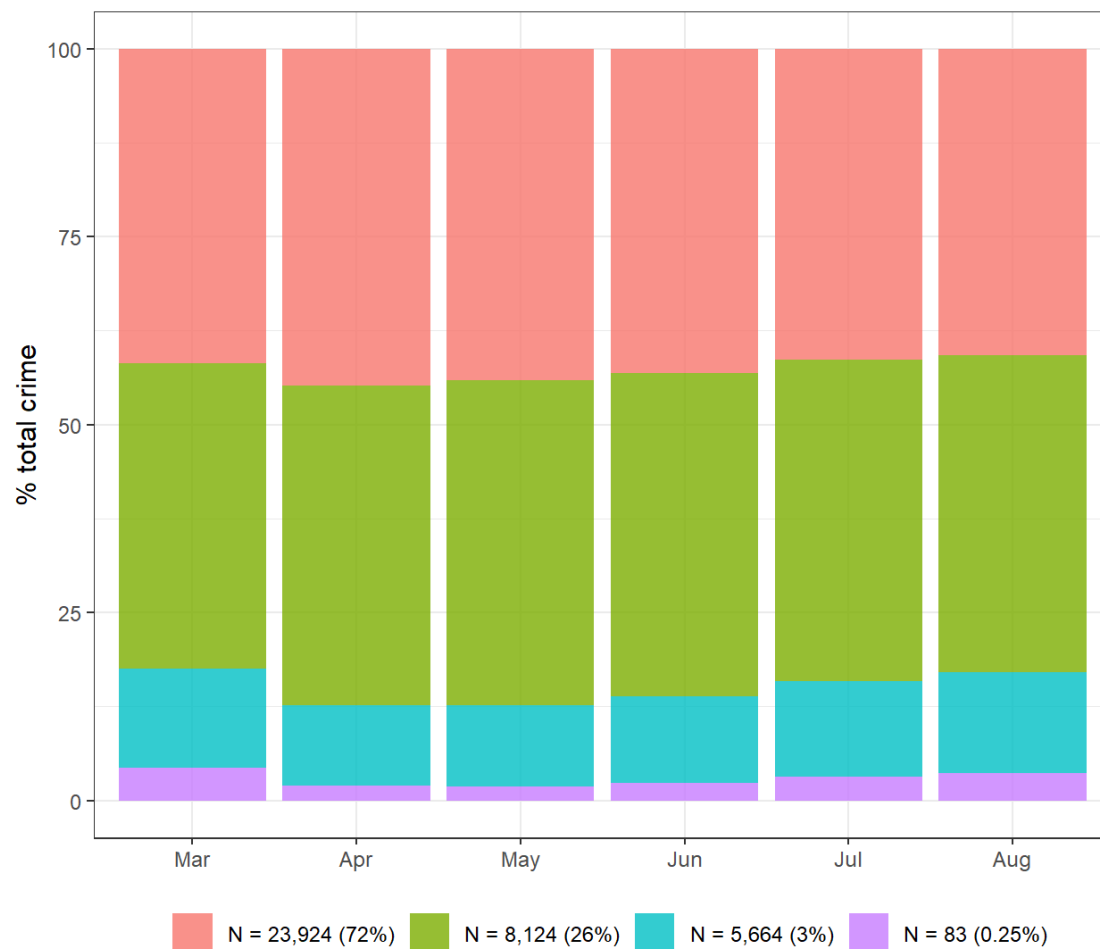


Figure 6: K-means cluster solutions. Proportion of total crime attributable to each cluster.

### Anti-social behaviour

- The increase in ASB appears to have been experienced uniformly across clusters.
- As with notifiable offences, the proportion of total crime attributable to very low and very high ASB clusters fell during the start of lockdown.
- It is the mid-cluster, comprising only 23% of LSOAs in England and Wales, that swelled in April.
- That said, there has still been remarkable stability, given the dramatic change that occurred.



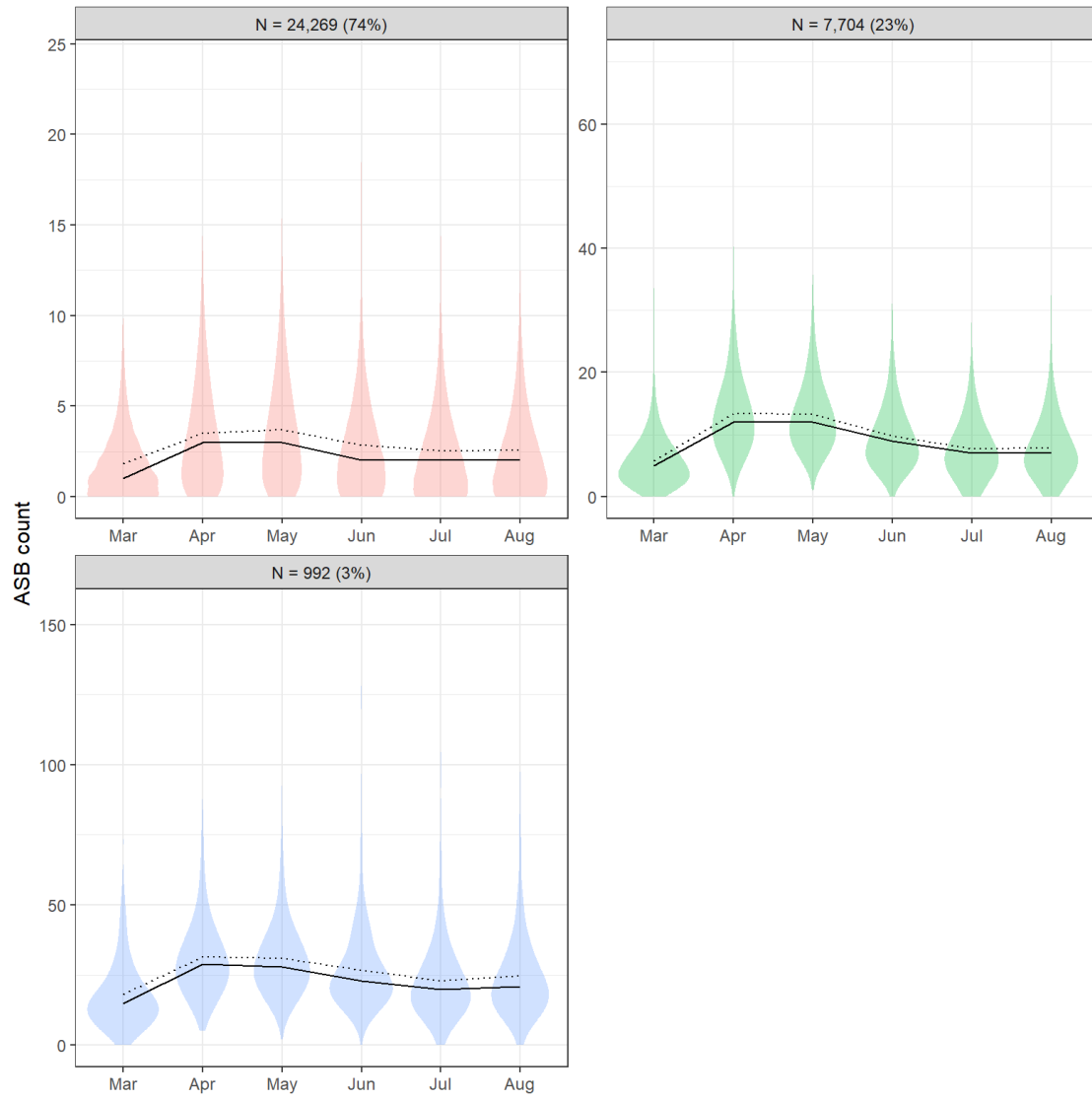


Figure 7: K-means cluster solutions for LSOA ASB.

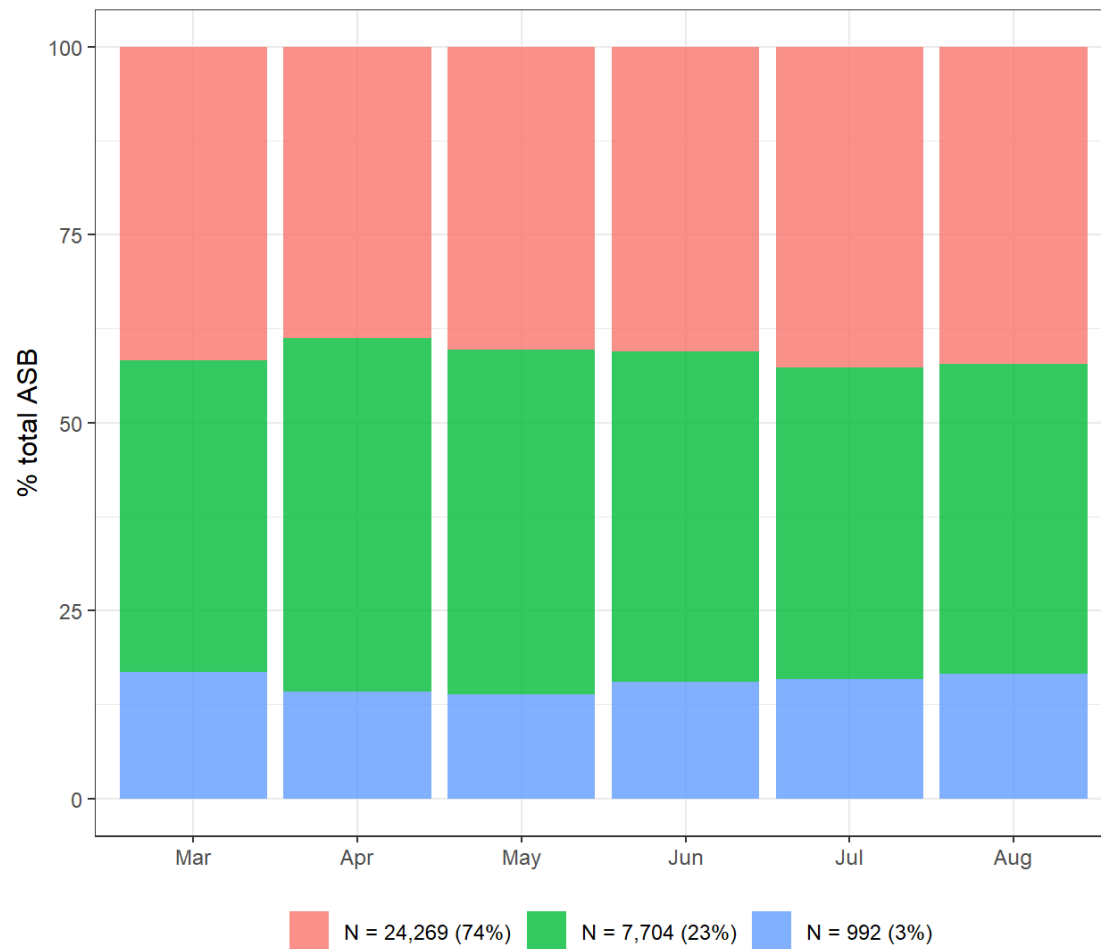


Figure 8: K-means cluster solutions for LSOA ASB.

Spatial distribution of clusters

Characteristics of clusters

Discussion