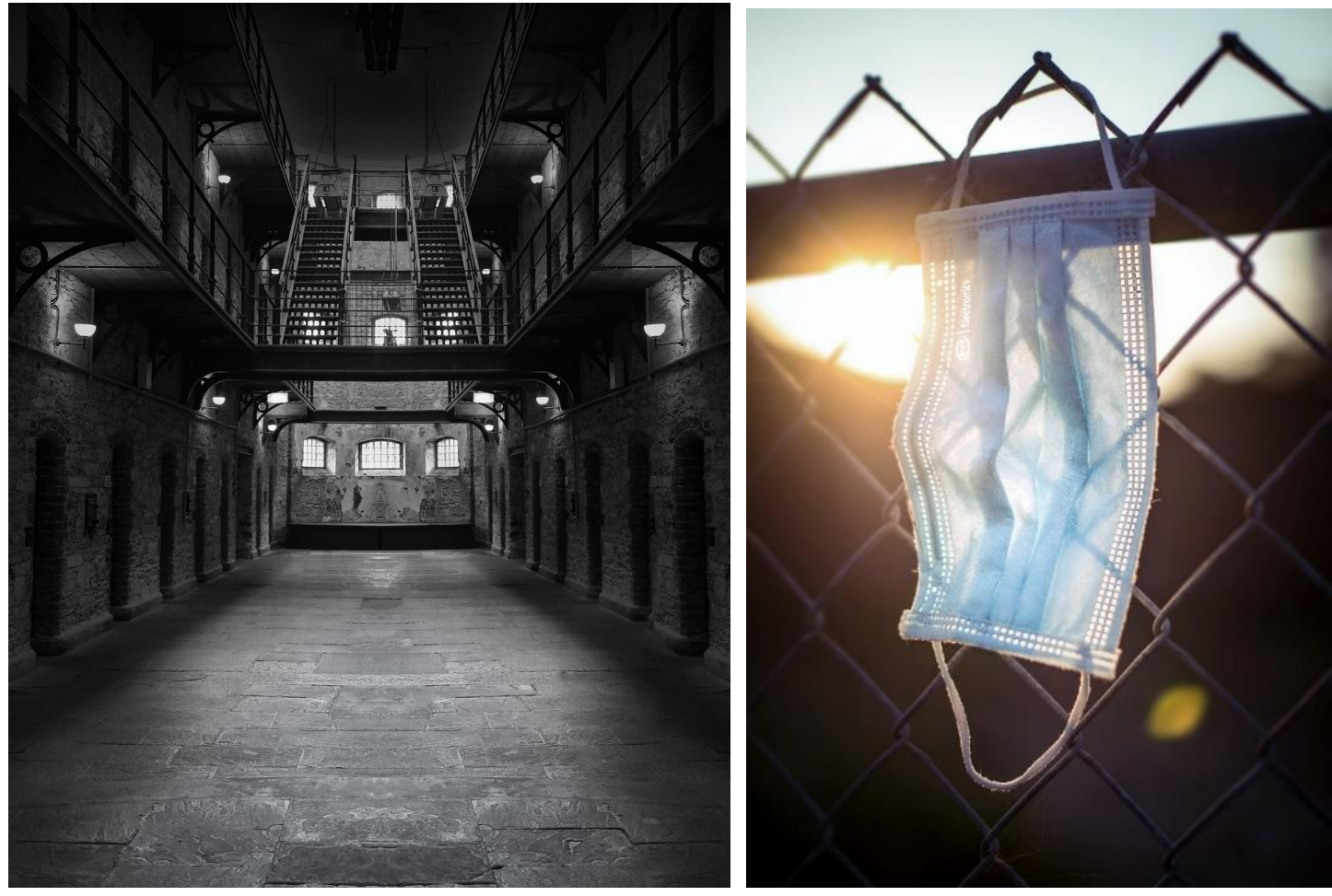


The impact of COVID-19 on the delivery and receipt of prison healthcare in the UK: an interrupted time series

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Introduction



- Healthcare in prisons has changed significantly since the Covid-19 pandemic began - both positive and negative.
- Greater use of telephone or video medical appointments, distribution of medications, referrals to acute hospital care for emergency treatment only.
- Research mainly on impact on mental health and risk of COVID-19 infection

We do not understand impact on day-to-day prison healthcare or whether recovered to pre-pandemic rates.

Methods

Aim of the analysis is to assess and compare changes in prison healthcare activity before and during COVID-19.

13 prisons in North of England for a range of outcomes, 24 months prior to March 2020 (**Pre-COVID phase**) and April 20 to July 21 (**COVID phase**)

Interrupted Time Series Analysis

- Mixed effect models, account for:
- individuals' characteristics and time in prison
 - correlation over time within prisons
 - variation between prisons

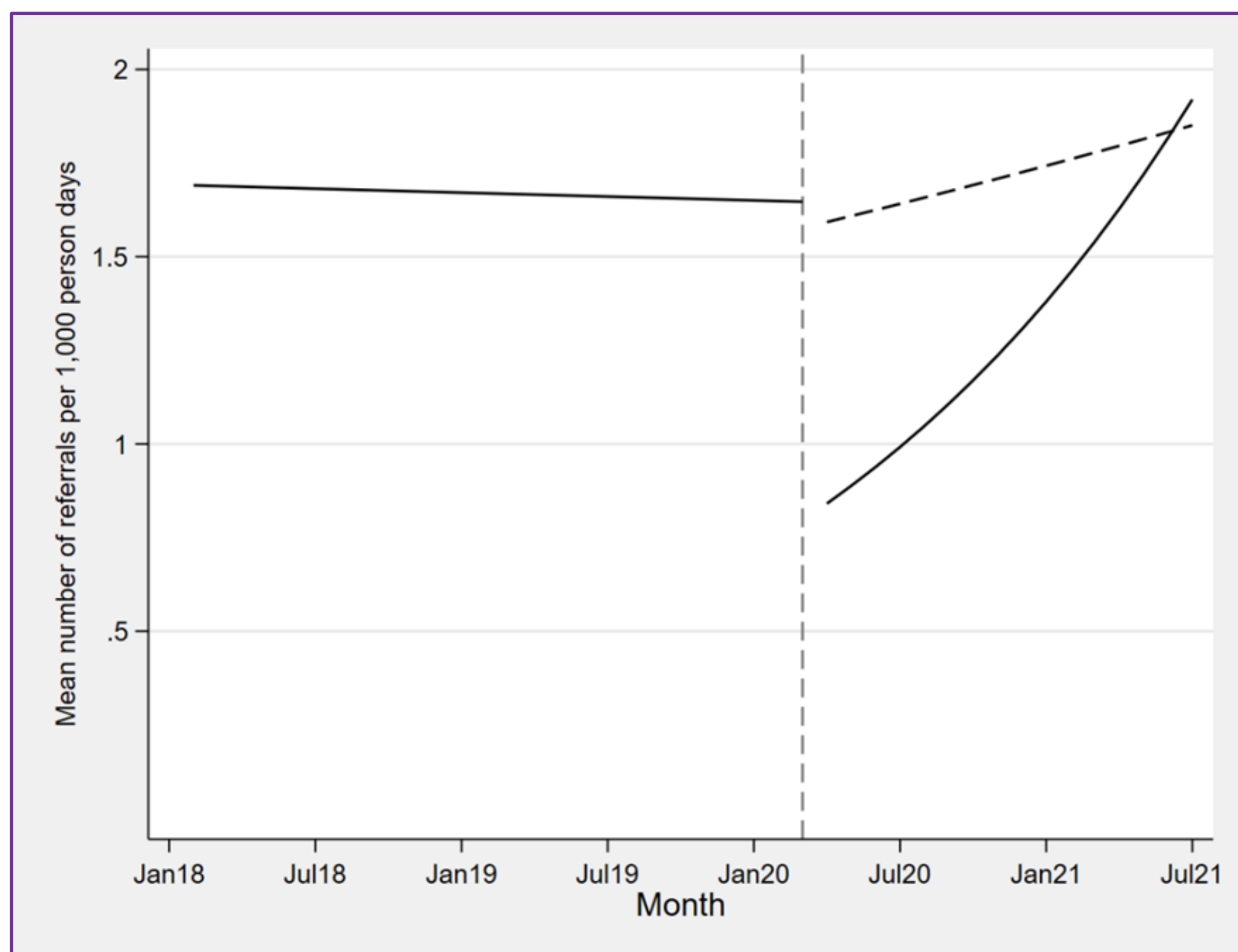
Two Stages of modelling

Negative binomial model mixed effects model
– estimate of outcome per person per month accounting for individual characteristics and time in prison

Prison level aggregated negative binomial mixed effects model – estimate of mean number of outcomes per 1000 person days per month accounting for prison variation

Results and Conclusions

Estimated mean number of referrals per 1,000 person days by a prison clinician to hospital or community care, including 'two week wait' referrals in the month



Hashed line represents the estimate of number of referrals if no lockdown i.e., trajectory pre-pandemic applied to people in prison during pandemic

Ratio of expected and actual referrals by month ranged from:

- lower than expected at beginning of pandemic: 0.58 (95% CI 0.44, 0.71) to
- similar ratio by July 2021: 1.14 (0.92, 1.47)

There were three main patterns of the outcomes over time, in the pre-COVID and COVID phases

Pre-pandemic static Sharp decline Not yet recovered

- Referrals to hospital
- Pregabalin
- Hep B vaccine
- PPV vaccine

Pre-pandemic increase/static Static in pandemic

- Second reception screen
- Breast, bowel, cervical screening
- Flu vaccine
- MMR vaccine

Pre-pandemic static Sharp decline Higher than pre-pandemic

- Consultations with GP/ANP
- Consultations with nurses/HCSW
- Sexual health appointments
- Medications: antidepressants & antipsychotics, Buprenorphine, Methadone, Chlordiazepoxide, Pabrinex & Thiamine

Pre-pandemic fall Continue in pandemic

- Gabapentin

The impact of COVID-19 on prison healthcare was mixed, although the mental health crisis was clear. Day-to-day healthcare needs should be incorporated into planning for future threats.