COVID-19 and illicit drug offence trends, March to June 2020

Source: Queensland Police Service unpublished data, extracted 10 July 2020

Key findings

- While overall recorded offences decreased during the months immediately following the implementation of COVID-19 containment measures, recorded illicit drug offences increased. This increase was above forecast estimates for March to June 2020 based on historical data. Recorded offences includes those reported to and detected by the police.
- Increases in illicit drug offences and illicit drug offenders were largely driven by rises in minor drug offending, which were higher than predicted in April, May and June 2020.
- Rate increases in minor illicit drug offenders were evident in April, peaked in May and began to fall in June and occurred across all regional and demographic groups examined.
- The magnitude and significance of minor illicit drug offender growth differed across groups with:
  - the most sustained increases in minor illicit drug offenders occurring in major cities and inner regional areas and highest occurring in remote regions
  - increases higher for female than male minor illicit drug offenders
  - similar increasing trends occurring for Aboriginal and Torres Strait Islander and non-Indigenous minor illicit drug offenders
  - increases more apparent for adult than youth minor illicit drug offenders.
- Changes in minor illicit drug offending are likely to be explained by a complex interplay of various factors including disruptions in the availability and accessibility of illicit substances, the possible exacerbation of the social determinants of illicit drug use, redeployment of police services and changes in crime reporting by the public potentially occurring in the context of COVID-19 containment measures.

Introduction

Recent analyses undertaken by Queensland Government Statistician's Office (QGSO) found that the total recorded offence rate in Queensland decreased following the implementation of strategies aimed at reducing the impact of the COVID-19 pandemic, while the illicit drug offence rate increased (QGSO 2020). This research paper expands on these initial analyses by describing research conducted to better understand illicit drug offence trends taking place in Queensland between March and June 2020. The research involved comparing actual illicit drug offence trends to previous and predicted trends and examining if increases in illicit drug offences were experienced consistently across different Queensland regions and demographic groups.

The paper commences by providing background information to assist with the interpretation of research findings presented in this paper, followed by a description of the data and research methods used. Research findings are then subsequently presented and discussed.[1]

Background

This section provides information on the containment measures introduced to limit the spread of COVID-19 and discusses how these may have impacted recorded offences.

COVID-19 containment measures

Following the declaration of a global COVID-19 pandemic on 11 March 2020, Australia's Commonwealth and state and territory governments began imposing containment measures to minimise transmission of the disease. These measures included broad-scale social–distancing protocols, border closures, quarantining of high-risk individuals and closure of businesses in certain industries.

[1] Data presented in this report may differ from those published elsewhere by QGSO and others, due to differences in counting rules applied and data extraction dates. Readers are therefore urged to exercise caution when making comparisons between publications.

Social-distancing regulations were introduced in Queensland in mid-March, with limits on large non–essential public gatherings and smaller indoor gatherings, and the requirement for individuals to stay 1.5 metres apart. Border controls, closures of non-essential businesses and services, and restrictions on individual movement and gatherings then quickly followed. By the end of March, Queensland's borders were closed to all but local residents, essential travellers, and freight, travel outside the home was limited to only essential purposes, and only two visitors per household were permitted. Schooling was also largely carried out online. These high–level containment measures were maintained throughout April, with the first easing of containment measures commencing in the beginning of May. Containment measures were then progressively eased and by the end of May all students had returned to school, non–essential businesses and services were permitted to re-open at reduced capacity, residents were allowed unlimited recreational travel within the state, and up to 20 visitors per household were allowed.

As shown in Figure 1, community mobility in public spaces such as retail and recreation premises, transit stations, and workplaces started to decrease in mid-March and had fallen dramatically by April, in line with the increasing COVID-19 containment measures. Meanwhile, mobility in residential areas increased, showing that people were spending more time at home and less time 'out-and-about'. With the gradual easing of containment measures, community mobility in public spaces has increased, but is yet to return to pre-COVID-19 levels as of the end of June.

Measuring the impacts of containment measures on crime

Routine activity theory suggests that three elements must converge for a crime to occur: motivated offenders, suitable targets and the absence of capable guardianship (Cohen and Felson 1979).[2] Changes in crime trends were therefore anticipated in the COVID-19 context given the possible disruption of these elements due to COVID-19 containment measures. For example, the closure of some retail spaces reduces opportunities for theft and more people working from home increases neighbourhood guardianship.

To determine whether rates and patterns of crime changed after the introduction of COVID-19 containment measures in Queensland, QGSO estimated the expected incidence of crime using forecasting techniques. This enabled a comparison of observed crime (what actually happened) between March and June 2020 in relation to predicted crime trends (what could be expected if COVID-19 containment measures were not introduced). If the observed rates of crime significantly differ from expectations, it could be concluded that the differences are likely due to the pandemic and the introduction of associated containment measures.

The initial analyses showed that Queensland's rate of total offences decreased following COVID-19 containment measures, with lower overall offence rates compared with preceding months and also with the same period in the previous year (see Figure 2). Indeed, in March, April, May and June 2020, the offence rate was significantly lower than expected, falling below the 95% prediction interval[3] for each month.

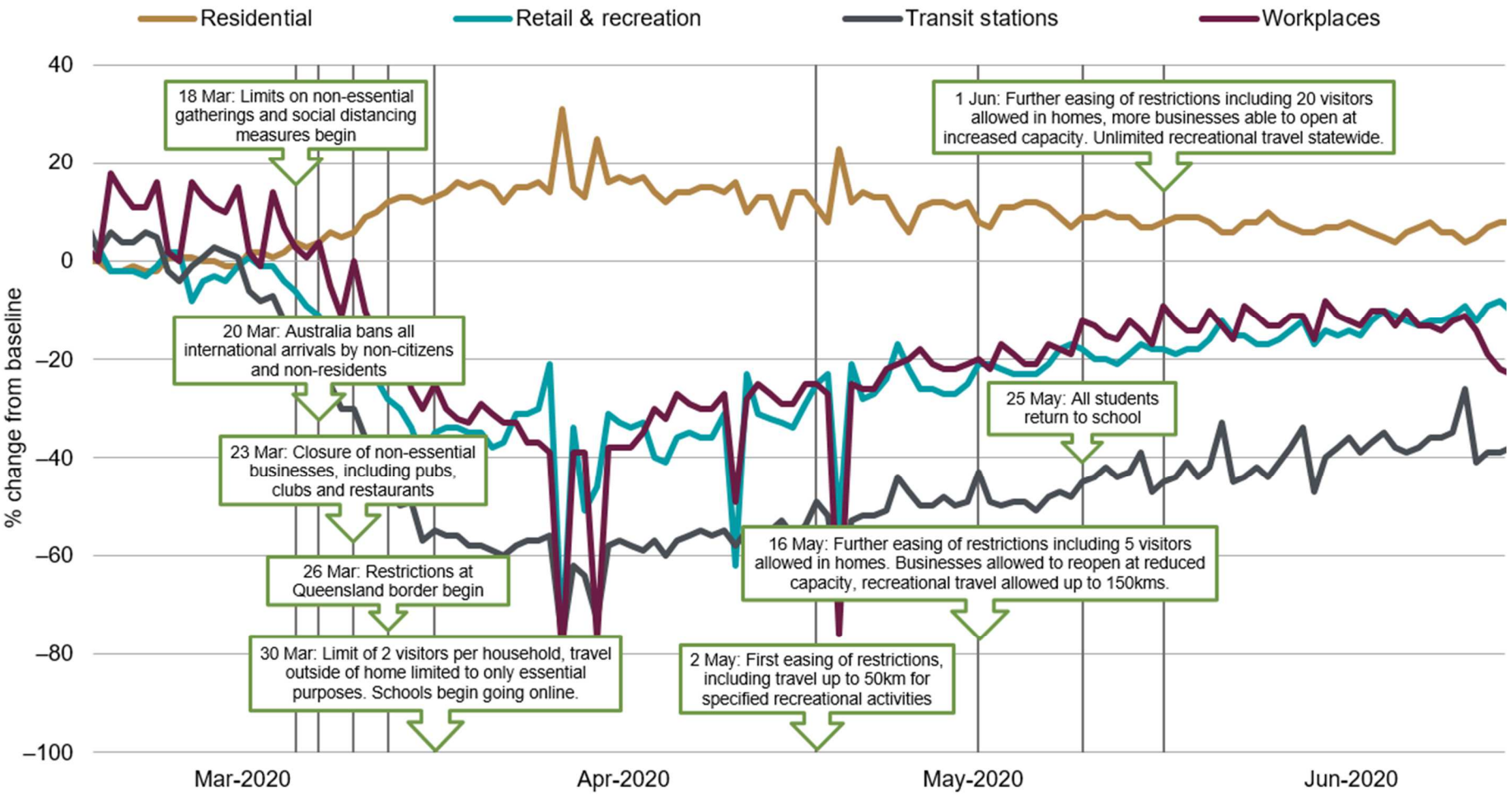
The forecasting also showed (data not displayed) that lower than expected offence rates were most apparent for property offences (which were 35–40% lower than forecast for April to June) and that rates of offences against the person were lower across all months under examination (with significant differences observed in April and May and a return to near forecast levels in June). Rates of 'other' offences performed quite differently over the March–June period, initially declining slightly below the 95% prediction interval in March before returning almost to the forecast rate for April, and exceeding forecasts for May and June. This pattern was driven by illicit drug offence rates.[4]

[2] Guardianship is 'the physical or symbolic presence of an individual (or group of individuals) that acts (either intentionally or unintentionally) to deter a potential criminal event.' (Hollis-Peel et al. 2011, p. 4).

[3] A 95% prediction interval is the range in which one would expect the forecast value to lie given a 95% probability.

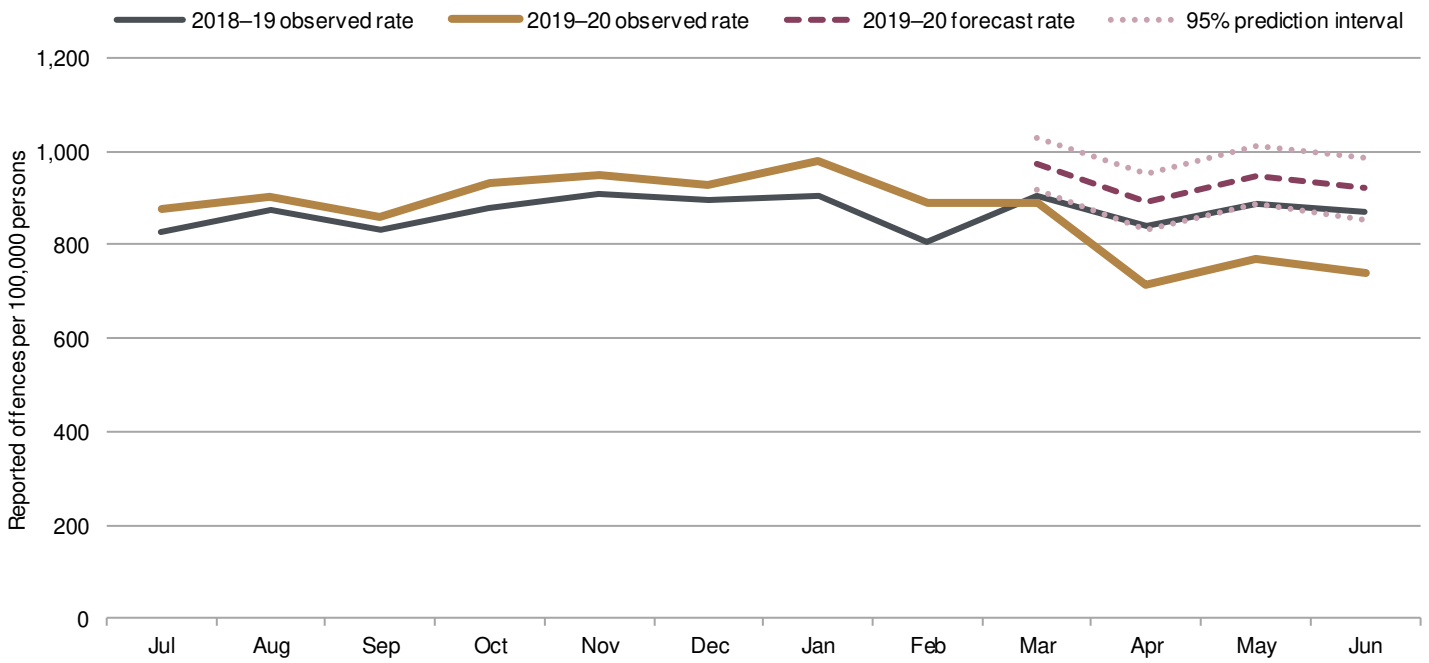
[4] See 'COVID-19 impact on crime, March to June 2020' for further information regarding forecasting work, including information on data definitions and method of analysis (QGSO 2020).

Figure 1 Queensland community mobility trends[5] and timing of COVID-19 containment measures



[5] Data were sourced from Google's (2020) *COVID-19 Community Mobility Reports* and provides a measure of how visits and length of stay at different locations changed compared to the baseline period (3 January to 6 February 2020).

Figure 2 Monthly rates of total recorded offences



Method

The following section describes the data and methods used to explore Queensland's illicit drug offending patterns following the introduction of containment measures aimed to reduce the impact of the COVID-19 pandemic.

Rates and classifications

Administrative data from the Queensland Police Service (QPS) forms the basis of the quantitative analyses presented in this paper. These data were derived from information on offences recorded in Queensland Police Records and Information Management Exchange (QPRIME). Specifically, data were selected for all offences that were able to be mapped to the Australian Standard Offence Classification (Queensland Extension) (QASOC),[6] and for offences where an alleged offender had action taken against them by police (e.g. arrest, summons, warrant, caution, restorative justice conference or other action). Offences that had been actioned were used because they provide demographic information about the alleged offender (hereafter referred to simply as 'offender').

Counts of offences and offenders were converted to rates per 100,000 persons so that direct comparisons across time, regions, and demographic groups could be made. To calculate offence and offender rates, estimated resident population (ERP) figures from the Australian Bureau of Statistics (ABS) were obtained for single year of age by sex and Indigenous status,[7] and for Queensland statistical areas level 2 (SA2).[8] [9] SA2 regions were assigned a remoteness level based on their average Accessibility/Remoteness Index of Australia (ARIA+) score.[10] Offence rates were calculated monthly per

[6] QASOC (https://www.qgso.qld.gov.au/about-statistics/statistical-standards-classifications/australian-standard-offence-classification-queensland-extension) was developed for use by Queensland agencies when more detail is needed, and is an extension of ABS 1234.0, the *Australian and New Zealand Standard Offence Classification,* 2011.

[7] Single year of age population estimates for Queensland are sourced from ABS 3101.0, *Australian Demographic Statistics, Australia*. Single year of age population estimates for Aboriginal and Torres Strait Islander Australians were obtained from unpublished data from ABS 3238.0, *Estimates and Projections, Aboriginal and Torres Strait Islanders Australians, 2001 to 2024*.

[8] There are 528 SA2s within Queensland. SA2s are one of the spatial units defined under the *Australian Statistical Geography Standard* (ASGS). The ASGS is a hierarchical geographical classification, defined by the ABS, which is used in the collection and dissemination of official statistics. The ASGS provides a common framework of statistical geography and thereby enables the production of statistics which are comparable and can be spatially integrated. SA2 population estimates for Queensland are sourced from ABS 3218.0, *Regional Population Growth, Australia*.

[9] The mid-point ERP of both calendar years in each financial year was used to provide the most accurate estimate of rates. As ERPs for 2019–20 were not available at the time of publication, the population for this year was projected. This was done by calculating the absolute change in ERP between 2017–18 and 2018–19 and adding that value to the 2018–19 ERP to project the 2019–20 ERP.

[10] ARIA+ is an index of the accessibility of places to service centres, or conversely of remoteness of places. Geographical areas are given a score (continuous between 0 to 15) based on the road distance to service towns of different sizes. Scores for regions are derived by averaging scores of

100,000 ERP. Offender rates were calculated monthly per 100,000 ERP for those aged 10 years and over.[11] Adult offenders were defined as those aged 18 years and over, and youth offenders as those aged between 10 and 17 years.[12]

The focus of this paper is ANZSOC Division 10, Illicit drug offences. Illicit drug offences were disaggregated into QASOC offence types and grouped as follows:

- Minor illicit drug offences
  - 10400 Possess and/or use illicit drugs, not further defined
  - 10992 Possession of drug utensils
- Non-minor illicit drug offences
  - 10100 Import or export of illicit drugs, not further defined
  - 10211 Deal or traffic in illicit drugs – commercial quantity
  - 10221 Deal or traffic in illicit drugs – non-commercial quantity
  - 10311 Manufacture illicit drugs
- Other illicit drug offences, nec (not elsewhere classified)
  - 10991 Permitting use of premises for illicit drug offences
  - 10999 Illicit drug offences, nec (remainder).

Illicit drug offences were grouped this way following exploratory analysis that showed that 'minor' illicit drug possession offences followed similar trends in 2019–20 to that observed in 2018–19 and exhibited substantially higher offender rates than the other illicit drug offence types. In contrast, the more serious or 'non-minor' illicit drug offences of importing/exporting, dealing/trafficking and manufacturing had quite low rates and tended to be volatile, with no discernible monthly pattern over the previous year. The two remaining 'other illicit drug offences' also exhibited quite low rates, with the majority of these offences classed as 'not elsewhere classified', and thus best suited to remaining separate from the other categories.

Forecasting

Forecasting was performed to determine whether the observed monthly offence and offender rates since COVID-19 containment measures were introduced in March 2020 were significantly different to what would be expected if the pandemic had not occurred. If the observed rate was outside of the 95% prediction interval, it was deemed to be significantly different. The observed rate was also compared to the forecast point estimate as a measure of the size of difference or change between expected and observed rates.

For each forecast model, three forecasting methods were constructed: an exponential smoothing state space (ETS) model, a non-seasonally adjusted auto-regressive integrated moving average (ARIMA) model, and a seasonally adjusted ARIMA model.[13] Within each model type, the model specification and parameters were automatically selected based on the model with the lowest Akaike Information Criterion (AIC) value. Each of the three resultant models were then compared and the best model chosen based on the best forecast accuracy (i.e. the model with the lowest level of error as measured by the root mean square error (RMSE), mean absolute percentage error (MAPE), and mean absolute scaled error (MASE)).[14] Monthly data from July 2014 to June 2019 was used to train the model, with monthly data from July 2019 to February 2020 used to test the model. Once the best model was selected, offender rates were forecast for March, April, May and June 2020, based on monthly data from July 2014 to February 2020.[15] As noted previously, COVID-19 containment measures were introduced in the latter half of March 2020, with substantial changes in community mobility in Queensland starting in that month as well. It was therefore decided that March 2020 should be forecast, rather than being used as an observed value from which to forecast.

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1 km^2 grid. The index scores can then be classified into five remoteness areas: major cities, inner regional, outer regional, remote, very remote (ABS 1270.0.55.005, *Australian Statistical Geography Standard: Volume 5 - Remoteness Structure*, July 2016).

[11] SA2 ERPs by single year age for 2018–19 and 2019–20 were not available at the time of publication. Remoteness level offender rates were therefore calculated using the entire Queensland ERP, rather than the Queensland ERP for those aged 10 years and over.

[12] Age is based on the offender's age when action was taken against them by police, not the date the offence was reported or the date the offence took place.

[13] Forecasting was undertaken in relation to offence types and demographic or spatial subgroups using offender and/or offence rates.

[14] The RMSE, MAPE and MASE provide measures of forecast error (the difference between an observed value and its forecast) and are therefore useful when evaluating the potential accuracy of a forecast. Model accuracy was assessed by testing how well trained models (July 2014 to June 2019) performed when forecasting the remaining pre-COVID-19 test data (July 2019 to February 2020) and the model with the lowest error values were deemed to be the 'best' model.

[15] Due to the large number of forecast models produced for analysis, the model specification and associated parameters will not be discussed

Limitations

There are a number of limitations to the analysis undertaken for this research paper. These include:

- The data used for analysis relate to recorded offences (including those reported to and detected by police) and do not provide an accurate and true measure of all offending within Queensland. This is because not all offending is reported to, or detected by police, and not all recorded offences are proven in a court of law. Similarly, any increases or decreases in offending in the data may not be indicative of actual changes in offending but could rather reflect changes in police detection and community reporting of offences. Other publications may refer to recorded offences as reported offences.
- Analysis of distinct offender rates captures a cross-sectional snapshot of offenders, rather than examining individual offenders over time. No conclusions can therefore be drawn about whether the number of individual offenders has increased or decreased during the COVID-19 containment measures, or whether the same offenders are just offending more or less often.
- While the discussion section of this paper considers the types of factors potentially influencing the illicit drug offence trends described in this paper, different data and research strategies to those described in this section are required to measure how these factors are possibly impacting illicit drug offence trends.
- The use of forecasting based on historical trends relies on the strength of the relationship between past and future values. Where there is volatility or noise in the data, or low rates available for analysis, forecasts can become less reliable and result in wider prediction intervals, making statistical inference difficult. It is also possible that any divergence from the forecast trends are actually due to other factors, unrelated to COVID-19 containment measures, that occurred at the same time as the pandemic. This is probably unlikely, however, and thus any divergence from the forecast trends will be interpreted as providing evidence of the effects of the COVID-19 pandemic.

Results

The analyses shown in this section involved comparing recorded and forecast rates of illicit drug offences and offenders to explore how the COVID-19 pandemic may have impacted recent illicit drug trends in Queensland. Information is provided in relation to illicit drug offences recorded in 2018–19 and the months preceding COVID-19 containment measures (July 2019 to February 2020) to assist with contextualising recent trends. For the purposes of this research paper, COVID-19 months refer to the months likely to have been impacted by the COVID-19 containment measures (March to June 2020). Variation in illicit drug offender trends occurring after the implementation of COVID-19 containment measures is also shown in relation to region, gender, Indigeneity and age. Readers should note that different scales are used to present findings in figures.

Illicit drug offences increased while overall offences declined

While the rate of total crime decreased in the COVID-19 months (see Figure 2), the rate of illicit drug offences increased. Illicit drug offence rates increased between March and April (from 119.8 to 146.1 per 100,000 persons), peaked in May (191.2 per 100,000 persons), before starting to fall again in June (160.8) (see Figure 3). The offence rates in April, May and June were higher than the preceding three months (which ranged between 117.0 per 100,000 persons in February and 127.0 in January) and higher than the same period in the previous year (which ranged from 131.1 to 141.6 per 100,000 persons). Indeed, in April, May and June 2020, the offence rate was significantly higher than expected, falling outside the 95% prediction interval for each month.

The pattern for distinct offender rates for illicit drug offenders was similar to the pattern for illicit drug offence rates, with an increase in April, peak in May, and a fall in June. Offender rates in both April and May 2020 (146.2 and 193.2 per 100,000 persons, respectively) were significantly higher than expected (115.2 and 149.0 per 100,000 persons, 26.9% and 29.6% above the expected rates, respectively) (see Figure 4). Although the June 2020 offender rate (162.7 per 100,000 persons) was higher than both the previous year and the forecast estimate, it did not quite fall outside the 95% prediction interval.

Figure 3 Drug offence rates (all drug offences)

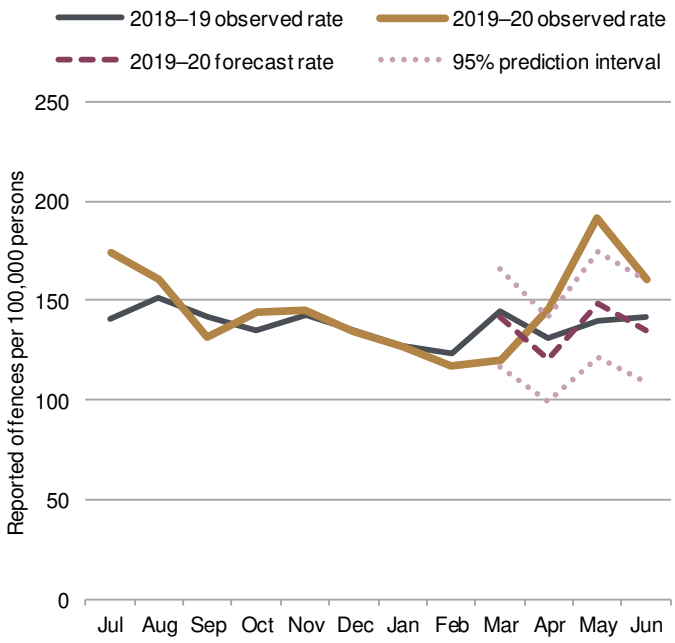
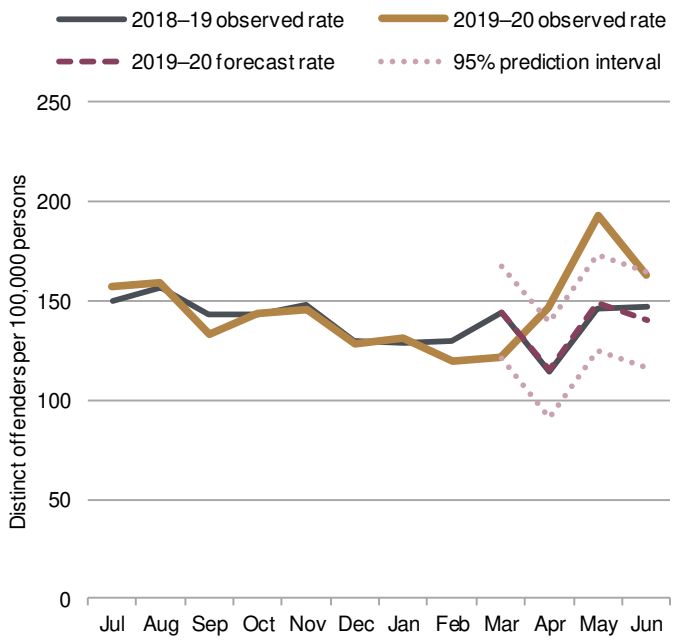


Figure 4 Distinct illicit drug offender rates (all drug offences)



The changes in illicit drug offences were analysed further to determine if they differed by offence type, region, and the demographic characteristics of the offender. Given the volatility of illicit drug offence rates and research interest in demographic factors, only distinct illicit drug offender rates are discussed in the following sections.[16]

Increases in illicit drug offences were driven by minor illicit drug offenders

The overall growth in recorded illicit drug offences during the COVID-19 months appeared to be primarily driven by increases in minor illicit drug offenders, with rates for non-minor and other illicit drug offenders exhibiting more volatility due to their low incidence, but largely following historical trends. Minor illicit drug offences include possession and/or use of illicit drugs or drug utensils, while non–minor illicit drug offences are comprised of import, export, deal/traffic and manufacture of illicit drugs. 'Other illicit drug offences' includes permitting use of premises for illicit drug offences and other illicit drug offences not elsewhere classified. Minor illicit drug offences have much higher offender rates and comprise the majority of drug offenders (approximately 85%), followed by 'other illicit drug offences' (approximately 10%) and non–minor illicit drug offences (approximately 5%).

As shown in Figure 5, for minor illicit drug offences, the offender rates for April, May and June 2020 were significantly higher than forecast. Similar to the offender rates for all illicit offences, minor drug offender rates increased in April (from 101.8 per 100,000 persons in March to 124.3 in April), peaked in May (166.5 per 100,000 persons), before starting to fall again in June (139.9).

As shown in Figure 6, the offender rate for non-minor illicit drug offences during the COVID-19 months followed a similar trend to the previous year and the forecast estimates. Indeed, trends observed for the COVID-19 months did not differ significantly from predicted rates, with the average rate of offending in April, May and June 2020 (7.4 per 100,000 persons) slightly lower, but ultimately quite similar to, the forecast estimates (averaging 8.0 per 100,000 persons).

As shown in Figure 7, although changes in distinct offender rates for 'other illicit drug' offences during the COVID-19 months appeared to increase from the preceding months, from the same period in the previous year, and from the forecast estimates, only the May 2020 peak of 17.9 offenders per 100,000 persons fell outside the 95% prediction interval.

[16] Demographic characteristics of the offender are only available for offender rates. Recorded offence rates can be volatile given that they can reflect targeted police operations and the different ways in which illicit drug offences may be captured in QPRIME.

Figure 5 Distinct minor illicit drug offender rates

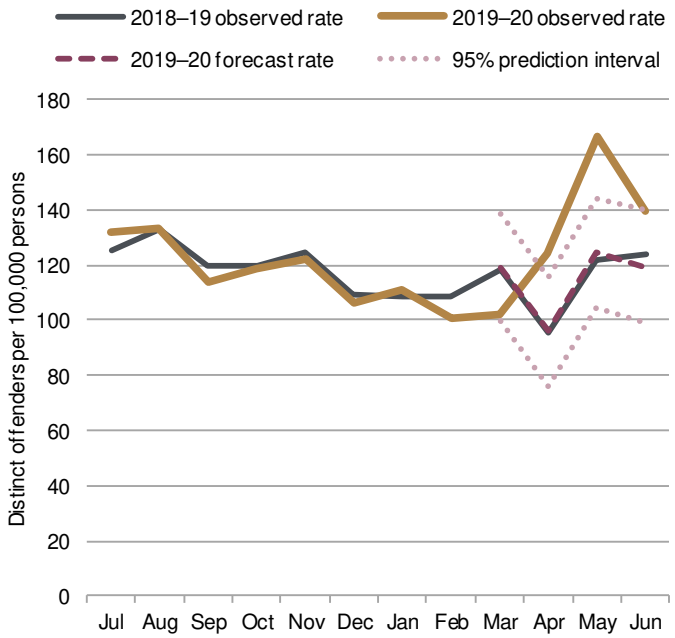


Figure 6 Distinct non–minor illicit drug offender rates

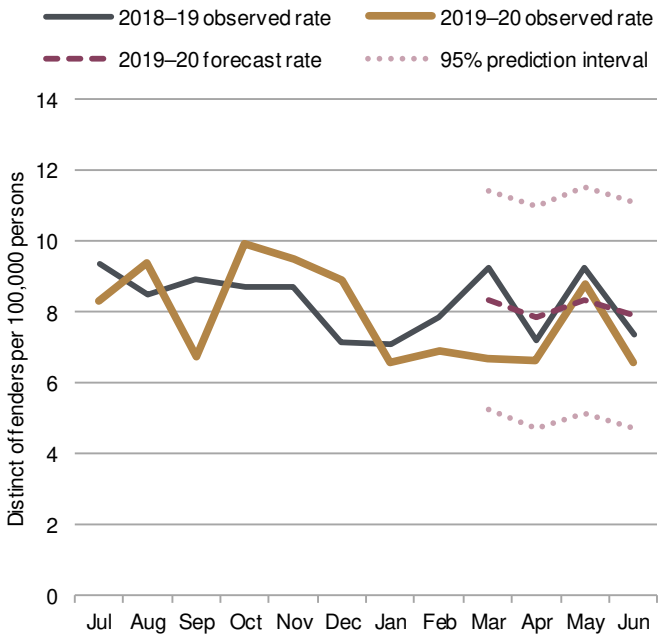
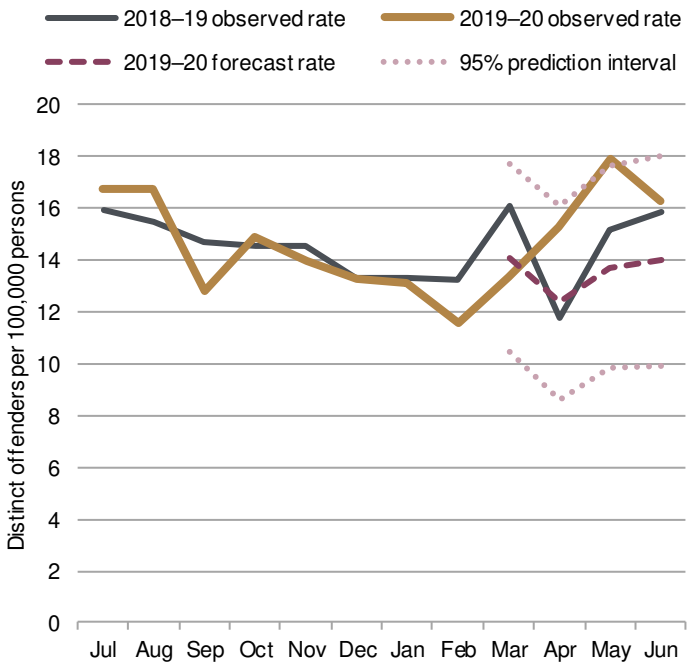


Figure 7 Distinct 'other illicit drug offender' rates



In summary, Queensland has seen a rise in the rates of minor illicit drug offenders relating to possession offences during the COVID-19 months, but relatively unchanged offender rates for 'other illicit drug offence' types (i.e. production/distribution and 'other'). As such, only minor illicit drug offenders will be examined further for regional and demographic differences.

Increases in minor illicit drug offenders occurred across Queensland

Regional differences in minor illicit drug offending were examined based on ABS classification schemes. Overall, the rate of minor illicit drug offenders was higher in the more regional and remote areas of Queensland, with offender rates at their highest in the outer regional areas, followed by remote and very remote, inner regional, and major cities.[17]

For each region, there was a general trend for increases in the rate of minor illicit drug offenders in April and May 2020, and a fall in June 2020 (see Figure 8 through Figure 12). However, for minor illicit offenders in very remote regions, these increases were not significantly higher than expected and largely followed the previous and expected trends. Major cities and inner regional minor illicit drug offenders exhibited the most sustained increases during the COVID-19 months, with significantly higher than expected offender rates throughout April, May and June 2020. Meanwhile, minor illicit drug offenders in the outer regional and remote regions exhibited offender rates that were significantly higher than expected in April and May 2020.

Nevertheless, offenders in the remote regions exhibited very sharp increases in minor drug offending from March to May 2020 (162.7%), compared with major cities (63.4%), inner regional (48.4%) and outer regional areas (74.5%). Remote regions also displayed the greatest difference from the forecast estimate in May 2020, at 60.2%, compared with other regions where differences ranged from 34.3% in major cities to 45.5% in inner regional areas. Outer regional minor illicit drug offenders experienced significantly lower than expected offender rates in March 2020.

Figure 8 Major cities minor illicit drug offender rates

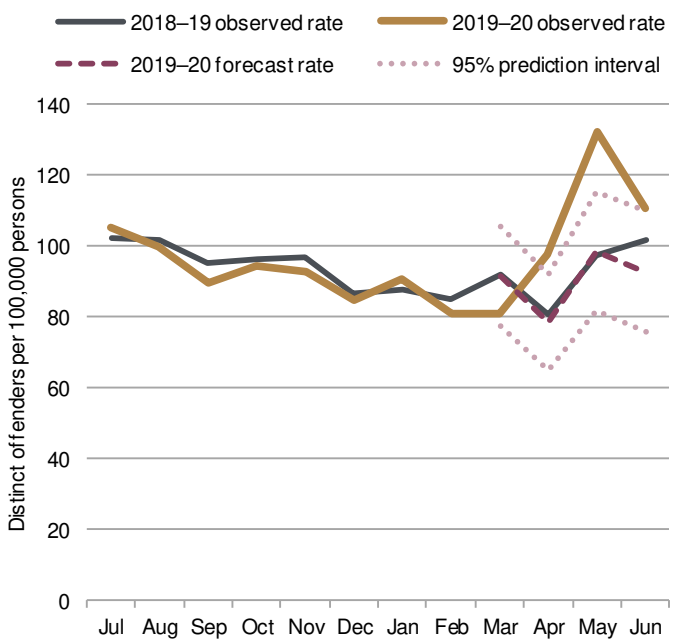
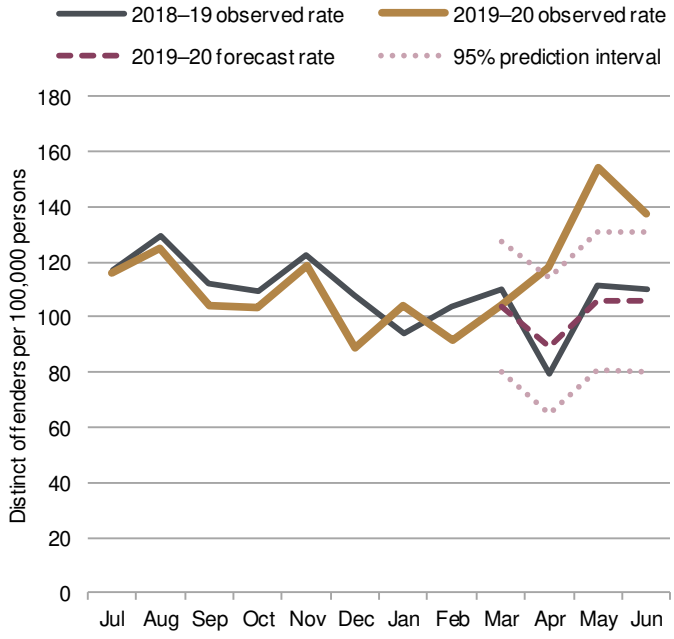


Figure 9 Inner regional minor illicit drug offender rates



[17] Major cities includes places such as Brisbane and Southport; inner regional includes places such as Toowoomba and Bundaberg; outer regional includes places such as Cairns and Townsville; remote includes places such as Mount Isa and Palm Island and very remote includes places such as Charleville and Mornington Island.

Figure 10 Outer regional minor illicit drug offender rates

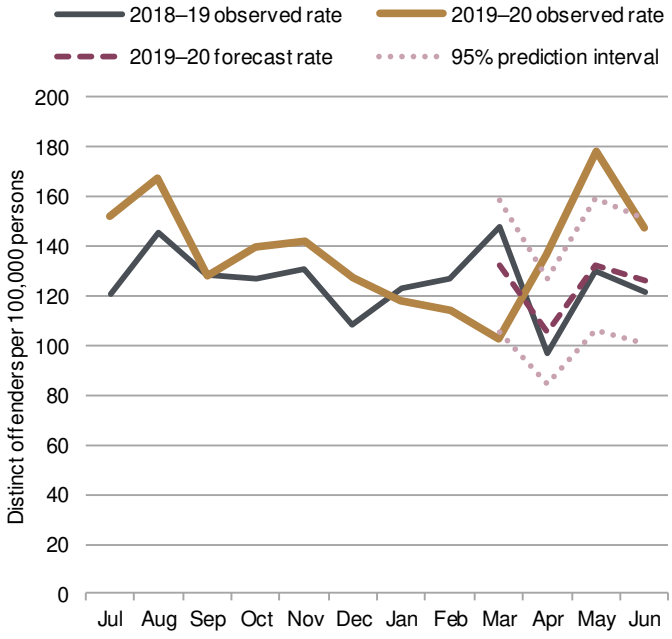


Figure 11 Remote minor illicit drug offender rates

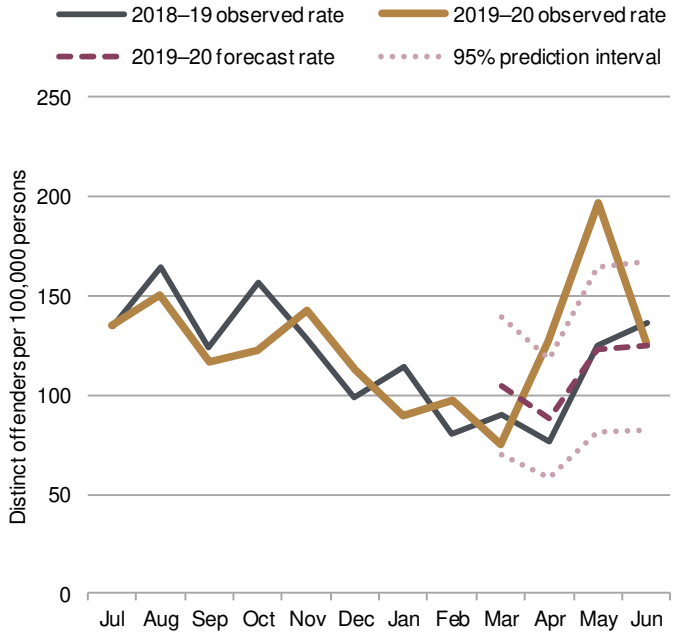
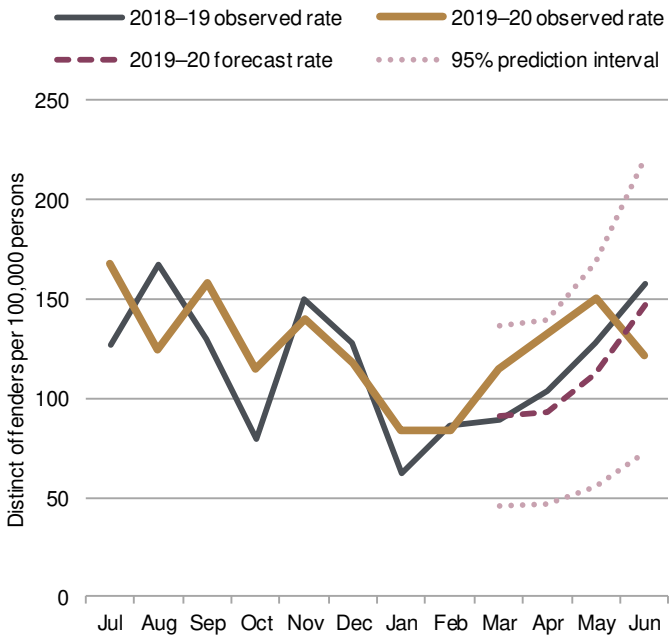


Figure 12 Very remote minor drug offender rates



Increases in minor illicit drug offenders occurred for men and women

Offender rates differ for male and female minor illicit drug offenders, with male offender rates more than twice as high as female offender rates. However, male and female minor illicit drug offender rates followed similar trends in the COVID-19 months. The rates for both male and female minor illicit drug offenders increased in April, peaked in May, and then decreased in June 2020 (see Figure 13 and Figure 14), with April and May 2020 significantly higher than expected. However, female offenders exhibited slightly higher increases from March to May 2020 (68.4%) compared with male offenders (61.6%), and also displayed a greater difference from the forecast estimate in May 2020 (38.2% for female offenders compared with 31.9% for male offenders).

Figure 12 Female minor illicit drug offender rates

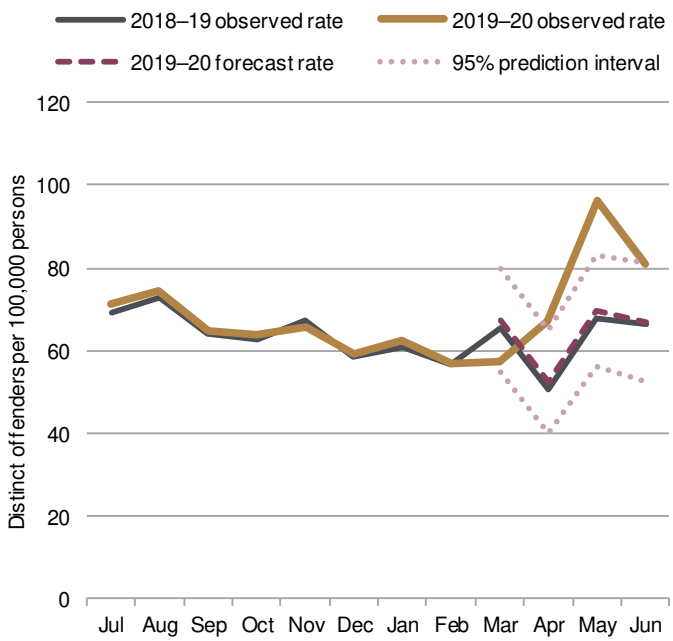
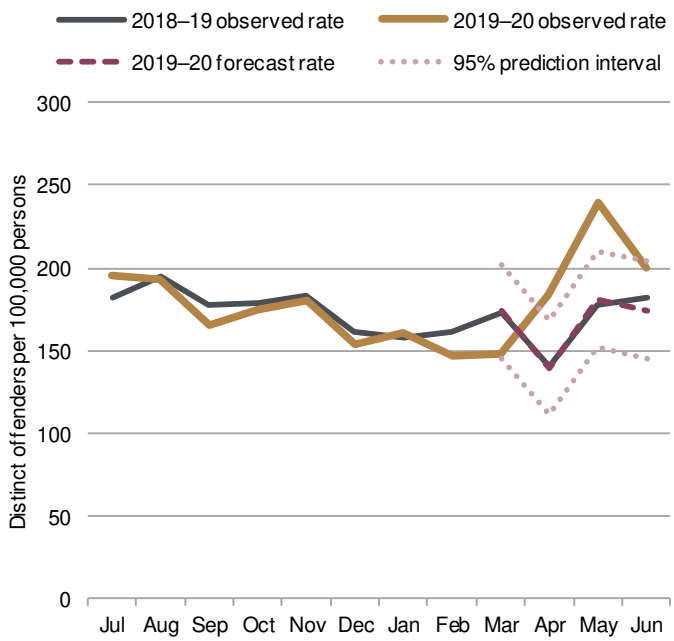


Figure 13 Male minor illicit drug offender rates



Increases in minor illicit drug offenders occurred regardless of Indigeneity

Increases were observed for both Aboriginal and Torres Strait Islander and non–Indigenous minor illicit drug offenders during the COVID-19 months, each experiencing an increased rate of offending in April, peaking in May, followed by a decrease in June 2020 (see Figure 15 and Figure 16). Offender rates in April and May 2020 were significantly higher than expected for both Aboriginal and Torres Strait Islander and non-Indigenous offenders, with March 2020 significantly lower than expected for non-Indigenous offenders. Although Aboriginal and Torres Strait Islander offenders exhibited far greater differences from the forecast estimate in May 2020 (61.0%) compared with non-Indigenous offenders (30.9%), both groups experienced similar increases in offending from March to May 2020 (60.2% and 64.3%, respectively).

Figure 14 Aboriginal and Torres Strait Islander minor illicit drug offender rates

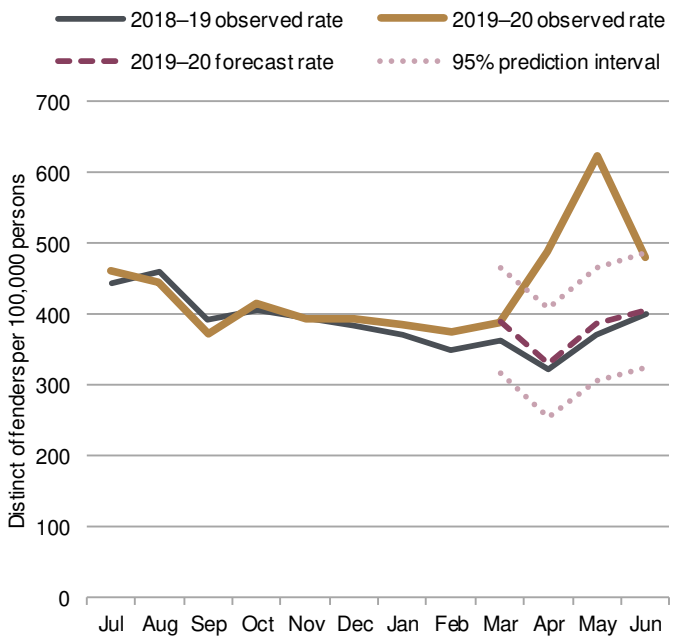
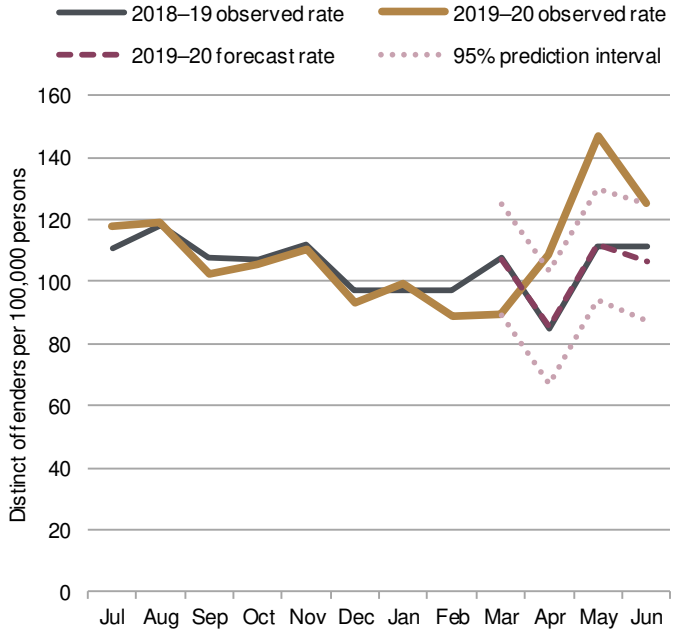


Figure 15 Non–Indigenous minor illicit drug offender rates



Increases in minor illicit drug offenders occurred for adults and youth

Minor illicit drug offender rates are generally higher among adults (people aged 18 and over) than young people. Nevertheless, both adult and youth minor illicit drug offenders exhibited an increase in rates in April, peaking in May, followed by a decrease in June 2020 (see Figure 17and Figure 18).

Growth in the rate of adult minor illicit drug offenders was quite substantial from March to May 2020, increasing by 65.8% from 104.7 per 100,000 persons in March, to 173.6 in May. The increases in April, May and June were all outside of the 95% prediction interval, indicating that rises in adult minor illicit drug offender rates for April through June 2020 were significantly higher than expected. Although youth minor illicit drug offenders also exhibited a substantial increase, increasing by 40.5% from 80.8 per 100,000 persons in March, to 113.6 in May, only the April 2020 rate was significantly higher than expected.

Offenders between 20 and 49 years of age exhibited the most sustained increases during the COVID-19 months, with significantly higher than expected offender rates throughout April, May and June 2020 (data not shown).

Figure 16 Adult minor illicit drug offender rates

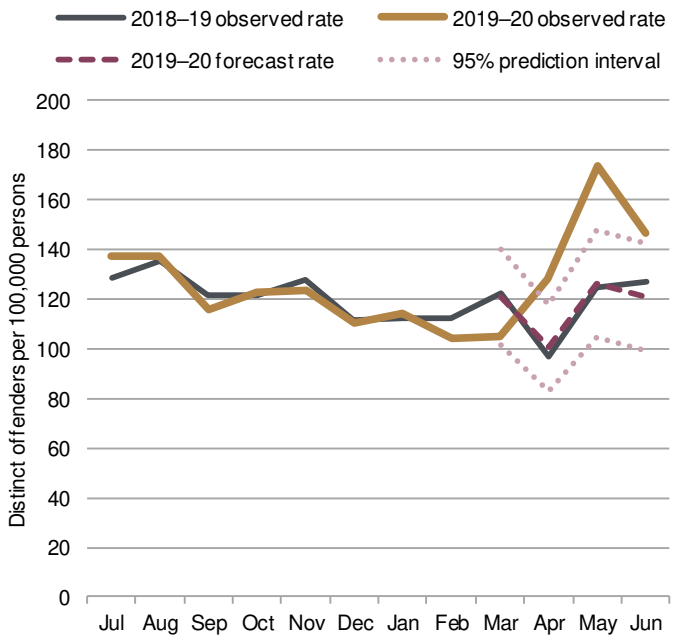
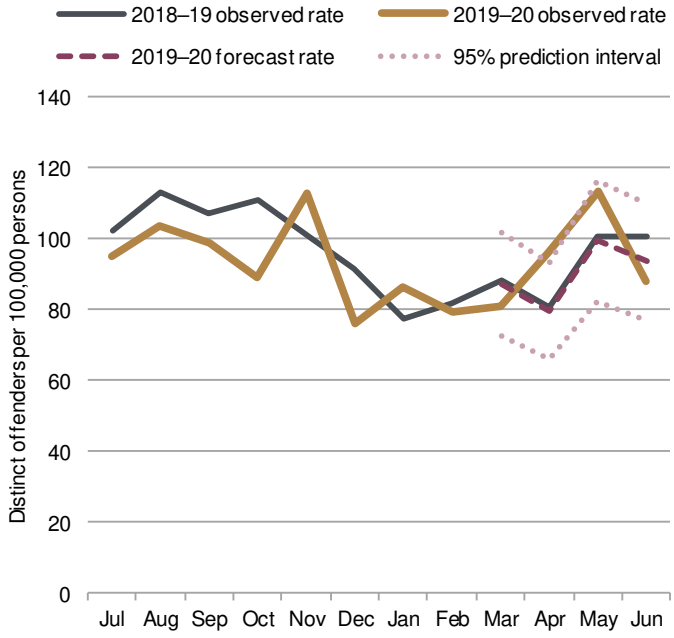


Figure 17 Youth minor illicit drug offender rates



Discussion

The rates of illicit drug offences and offenders were found to increase in April, May and June 2020, despite overall offence rates decreasing. These increases coincided with the introduction of COVID-19 containment measures and, importantly, were found to be significantly higher than expected if the pandemic had not occurred (particularly for May). As such, it is highly likely that observed changes in illicit drug offending throughout the COVID-19 months were due to the effects of the pandemic and its associated containment measures. In line with the easing of these measures in June, the beginning of a fall in illicit drug offence and offender rates was observed in June. As further easing of containment measures has occurred throughout July for Queensland, continued monitoring of offence trends is needed.

The observed increases in illicit drug offending appears to be largely driven by minor offending (i.e. possession) rather than more serious offending, such as production and distribution of illicit drugs. Of note, the general COVID-19 monthly trends for minor illicit drug offending were found to be remarkably similar across different groups. There was a rise in rates in April, a peak in May, and a fall in June across all regional and demographic groups examined. However, the magnitude and significance of these changes did differ across groups, but not greatly so.

Regionally there was some variation, with the most sustained increases in rates being observed for offenders in major cities and inner regional areas, the biggest overall rate increases were for offenders in remote regions (although there was a sharp return to normal in June 2020), and no change in trends were observed for offenders in very remote regions. Increases from March to May 2020, and between the observed and forecast rates, were somewhat greater for female than male offenders. Aboriginal and Torres Strait Islander and non-Indigenous offenders may have been similarly

affected, with comparable increases in offender rates from March to May 2020, but much higher increases from the expected rates for the Aboriginal and Torres Strait Islander population. Both adult and youth minor illicit drug offenders exhibited an increase in rates in April, peaking in May, followed by a decrease in June 2020. Increases were higher for adult offenders than youth offenders.

The growth in illicit drug offences and illicit drug offenders during COVID-19 months is likely to reflect a complex interplay between several factors, including disruptions to the supply of illicit substances, changes in the demand of illicit substances and changes to the detection of illicit drug offences. These are discussed in more detail below.

Disruptions in the availability and accessibility of illicit drugs

The COVID-19 pandemic and associated containment measures are expected to have considerable implications for illicit drug supply and how people access illicit drugs (Peacock 2020; United Nations Office on Drugs and Crime (UNODC) 2020). For example, the closure of state and international borders and restrictions on movement are likely to disrupt the production, trafficking and supply of illicit drugs worldwide (UNODC 2020)[18] and the remoteness of Australia and its reliance on the importation of illicit drugs mean that it is particularly susceptible to the restrictions placed on international travel.[19] The extent to which COVID-19 containment measures have resulted in illicit drug shortages in Queensland in the short-term is currently not known. However, real or perceived illicit drug shortages may have led to some illicit drug users engaging in risky attempts to stock up on illicit drugs in the earlier stages of the pandemic (Dietze and Peacock 2020; Sutherland et al. 2020).

Social distancing measures and restrictions on movement are also likely to impact the contexts in which people access illicit drugs (Dietze and Peacock 2020). From late March, there were limits on social gatherings in homes, along with the closure of pubs, bars and nightclubs, and the cancelling of music festivals.[20] Further, as streets became less crowded, face-to-face illicit drug dealing and public illicit drug use may have been more visible to police and onlookers. While this may have led some illicit drug users to seek alternative avenues to access illicit drugs (e.g. online marketplaces) and modes of illicit drug delivery (e.g. postal), those who continued to access illicit drugs in person and in social settings may have been more likely to be detected (Dietze and Peacock 2020; Sutherland et al. 2020). This would have been particularly relevant in April and May as the most stringent containment measures were in place, before being eased at the beginning of June.

Exacerbation of the social determinants of illicit drug use

The health, economic and social consequences of the COVID-19 pandemic may exacerbate the social determinants of illicit drug use (Nicola et al. 2020; Spooner and Hetherington 2005). This includes increases in unemployment, decreases in emotional and mental wellbeing, disruptions to social support networks, and more difficulty accessing support services (ABS 2020a; Dunlop et al. 2020; Queensland Treasury 2020). In particular, the closure of many businesses from mid to late March resulted in significant job losses, with associated outcomes such as increased psychological distress potentially contributing to increased illicit drug use among some users (ABS 2020b; Dom et al. 2016; Nagelhout et al. 2017). The downturn in the job market affected some groups differently. For example, women represent a higher proportion of workers in the hospitality and tourism industries than men, so may have been impacted differently by the job losses associated with these industries (Richardson and Denniss 2020). This may be a possible explanation for why female offenders exhibited slightly higher increases in minor illicit drug offender rates during the COVID-19 months compared with male offenders. Unemployment and underemployment may also explain why adult offenders, particularly those most likely to be in the workforce (from 20 to 49 years of age), exhibited significant and more sustained increases in minor illicit drug offender rates.

Recent surveys of people who use illicit drugs have found that cannabis and alcohol are the most commonly reported substances to have increased in use since COVID-19 containment measures began (Peacock et al. 2020,[21] Sutherland et al. 2020).[22] Conversely, the most commonly cited illicit drugs to have decreased in use were MDMA, cocaine and ketamine (Sutherland et al. 2020). Some respondents suggested that decreases in illicit drug use were associated with

[18] Australia closed its borders to non-citizens and non-residents on 20 March 2020. Border restrictions for those entering Queensland were introduced on 26 March 2020 to only allow local residents, essential travellers and freight.

[19] In 2017–18, between 85–99% of seizures of key drugs such as heroin, cocaine, methamphetamine and 3,4-methylenedioxymethamphetamine (MDMA) were detected at the Australian border (Australian Criminal Intelligence Commission 2019; Dietze and Peacock 2020).

[20] The closure of non-essential businesses in Queensland such as pubs and clubs began on 23 March 2020.

[21] This is an Australian study based on 389 interviews conducted over the phone and via videoconferencing with paid participants who have used illicit drugs at least once monthly in the preceding six months and resided in a capital city for the last 12 months. Participants were recruited through social media and peer referral, with interviews conducted between 25 April and 10 June 2020.

[22] This is an Australian study based on 702 surveys conducted online with participants who have used illicit drugs at least once monthly during 2019. Participants were recruited using convenience sampling, with online survey responses collected between 25 April and 15 June 2020.

less opportunities to use illicit drugs, while increases in use were reported to be the result of boredom and having more time on their hands (Peacock et al. 2020). Further, many respondents reported that their mental health had worsened since the COVID-19 containment measures commenced (Sutherland et al. 2020). Changes in income could also potentially influence patterns of illicit drug use due to increased access, or lack thereof, to disposable income. There were mixed results regarding changes in income (from any source) since the beginning of the COVID-19 containment measures however, with around a quarter (24%) reporting that they were receiving more money, 42% less money, and 34% a similar amount (Peacock et al. 2020).

It is important to note that illicit drug offence trends are an unreliable estimate of the true prevalence of illicit drug use in a population (Weatherburn 2000; Willis, Anderson and Homel 2011).[23] Therefore, increases in illicit drug offender rates do not necessarily mean illicit drug use has increased. Indeed, it is possible that overall illicit drug use has not increased, or has in fact decreased in recent months, but other factors have contributed to the increased visibility and detection of illicit drug offences.[24]

Changes in police activity and crime reporting by the public

The COVID-19 pandemic and associated containment measures involved the redeployment of police to different priority tasks and potentially increased opportunities for the public to detect and report suspicious activity (Hodgkinson and Andresen 2020). This is particularly relevant for the detection of illicit drug offences which are often the result of police activity and reporting by the general public, compared to other offence types (e.g. property and violent offences) which tend to be reported by victims (Hughes et al. 2019; Weatherburn 2000). From late March 2020, increased police presence and powers to enforce public health directions may have provided more opportunities for the detection of illicit drug offences (Queensland Police Service 2020), such as the policing of border checkpoints and checks for compliance with home confinement orders. Further, reductions in legitimate foot and vehicle traffic may have made street illicit drug use and dealing more visible to police and onlookers. As containment measures were eased, there was less cause for police to stop and question members of the public, as well as increased vehicle and foot traffic which may have concealed illicit drug activity. Although the rates of minor illicit drug offenders peaked in May 2020 when containment measures began to ease, historical trends show that rises from April to May are to be expected which may have been compounded by the potential effects of increased illicit drug use occurring in the context of COVID-19. The fall in rates in June 2020, however, is in line with the further easing of containment measures and community mobility slowly increasing in public spaces and decreasing in private spaces.

The natural surveillance and guardianship of neighbourhoods may have increased as more people stayed at home (Hodgkinson and Andresen 2020).[25] [26] This could contribute to decreases in burglary and other property offences, with increased guardianship of residential properties leading to less opportunities for motivated offenders to find suitable targets (Hodgkinson and Andresen 2020). For illicit drug offences, improved natural surveillance in neighbourhoods and the community's commitment to adhering to the containment measures may have increased reporting of suspicious activity.[27] For example, the contexts in which illicit drug use may occur, such as house parties, may be reported as a breach of social gathering rules, as well as suspected illicit drug activities.

Conclusion

The months immediately following the introduction of COVID-19 containment measures is characterised by higher than expected illicit drug offending recorded by the police. The broad ranging health, economic and social impacts of the COVID-19 pandemic may have contributed to these increases in a variety of ways. This includes real or perceived reductions in the availability of illicit drugs, changes in how people access illicit drugs, and increasing unemployment and other outcomes contributing to more frequent illicit drug use. These impacts further interact with changes in police activity and the reporting of crime by the public.

[23] Other data such as drug–related illness, injury and death; support service engagement; wastewater analysis and self-report surveys provide a clearer picture of trends in drug use.

[24] Various research projects are ongoing to monitor the impacts of the COVID-19 pandemic on the experiences of people who use illicit drugs in Australia. This includes the 'Australians' drug use: Adapting to pandemic threats (ADAPT) study'. Other previously established drug use monitoring projects have been adapted to include the assessment of the impact of COVID-19 on drug use, including the 'Ecstasy and related drugs reporting system'(EDRS) and the 'Illicit drug reporting system' (IDRS).

[25] Natural surveillance is a principle of Crime Prevention Through Environmental Design (CPTED) which includes improving the likelihood that suspicious activity will be observed by onlookers, such as having good lighting and ensuring clear lines of sight for onlookers (Queensland Government 2007). More people being at home may improve existing natural surveillance mechanisms in residential areas.

[26] Routine activities theory posits that crime occurs where a suitable target, a motivated offender and a lack of a capable guardian of the crime target converge in time and space (Cohen and Felson 1979). Stay-at-home orders would be expected to improve the guardianship of residential properties.

[27] The Queensland Police Service established a webpage specifically for the reporting of suspicious activity/COVID-19 breaches by the public.

Ongoing monitoring of recorded offences will provide further insight into the impact of COVID-19 on Queensland's illicit drug trends. This work is likely to benefit from understanding the role of community guardianship in the detection and prevention of offences and possible changes occurring within illicit drug markets.

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