

## Forty is the new thirty (for recidivism): Trends in offender age, reimprisonment, and time to desistance among the New South Wales custodial population

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### **Aims**

To examine trends in the age profile of offenders held in Corrective Services New South Wales (CSNSW) correctional centres and how these trends correspond with changes in rates of recidivism (defined here as return to custody) and duration of persistent recidivism and repeat reimprisonment over the life course.

### **Methods**

The study examined custodial episode data for all offenders housed in CSNSW correctional centres between 1990 and 2016 (N = 416,841 episodes) using a series of cross-sectional cohort and longitudinal analytical methods.

### **Results**

Trends data showed that between 1990 and 2016, representation of offenders in most older age brackets (particularly offenders aged over 35 years) increased substantially in terms of raw frequency and proportion of the total custodial population. While the average age of both first-time and repeat custody offenders increased over the timeframe of measurement, repeat custody offenders also comprised an increasing proportion of the custodial population. Results indicated that growth in the number of offenders in older age categories was associated with more offenders being engaged in active cycles of repeat reimprisonment at a later age and for longer periods. Length of custodial episode was not found to account for trends in the age of offenders.

### **Conclusion**

The results of this study suggest that ageing of the custodial population has a relationship with the increasing representation of offenders who exhibit persistent patterns of recidivism and reimprisonment, with their attendant social and other costs, for more prolonged periods over the life course.

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## INTRODUCTION

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An overarching aim of criminal justice systems across jurisdictions is to achieve desistance among offenders. Desistance refers to the process of long-term abstinence from criminal behaviour for those individuals who have shown a previous pattern of offending (e.g. McNeill, Farrall, Lightowler, & Maruna, 2012). In this regard desistance emphasises a reduction or cessation of offending over time, with a focus on those who have a history of chronic offending.

Theories of desistance propose that cessation of offending may be attributed to interactions between changes in individual cognition or antisocial propensity and the development of bonds with social institutions that encourage prosocial functioning in the community (Kazemian, 2007; Maruna, 2001; Longshore, Chang, Hseih, & Messina, 2004). Desistance has been described as an implicit focus of offender interventions (McNeill et al., 2012) because it encompasses processes of both addressing individual risk factors and promoting reintegration into the community.

A central empirical observation that is relevant to desistance is that propensity for offending has a strong relationship with offender age. One of the most well established risk factors for recidivism is age, with a tendency for offending to peak in adolescence before declining at varying rates throughout adulthood (e.g. Moffitt, 1993). The literature on desistance has largely focused on explaining why some individuals cease patterns of repeat offending in adolescence or young adulthood whereas others show persistence into later life.

Age may not be considered a risk factor in itself but rather a proxy for biological and social transitions that in turn drive risk (e.g. Kazemian, 2007; Sampson & Laub, 1992; 1993). Consistent with this, early influential papers by Sampson and Laub (1992; 1993) described a life course

perspective of offending, which proposes that life transitions (e.g. first job) and trajectories (e.g. being a parent) that tend to occur at different stages in life have an influence on internal and external social controls that regulate offending behaviour.

Recent research has indicated that the age composition of serious offenders and those imprisoned in correctional centres is changing. Much of this research has focused on the increasing prevalence of aged offenders (typically defined as offenders over the age of 50 years: e.g. Baidawi et al., 2011; Stavrou, 2017) in prisons and the challenges associated with managing those offenders in the custodial environment. In recent decades the proportion of inmates aged over 50 years has increased in Australia (Angus, 2015; Australian Bureau of Statistics (ABS), 2010; Leach & Neto, 2011) and other Western countries (e.g. Rikard & Rosenberg, 2007), to the extent that aged inmates comprise the fastest growing group of offenders in prisons (Baidawi et al., 2011). A number of factors have been attributed to the increase in older inmates, including an ageing general population, increased focus of policing on offences that are more likely to be perpetrated by older offenders such as child sexual abuse, and trends towards offences attracting longer sentences (e.g. Baidawi et al., 2011; Potter, Cashin, Chenoweth, & Jeon, 2007; Rikard & Rosenberg, 2007). It is noted, however, that growth in the number of aged inmates in Australian prisons was found to be disproportionate when compared to growth in the general population (ABS, 2010).

A recent study by the NSW Bureau of Crime Statistics and Research (BOCSAR; Stavrou, 2017) examined trends in older offenders using both CSNSW custodial statistics and NSW court finalisation data between 2000 and 2015. The study confirmed that individuals over the age of 50 years have contributed to a growing proportion of convictions in NSW courts and inmates in NSW prisons over time. This was associated with lower conviction rates for younger offenders (see also

Weatherburn, Freeman, & Holmes, 2014) and increasing average age both for a range of offence types and within the prison population. In contrast, the average period of placement in custody declined from 12 months to 7 months for aged offenders. Interestingly, Stavrou (2017) also reported indications that between 2000 and 2015, the proportion of aged offenders in NSW courts with a prior court appearance increased from 25.9% to 36.5% whereas the proportion of those who reoffended over the following two years increased from 13.8% to 17.6%.

The results reported by Stavrou (2017) are relevant to desistance because they indicate that a growing proportion of older offenders are engaged in patterns of active offending that show signs of persistence both prior to and subsequent to their index court episode. This has implications for the prospect that trajectories of persistence and desistance over the life course is changing over time. For example, individuals in the criminal justice system may be commencing active periods of repeat offending later in their lives or alternatively engaging in chronic offending over longer timeframes. Exploration of these dynamics from the data presented by Stavrou (2017) is limited, however, by the study's focus on offenders aged over 50 years and analysis of offending patterns immediately prior to and after the index episode.

The aim of this study was to provide a more comprehensive examination of changing trends in the relationships between age, reoffending, and persistence of reoffending, with a focus on patterns of serious offending and return to imprisonment among inmates held in CSNSW correctional centres. This study employed inmate population data to examine the prevalence of inmates of different age groups and the effects of trends in the rate of imprisonment for first-time prison receptions compared to chronic offenders. From this we aimed to explore how changes in the age of inmates are associated with trends in the age of active persistent offending and the

implications of this for the overall duration of repeat offending over the lifespan.

## METHODS

Data for this study were extracted from the CSNSW Offender Integrated Management System (OIMS), which is used to collate and manage demographic, sentencing, episode, and operational data relating to all offenders under CSNSW supervision. Electronic records contributing to the current OIMS format have been in continuous use for the supervision of custodial offenders since 1986. For the purposes of this study, custodial episode data for all individuals housed in CSNSW correctional centres between 1990 and the data collection census point of 30 November 2016 were extracted (N = 416,841 episodes).

Two primary variables for analyses in this study were the age of first imprisonment (or whether the offender had been imprisoned for the first time for the index episode) and recidivism status after the index episode. Recidivism is defined in this study as return to custody under a new sentence and / or breach of parole. A challenge for examining longitudinal trends was that available data from OIMS had lower (1986) and upper (2016) bounds at the time of analysis that prevented exhaustive tracking of offender outcomes over the lifespan. To address this we defined first time of imprisonment as an episode that was not preceded by another episode within three years of reception. Similarly, we defined recidivism as return to custody within three years of release from the index episode. Timeframes for analysis of each outcome were adjusted accordingly.

Initial analysis of return to custody outcomes among a sample of offenders released between 1990 and 2000 (follow up = 16–26 years) showed that 82.9% of offenders who returned to custody did so within three years of release. This indicates that using a three year threshold for recidivism

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allowed over 80% confidence that those individuals who did not reoffend in that timeframe continued to desist over the longer term. Similar definitions of desistance as three years or less without recidivism have been employed in previous studies (e.g. Shover & Thompson, 1992; Uggen & Kruttschnitt, 1998; see also Kazemian, 2007).

Initial data diagnostics indicated that primary variables of interest in this study, such as offender age and length of custodial episode, were not normally distributed. To account for this we report nonparametric indicators of averages (i.e. median) where relevant. Similarly, statistical testing of trends was conducted using Kendall's rank-order correlation test (Kendall's tau-b). This nonparametric test was used to assess the extent and significance of associations between time and the outcome variable of interest. Trends were interpreted as being significant at  $p < .05$ .

## RESULTS

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### Trends in inmate age

Over the timeframe of measurement, the average (median) offender age at the time of entry into NSW correctional centres increased from 26 years in 1990 to 32 years in 2016 in a significant positive trend ( $\tau = .90$ ;  $p < .0005$ ). An increase in the average age of inmates may be broadly attributable to two factors. First, there may be increasing uptakes of older offenders being sentenced to custody or otherwise returned to custody. Second, offenders may be subject to longer custodial episodes so that they effectively age in prison over time.

To explore the first possibility, Figure 1a shows trends in the raw counts of new inmate receptions between calendar years 1990 and 2016. It can be seen that in the initial years of the time series inmates aged between 20-24 years and 25-29

years were the most populous of the age groups. Over time the number of inmates in these age groups have remained steady or declined, while counts in the older age groups have increased. By end 2016 the most populous groups were inmates in the 25-29 age range ( $n = 2940$ ), the 30-34 age range ( $n = 2916$ ) and the 20-24 age range ( $n = 2596$ )<sup>1</sup>.

While it is clear that younger offenders continue to comprise a large proportion of new receptions, it is also important to examine the extent of growth occurring for each of the age groups. Figure 1b shows proportional growth for the age categories expressed as change relative to 1990 levels. Growth in new receptions was largest for inmates in the 45-49 age range, which grew by 353% between 1990 and 2016 ( $\tau = .92$ ;  $p < .0005$ ). Rates of new receptions for other older offender groups similarly showed significant growth trends, including by 294% for the 40-44 age range, by 284% for the 50+ age range, and by 192% for the 35-39 age range ( $\tau$ 's = .56 - .92;  $p$ 's < .0005).

In contrast, analyses of association indicated that the 20-24 age range exhibited a significant trend towards negative growth, resulting in a count of new receptions in 2016 that was 10% lower than that of 1990 ( $\tau = -.52$ ;  $p < .0005$ ). New receptions of inmates in the 25-29 age range increased by 33% between 1990 and 2016 but did not show a significant trend over the timeframe of measurement ( $\tau = .02$ ;  $p = .88$ ). New receptions in the 30-34 age range showed an intermediate level of growth by 91% ( $\tau = .57$ ;  $p < .0005$ ).

Taken together, the pattern of results from Figures 1a and 1b indicate that older offender groups have comprised a growing proportion of custodial receptions over time. For example, over the period

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<sup>1</sup> An additional age category for inmates between the ages of 18 and 19 years was omitted for the purposes of this study to allow for greater comparability across the groups. Inmates in this age range were observed to exhibit similar trends to those in the 20-24 years age category.

of measurement the total number of new inmate receptions increased from 9521 in 1990 to 15773 in 2016. Inmates under the age of 30 years comprised 63.5% of all new receptions in 1990 and 41.3% of new receptions in 2016. By contrast, inmates over the age of 40 years comprised only 10.7% of all new receptions in 1990, which grew to 27.7% in 2016.

On the other hand, there was little evidence that the average length of custodial episodes has been subject to change over the measurement period. Overall median episode length at discharge showed some non-monotonic variation over time without a clear trend, with the result being that average length was 89 days in 1990 and 86 days in 2013. Figure 2 also shows trends in the average duration of custodial episode for each of the major age categories. It can be seen that the oldest age group (50+) has historically had longer episodes on average compared to the other age groups.

However, all of the age groups showed similar patterns of variation in episode length over time, which indicates that there has not been a trend towards administration of longer episodes to older offenders in particular.

Figure 1a. Inmate count by year and age at reception

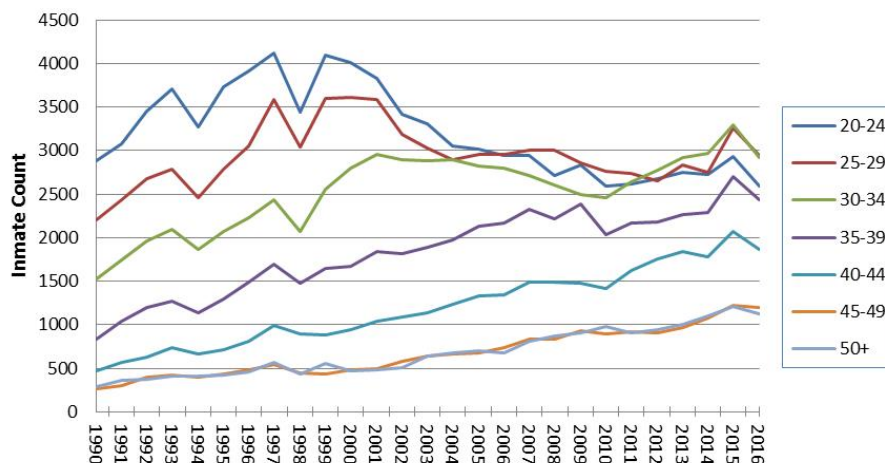


Figure 1b. Inmate proportional growth by year and age at reception

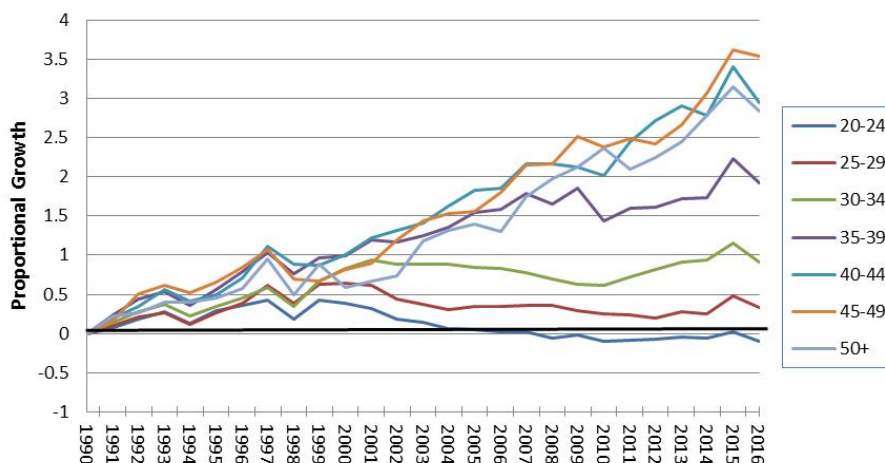


Figure 2. Median custody episode length by year and age at reception

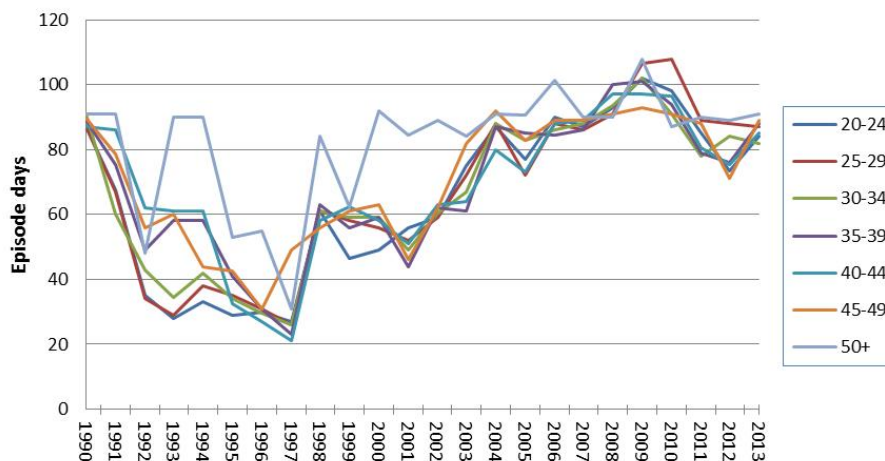
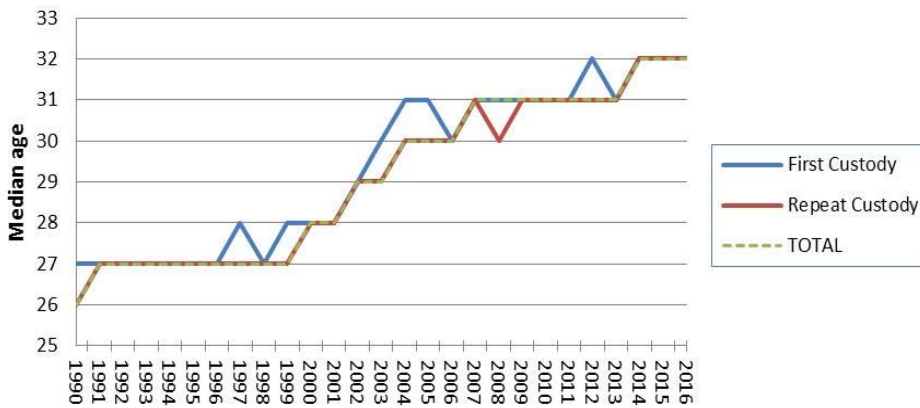




Figure 3. Median inmate age by year and prior custody status



### First time versus repeat custody offenders

The increasing number of older offenders entering custody may comprise first time entrants who had not been previously imprisoned or repeat entrants who have a history of imprisonment. From the perspective of desistance this distinction is important. Growth in the number of new, older prison entrants may be indicative of changes in the age that individuals commence phases of active serious offending or in the prosecution of offending behaviour that is more likely to be perpetrated by older individuals. On the other hand, growth in the number of older repeat inmates has implications for patterns of desistance among chronic reoffenders.

Figure 4. Growth in inmate receptions, 1990-2016 by custodial status

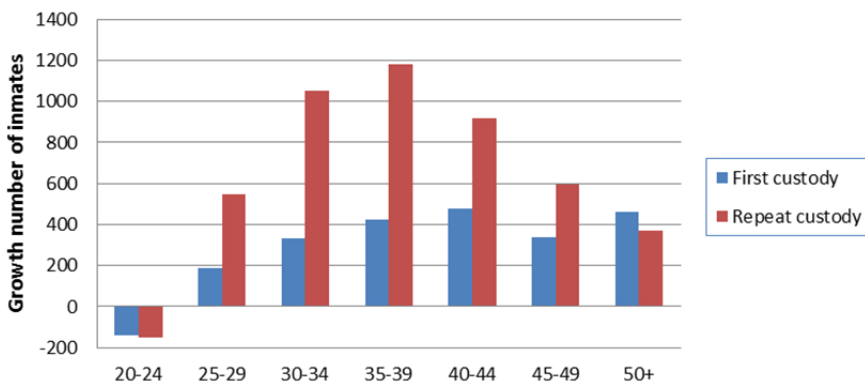
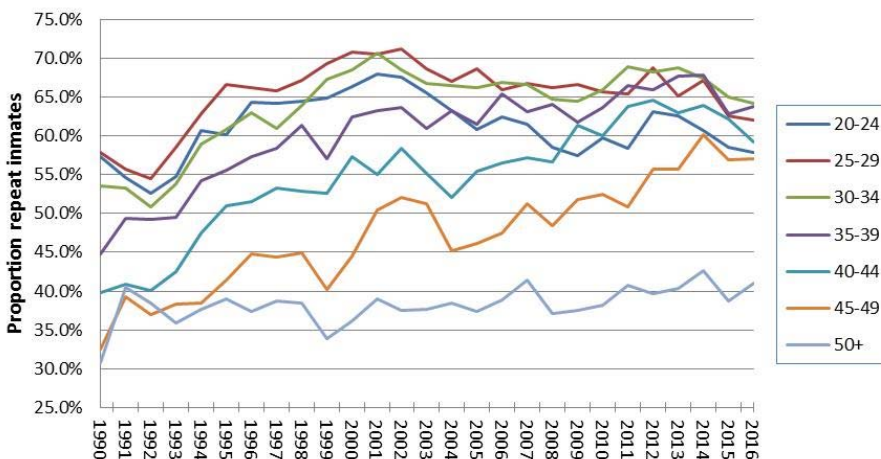


Figure 5. Proportion repeat inmates by year and age at reception



Trends in the average (median) age of inmate receptions between 1990 and 2016, stratified by first time and repeat inmates, are shown in Figure 3. It can be seen that both first time and repeat receptions showed increases in average age that was aligned with the overall increase in inmate age over the timeframe of measurement. Both first time inmates and repeat inmates showed similar increases in average age at reception from 27 years to 32 years ( $\tau = .87$ ;  $p < .0005$ ) and from 26 years to 32 years ( $\tau = .90$ ;  $p < .0005$ ) respectively between 1990 and

2016.

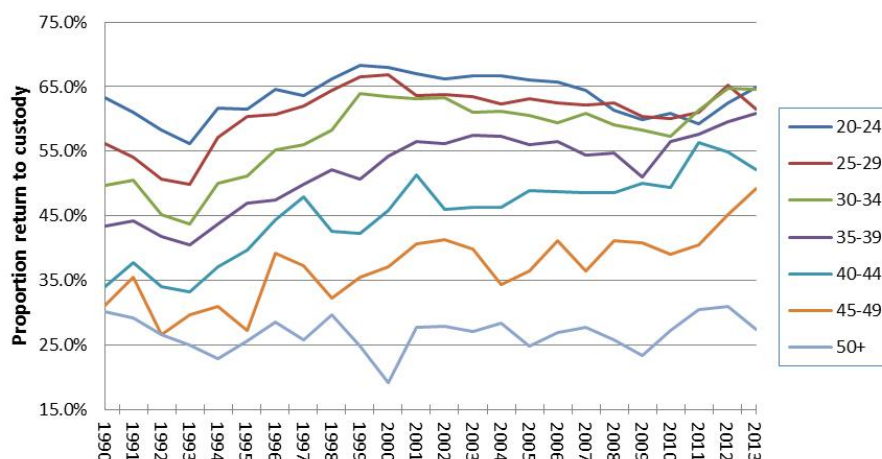
The extent to which ageing in the first time and repeat custody inmate groups can influence overall trends in the ageing of the prison population depends on the prevalence of each of these groups. Figure 4 illustrates the comparative growth in receptions for each of the age groups between 1990 and 2016, expressed as counts of first time and repeat inmates.

It can be seen that growth in most of the age categories, and in the overall number of receptions over the timeframe of measurement, has primarily involved the reimprisonment of offenders who had a recent history of prior placement in custody. One exception to this is receptions in the 50+ age group, which has shown greater increases in the intake of first time inmates compared to repeat inmates. Receptions in the 20-24 age range have also seen similar declines in numbers of first time and repeat inmates between 1990 and 2016.

Between 1990 and 2016 the proportion of receptions for inmates who had an identified prior prison episode within 3 years grew significantly from 50.4% to 58.7% ( $\tau = .35$ ;  $p = .01$ ). Figure 5 shows trends in the proportion of repeat inmates for each age category. All of the age groups showed trends towards significant increases in the proportion of receptions who were repeat inmates ( $\tau$ 's  $> .40$ ;  $p$ 's  $< .005$ ) with the exception of the youngest offenders, being those in the 20-24 age range ( $\tau = -.006$ ;  $p = .97$ ) and those in the 25-29 age range ( $\tau = .08$ ;  $p = .55$ ).

Proportions of repeat inmates showed the highest magnitude of change between 1990 and 2016 for the 45-49 age range (from 32.6% to 57.0%), the 40-44 age range (from 40.0% to 59.2%), and the 35-39 age range (from 44.7% to 63.8%).

Figure 6. Rate of return to custody by year and age of release



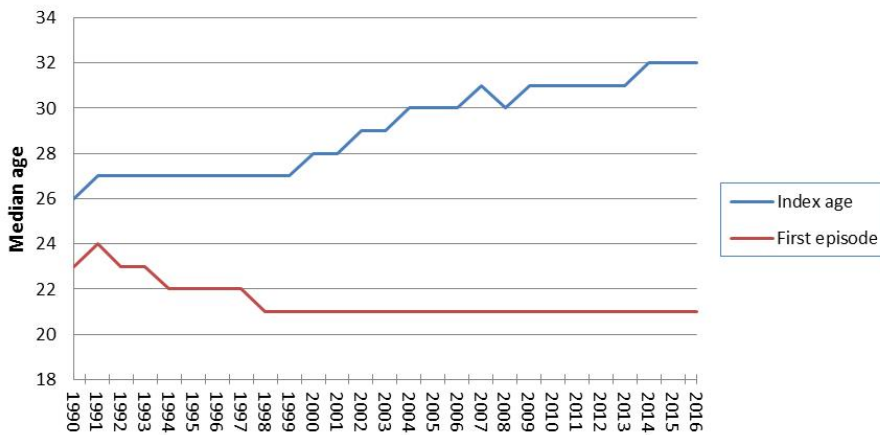
### Rates of return to custody

Available trends data suggest that the increase in the average age of inmates has been associated with growth in the number of older individuals who have a history of repetitive offending and reimprisonment. There is the implication that greater numbers of older offenders continue to be engaged in active phases of persistent offending. Another method of exploring this possibility is to examine rates of return to custody following the index custodial episode.

Across the inmate population, the overall rate of return within 3 years of release showed a non-significant increasing trend from 56.7% in 1990 to 62.2% in 2016 ( $\tau = .19$ ;  $p = .19$ ). Rates of return for each of the age categories (calculated from age at release from custody) are shown in Figure 6.

Between 1990 and 2013 significant growth trends in rates of return to custody were observed for a number of the older offender groups. Inmates released from custody at the age of 45-49 years showed 58% proportional growth in their rate of return relative to 1990 levels ( $\tau = .56$ ;  $p < .0005$ ), whereas those released at the age of 40-44 years showed growth of 53% ( $\tau = .76$ ;  $p < .0005$ ). Rates of return following release in 2013 were also 42% higher for the 35-39 age range ( $\tau = .71$ ;  $p < .0005$ ) and 30% higher for the 30-34 age range ( $\tau = .46$ ;  $p = .001$ ) compared to 1990 levels.

Figure 7. Median index age and age of first prison episode for repeat offenders by year



In contrast, inmates in the 20-24 age range and 25-29 age range showed low proportional growth relative to 1990 of 3% ( $\tau = -.004$ ;  $p = .98$ ) and 11% respectively ( $\tau = .22$ ;  $p = .14$ ). In addition, the rate of return for offenders released from custody at the age of 50 years or more declined by 10% between 1990 and 2013 ( $\tau = .08$ ;  $p = .60$ ).

### Trends in the duration of active offending

The final stage of analysis aimed to explore how trends in the age of inmates correspond with changes in the longitudinal trajectories of active offending, marked by repetitive serious offending and reimprisonment, exhibited by these individuals over time.

An increase in the number of older repeat offenders may be associated with one of two trajectories. First, individuals may commence serious offending warranting imprisonment at a later age and desist at a later age compared to previous cohorts. As a result these individuals would exhibit active offending behaviour at later ages on average; however the overall duration of their criminal career or active offending over the life course would remain similar to previous cohorts. Second, individuals may commence serious offending from an early age and persist with active offending behaviour until a later age. In turn, these individuals would then be expected to

maintain phases of persistent offending for a longer duration compared to previous cohorts.

To assess these potential trajectories, we calculated interval of active offending between age at index custodial episode and age at first prison episode, for those offenders who were identified as having a history of repeat custodial episodes.

In order to improve comparability over the time series we defined the time of active offending by a sequence of repeat reimprisonments, each occurring within 3 years of the previous release.

The average (median) age of repeat inmates at index custodial episode and at first prison episode is shown in Figure 7. As previously illustrated in Figure 3, the average age of repeat inmates at reception for the index episode increased in a significant growth trend from 26 years in 1990 to 32 years in 2016. In contrast, the age at first prison episode for these individuals was relatively stable over time. There were indications of a declining trend in reception age at first prison episode from 1990 ( $\tau = -.69$ ;  $p < .0005$ ), which may have been a statistical artefact of the data series<sup>2</sup>. The median reception age at first episode has remained steady at 21 years since 1998.

In 1990 the average age between first episode and index episode was 3 years. Taking into account possible data limitations in the initial years of measurement, from the time the age of first episode data stabilised in 1998 the average

<sup>2</sup> Given that data for this series had a lower boundary of 1986, it would be expected that many offenders who were active in the 1990s would have prison episodes that precede available records. These offenders would then be expected to have a younger actual age at first episode than recorded. However, it is noted that this limitation does not affect the distribution of age at index episode and definition of repeat inmate status.



interval was 7 years. In 2016 the average interval between first and index episode increased to 11 years. Using the potentially biased index of trends starting from 1990, the duration between first prison episode and index episode increased by 267% over the time series in a significant linear trend ( $\tau = .94$ ;  $p < .0005$ ). Applying a more conservative index of trends starting from the time that age of first episode stabilised, the duration between first and index prison episode increased by 57% from 1998 to 2016 in a significant trend ( $\tau = .91$ ;  $p < .0005$ ). These data indicate that while the average age of first imprisonment for repeat inmates has remained steady, the duration of their subsequent periods of active reoffending and reimprisonment has increased significantly over time.

## DISCUSSION

The results of this study indicated that an increase in the average age of inmates entering the CSNSW prison population between 1990 and 2016 was associated with growth in the number of older offenders entering custody. This outcome is consistent with those reported by Stavrou (2017) in addition to other studies indicating an increase in aged inmates over 50 years old (e.g. Baidawi et al., 2011; Leach & Neto, 2011). In contrast, there was little evidence to suggest that ageing of the prison population was related to judicial trends in the imposition of longer custodial episodes for offenders in general or for older groups of offenders in particular.

A related finding was that inmates in the older age categories comprised an increasing proportion of the total prison population over the timeframe of measurement. This appeared to be a result of both increases in the number of older inmate receptions, as mentioned above, in concert with stagnancy or declines in the number of receptions for offenders in the youngest age groups. A similar

decline in the rates of prosecution of younger offenders has been observed from court finalisation data (ABS, 2016; Stavrou, 2017), which suggests reductions in offending behaviour among this demographic over time. Considering the population of interest for the present study, there is also the possibility that judicial authorities are exhibiting increasing reluctance to impose custodial sentences for younger offenders. Consistent with this, a recent study (Weatherburn et al., 2014) indicated trends towards decreasing imprisoned populations at NSW Juvenile Justice centres.

Interestingly, the results also indicated that the growing population of older inmates is being increasingly represented by repeat offenders returning to custody. Between 1990 and 2016 there was an overall increase in the proportion of inmates with both prior custodial episodes and return to custody following the index episode, which were particularly pronounced for offenders between the ages of 30 and 50 years at reception and release respectively. In addition, available longitudinal data indicated that the active criminal career of inmates, or the overall duration with which they were engaged in cycles of release and reimprisonment over the lifespan, had correspondingly increased. Duration between index episode and first prison episode was 11 years in 2016, compared to 7 years in 1998 and 3 years in 1990. Given that average custodial episode length remained relatively steady over the timeframe of measurement (see also Stavrou, 2017), there is the implication that this significant overall increase in duration is associated with more prolonged phases of repetitive serious reoffending, followed by sentencing and reimprisonment, among inmate cohorts.

Taken together, the pattern of results suggests that a significant contributor to the ageing prison population and growing representation of older inmates involves the increasing capture of repeat offenders that is taking place over longer periods of the lifespan. This is consistent with observations

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that the recidivism rate for offenders in NSW has increased over recent years in conjunction with the increasing prison population (Productivity Commission, 2018; Weatherburn, Corben, Ramsey, & Fitzgerald, 2016; Weatherburn, Wan, & Corben, 2014).

One explanation for this trend may be derived from the life course perspective of desistance (e.g. Laub & Sampson, 1992; 1993) and relates to changes in how and when major life transitions and trajectories occur. For example, societal shifts toward increases in the age that individuals complete education, enter gainful employment and become married, in addition to changes in the stability or status of work options and intimate relationships, may be associated with delays in the age that chronic offenders develop social bonds and controls that facilitate desistance (Kazemian, 2007).

An alternative explanation is that over recent decades there has been increasing judicial selectivity towards use of imprisonment as a last resort for serious offenders who pose a substantial or actuarially supported risk of harm to the community. As a result it may be expected that the prison population would increasingly comprise those high risk, high needs offenders who are likely to persist in chronic offending. This account is supported by the observed decline in imprisonment of adolescents (Weatherburn et al., 2014) in addition to findings for general increases in the proportion of inmates who have prior histories of imprisonment in the current study. It is noted, however, that similar trends have also been observed in regards to criminal court finalisations (Stavrou, 2017). It is possible that shifting thresholds for imprisonment reflect broader trends in the criminal justice system towards targeting the relatively small group of at-risk chronic offenders who account for a large proportion of all criminal activity (Kazemian, 2007; Moffitt, 1993), within the context of declines in the rate of offending across the population at large.

A common implication of these accounts is that the custodial population is becoming increasingly represented by offenders who are relatively likely to exhibit persistent reoffending and reimprisonment, with their attendant social and other costs, for more prolonged periods over the life course. Given these trends there is increasing impetus for correctional systems to employ intervention models and resources that address and facilitate processes of desistance for inmates. This is particularly relevant for younger inmates, considering indications from the results that effective early intervention has the potential to interrupt trajectories of recidivism that may be several years longer than those of previous cohorts. At the same time, compositional shifts in the risk profile of offenders may correspond with additional challenges in implementing positive change through intervention and achieving or meaningfully assessing broader criminal justice outcomes such as reductions in the gross rate of reoffending.

From a more data-driven perspective, changes in the relationship between age and risk as shown in this study may have an influence on the validity of actuarial risk assessment tools, a number of which use age or derivatives of age as indices of risk (e.g. Andrews & Bonta, 1995; Hanson & Thornton, 2000; Helmus, Thornton, Hanson, & Bibchishin, 2012; Stavrou & Poynton, 2016; Xie et al., 2018). There is a need for such tools to undergo periodic revalidation and norming processes across jurisdictions to account for local trends in factors such as the age composition of assessed offenders.

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# Other CRES Research Titles

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