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UNDERSTANDING THE SOCIAL CARE SUPPORT NEEDS OF SCOTLAND'S PRISON POPULATION

HEALTH AND SOCIAL CARE

social research

Understanding the Social Care Support Needs of Scotland's Prison Population

Alma Economics received expert advice throughout this research from Professor Bill Whyte (Edinburgh University) and Dr Beth Weaver (Strathclyde University).

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Executive summary

Introduction and the existing evidence base

The Scottish Government has recognised the increasing need for social care support among the prison population and is committed to developing personalised social care support, ensuring that the "deprivation of liberty should not contribute to deprivation of other rights as a citizen" (Levy et al., 2018). Steps have already been taken towards improving social care and integrating health and social care support following the model of provision outside of prisons. As part of this initiative, Alma Economics has been commissioned to provide quantitative estimates of the level of social care support needs of the prison population in Scotland, based on statistical techniques informed by qualitative research.

Whilst it is the ageing demographic of the prison population in Scotland that is perceived to be the key driver of elevating the importance of this issue, demographic change is only part of the problem to be addressed. Moreover, the prevalence of physical and mental health conditions among the prison population is high, especially when compared to the non-prison population, and the prison environment can both exacerbate these problems and be the initial trigger. A review of the existing evidence base highlights issues of physical disability, social care needs due to ageing and increasing frailty, the prevalence of mental health and substance abuse issues, and the frequency of hidden disabilities and head injuries as key drivers for care needs. There is also evidence that many conditions are under-recognised in prison settings.

Extensive review of existing evidence identified the absence of evidence specifically on precedents for statistical modelling of the type conducted in this study. The techniques applied are therefore innovative in this particular context but are well established in other fields of economics. Moreover, qualitative research with stakeholders has been used to provide further understanding of statistical results, so this study represents a combination of quantitative and qualitative research.

The quantitative approach taken in this study

This study makes use of detailed publicly available data from the Scottish Household Survey on a representative sample of individuals in Scotland, alongside individual-level data provided by the Scottish Government on individuals receiving social care, and a snapshot of individual-level data on the current prison population in Scotland. This is augmented by SPS survey results.

This data is then used to create probability models to extrapolate from the non-prison population in Scotland to the prison population, while controlling for age, gender, and deprivation levels. Different methodologies are used to provide a range of quantitative estimates under different assumptions. To provide an estimate of the uncertainty regarding estimates, sensitivity analysis has been performed to create ranges around estimates.

Qualitative research with social care stakeholders

Qualitative interviews were conducted with a range of stakeholders in the Scottish Prison Service (SPS), NHS, and social care representative bodies outside of prisons. A key finding from these discussions was that according to most stakeholders there are unmet social care support needs in Scottish prisons.

Stakeholders raised the problem of addressing invisible disabilities and suggested there is too much focus on a narrow definition of social care as physical care needs. In addition, stakeholders provided a range of suggestions for maximising the chance of successful, comprehensive delivery of social care in Scottish prisons, including improving governance, partnering and skills, as well as reducing the stigma associated with receiving care.

Results and conclusions

The central, and preferred, estimate produced by this study is that 7-10% of the prison population in Scotland have social care needs. This is based on extrapolating from the non-prison population based on characteristics including age, deprivation levels, gender and the premature ageing of the prison population.

It should be noted that there are a wide range of estimates available outside of the central estimate. Extrapolating from the non-prison population receiving social care produces an estimate that around 3% of the Scottish prison population would have met eligibility criteria thresholds for support outside of prison. Focusing on social care data recorded in the SPS prison records system, PR2, provides the highest estimate in the range, with a result of 13%. All of these estimates apply to the same definition of social care, although the lowest estimate also factors in eligibility criteria.

Going beyond the scope of the current study, there is the question of whether preventative social care support should also be considered, so that individuals who do not currently have social care support needs become less likely to develop them. For example, more could be done to support and encourage people in custody to participate in the prison community, including purposeful activities such as work or education, socialise more and manage complex relationships, as well as preparing for their transition back into the wider community.

Delivering preventative social care would involve providing services to a larger proportion of the prison population in Scotland than under the approach of only working with existing needs. However, it should be noted that the cost per individual is likely to fall as increasing numbers of individuals receive support. This is because a small number of individuals need very high levels of support (at high cost), but reducing eligibility criteria means working with individuals with lower levels of support needs. Going further, preventative care involves working with individuals where small amounts of support, e.g. providing structured group activities, can reduce their chance of developing social care needs. Lastly, effective preventative care may reduce total funding requirements depending on the success of preventative activities.

1. Introduction

The prevalence of physical and mental health conditions among the prison population is high, especially when compared to the non-prison population. According to Fitzpatrick and Bramley (2019), offending[1] is likely to co-occur with at least one other severe and multiple disadvantage (SMD), including homelessness, substance dependency, mental health issues and domestic violence and abuse. In particular, over a year, 5,700 people in Scotland suffer simultaneously from 3 forms of SMD (offending, homelessness and substance misuse).

People in custody often suffer from physical and mental health conditions that might be present before admission to prison, some of which may naturally deteriorate over time or due to imprisonment. Many of these conditions can also develop for the first time during their sentence as a consequence of prison-related factors, including overcrowding, social isolation, or inadequate support. A person in custody with physical and/or mental health conditions might develop social care support needs, meaning that they might require help with activities of daily living, as well as help in maintaining independence, managing personal relationships, taking part in prison life, and social interaction. To meet their social care support needs, people in prison usually need social care support, which is defined as helping people live independently, be active members of the community in which they are part of, and preserve their dignity and human rights.[2] The social care support provided in prison should be comparable to the level provided in the community, although people in custody do not have access to family networks or community resources and support, which are often a source of social care support in the non-prison community.

The likelihood of people in prison having social care support needs, and consequently the need for social care support, is increasing. This upward change is partly explained by the changing demographics in the prison population in Scotland. In particular, the increase in the number of people convicted of historic sexual offences later in their lives has led to changes in prison demographics, causing an increase in the number and proportion of the prison population aged over 50 years old. According to the latest prison statistics published by The Scottish Government (2020), the number of people aged over 50 years old has been rising, and there has also been an increase in the number of people aged 30-39, especially after 2017. In contrast, the number of people aged under 25 has been reducing over the years, which is in-line with the Scottish Government's aim to reduce the size of the Scottish prison population.[3]

Importantly, although it is the ageing of the prison population in Scotland that has been a key driver of focussing attention on the potential absence of comprehensive

[1] According to the definition used in the report by Fitzpatrick and Bramley (2019), offending includes people that are or have been in prison, had trouble with police, or have been "convicted, arrested or accused in connection with non-trivial crimes".

[2] More information on the definition of social care support in the Scottish context can be found here: https://www.gov.scot/policies/social-care/social-care-support/

[3] See for example https://www.gov.scot/news/data-on-effects-of-presumption-against-short-sentences/ and https://www.gov.scot/publications/protecting-scotlands-future-governments-programme-scotland-2019-20/

social care provision for people in prison, this issue may be equally relevant for all ages. Both older and young people in prison might have social care support needs that are not age-related and social care support in prison applies to everyone who needs it. This report estimates social care needs among all age groups in prison, rather than narrowly focusing on older people in prison.

Accelerated ageing among people in custody

There is reasonable debate about the threshold at which a person in custody is considered “older”. Based on previous research (e.g. Aday, 2003; Loeb and Abudagga, 2006). The SPS has adopted the age of 50 years old as the threshold to classify someone in prison as “older”. The threshold for the prison population is ten years younger than the one for the general population, due to the accelerated ageing observed among people in prison (SPS, 2017a). The faster ageing process is due to a number of health and lifestyle factors that occur either prior to conviction or during the sentence.

The Royal College of Psychiatrists (2018) highlight the relationship between age and substance misuse and the manifestation of complex needs in the general population. The report also highlights the significant correlations between substance misuse and mental health problems, as well as the impact of substance use on accelerated ageing (Beynon et al., 2010), which is further compounded by socio-economic deprivation and adverse psycho-social factors (Bachi et al., 2017). Substance misuse leads to biological ageing, exerting a compounding effect on chronological ageing, and it is exacerbated by low socio-economic status (e.g. as a consequence of limited use of health services, lack of sleep, insufficient exercise and poor nutrition, etc.). The Royal College of Psychiatrists (2018) observes that while clinical services in Europe define older people as being 65 and over ‘for illicit drug [users], 40 years of age has been considered as more valid in defining older people’.

Referencing research by Stojkovic (2007), which identified the difficulties faced by older people in custody, often as a result of inadequate resourcing by prison systems to care for their needs, Levy et al. (2018) note that imprisonment can hasten the biological ageing process. This is more prevalent among people in prison who experience some kind of disability. The authors found that people in custody felt that “their overall health and/or disability has deteriorated whilst in prison”, mainly due to the impact of incarceration on their psychosocial health and the lack of professional support. While some people in prison had a disability prior to their imprisonment and had previously received social care support in the community, others in the study noted that they acquired some kind of disability, and/or health conditions necessitating social care support in prison and struggled to process changes in their support needs. Consequently, people coping with the same conditions may be differently affected, which may have implications for both the nature and extent of support required.

Social care support needs

Against the background of changing demographic characteristics of the prison

population and an increasing number of older people in custody, the social care support needs of the prison population in Scotland are increasing. This raises the question of what social care support need is. Although there is no universally agreed definition or conceptualisation of social care, the literature has previously narrowed social care support need to personal care, which risks under-estimating social care support needs, and calls into question issues surrounding rights. Such a definition, as Levy et al. (2018) note, ignores broader definitions of social care, that include a focus on wellbeing, the need to support the exercise of agency, citizenship, and opportunities for participation. There are, then, issues around defining social care too narrowly as personal care, which will impact on how need is perceived, self-reported, estimated, and provided.

In this report, social care support needs are understood as those defined by the Commission on Funding of Care and Support (the "Dilnot Commission"). According to this Commission, people of all ages might need social care support due to "certain physical, cognitive or age-related conditions" that reduce their ability to perform "personal care or domestic routines", or because they need help to "sustain employment in paid or unpaid work, education, learning, leisure and other social support systems", to build social relationships and to participate in the community.[4] This definition implies that social care support needs are not restricted to older people in prison. On this basis, young people in prison are also likely to need social care support, as social care support needs do not arise only from frailty related to age, but also from physical disability, mental health issues, substance use, learning disability and other hidden disabilities, which are more prevalent among young people in prison than those in the community (Youth Justice Improvement Board, 2017).

Challenges in providing social care support in prisons

The Scottish Prison Service (SPS) is currently responsible for personal care support in prisons. In 2017-18, the SPS spent around £542,000 on agency care workers who helped individuals carry out activities of daily living, such as bathing, using the toilet, getting dressed, eating (Bavidge, 2019). In 2019-2020, the SPS spent around £960,000, based on the Test of Change project, described in more detail below.

Although the SPS is currently commissioning personal care support, broader social care support needs in Scottish prisons are thought to be unmet. Prisons are not structurally designed to accommodate individuals who are unable to fully care for themselves. The architecture of the prison estate in Scotland, as in many countries, can represent physical challenges to people in prison with social care support needs that would not affect them in the community. It might also be suggested that the purpose and the restrictive nature of the prison regime presents challenges for the provision of social care in prisons. Prison can be a disabling space in this regard.

People in prison receive social care support from other individuals in custody, prison

[4] The Dilnot Commission definition can be found here: https://webarchive.nationalarchives.gov.uk/20130221121534/http://www.dilnotcommission.dh.gov.uk/our-report/

staff, healthcare or social care workers. Other people in custody and prison staff are – in most cases – not trained to provide social care support, meaning that social care needs might not be adequately met, or the cared-for person or the carer could even be put at risk. Levy et al. (2018) highlight the need for providing appropriate training to prison staff and other people in custody, specifically in relation to social care support needs. Based on SPS guidance on personal care peer support policy, which sets out guiding principles for those in custody that provide support to others, peer support does not include intimate care (i.e. tasks related to personal hygiene), but it includes a broader definition of personal care support.

Other reasons that could lead to inadequate social care provision include the lack of tools to identify social care needs when people are admitted into prison, or throughout the duration of a person's sentence; the high-level support required; and the complexity of the needs, due to co-occurrence of causal factors. Indeed, Public Health England (2017) note that co-occurring conditions are common among people in custody, and many people affected have complex needs. These conclusions imply that there is a need to recognise and negotiate the inter-connectedness between conditions that can result in a range of health and social care support needs, which will be dynamic over the life course or even during a person's sentence. These needs require multiple, holistic, and integrated health and social care interventions.

Steps towards improving social care support in Scottish prisons

As a response to the changing demographics in the prison population, and the increasing need for a health and social care model, which is in line with the provision in the community, the Scottish Government is taking steps towards integrating health and social care support in prisons. Responsibility for health services was transferred from the SPS to NHS Health Scotland in 2011 and, subsequently, became the responsibility of Integration Authorities when they were established in 2015. This transfer specifically excluded social care, which by default remains the responsibly of the SPS. The integration of health and social care in 2016 did not in practice extend to prisons, although the policy intention is that health and social care partnerships that deliver care in the community should do so in prisons.

Part of the work stream that supports the integration of health and social care in the prison community and aims to improve availability and quality of prison population's social care data is a Test of Change project conducted by Social Work Scotland. The purpose of this project was to explore different approaches to incorporating adult social work assessment and social care delivery practices within the existing services in prisons. Tests of Change were to be delivered within 4 Health and Social Care Partnerships, which covered 6 prisons. The Test of Change sites were also to identify the challenges in assessing and arranging services for people in prison in a way that was equitable with community-based assessment. All the test sites worked on the principle that people residing in prisons should be treated for social work and social care services in the same way they are for health services. The Test of Change initiative has already been delivered in HMP Castle Huntly and HMP Perth as part of a

wider programme to deliver holistic health and social care packages within the prison settings.

The current study presented in this report will support the Scottish Government's objective of delivering integrated health and social care in prisons, through the assessment of social care support needs of people in custody for the duration of their sentences. The output of this study will serve as a key element of the evidence base for the integration of health and social care in prisons.

2. Literature Review

- There is considerable evidence on the general themes of the drivers of social care needs in Scottish prisons, covering issues such as:
  - Physical disability
  - Increased social care needs due to ageing
  - High prevalence of mental health issues in the prison community
  - High levels of substance abuse
  - High prevalence of hidden disabilities and head injuries

  The prevalence of most of these conditions is higher among the prison population compared to the non-prison population. Many conditions are under-recognised in prison settings.
- No specific precedents were found for statistical modelling of the type contained in this study. This prompts the development of a novel methodology (outlined in Section 4) that draws on traditional statistical techniques for modelling probabilities.

The literature review was undertaken to understand the characteristics of people in prison and to identify the relationship between health and demographic characteristics with associated social care support needs. Firstly, this review uses evidence from research on the prison population in Scotland and UK-specific evidence of the social care support needs of the prison population, as well as evidence on social care support needs and provision after imprisonment and in the community more generally. In particular, the literature review discusses the social care support needs of the prison population in Scotland, as well as in England and Wales. Secondly, the review explores evidence on social care support needs and provision outside prison. In particular, the second part of the review focuses on the social care support needs of people after their imprisonment and explores empirical methodologies used to model social care support needs of the non-prison population.

Social care support needs of people in custody

i. Social care support needs in Scottish prisons

The demographics of the prison population in Scotland are changing. There is a declining number of young people in custody and an increasing population of older people in prison, who the SPS have defined as individuals over 50 years old (SPS, 2017a). The main driver of demographic changes is the conviction of older people for historic sexual offences, leading to more people spending their end of life in custody. The number of older people in custody is expected to rise further in the coming years,

causing an increase in the expected social care support needs of the prison population (Levy et al., 2018).

However, social care support needs are not restricted to older people in prison. They can arise not only from frailty related to age, but also from physical disability, mental health issues, substance use, learning disability and other conditions such as autism, ADHD and brain injury. This means that young people and young adults in prison are likely to need social care support at greater levels than their non-incarcerated peers.

Physical disability and social care support needs associated with ageing

The literature here has focused on the social care support needs of people in custody who have some physical disability or frailty related to ageing. People using a wheelchair, for example, find it difficult to move around prisons, which are not well designed for disabled people or those with mobility difficulties. According to a report from HM Inspectorate of Prisons for Scotland (2017), which explored the social care support needs of older people in Scottish prisons, people over 60 could face difficulties in eating, sleeping (if they have to sleep on the top bunk), walking around the prison or accessing the toilet. In the majority of cases, individuals were dependent on the help of prison staff or other people in custody. Perkins et al. (2014), using a sample from 10 Scottish prisons, found that older people in custody suffered from health issues associated with ageing, alcohol misuse, mental illnesses and learning difficulties.

Mental health and wellbeing

The negative impacts and effects of imprisonment are multifarious. Among these effects is the deleterious impact of imprisonment on mental health and general wellbeing. The World Health Organisation (Regional Office for Europe)[5] attribute this to the effects of 'overcrowding, various forms of violence, enforced solitude, lack of privacy, lack of meaningful activity, isolation from social networks, insecurity about future prospects… and inadequate health services, especially mental health' that people experience in prison.

A Health Needs Assessment conducted by NHS Greater Glasgow and Clyde (2012), based on published literature and reports, direct observations and engagement with prison staff and people in custody, shows that people in custody and prison staff in Scotland consider mental health to be the most important health issue. Other evidence from a now dated thematic inspection of Scottish prisons showed that 4.5% of people in prison in Scotland suffered from 'severe and enduring' mental health problems and the number of people with less acute mental health problems is likely to be much higher (HM Chief Inspector of Prisons for Scotland, 2008). These findings

[5] More information on the World Health Organisation (WHO) (Regional Office for Europe) is available here: http://www.euro.who.int/en/health-topics/health-determinants/prisons-and-health/focus-areas/mental-health

align with those from Davidson et al. (1995) which showed that there is high prevalence of mental health issues in the prison community: 2% suffered from a major psychiatric disorder, 40% reported symptoms of depression, 34% reported symptoms of anxiety and 40% disrupted sleep.

People in custody are more likely to suffer from mental illnesses before their offence than the wider non-prison population. 14% of people in prison in Scotland have psychiatric records and 7.3% have records of self-harm incidents (Graham, 2007). Mental health issues can also arise due to imprisonment. Children and young people in custody can experience their sentence, however short, as traumatic, and they can suffer from symptoms of adjustment disorders in the weeks post-release (Youth Justice Improvement Board, 2017).

Tweed et al. (2019) also show that the mental wellbeing of prison community, which the authors defined as ‘feeling good’ and ‘doing well’, is lower than the non-prison population, even when they are matched to non-prison population in the most deprived areas. Additionally, the same research shows that people on remand have lower scores of mental wellbeing compared to sentenced people.

Substance use

There is a long-established association between mental ill-health and substance misuse (The Royal College of Psychiatrists, 2018). Substance misuse is one of the risk factors of developing and/or contracting health-related problems, including bloodborne viruses, liver disease, Wernicke–Korsakoff syndrome, and dementia, which can increase health and social care support needs. Associated health and social care support needs are compounded by homelessness and mental health issues, which are more prevalent across the prison population compared to the general population. Thus, people with these kinds of conditions are likely to have distinct health and social care support needs, which may be amplified when co-occurring with incarceration.

Alcohol

Alcohol problems are under-recognised and under-recorded in Scottish prison settings, while evidence on the prevalence rate varies. According to a 2012 health needs assessment, 20% of the prison population in NHS Greater Glasgow and Clyde (NHSGGC) were alcohol dependent, and over half were drunk when committing their offence (NHS Greater Glasgow and Clyde, 2012). The prevalence of alcohol dependence is much higher than in the non-prison population, and this difference is more pronounced for women in prison.

Parkes et al. (2010) compared the prevalence of alcohol problems of the Scottish Prison Population with the general population, using self-reported data, including the 2008 Scottish Prisoners Survey and the 2008 Scottish Health Survey. The results suggested that at all ages, 44% of men and 48% of women in custody had alcohol problems compared to 13% of men and 9% of women in the general population.

Alcohol problems were also 2.5 times more prevalent among children and young men in custody aged 16-24 years old compared to the general population, and 3.5 times more prevalent for women aged 16-24 (NHS Greater Glasgow and Clyde, 2012). It should be noted that these results make no attempt to control for the characteristics of individuals, e.g. age and socioeconomic status.

Drugs

People in prison are more likely than the general population to have a history of drug misuse, which might continue in prison. The 2017 SPS biennial survey of people in prison reported that 36% of the prison population said that they were drug users before their imprisonment, and 38% of them had used drugs when committing their offence. According to a health care needs assessment conducted in 2007 in Scottish prisons, which used data from the General Administration System for Scotland (G-PASS) register, the prevalence rate of illegal drug use on admission to prison was 67%, while the prevalence rate in the Scottish community was estimated at 8% (Graham, 2007). In 2010/11, results from drug testing in Scottish prisons showed that 86% of people in custody had used drugs at arrival in HMP Barlinnie prison, and 83% in HMP Greenock (NHS Greater Glasgow and Clyde, 2012). In 2018/19, 71% of people arriving into custody who were voluntarily tested at 12 Scottish prisons were found positive for illegal drugs (or misuse of prescribed medication).[6]

People in custody might continue or start using drugs during their time in prison. In 2017, 39% of people in custody reported they had used illegal drugs in prison.[7] During the same year, 18% of prison population reported that they had used new psychoactive substances (such as synthetic cannabis) while in prison (SPS, 2017b). In 2018/19, 26% of people voluntarily tested when leaving prison were found positive for illegal and/or illicit drugs at their release.[8] This was lower than the previous year, when 31% tested positive, but the percentage of individuals who tested positive for illegal/illicit drugs when leaving prison had gradually increased over time from 17% in 2009/10.

Learning disability

Staff and people in prison consider that the prevalence of learning disabilities is underestimated and under-recognised. Levy et al. (2018) state that ‘people with diagnosed or borderline [….] learning disabilities (previously referred to as intellectual disability and/or brain injury) regularly end up in the prison system, but are not readily identifiable to themselves and prison staff’. Somewhat out of date, but included in the absence of a more recent source, in 2004, 17 people in Scottish prisons were either diagnosed or “were strongly believed” to have a learning disability, representing approximately 0.3% of the prison population, not statistically different from the 0.5% of the general population with learning disabilities (Myers et al., 2004). More recently, 10

[6] More information can be found here: https://www.scotpho.org.uk/behaviour/drugs/data/availability-and-prevalence

[7] See footnote 9.

[8] See link in footnote 9 for more information.

people with learning disabilities were identified following a pilot study which screened new admissions over a 16-week screening in 3 Scottish prisons implying a low prevalence rate (National Prisoner Healthcare Network, 2016; NHS Greater Glasgow and Clyde, 2014). However, this prevalence rate excludes those already in those prisons.

Although there is limited understanding of the prevalence of learning disabilities in Scottish prison settings, it is recognised that people with learning disabilities have "a distinctive set of needs" as they find it hard to settle in and adapt to the prison environment (NHS Greater Glasgow and Clyde, 2014). The first step towards helping people in prison overcome the challenges posed by their learning disabilities is to improve identification of cases. However, according to Equality and Human Rights Commission (2017), criminal justice agencies do not use a consistent procedure to identify them.

NHS Greater Glasgow and Clyde (2012) highlighted the need for a screening tool of learning disabilities and difficulties that could be used at admission. In 2018, the Do-IT profiler was piloted in three Scottish prisons (HMO/YOI Polmont, HMP Glenochil and HMP/YOI Cornton Vale); 149 participants (21%) were identified with signs of learning disabilities or difficulties (Cameron, Downie & Carnie, 2018). The Do-IT profiler includes screening tools and assessments of learning difficulties and disabilities of people in prison. It provides tools to support people on their rehabilitative pathway, including continuous monitoring, and providing instant feedback and advice after screenings and assessments.[9] The Do-IT profiler is expected to be used across all Scottish Prisons in the future and should improve the data on learning disability prevalence (Levy et al., 2018).

Other hidden disabilities

Hidden disabilities, including Autism Spectrum Disorders (ASDs), ADHD and other neurodevelopmental disorders, are conditions that are not obviously recognisable or visible. These impairments are more difficult to identify in prison settings, due to lack of awareness, resources and specific assessment systems in the criminal justice system (Ashworth, 2016). Conditions like ASDs (autism, Asperger syndrome, and pervasive development disorder) are over-represented among people in custody but underdiagnosed. This is despite there being standard measures to trace ASDs and efforts to develop screening tools for ASDs in prisons (Robinson et al., 2012).

The prevalence rate of ASDs in Scottish prisons is not known. Results from studies in Scottish prisons vary from no evidence that ASDs are common (Robinson et al., 2012), to a prevalence rate of 9% (Young et al., 2018a). Other studies explore the link between ASDs and offending behaviour – although some have speculated a potential correlation between them, more recent studies did not find any evidence that people with ASDs are more positive to offending behaviour, while others even found a

[9] More information on the Do-IT profiler is available at: https://doitprofiler.com/wp-content/uploads/2019/05/Do-IT-Profiler-How-can-it-support-in-prison-and-through-the-gate..pdf

negative correlation (Allely, 2015).

People with ASD are likely to suffer from another hidden disability, such as ADHD. Young et al. (2018) found that 22% of men in one Scottish prison had both ASD and ADHD, while 25% of them had at least ADHD. This estimate was consistent with results from an earlier study by Young et al. (2009), which used a sample of 198 men living in HMP Aberdeen, and found that 24% of them had childhood ADHD, of which 20% continued having symptoms during adulthood.

Head (brain) injury

Traumatic brain injury is more prevalent in the prison population than the general population. One in four people in Scottish prisons have experienced traumatic brain injury, while 10% have suffered from a severe head injury, or multiple head injuries (McMillan et al., 2019), that might require longer-term rehabilitative and social care.

People in prison in Scotland are more likely to experience 3 or more hospitalised head injuries and suffer more severe ones than the non-prison population. Among the prison population, there is a higher risk of people in lower deprivation quintiles suffering from a hospitalised head injury (McMillan et al., 2019). Head injuries that can cause a brain injury are also common among young people in custody. According to the Youth Justice Improvement Board (2017), more than one third of the young people in custody in Scotland that participated in the study had a head injury, while 20% had experienced two or more head injuries. One out of four young people who had a head injury claimed that it happened during a fight.

ii. Social care support needs of the prison population in England and Wales

Similar to Scotland, Wales and England have one of the highest imprisonment rates in Western Europe. The total prison population in English and Welsh prisons was 79,643 in July 2020, while the prison population rate was estimated to be around 133 people in custody per 100,000 of the national population.[10] In Scotland, the imprisonment rate is calculated at 135 people in custody per 100,000 of the national population.[11] The age structure of people in prisons in England and Wales is also changing, mirroring Scottish trends. The number/proportion of people over 50 in English and Welsh prisons has increased by more than 150% since 2002 (Sturge, 2020).

Although there are similarities between rates of imprisonment and the age profile of the prison populations in Scotland and England and Wales, the latter has legislation in place to support the prison population with social care support needs, while Scotland lacks “legislation that clearly defines responsibility and approaches to providing social care in prisons”, impacting on peoples’ lives during and after their imprisonment (Levy et al., 2018).

[10] More information can be found here: https://www.prisonstudies.org/country/united-kingdom-england-wales

[11] More information can be found here: https://www.prisonstudies.org/country/united-kingdom-scotland

Legislation in England and Wales

The social care needs of people in custody in England and Wales are not fully met (Care Quality Commission, 2018), although there have been improvements in delivering social care in prisons after the introduction of the Care Act 2014[12] in England and the Social Services and Well-being (Wales) Act.[13]

Both Acts state that local authorities are responsible for providing social care to people in prison who meet the eligibility criteria. People in custody are eligible under the same criteria used for people in the community (Tang and Kennelly, 2015).[14] The eligibility criteria in England are: (i) needs for care and support arise due to mental health problems, physical ill-health, disability, learning and cognitive disabilities and substance (alcohol and/or drug) dependence; (ii) the person is incapable of doing at least 2 daily activities, such as going to the toilet, developing and keeping personal relationships etc.; (iii) not being able to carry out the aforementioned activities has an impact on personal wellbeing. In Wales, a person is eligible to receive social care support if needs arise from certain health problems that make them incapable of carrying out daily activities. Moreover, Welsh people are eligible for social care support if they do not have access to care support and they need help from the local authority to meet their needs.[15]

Age, mental health issues, substance misuse and hidden disability

The needs of the prison population can be identified using a screening process at arrival. If the social care support needs of people in custody arise during their sentence, they have the right to ask for a social care assessment. However, needs are still unmet either due to failure of screening processes to identify potential needs, or people in custody not being aware that they can self-refer for a social care assessment (Care Quality Commission, 2018).

During 2014-2016, 1,835 people in English prisons were identified as having social care support needs, including needing help with activities of daily living, or help related to health and wellbeing (2.3% of the total English prison population); 1,593 had an assessment (2.0% of the total prison population in England) and 790 (1.0% of England's prison population prison population) received social care (Tucker et al., 2018).[16] Needs can arise due to age, mental health issues, drug and alcohol misuse,

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[12] The Care Act 2014 on people in custody is available at: http://www.legislation.gov.uk/ukpga/2014/23/section/76/enacted

[13] The Social Services and Well-being (Wales) Act is available at: http://www.legislation.gov.uk/anaw/2014/4/contents

[14] More information on the eligibility criteria under the Social Services and Well-being (Wales) Act 2014 can be found here: https://www.assembly.wales/laid%20documents/sub-ld10422/sub-ld10422-e.pdf

[15] More information on the eligibility criteria in England and Wales is available at: https://www.mind.org.uk/information-support/legal-rights/health-and-social-care-rights/eligibility-for-social-care/ and here: https://www.justice.gov.uk/offenders/psis/prison-service-instructions-2016

[16] The statistics in brackets are approximations and they were calculated by assuming that the English prison population in 2016 was 78,481. This number was calculated using the prison population rate per 100,000 in England in 2016 in (Jones, 2018) and the English population for the same year, which can be found here: https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/timeseries/enpop/pop

learning disabilities, and due to other health conditions, such as brain injury.

According to the UK Department of Health (2014), 8.3% of people in custody aged 50 and over would need social care support. This estimate was based on prison data provided by prison governors from 5 prisons via a 2014 pilot questionnaire. When using self-reporting data of the prison population, the estimate of older people in custody needing social care is much larger. For example, in HMP Northumberland, 40% of older people self-reported that they were unable to carry out an activity of daily living, due to either a health condition or due to their age (Public Health England, 2017). There is a recurring theme of significant differences between levels of self-reporting of needs and official assessments that is noticeable in some of the results presented in Chapter 5.

According to the National Audit Office (2017), there were 120 self-inflicted deaths in English and Welsh prisons in 2016, while incidents of self-harm increased by 73% from 2012 to 2016. Without making any adjustments for the characteristics of individuals, self-inflicted deaths are 6.2 times more likely in prison settings than outside, while 70% of self-inflicted deaths in prison cases in 2019 had mental health needs (Prison Reform Trust, 2019). The prevalence of mental health problems can vary depending on age and gender. The younger prison population is more likely to suffer from neurotic disorders than the general population. Farrant (2001) states that 50% of young men on remand and 30% of sentenced young people suffer from a diagnosable mental health disorder. Depression is 5 times more prevalent among the older prison population than elderly people in the community (Fazel et al., 2001). Mental health problems are also 5 times more prevalent among women in prison, compared to women in the community; in 2012, 28% of the reported self-harm incidents in prison were committed by women (Prison Reform Trust, 2013).

Mental health issues are also prevalent among people with a neurodevelopmental disorder. People in custody have an increased risk of developing comorbid disorders, such as mood, anxiety or personality disorders alongside ADHD (Young and Cocallis, 2019). In the UK, around 25% of people in custody are identified to have ADHD, which is considered to be associated with increased recidivism (Young et al., 2018b). Other neurodevelopmental disorders, such as ASDs, can “slip through the gap between learning disabilities and mental health diagnoses”, making it harder to be diagnosed in the criminal justice system (Ashworth, 2016). Indeed, Underwood et al. (2016), using a sample from a prison in London, identified around 16% people in custody with unrecognised ASD traits, while the estimate was not significantly higher than the rate found in a counterfactual group in the community. Regarding learning disabilities, the prevalence rate in the UK prisons ranges from 1-10% (Loucks, 2007).

Drug misuse is also prevalent among people in custody; this endangers their health and increases their respective needs. People in custody are more likely to have a history of drug dependence than the non-prison population, while drug abuse continues in prison. The extent and patterns of drug misuse in prison differ from in the community. For example, although the misuse of opiates in prison is declining, following the decreasing trend in the community, opiate misuse remains a significant

issue in prisons. New psychoactive substances (particularly synthetic cannabis) are more widely used in prisons than the community (HM Inspectorate of Prisons, 2015). Additionally, there has been an increase in misuse of prescribed medication, such as Buprenorphine (Bi-Mohammed et al., 2017).

Social care outside prison

Social care support needs after prison

It is widely recognised that people leaving prison encounter difficulties accessing support and benefits – and this is more acute for those leaving prison on short sentences without statutory social work involvement.[17] Needs tend to include accessing adequate housing, benefits and GP registration, and this is not only an issue for the continuance of social care, but it can also contribute to worsening socio-economic and health vulnerabilities.

Levy et al. (2018) point to the impact of social sanctions and conditionality on social isolation and disengagement from support networks. The issue of social care post-release also needs to be situated in the context of the relative social isolation that prison leavers often face (Nugent and Schinkel, 2016). This is likely to be exacerbated for those with limited mobility, severe and enduring mental illness, and learning disability. Together, such impacts can increase vulnerability to and risk of homelessness; and by extension, exposure to violence and vulnerability to self-harm, escalating poverty, risk of reoffending – all of which are likely to underpin if not reinforce the cycle of re-imprisonment (Fernandes and Sharp, 2015).

Levy et al. (2018) highlight an urgent need to collaborate between social work and others 'to ensure the seamless provision of services to [people in prison] in the move from the community, into prison and back into the community'. Given the prevalence of short sentenced people in custody in the prison population in Scotland and taking into account the phenomenon of the 'revolving door', this is a particularly pertinent observation – more so when considering the absence of statutory social work support for individuals subject to short sentences who are not subject to post release licence and the withdrawal of SPS Throughcare Support Officers in 2019.[18]

Modelling social care support needs of the non-prison population

The literature here mostly focuses on the social care support needs of older people, since this group represents a growing population with significant social care support needs. The literature seeks to identify social care support needs through estimating

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[17] People with short sentences were the majority of prison population. Sentences of 3-6 months predominated in Scottish prisons until 2019, and this trend was the case since 2011. In 2018-19, 35% of custodial sentences were of 3-6 months. The total proportion of 6 months or less was 61%. More information can be found here: https://www.gov.scot/publications/criminal-proceedings-scotland-2018-19

However, after the presumption against short sentences passed in 2019, this picture has probably changed, but there is no available data yet.

[18] More information on the suspended SPS throughcare support scheme is available at: https://www.gov.scot/publications/foi-201900002886/

people's care dependency, using different approaches, such as the 'interval' method of measuring needs or using assessment tools, including the Indicator of Relative Need (ioRN) and the CAPE tool.

The 'interval' method of measuring needs

The 'interval' method of measuring needs classifies individuals into care groups based on social care support needs and the level of dependency on other people. Isaacs and Neville (1976) developed this method but it continues to be used in the literature to estimate care dependency of older people (e.g. Kingston et al. (2018)).

Isaacs and Neville (1976) used the interval method to estimate the needs of older people for domiciliary services, using a sample from three areas in the west of Scotland. The authors classified the individuals into 12 care groups, based on potential need and solitude (i.e. social isolation). The social care support needs of the sample would equal to the sum of social care support needs estimated for the 12 groups. Potential need was defined as the measure of disability and its severity. The latter was categorised into 3 different levels based on how often the person needed help to cover activities of daily living (long, short and critical interval need). Solitude was also categorised into 4 groups, based on the frequency of the availability of social care support need provision (minimal, maximal, diurnal, nocturnal). The 12 groups were the combination of the above criteria. The model was based on the assumption that the social care support needs were approximately homogeneous among the 12 groups.

Potential need was linearly associated with age, but there was no significant relationship with sex, marital status, social class, living arrangements, family structure, and area of residence. Estimated social care support needs were similar to the estimate produced by a second method, according to which the social care support needs of older people were calculated as the sum of the actual help people received and the potential further help they should receive to fully cover their needs. Extrapolating the estimates for potential need to the Scottish population, it could be claimed that 250 people per 1,000 of population aged over 65 years old may have had potential social care support need.

Estimation of needs based on assessment tools

Another way to measure social care support needs is using assessment tools of needs and care dependency. An example of these assessment tools is the Indicator of Relative Need (ioRN), which was developed by and for health and social care professionals in Scotland to identify and measure people's functional needs and dependency.[19] The ioRN includes a questionnaire that gathers information on people's physical and mental wellbeing, including activities of daily living, personal care, food

[19] Information on the Indicator of Relative Need (ioRN) is available at: https://www.isdscotland.org/Health-Topics/Health-and-Social-Community-Care/Dependency-Relative-Needs/In-the-Community/index.asp#iorn

and drink preparation, mental health and behavioural issues.[20] Based on answers to the questionnaire, an algorithm categorises people into different groups of dependency. The assessment outcomes are essential to understand people's support needs and inform planning and delivery of future services (NHS Scotland, 2017). The tool can be used in the community, while there is another version which can be used in care homes and hospital settings. Although it was first designed for older people, there is no age barrier to its use.[21]

Following a similar methodology but using a different tool to assess older people's care dependency, Wattis et al. (1992) estimated the needs of people with dementia and/or disability living in residential and nursing homes in Leeds. The authors used the Clifton Assessment Procedures for the Elderly (CAPE) to identify 5 care dependency grades (independent people, low, medium, high and maximum dependency) and classify the sample accordingly. CAPE is mostly used by professional workers involved in the care of the elderly to identify met and unmet needs of older people. It assesses people's quality of life as well as care dependency levels due to physical and cognitive impairments.[22]

[20] Further information on the ioRN tool: https://integratedcarefoundation.org/wp-content/uploads/2017/11/Pete-Knight-Slides-002.pdf

[21] Interview "Peter Knight discusses the Indicator of Relative Need (IoRN) tool", by Linda White, published in the blog of Scottish Government in 2015. It can be found at: https://blogs.gov.scot/health-social-care-integration/2015/01/22/peter-knight-discusses-his-indicator-of-relative-need-iorn-tool/

[22] Information on the Clifton Assessment Procedures for the Elderly (CAPE) can be found here: https://instruct.uwo.ca/health-sciences/9641/Assessments/Psychological/CAPE.html

3. Stakeholder interviews

- Qualitative interviews were conducted with a range of stakeholders in the SPS, NHS and with social care representative bodies outside of prisons.
- The majority of stakeholders view there to be unmet social care support needs in Scottish prisons, although some respondents thought provision is reasonably comprehensive. Among those who view there to be unmet needs, respondents raised the problem of addressing invisible disabilities and suggested there is too much focus on a narrow definition of physical care needs.
- To maximise the chance of successful delivery of social care in Scottish prisons, there was a relatively high consensus around improving the following areas: governance, partnering and information sharing; capability and skills; stigma levels associated with receiving support; accommodation; and taking a holistic approach.
- The key challenges to successful delivery were flagged as: identifying invisible disabilities; security; and fluctuations in social care support needs in prisons.

To assist with understanding the social care support needs in Scottish prisons, 10 stakeholder interviews were conducted, consisting of 4 interviews with SPS personnel (including 2 Prison Governors), 1 with an NHS prison healthcare team leader, and 5 with social care representatives external to the process of delivering care in prisons.[23] Fieldwork was affected by potential interviewees having very high workloads due to the COVID-19 pandemic and being unable to participate, resulting in engagement with fewer stakeholders than would have been the case otherwise, particularly among potential NHS respondents.

The purpose of stakeholder interviews was to inform the process of estimating the number of individuals in custody in Scotland with social care support needs. Interviews covered: the importance and understanding of social care needs in prisons; the possibility of unmet needs; the main challenges for delivering social care in prisons; current provision; and options for maximising the chances of successful delivery.

The write-up below presents the range of views expressed by stakeholders without providing a critique, and the responses go well beyond those needed for the scope of this study. The difference in views between stakeholders who have a relatively narrow view of social care support needs (primarily relating to visible disabilities) and those

[23] External social care stakeholders consisted of one representative from the Convention of Scottish Local Authorities (COSLA), one from the Scottish Social Services Council, one from Scottish Care and two from Social Work Scotland.

with wider views of social care support needs (including invisible disabilities and a more holistic approach to care) has been key to determining the conclusions of this study. Commenting on the wider themes raised by respondents, there were many similarities to points raised in Levy et al. (2018), including issues with facilities and physical barriers to social care in prisons. Similar issues were found in relation to governance, i.e. whose responsibility it is to provide social care.

The current level of social care in Scottish prisons

The extent of care needs currently addressed

A number of respondents noted that while the NHS provides healthcare services in prisons in Scotland, local authorities do not provide social care in prisons (in line with the more detailed discussion of the policy context in sections 1 and 2). A number of respondents noted that access for people in custody to social care, assessment, equipment and support, is currently neither integrated with community services nor fully equitable with services and support available in the community.

There is a high level of consensus that there are significant and growing needs for social care in prisons in Scotland, particularly due to the ageing prison population, but also due to a growing need for throughcare (covered further below). A number of respondents noted that people are “older earlier” in prison, so people in prisons often have health and care conditions more typical of those who are 10-20 years older in the general population.

There was also a high level of consensus that provision of social care in Scottish prisons has become a high strategic priority for the SPS. As one respondent puts it, “everyone has needs and you have to meet them”. The total level of social care support needs varies considerably by prison and particularly affects prisons with a large number of people in custody on long-term sentences. Social care support needs can also vary significantly with turnover in people in custody, particularly in prisons with higher numbers of admissions and releases, due to having a large number of people in custody on remand or short-term sentences.

One respondent emphasised the vulnerability of the prison population, particularly for individuals regularly in and out of prison. Among this group, homelessness (when out of prison), substance misuse, and mental health problems are common.

Current provision

The SPS does not directly employ carers, qualified care managers, occupational therapists or adult care social workers, but instead procures social care (primarily personal care) from external care providers as required. The provision of social care, estate adjustments, and equipment for people in custody who have social care support needs is handled on a case by case basis, dependent on individual needs and

establishment capability.

One SPS respondent described how they have a comprehensive understanding of social care support needs in the prison they work in, but that this has only become the case recently. They noted that services and facilities (covered below) are of equal importance, and stressed that drug use and poor mental health are significant drivers of social care support needs. Another SPS respondent raised the issue of increasing spend on social care, which had risen 10-fold in the last 5 years. This increase was mainly represented by higher spend on social care support per recipient, rather than a greater number of individuals with social care support needs, i.e. it primarily represents increased quality of care per individual with support needs.

The process of going from first identifying a social care support need to implementing a care plan was discussed. One SPS respondent noted that in the first instance, people in custody normally self-refer either to prison officers or to the NHS team, but in some cases, staff (either SPS or NHS staff) make the first approach. At this point, there is typically triage, a case conference, and then a care plan is agreed between the SPS and NHS staff. A number of prisons also operate a Peer Carer scheme, which tends to provide social support but with no delivery of personal care.

Where there are contracts for external care services, it is typical for carers to come into the prison several times per day to engage in support activities such as washing, helping people eat, helping the bed-bound move around in bed, changing dressings, and helping with changing clothes, etc; although in some cases a 24-hour support can be required. It should be noted that these activities generally represent personal care related to physical health rather than wider social care and support. One respondent emphasised that 100% of care is provided by external carers or the NHS, and prison officers do not provide care.

Potential unmet needs

Some SPS respondents thought that there aren't currently unmet needs in the prisons in which they work. One respondent noted that although the SPS would not be able to fully assess needs if working alone, they were able to do so via close working with the NHS and the private company that provided care. In contrast, another SPS respondent noted that the 2017 SPS Prisoner Survey (covered elsewhere in this report in more detail) suggests the likelihood of significant unmet needs. This respondent noted that the number of this survey's respondents self-reporting difficulties with daily living was much higher than the number of prisoners currently receiving care.[24]

A number of respondents (both SPS and non-SPS) noted that the focus of social care provision is very much on providing packages of support for physical needs. Physical needs are perceived to be well understood, but there are likely to be unmet needs for invisible disabilities, including mental health problems. Respondents noted particular

[24] The SPS Prisoner Survey is discussed further in section 4.

gaps around talking therapy, with under-provision of counselling and cognitive behavioural therapy (CBT) relative to the number of individuals who could benefit from this treatment. One particular area of concern was around whether social care support needs due to autism were being fully addressed, and it was suggested that a higher level of autism awareness among SPS staff would be beneficial. One respondent noted a gap around therapeutic support and suggested there would be significant benefits from providing structured activities to encourage social interaction.

More than one respondent raised the point that there are some unmet needs due to people in custody not wanting support, citing pride and the potential stigma of receiving support as motivations for this. One respondent gave the example of recipients of COVID-19 “shielding” letters. Where individuals were recommended to shield and had full discretion over whether they did or not, the majority chose not to, and this was in large part to avoid creating a negative impression among peers. It was also noted that some individuals do not make their needs known due to having low expectations about the level of care they are entitled to.

One respondent noted that there are some challenges around the speed of accessing social care services, suggesting that even if needs might end up being met, there can be time lags before that happens. Another respondent raised the difficulty of assessment in prisons, noting that someone may need to be seen several times over a period of time to assess care needs, and that a single assessment might lead to unmet needs.

A number of respondents (both SPS and non-SPS) noted that social care needs will continue to grow over the medium-term, due to the continued ageing of the prison population and increasing numbers of complex cases. This creates the potential for an increase in unmet needs.

Facilities

The majority of respondents raised the issue of prison accommodation and facilities as a significant problem for addressing social care support needs. It was noted that most prisons have been designed for a young able-bodied prison population, with security as the primary concern. This makes prisons typically badly suited to older people in custody, causing difficulties getting around the prison for many. Relatively few cells have been adapted for people in custody with significant disabilities, with respondents mentioning that they had “a few” disabled-friendly cells but noting that they would ideally have more. One respondent provided the figure of around £8,000 just to widen a cell door.

One respondent gave the opinion that accommodation and facilities are as important as services for fully delivering social care and support in prisons.

Improving social care in Scottish prisons

Options for maximising successful delivery

Governance, partnering and information sharing

One of the most frequently mentioned areas for improvement was around governance and the role of social care delivery through Health and Social Care Partnerships. On governance, it was felt that it is not always fully clear whose responsibility it is to deliver care and this can have a negative impact on levels of accountability. Clarity of responsibility was seen as vital for successful delivery.

Most respondents mentioned the need for social care to be delivered as a partnership working in collaboration with the SPS and NHS. A number of respondents recommended having some co-location of social care and NHS staff or management within prisons to facilitate collaboration. A number of respondents also made the point that Health and Social Care Partnerships should have an important role to play in providing social care in prisons, noting that this is not currently the case.

A related point, raised by a number of respondents, is that at present, information sharing between statutory services is not working well, tending to be slow or to not happen at all. This is particularly a problem for providing throughcare as individuals transition between prisons and the community. One respondent noted that to maximise chances of success there needs to be connectivity for the journey of people through the justice system.

Capability and skills

Most respondents mentioned the issue of needing to make sure that people with the right skills are involved with providing comprehensive social care in prisons, with assessment noted as one particular area where this is particularly important. Respondents noted that the right skills were needed for thorough assessment, effective commissioning and subsequent monitoring. It was also noted that skills were needed for working with both younger and older people in custody, and that these skills were different for the two groups.

One respondent particularly highlighted the need for skills relating to end of life and dementia care, and that this should include training for prison workers as well as care workers.

Destigmatising social care

Multiple respondents raised the issue that there are some unmet social care support needs in prisons due to unwillingness by people in custody to receive support because of the perception that it would show weakness to their peers and could lead to bullying. One respondent noted that there is no gender difference in this perception of stigma, with women in custody just as likely to be reluctant to receive support as men.

Respondents noted that attempting to destigmatise social care via communication exercises could be part of the solution to addressing this. One respondent noted that privacy could be part of the solution via the provision of private places for delivering care, given that prisons are currently characterised by very low levels of privacy.

Adapting accommodation

A number of respondents noted that to fully address social care support needs in Scottish prisons, there will need to be improvements and adaptations made to accommodation. This is true also for relatively modern prisons with one respondent commenting that they wished they had known in the 1990s about the future increases in social care support needs when making plans to develop their estate.

A number of respondents commented on the cost implications of adapting and improving accommodation, which are relatively large. One respondent noted that it would be ideal to have a facility that is more like a secure care home than a traditional prison but noted that this would represent a significant change to how custodial sentences are delivered.

Taking a holistic approach and providing throughcare

A number of respondents highlighted the need for a holistic approach to social care in prisons, with comprehensive assessment and recognising the high number of complex cases, defined as having multiple types of social care support need. For example, mental health issues often lead to alcohol and substance misuse and vice versa. One respondent noted that social care in prisons needs to involve social workers, particularly for assessment.

As part of this, a number of respondents made the point that people in custody need to be at the centre of determining person-centred care. This approach would base care on the individual aspirations of people in custody and give them a voice on issues that affect them, which is in line with current Scottish legislation, so it should be happening at present. Related to taking a holistic approach that considers the breadth of needs of people in custody is the issue of delivering a programme of care for an individual over a period of time to consider the throughcare journey with transitions into and out of prison. A number of respondents commented on this as a current shortcoming that could be addressed, particularly to support the transition from prison back into the community. It was noted that the throughcare journey should be planned and would ideally involve replication of provision, including continuity of care staff where feasible.

The role of prison officers

A number of respondents discussed the current and potential future roles of prison officers, which was an area where views differed. It was generally noted that prison officers have limited training in issues relating to social care. Some viewed prison officers as rightly having a limited role, whereas others thought they could have their

roles changed to get more involved. One respondent suggested it would be worth considering the possibility of a hybrid role that combined being a prison officer with assisting with social care. One point that was particularly flagged as an area for improvement was more training about autism awareness and understanding.

Peer caring

Voluntary peer caring (or buddying) schemes can play a helpful auxiliary role in providing social support in prisons, which is an activity that happens at present with the SPS having existing guidance on peer caring and support. Respondents were clear that peer caring should not be for personal care, but instead peer carers could provide other forms of social support such as providing social interaction or company.

Alcohol misuse, substance misuse and non-severe mental illness

One area where views differed slightly was on the responsibilities around providing care to support issues relating to alcohol misuse, substance misuse and non-severe mental illness.[25] Whilst it was a common theme that these issues were prevalent in Scottish prisons, there were different views regarding the role for social care in addressing them. Most respondents (both SPS and non-SPS) highlighted the role for social care in this area, but a small number of respondents highlighted the role of the NHS in addressing these issues, with some suggesting the NHS could provide a comprehensive solution for most issues in this category. Where respondents saw significant responsibility for social care in this area, this was seen as a key area to address in order to successfully provide comprehensive social care in Scottish prisons.

Challenges

One respondent put it very succinctly by noting that some of the challenges of providing social care in prisons are fundamental to how prisons are traditionally operated. Firstly, prisons typically rely on relatively strict routines with everyone doing the same activity at the same time, and this can be a poor fit with providing social care and support where individuals need to be able to go about tasks at their own pace. Secondly, the facilities in prisons have been built to provide secure accommodation for an able-bodied prison population, which causes significant problems for providing social care. This emphasis on facilities was a common theme, with a number of SPS respondents noting how expensive it is to adapt accommodation.

These comments provide a helpful summary of the overall level of challenge. The sections that follow outline some of the more specific challenges raised by respondents.

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[25] Severe mental illness is defined here as mental illnesses that produce distortions of perception, delusions, hallucinations, and unusual behaviours. Because the symptoms reflect a loss of contact with perceived reality, the disorders are also sometimes known as psychotic disorders. The main illnesses defined here as severe are schizophrenia, schizoaffective disorder and bipolar disorder. There is a well-established role for social care in these areas.

Identifying invisible disabilities

A number of respondents, particularly non-SPS respondents, noted that one of the biggest challenges to delivering comprehensive social care in prisons is fully addressing invisible disabilities, particularly relating to mental health. Where individuals in custody do not self-refer with invisible disabilities, these can be hard to detect. One respondent noted that this presents a strong case for wider screening processes in order to assess the social care support needs of more people who choose not to self-refer.

One respondent noted that in some cases, it is hard to detect invisible disabilities because individuals receiving help to follow routines by others in custody and by prison officers can appear more capable than is truly the case. In these cases, support suppresses indications that someone is struggling. Invisible disabilities are particularly likely to cause individuals to withdraw into their cells, reducing participation with prison life. One respondent gave the example of an individual in custody unable to participate in work in prison due to having severe Obsessive Compulsive Disorder, which was exacerbated by the available environment for work in prison.

Security

A number of respondents noted security issues as a challenge. One respondent made the point that prisons are a secure custodial environment, which is likely to be perceived to be a challenging and unattractive environment for many care providers. At present, this results in a limited number of agencies that are able to offer services. Another respondent noted that all actions taken to improve the health and wellbeing of people who live and work in prisons need to be balanced with security and order considerations.

Another respondent noted that having additional external service providers creates additional security risks, including for controlling what is going into and out of prisons. This non-SPS respondent suggested that this presents a case for SPS having its own social care staff.

Fluctuations in social care support needs in prisons

One respondent raised the issue that social care support needs in prisons can fluctuate quickly with little warning, which is particularly an issue for prisons with a large number of people on remand or short-term sentences. This respondent noted that this can be particularly the case with Friday admissions, which can lead to increases in social care support needs for a prison without advance warning.

Learning Difficulties and Disabilities (LDD)

One respondent talked extensively about the current programme of work being taken forward in Scottish prisons on Learning Difficulties and Disabilities (henceforth “LDD”), which is a broader category for intervention than only addressing Learning Disabilities (henceforth “LD”). This broader definition would include dyslexia and dyspraxia, which are typically defined as learning difficulties rather than learning disabilities.

A significant programme of assessment has been trialled and the results of this trial suggested that around 40% of people screened had some form of LDD. During a second trial, care pathways were considered. These would sometimes be NHS-led in the case of significant mental health issues and sometimes be addressed by education providers, either working in small groups or working one-to-one.

Full coverage of LDD goes beyond the scope of this work, partly because it is likely to go beyond the level of support provided outside of prisons and partly because some of the solution relates to education rather than social care.

4. Data and methodology

- This study makes use of detailed publicly available data from the Scottish Household Survey on a representative sample of individuals in Scotland, alongside individual-level data provided by the Scottish Government on individuals receiving social care, a snapshot of individual-level data in the current Scottish prison population, as well as preliminary Test of Change screening results from a Test of Change site. This is augmented by SPS prisoner survey results.
- This data is then used to create probability models to extrapolate from the non-prison population in Scotland to the prison population while controlling for age, gender, and premature ageing, controlling either for deprivation levels, or differential ageing between prison and non-prison population. Different methodologies are employed to assess needs based on both levels of need in administrative data and also based on self-reporting of needs.

This section presents the methodology that was developed to identify the extent of social care support needs in the Scottish prison population as well as the data used to feed into the statistical modelling. As there is no precedent for statistical modelling of social care support need in prison settings, a novel methodology was developed to arrive at central estimates of social care support need as well as upper and lower bounds. The limited data on the prison population prevents the direct calculation of the social care needs of people in Scottish prisons, and it makes the need for developing and following a novel modelling route imperative.

With model choice guided by the availability of data, models described in this section have been designed to produce estimates of social care support needs and can produce new estimates based on future data updates. The results can be used to inform policies on how to support people in Scottish prisons with social care support needs, which will guide future assessments of funding requirements.

Data

A variety of datasets were collated and analysed in order to better understand the likely social care support needs of the Scottish prison population and to produce a range of potential estimates of this. The data sources used were a mix of publicly

available data and data provided by the Scottish Government:[26]

- **Scottish Household Survey (2017)**:[27] this was used to estimate an individual-level probability model for the non-prison population in Scotland of having social care support needs. The annual survey covers a sample of 1,000 households, and it asks participants questions on personal characteristics, such as gender and age, the deprivation quantile, as well as whether the individual has a condition that prevents him/her from carrying out activities in his/her every-day life. The self-reported data was accessed via the UK Data Service,

- **Social Care Survey (2015-2017)**: this dataset was provided by the Scottish Government and provides information on the demographic characteristics of people who receive social care support. All 32 Scottish Local Authorities provide information about people being assessed for social care support, including home care services (such as re-ablement services), meals services, housing support services, community alarms and other telecare services, self-directed support (including direct payments), as well as social worker/support workers services. People receiving social care support are people with dementia, mental health problems, learning disability, physical disability, drug- and/or alcohol related problems, people who need palliative care or people who are carers, people who have problems arising from infirmity due to age, as well as other vulnerable groups, including people with HIV/AIDS, or acquired brain injury,

- **A data extract from the SPS PR2 system (2020)**: this dataset was provided by the Scottish Government and includes information on the prison population's demographic characteristics and potential social care support needs. PR2 is an operational system used by the SPS to manage the prison population – it is not designed as a way of monitoring health or social care needs,

- **SPS Prisoner Survey (2017-2018)**: an anonymised dataset of the Scottish Prisoner Survey was provided by the Scottish Government, including self-reported information on demographic characteristics of people in custody and questions covering potential social care support needs. The 16th wave of this survey includes 3,137 observations across the 15 prisons in Scotland. Some of the caveats of the SPS Prisoner Survey is that it is not representative of the prison population, meaning that the most marginalised and disadvantaged individuals might not be taken into account. Additionally, the questions in the SPS survey focus on personal care needs, rather than a broader definition of social care support needs,

[26] Due to time lags in data collection and availability, data from the Scottish Household Survey, Social Care Services and the SPS Prisoner Survey all correspond to 2017, although the PR2 extract is a snapshot of the March 2020 prison population.

[27] Scottish Household Survey: http://www.scottishhouseholdsurvey.com/

- **Preliminary Test of Change screening results:** an anonymised dataset on preliminary Test of Change screening results was provided by the Scottish Government. The dataset included results of screened people in custody in one of the Test of Change sites, which adopted a wide-ranging approach to assessing needs among people in custody. The results flagged various social care needs related to one of the following categories: alcohol dependency, alcohol related brain injury, autism/Asperger, blood-borne virus, dementia/memory/incapacity, drug dependency, hearing impairment/deaf, learning difficulties, mental health, neurological condition (not dementia), frailty, physical disability or long term condition, visual impairment or "other".

Based on the Scottish Household Survey, the non-prison population is on average, as expected, in the middle quintile for the Scottish Index of Multiple Deprivation (SIMD).[28] Although the PR2 extract did not provide deprivation information for people in custody, according to ScotPHO (2010), people in Scottish prisons are most likely to come from the more deprived areas of Scotland; on average, they are in the bottom two SIMD quintiles. More recent data shows that this picture has not changed in the last decade; people in custody are three times more likely to come from the 10% most deprived areas of Scotland (The Scottish Government, 2020).

Methodology

Using the data described above, two different methodologies have been implemented to estimate the social care support needs of the Scottish prison population, supported by presenting three additional data points to inform the assessment. These are described below in non-technical terms, but further technical detail on the methodologies is provided in an annex.

Methodology 1 – Applying support levels of the general population

Methodology 1 uses data on the non-prison population to statistically estimate a probability model[29] that can then be applied to each individual in the current Scottish prison population. This model was based on calibrating social care support needs in the Scottish Household Survey (2017) to the level of social care provision reported in the Social Care Survey data extract (2015-2017). It should be noted that this calibration implies that this methodology will therefore identify the proportion of people in prison in Scotland who not only have social care needs but would have met eligibility criteria thresholds for support. This is not a feature of the other methodologies below.

The two datasets provided information on age, gender, and deprivation of non-prison population. The probability model that has been estimated controls for the aforementioned demographic characteristics. This estimated relationship is applied to

[28] The SIMD provides a deprivation rank for Scottish areas. The deprivation categories include the most deprived categories (1st quintile), and the least deprived categories (5th quintile). More information is available here: https://www2.gov.scot/Resource/0043/00439496.pdf

[29] Specifically, logistic regression is used, also known as estimating logit models.

each individual in the PR2 extract, which provided information on the age and gender of the prison population.

This results in assigning each member of the prison population a percentage probability of having social care support needs that would be covered and supported in the community. These probabilities can then be summed across the prison population to produce an estimate of the proportion of the prison population with needs. For example, if four individuals each had an estimated 25% probability of having a social care support need then summing across the four individuals would produce an estimate of one person in this population of four having a social care support need.

Methodology 2 – Self-reporting social care support needs

The second methodology is similar to the first, but instead of creating a model calibrated to the Social Care Survey data extract (2015-2017), the model relies on self-reporting of social care needs in the Scottish Household Survey (2017). The model controls for the same demographic characteristics as in Methodology 1. Then, the estimated relationship is again applied to each person in the PR2 extract.

Three versions of Methodology 2 have been implemented. Methodology 2a is exactly as per Methodology 1 except for using self-reported assessments of need to estimate probabilities. Methodology 2b excludes the deprivation adjustment. Methodology 2c also excludes the deprivation adjustment, but instead adjusts directly for premature ageing. Following evidence from the literature on accelerated ageing of people in custody, and adopting the 10 year-differential ageing between prison and non-prison population, the age of the prison population is shifted by a decade to better match the age of the non-prison population. For example, under Methodology 2c, an individual in prison aged 50-59 is treated as 60-69 years of age for extrapolating from the non-prison population.

Data Point 1 – Using the SPS survey

In contrast to the first 2 methodologies, which extrapolate from the non-prison population to the prison population, Data Point 1 presents the estimate of the percentage of people in custody having personal care needs based on the SPS Survey 2017.

The survey includes questions about requiring assistance in managing: (i) transferring/moving around the prison, (ii) washing/personal care, (iii) toilet use, (iv) dressing, (v) collecting meals, (vi) eating meals, as well as questions on physical and mental health conditions, hidden disabilities, and substance use. This survey data was used to calculate the percentage of survey respondents who required assistance in managing at least one of the aforementioned activities of daily living. This sub-sample includes people who have physical and/or mental health conditions, hidden disabilities, as well as people with drug or alcohol problems. People who have these types of conditions but who report that they can deal with activities of daily living are

not categorised as people with personal care, and some of them might need healthcare support instead of social care.

Data Point 2 – Using the PR2 data extract

Data Point 2 uses information provided in the data extract from the SPS PR2 system (2020). This data source contains information on the percentage of people in custody that have potential social care needs, broken down by category. The potential social care needs of people in custody include needs stemming from at least one of the following: physical issues, mental health, drug use, alcohol use, learning disabilities, neurological problems, autism, dementia, palliative care issues, and age-related frailty. It should be noted that this data source is not considered to be fully reliable on social care data, which is why it is not the central focus of determining the total level of need. It is thought there are both missing cases and resolved cases, i.e. a mix of false negatives and false positives, in this data source.

Data Point 3 – Using preliminary Test of Change screening results

As with Data Point 1 and Data Point 2, Data Point 3 contains information on the percentage of people with social care needs in one of the Test of Change sites. The preliminary Test of Change screening results are used in this methodology: if an individual is flagged as having at least one condition (alcohol dependency, alcohol related brain injury, autism/Asperger, blood-borne virus, dementia/memory/incapacity, drug dependency, hearing impairment/deaf, learning difficulties, mental health, neurological condition (not dementia), frailty, physical disability or long term condition, visual impairment and “other”), then this person is considered to have social care needs.

An important limitation of this approach is that the single Test of Change site may have had a level of social care needs unrepresentative of other prisons in Scotland.

5. Results

- The central, and preferred, estimate produced by this study is for 7-10% of the prison population in Scotland to have social care needs. This is based on extrapolating from the non-prison population based on characteristics including age, deprivation levels, gender and the premature ageing of the prison population.
- A wide range of estimates are available outside of the central estimate. Extrapolating from the non-prison population receiving care produces an estimate that around 3% of the Scottish prison population would have met eligibility criteria thresholds for support outside of prison. Instead, focusing on social care data in the SPS PR2 extract provides the highest estimate in the range, with a result of 13%.
- On average, people with longer sentences have a higher probability of having social care needs. Additionally, the probability of having social care needs is higher in older age groups. Women seem to have a slightly higher probability of having social care needs than men.
- Sensitivity analysis shows that the percentage variability of estimates of social care need is greater for any given individual prison compared to variability in the overall prison population, i.e. total social care needs across all prisons are likely to fluctuate less than the needs of each individual prison. At any given time, some prisons will experience higher-than-expected levels of need (given the characteristics of their prison population), and others will experience below-average levels.

This chapter brings together the results from the statistical modelling explained in Chapter 4. It further includes the results from the Monte Carlo analysis for the first 2 methodologies, as well as the caveats and limitations for using the statistical modelling to estimate the social care support needs of the prison population in Scotland.

Estimates of social care support needs

The results from the methodologies we developed in the previous section are summarised in the table below. In this table, we also include the SPS estimate referenced in the Dundee Report (Levy et al., 2018).

Table 1. Estimates of social care support needs of people in Scottish prisons

	Methodologies / Data Points	Central estimate for the percentage of prison population with social care needs
1	Methodology 1 – Applying support levels of the general population	2.7%
2a	Methodology 2a – Self-reporting social care support needs (model A)	10.1%
2b	Methodology 2b – Self-reporting social care support needs (model B)	7.1%
2c	Methodology 2c – Self-reporting social care support needs (model C)	10.2%
3	Data Point 1 – Using the SPS survey	8.3%
4	Data Point 2 – Using the PR2 data extract	13.0%
5	Data Point 3 – Using preliminary Test of Change screening results (for one prison only)	12.2%
6	*Memorandum item: SPS (2018)*	*1.9%*

Methodology 1 provides an estimate of 2.7% of people in Scottish prisons having social care support needs and where, outside of prison, they would be likely to meet eligibility criteria thresholds. This methodology is based on extrapolating from the number of individuals in the wider population who have been assessed and receive social care support from the Local Authorities to cover their social care support needs. This will therefore exclude cases where individuals receive social care support from family members, which will not be possible for members of the prison population, or people who have social care needs but are not eligible for receiving social care support in the community. Consequently, this methodology may result in an under-estimation of social care support needs in prisons.

Methodologies 2a, 2b and 2c provide estimates of 10.1%, 7.1% and 10.2% respectively, and they are based on extrapolating from the number of individuals in the wider population who self-report having social care support needs. Methodologies 2a and 2c control for premature ageing of the prison population by controlling either for

deprivation or the different effective ageing rates between the prison and non-prison population. These methodologies include people who have social care support needs, irrespective of the kind of social care support they need and who will provide it. These results should be viewed as the central estimates of this study, giving a preferred range of 7-10%, albeit with indications from other data (discussed below) that a higher proportion of the prison population in Scotland may have support needs.

Data Point 1 relies on people in custody self-reporting their personal care needs. This methodology shows that 8.3% of people in Scottish prison settings have personal care needs. As explained in Chapter 4, this methodology calculates the percentage of survey respondents who required assistance in managing i) transferring/moving around the prison, (ii) washing/personal care, (iii) toilet use, (iv) dressing, (v) collecting meals, and/or (vi) eating meals. The group of people that need assistance with at least one of these daily activities also includes people with physical and/or mental health conditions, hidden disabilities, as well as people with drug or alcohol problems. People who have these kinds of conditions but who have reported that they can deal with everyday activities are not considered as having personal care needs.

Data Point 2 suggests that an estimated 13.0% of people in Scottish prisons have conditions expected to cause social care needs based on PR2 data. Data Point 3, which uses preliminary Test of Change screening results, provided an estimate of 12.2% of people having social care needs in one Test of Change site. These results provide some tentative evidence that the proportion of the prison population in Scotland with social care needs may be slightly higher than the estimates presented in this study, although neither data source should be considered to be robust. The social care element of PR2 data is not thought to be fully reliable because it is thought there are both some missing active cases and some missing resolved cases, i.e. a mix of false negatives and false positives, in this data source. Data Point 3 is recent and reliable but unfortunately covers only one prison, making it difficult to draw inferences about the overall prison population in Scotland from this source.

The results in the table above show that there is no single answer to the question of the proportion of the prison population in Scotland that have social support needs, which is consistent with messages from stakeholder interviews in Section 3. Providing social care support only to those who would meet eligibility criteria thresholds outside of prison results in the relatively low estimate of 2.7% generated by Methodology 1. Focusing primarily on personal care rather than social care generates the 1.9% estimate from SPS (2018). Under these definitions, the level of current unmet needs is relatively low.

In contrast, Methodologies 2a, 2b and 2c suggest a range of 7-10% based on extrapolating from social care needs in the non-prison population to the prison population. This range is notably higher than the 2.7% generated by Methodology 1 and the 1.9% estimate from SPS (2018). Going further, PR2 data and early Test of Change results suggest even higher estimates of up to 13.0%.

Disaggregating results to prisoner status, age groups and gender

The results for methodologies 1 and 2a are disaggregated by prisoner status (unsentenced, short-term, long-term, life sentences), age groups and gender. Sentences are either determinate or indeterminate. The latter category does not have a set end point – for example, a life sentence is considered an indeterminate sentence. Determinate sentences are categorised as short-term and long-term sentences. A short-term sentence is less than four years, while a person given a long-term sentence will be in prison for four years or more.[30] The ages of people in custody are categorised to the following age groups: under 30, 30-39, 40-49, 50-59, 60-69, and over 70 years old. The results are also broken down by gender.

Table 2. Disaggregation of estimates of having social care needs to prisoner status, age groups and gender

	Methodology 1	Methodology 2a
Prisoner status (%)		
Unsentenced	2.2%	8.9%
Short-term sentence	2.5%	9.6%
Long-term sentence	3.9%	11.4%
Life sentence	3.3%	12.9%
Age groups (%)		
Under 30 years old	1.0%	4.7%
30-39 years old	1.9%	8.0%
40-49 years old	2.8%	12.6%
50-59 years old	3.7%	19.8%
60-69 years old	8.0%	22.3%
Over 70 years old	32.0%	27.9%
Gender (%)		

[30] More information on the types of prison sentences in Scotland can be found in the following links: https://www.mygov.scot/prison-sentence/ and https://www.scottishsentencingcouncil.org.uk/about-sentencing/prison-sentences/

Women	3.2%	10.8%
Men	2.7%	10.0%

Methodology 1 provides lower estimates, on average, than methodology 2a. The results disaggregated by prisoner status show that, on average, the longer the sentence, the higher the probability of having social care needs. For example, the results from methodology 2a show that 10% of people who are serving a short-term sentence have social care needs, while 13% of people with a life sentence need social care support. Moreover, the probability of having social care needs is higher in older age groups. In particular, based on methodology 1, 1% of people aged less than 30 years old have social care needs, while 32% of people aged 70 years old or more have social care needs. When results are disaggregated by gender, it is estimated that women are more likely than men to have social care needs.

Understanding uncertainty around estimates

This section includes probability distributions for the level of need by performing a technique known as “Monte Carlo analysis” on the first two models (methodology 1 – Applying support levels of the general population and Methodology 2a – Self-reporting social care support needs). The models above estimate a probability for each individual of having social care support needs rather than assigning definite support needs to some individuals and a definite lack of support needs to others. However, in reality, these probabilities will translate into some individuals with social care support needs and some without. For example, if ten people in custody each have a 10% chance of having social care support needs, then on average 1 in 10 will be assessed to have needs, but by running simulations sometimes this will be zero out of 10 and sometimes 2 or more out of the 10.

Monte Carlo analysis simulates possible realities based on predicted probabilities a large number of times (1,000 times in this case), similar to producing a distribution around flipping a biased coin a large number of times, recording whether it was heads or tails (1 if the prisoner has social care support needs and 0 otherwise). The bias in the coin is the estimated probability of having social care support needs. This is done to provide an understanding of the potential variability around predicted total numbers of people in custody with social care support needs.

Applying this technique based on Methodology 1, which produced a central estimate of 2.7%, provided a range of 2-3.5% of people in custody having social care support needs, suggesting a lower bound of 2% and an upper bound of 3.5% of individuals. Applying this technique based on Methodology 2a produced an estimate that 8.5-11.5% of people in Scottish prisons having social care support needs, noting that the central estimate from Methodology 2a is 10.1%.

Moreover, a random prison was selected to show how variability for a single prison

can be quite different to the whole prison population level so that at any given time there will be some prisons with above-average social care support needs and some below. Methodology 1 produced an estimate of 2.3% of people in the randomly selected prison having social care support needs, but Monte Carlo analysis estimated a range of 0.5-4.5% of people in this specific prison having social care support needs. Methodology 2a provided an estimate of 9.1%, and the analysis estimated a range of 6-13%.

The percentage variability for an individual prison is greater than for the whole prison population, noting that e.g. the 6-13% range for an individual prison is larger than the 8.5-11.5% range for the overall prison population. This has an important policy implication in that it demonstrates the importance of enabling flexibility in how total social care funding for Scottish prisons is allocated between prisons. At any given time, each prison is likely to be facing a larger-than-normal level of requirements to provide social care support or a lower-than-normal level of requirements. An ideal funding system would accommodate these fluctuations.

Limitations of a statistical approach

Although the use of a statistical approach in this study can provide a picture of the prevalence of social care support needs among people in custody, it does not provide a complete representation of the diversity and complexity of needs. A potential limitation of using statistical approaches in this research is that it cannot, or it would be highly complex to, differentiate between drivers of need and their impact on need (e.g. which types of drivers result in what kinds of need, given the variation within drivers of need on impact of that need). Moreover, statistical methodologies do not fully identify which drivers of social care support need are most acute across the prison estate (recognising that this will be a dynamic phenomenon) and in what ways - in terms of the extent and nature of social care support required. One person may have needs emerging from an interplay of drivers, but in terms of identifying the extent of need, what needs they manifest in, who they predominantly affect in terms of demographic, and the extent of required provision as shaped by length of prison sentence, statistical approaches are limited in what they can say about this. Given the number of drivers/variables – or the complex causative and consequential nature of the phenomena shaping the need for social care support in prison, it would be challenging, if not impossible, to accurately capture this using a solely statistical approach.

Thus, statistical models are limited in their capacity to reveal the full nature of a phenomenon and how need is experienced at the individual level, as individual experiences might differ markedly depending on age, gender, nature and driver of need, experience of living with or coping with need, sentence length, etc. Statistically identifying prevalence or extent of social care support need cannot, then, fully capture the diversity and complexity of social care support needs, or how they are affected by the institutional environment.

Limitations of extrapolating from the general population

The estimation of social care support needs of people in prison through extrapolating from the general population's needs may not take full account of the extent and effects of health inequities and social deprivation typically faced by people in prison (Levy et al., 2018). Despite controlling for the average characteristics of deprivation, the complexity and concentration of needs among the prison population might be under-estimated. For example, the degrees of mental illness, substance misuse and physical ill health are higher among people in custody when compared to the general population (Harris et al., 2007). The incidence of mental ill health is also higher among the prison population – particularly for women. Moreover, while there are higher rates of disability in the prison population, such as those with a learning disability, the extent of their prevalence, and therefore potential associated level of need, is widely under-estimated (Levy et al., 2018). Another issue when extrapolating from the general population is that, even when controlling for the age of people in custody, people in prison tend to be biologically older than their chronological age.

Anomalies of self-reporting

Key to not only identifying the level of need for social care in prisons, but also to reconciling anomalies between official statistics and self-reporting data, could be clarifying understandings of social care, the parameters surrounding what counts as social care and, thus, the identification of need, and how it can be measured. There is a difference in the literature between social care support as simply personal care and social care as a broader term, which includes supporting wellbeing and participation (in a prison context) in purposeful activities. Levy et al. (2018) suggest that limiting the identification of social care support need to personal care assistance reflects a 'reductionist approach to social care to solely health needs, leading possibly to false or narrow strategies about needs and the goals and desires of people in prison'.

Moreover, both self and social stigma are likely to play an influential role in self-reporting. Stigmatised or hidden disabilities (such as learning disabilities or mental health) are at risk of going undetected, resulting in an under-estimation of both need and lack of provision of specialist support.

6. Conclusion

The Scottish Government is undertaking a comprehensive, national assessment of the health and social care needs of people who are in prison. This will help to ensure that ongoing efforts to integrate health and social care in prisons are informed by evidence and are person-centred. Self-directed support and the integration of health and social care available to people in the community have so far not been extended to people in prison. Currently, social care in prisons is the responsibility of the Scottish Prisons Service (SPS).[31] In contrast, responsibility for health services was transferred from the SPS to NHS Health Scotland in 2011 and, subsequently delegated to Integration Authorities when they were established in 2015. A challenge for providing integrated health and social care is the lack of robust estimations of the scale, as well as an evidence-based understanding of the nature of the support needs across the population in prison. The last national prisons health needs assessment was in 2007 and did not include social care. This report aimed to quantify the extent of social care support needs among people in prison in Scotland using statistical techniques informed by qualitative research, and the wider existing evidence base, to assist in interpreting statistical results.

The central, and preferred, estimate produced by this study is that 7-10% of the prison population in Scotland have social care needs. This is based on extrapolating from the non-prison population based on characteristics including age, deprivation levels, gender, and the premature ageing of the prison population. However, there are a wide range of estimates available outside of the central estimate. Extrapolating from the non-prison population receiving care produces an estimate that around 3% of the Scottish prison population would have met eligibility criteria thresholds for support outside of prison. Instead, focusing on social care data in the SPS PR2 extract provides the highest estimate in the range, with a result of 13%. All of these estimates apply to the same definition of social care, although the lowest estimate also factors in eligibility criteria.

Going beyond the scope of the current study, there is the question of whether preventative social care support should also be considered, so that individuals who do not currently have social care support needs become less likely to develop them. For example, more could be done to encourage people in custody to participate in the prison community, socialise more and manage complex relationships, as well as preparing for their transition back into the wider community.

Delivering preventative social care would involve providing services to a larger proportion of the prison population in Scotland than under the approach of only working with existing needs. However, it should be noted that the cost per individual is likely to fall as increasing numbers of individuals receive support. This is because a

[31] The *Public Bodies (Joint Working) Act 2014* legislated for the integration of health and social care services: http://www.legislation.gov.uk/asp/2014/9/contents/enacted

small number of individuals need very high levels of support (at high cost) but reducing eligibility criteria means working with individuals with lower levels of support needs. Going further, preventative care involves working with individuals where small amounts of support, e.g. providing structured group activities, can reduce their chance of developing social care needs. Lastly, effective preventative care may reduce total funding requirements depending on the success of preventative activities.

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Annex – Technical methodological detail

Methodology 1: Applying current state intervention levels

The first approach is a four-step methodology to estimate the social care needs of prison population through modelling the social care needs of the non-prison Scottish population.

Step 1: Estimate the probability of the Scottish community having social care needs

The first step of the current methodology is the estimation of the probability of having social care needs. The Scottish Household Survey 2017 was used as it is a dataset that includes people with and without social care needs. The following logit model was estimated:

$has\_social\_care\_needs_i = \beta_0 + \beta_1\, female_i + \beta_2 age_i + \beta_3 deprivation\_quintile_i + \beta_4 \gamma_i + \varepsilon_i$ (1)

where:

- *i* indexes the individual,
- *has_social_care_needs* is a dummy variable that takes the value of 0 if the individual does not have social care needs and 1 if they do. The dummy variable was constructed using the “rg5b” variable from the survey, which asks participants whether their physical or mental health condition or illness lasting or expected to last 12 months or more (conditional that they are in this situation) reduces their ability to carry out daily activities. People replying “yes, a lot” were classified as people with social care needs, and people replying “yes, a little” or “not at all” were recorded as not having social care needs,
- *female* is a dummy variable with 1 if the individual is female and 0 otherwise,
- *age* is the age of the individual as a continuous variable,
- *deprivation_quintile* is a categorical variable whose values range from 1, for individuals who come from the 1st SIMD quintile (most deprived areas), to 5 for those who come from the 5th SIMD quintile (the least deprived areas),
- *γ* is the interaction of *age* and *deprivation_quintile*, and
- ε_i represents a random error term.

After estimating equation (1), the probability of having social care needs was predicted for each individual in the sample.

Step 2: Calibrate to social care administrative data

The percentage of people who have social care needs in the Scottish Household Survey 2017, based on the "*has_social_care_needs"* dummy variable that was constructed in Step 1, does not match the social care administrative statistics. In particular, around 13% have social care needs in the Scottish Household survey 2017, while official administrative data indicates that 4% of the Scottish population receive social care and support from Local Authorities.

Therefore, the predictions from Step 1 were calibrated to match the population frequencies in the administrative data. First, the sample from the Scottish Household Survey was classified into age groups: <30, 30-39, 40-49, 50-59, 60-59, 70-79, 80+. The predicted probabilities of having social care needs as estimated in Step 1 were sorted for each age bracket and gender. The next step included the construction of a new dummy for having social care needs, which was set to 1 for the top x% of the sorted probabilities within each gender and age group, where x% represents the proportion requiring social care support based on Scottish administrative data, and 0 otherwise.

Step 3: Estimate with the revised social care dummy

This step included the estimation of a model similar to the one constructed in Step 1, using the new social care needs dummy constructed in Step 2 as the dependent variable.

$$has\_social\_care\_needs_i = \beta_0 + \beta_1 female_i + \beta_2 agegroup_i + \beta_3 deprivation_i + \varepsilon_i \quad (2)$$

where:

- *i* indexes the individual,
- *has_social_care_needs* is the dummy constructed in Step 2, where 1 defines the individual with social care needs, and 0 otherwise,
- *female* is a dummy variable with 1 if the individual is female and 0 otherwise,
- *agegroup* is the categorical variable of age, classifying the sample into the following age groups: <30, 30-39, 40-49, 50-59, 60-69, 70-79, 80+, and
- *deprivation* is a dummy variable that takes 1 if the individual comes from the bottom 1st or 2nd SIMD quintile, and 0 otherwise.

The model (2) was used in the next step to create a probability estimate of social care needs for each person in Scottish prisons.

Step 4: Estimate social care needs of Scottish prison population

In this step, the model (2) from Step 3 was applied to the Scottish prison population. First, the model was used for the non-prison population, and then, the results were extrapolated to the prison population, by predicting the probability of having social

care needs for the whole sample, i.e. prison and non-prison population.

Methodology 2: Self-reporting social care needs

Similar to Methodology 1, this approach is based on extrapolating estimates of social care needs of the Scottish non-prison population to the Scottish prison population. The main difference between the two approaches is that Methodology 2 is based on self-reporting of social care needs rather than calibrating to administrative data of individuals receiving social care interventions.

As in Methodology 1, the probabilities of having social care needs were estimated for the non-prison population, and then, the results were extrapolated to the prison population. In this approach, two different specifications were used to predict the probability of people in custody having social care needs.

Specification A:

The first specification is similar to the model used in the 4th step of Methodology 1. The independent variables used for estimating the logit model were the same as before, but the dependent variable was varied to be based on self-reporting of needs in the Scottish Household Survey:

$$has\_social\_care\_needs\_self\_reported_i = \beta_0 + \beta_1\, female_i + \beta_2 agegroup_i + \beta_3 deprivation_i + \varepsilon_i \quad (3)$$

Specification B:

In this specification, the deprivation dummy was excluded:

$$has\_social\_care\_needs\_self\_reported_i = \beta_0 + \beta_1\, female_i + \beta_2 agegroup_i + \varepsilon_i \quad (4)$$

Specification C:

In this specification, the deprivation dummy was excluded but the premature ageing of the prison population was taken into account. In particular, adopting the 10 year-differential ageing between prison and non-prison population, the age of the prison population is shifted by a decade to better match the age of the non-prison population.

$$has\_social\_care\_needs\_self\_reported_i = \beta_0 + \beta_1\, female_i + \beta_2 differential\_ageing_i + \varepsilon_i \quad (5)$$

where:

- *differential_ageing* is the categorical variable of age for the non-prison population, classifying them into the following age groups: <30, 30-39, 40-49, 50-59, 60-69, 70-79, 80+. The age of the prison population has been adjusted in the following way: people in custody whose age group is 16-20 has remained in the “<30 age group; people whose age group is 21-29 years old have been moved to the 30-39 age group; people whose age group is 30-39 have been moved to the 40-49 age group, and so on.

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The views expressed in this report are those of the researcher and do not necessarily represent those of the Scottish Government or Scottish Ministers.

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