NHS Highland

Health and Healthcare in Prison:

A Literature Review 2020

PUBLIC HEALTH

Authorship

This literature review was written by Dr Catherine Flanigan Public Health Speciality Registrar (ST4) in November 2019 as part of a local prison health and healthcare needs assessment.

Contact details

Dr Catherine Flanigan
Directorate of Public Health
NHS Highland
Larch House
Stoneyfield Busness Park
IV2 7PA

All enquiries to: nhsh.publichealthintelligence@nhs.scot

Acknowledgments

Thanks to the healthcare needs assessment team at NHS Greater Glasgow and Clyde who undertook the original literature review and published the search strategies to allow this updated literature review to be conducted.

Thank you to Elisabeth Smart (Consultant in Public Health), Carolyn Hunter-Rowe (Public Health Intelligence Manager) and Jonathan Murphy (foundation year doctor) for their contribution to this report.

Contents



Glossary

Acronym	Meaning
ACT	Assessment in Custody and Teamwork
ADHD	Attention Deficit Hyperactivity Disorder
AUDIT	Alcohol Use Disorder Identification Tool
BAME	Black Asian Minority and Ethnic
BBV	Blood Borne Viruses
BMI	Body Mass Index
CAT	Cognitive Analytical Therapy
CBT	Cognitive Behavioural Therapy
CI	Confidence Interval
CIP	Community Integration Plans
COPD	Chronic Obstructive Pulmonary Disease
CPA	Care Programme Approach
CPD	Continuous Professional Development
DBI	Distress Brief Interventions
DBT	Dialectical Behavioural Therapy
DMFT	Decayed Missing and Filled Teeth
DNAR	Do Not Attempt Resuscitation
DoH	Department of Health
DRW	Drug Recovery Wing
EU	European Union
GP	General Practitioner
HBsAg	Hepatitis B Surface Antigen
HCV	Hepatitis C Virus
HIV	Human Immunodeficiency Virus
HMIPS	Her Majesty's Inspectorate of Prisons in Scotland
HMP	Her Majesty's Prison
IGRA	Interferon Gamma Release Assay
IRC	Immigration Removal Centres
LTBI	Latent Tuberculosis Infection
MHF	Mental Health Foundation
MMSE	Mini Mental State Examination
MSM	Men who have Sex with Men
NHS	National Health Service
NICE	National Institute of Clinical Excellence
NPHN	National Prisoner Healthcare Network
NPS	Novel Psychoactive Substances
NRT	Nicotine Replacement Therapy
OHQoL	Oral Health Related Quality of Life
OPT	Opioid Replacement Therapy
OST	Opiate Substitution Therapy
RCTs	Randomised Controlled Trials

RCPsych	Royal College of Psychiatrists
RMT	Risk Management Team
RNA	Ribonucleic Acid
PHE	Public Health England
PTSD	Post Traumatic Stress Disorder
ScotPHN	Scottish Public Health Network
ScotPHO	Scottish Public Health Observatory
SOHIPP	Scottish Oral Health Improvement Prison Programme
SSRIs	Selective Serotonin Reuptake Inhibitors
STIs	Sexually Transmitted Infections
SMI	Serious Mental Illness
SPS	Scottish Prison Service
TB	Tuberculosis
TBI	Traumatic Brain Injury
TSO	Throughcare Support Officer
UK	United Kingdom
USA	United States of America
USP	Under Served Populations
VFSMS	Veterans Forensic Substance Misuses Service
VIC	Veterans In Custody
WEMWBS	Warwick Edinburgh Mental Wellbeing Scale

1. Introduction

Methods

This literature review is an updated version of a literature review originally undertaken in 2012 for the NHS Greater Glasgow and Clyde prison healthcare needs assessment. It comprised of two separate search strategies: one on health in prison and one on healthcare interventions in prison. The same search strategies (see Appendix One) were re-run for the intervening time period from 2012 to 2019 in Embase and where relevant, combined with results from the earlier literature review.

Where papers referenced additional relevant resources, policies or studies these were also reviewed. A policy or guideline context has been provided where referenced or felt applicable, drawing on Scottish Government policy, Scottish Prison Services (SPS) publications, National Prison Healthcare Network (NPCN) and National Institute of Clinical Excellence (NICE) guidance. Additional sources of grey literature such as, best practice statements from third sector bodies, have also been included.

These search strategies identified papers which were exclusively related to female health in prison, young offenders institutes and police custody suites. These papers were reviewed and included where felt applicable to a male prison setting. Conference proceedings and abstracts were excluded.

Findings have largely been reported in line with the authors terminology and use of language to ensure accuracy. In this literature review people in the care of the prison are variously described as: 'people living in prison', 'prisoners' and occasionally 'offenders', the latter referring to a broader group than those living in prison. The most person centred term of reference is considered to be 'those in the care of the prison' or 'people living in prison'.

Overview

One of the limitations of the evidence base is that the majority of studies were descriptive in nature, with very few examining the impact of interventions and with even fewer using a quantitative assessment of impact. No Randomised Controlled Trials (RCTs) were reported. Few papers were systematic reviews and of those, no meta-analyses were included as studies were rarely of sufficient homogeneity to allow this. Much of the evidence presented was qualitative, with small sample sizes which was not easily synthesised.

Mental health and the health of older people were among the most common topics, wheras there were relatively few studies included on physical health or traditional health improvement topics, such as healthy weight interventions or smoking cessation.

In terms of good practice, common themes across the literature were: proactive screening, holistic care, maximising use of peer support and supporting throughcare into the community. Common challenges reported were: staffing, funding, security regimes and prison and healthcare culture clashes. A summary table of prevalence estimates reported in the literature for a range of conditions can be found in Appendix Two.

Principle of Equivalence

The principle of equivalence of prison care with community care was commonly referenced. This is the principle that healthcare delivered in the prison setting should be at least equivalent to that of the community. There was much debate about the application of this principal both in terms of the definition and appropriateness. It was reported to be unclear whether this was equivalence of process (which is usually assumed) or equivalence of outcomes. With the argument made strongly that the latter would be more appropriate and that more intensive and proactive care would be required in prison settings to reflect the higher health need and serial disadvantage of many people in prison. Adopting this approach would reflect the true ethos of the principle of equivalence[1,2]. The prevailing belief was that, regardless of the interpretation taken, the principle of equivalence should be considered a minimum rather than a gold standard of comparison[3].

Healthy Prisons

A healthy prison is one which is safe, secure, reforming, health promoting and grounded in respect for human rights. It usually takes a whole prison approach to promoting and supporting health through realising that many risk factors are interrelated and can be best tackled through comprehensive integrated programmes. Healthy settings create a healthy working, living and learning environments, they integrate health into the core business and routine life of the setting and they contribute to the health and wellbeing of the wider community[4].

In 2012 the Scottish Public Health Network (ScotPHN) provided the Better Health Better Lives Framework for improving prisoner's health. This framework highlights similar themes to those reported in this literature review, in terms of effective interventions, which include: proactive screening, use of peer support, harm reduction measures, use of family and wider community support and active use of time or diversionary activities. Underpinning this is an understanding of cycles of behaviour change and the potential need to offer sustained support at multiple points or across multiple attempts to change. Additionally, they recommend every person in prison have an individual care plan that reflects their own needs and priorities[4].

Her Majesty's Inspectorate of Prisons in Scotland (HMIPS)

Standard 9 in the HMIPS inspection sets out 17 inspection standards covering the assessment and response to an individual's health and wellbeing needs throughout their stay in prison. It specifically mentions that those with: mental health conditions, other long term health conditions, end of life care requirements or suicide risk should be able to access treatment and support equitable to that of the community and be supported through their stay in prison, transfer and subsequent release to the community. Additional requirements are that health improvement, prevention and promotion information and activities including oral health are available in prison[5].

2 Healthcare and Physical Health

2.1 Scottish Policy Context

The responsibility for prison healthcare has sat with the NHS in Scotland since 2011. In 2016 the Royal College of Nursing reviewed the impact of this transfer from SPS in a report called Five Years On[7]. This review found that it was not possible to evidence the overall impact of the transfer due to a combination of; the gaps in knowledge of health needs and the lack of national reporting on prison care. It was reported that the sustainability of prison healthcare had not improved, which was highlighted by poor staff morale, persistent staffing gaps and lack of development of advanced nursing practices. Areas in which improvement had been observed was linking to the wider community healthcare services and therefore wider clinical expertise. Continuity of care through to the community, primary care demand and long term condition management were all areas which remained challenging.

In 2017 the National Institute for Clinical Excellence (NICE) developed five quality standards in relation to physical health problems in prison[8]. They are:

- people entering or transferring between prisons have a medicine reconciliation carried out before their second stage health assessment within seven days of arrival
- people entering or transferring between prisons have a second stage health assessment within seven days. With a second stage screening covering less urgent topics such as sexual health, screening and Body Mass Index (BMI)
- people entering or transferring between prisons are tested for blood borne viruses and assessed for risk of Sexually Transmitted Infections (STIs)
- people in prison who have complex health and social care need have a lead care coordinator who can ensure good communication between health, social care and custodial teams
- people being transferred or discharged from prison are given a minimum of seven days' prescribed medicines or an FP10 prescription.

Some additional recommendations in the wider NICE guidance in relation to medications were: to allow people in prison to hold all medicines in-possession unless the person does not pass an individualised risk assessment, consider providing storage for in-possession medicine in prison cells and provide information and education about medicines adherence.

Beyond these five core standards additional recommendations from the wider guidance document include:

- ensuring people are offered the equivalent health checks to those offered in the community (e.g. people with learning disabilities have an annual health check)
- considering the use of peer support and mentoring to help promote a healthy lifestyle while in prison
- ensuring a local protocol is available for responding to and managing situations in which a person's health quickly deteriorates or in a health emergency
- carrying out a pre-release health assessment for people with complex needs at least one month before release
- liaising with relevant services that will be providing care and support to them after they leave prison.

2.2 Overview of health needs

Two studies comparing use of health services found that people in prison used health services between 17 and 23 times a year which was between 4 and 77 times more frequently than men in the community[9,10].

One literature review looked at overall health needs in prison particularly from the perspective of primary care nursing[9]. They observed that general health needs were higher among the prison population than in the community and that conversely the prison population make little use of health services outside prison but have high usage of services in prison. The authors noted that while prison was a valuable opportunity to reach this group and to improve health, that prison could also be detrimental to health. This highlighted

that mental health symptoms, including anxiety, worry, fatigue, depression and sleep problems were all more common in prisoners and particularly among remand prisoners. Prisoners with significant neurotic symptoms were then also more likely than other prisoners to report a physical health complaint and this further increased the demand for healthcare[9].

Effective chronic disease management was noted to be increasing as a need but challenging due to a high turnover of people in prison. An additional strain on the healthcare services is meeting the demand for minor ailment treatment, which in the community might be dealt with by self-care and over the counter advice and medication. They advised that of chronic conditions, asthma, diabetes and epilepsy should be prioritised for review appointments. Only 1% of the prison population have been found to have established epilepsy which is approximately equivalent to the rate in the general population for men aged 25-35 years. At the time of this review (2007), in prisons in England and Wales, diabetes care had specifically been noted as not being equal to that of the community. With inadequate dietary guidance, inappropriate diet, lack of self monitoring facilities, lack of specialist input and lack follow up all being cited as issues[9].

Confirming epilepsy in the prison population has proved challenging with a large discrepancy in self report and medically confirmed diagnoses. This may in part be due to increased alcohol use in this population which can be associated with loss of consciousness and withdrawal seizures and head injuries. While these conditions are distinct from epilepsy this could lead to confusion and increase self report of epilepsy explaining the discrepancy[11].

By way of conclusion, the authors noted that the literature to date focused more on the prevalence of health need, rather than on the services required to meet those needs. In addition they noted that there had been limited investigation of the expanding role of primary care nuses within the prison setting. During the intervening 10 years of research neither of these topics have been more thoroughly addressed.

Use of primary care

One study recorded the number and reason for General Practitioner (GP) visits in a large cohort of patients in Belgium. The most common categories for consultation were: administrative, including initial entry examination (22%), psychological (13.1%), respiratory (12.9%), digestive (12.5%), musculoskeletal (12%) and skin problems (7.7%).

Within psychological consultations the most commonly reported issues were: feeling anxious, sleep disturbance and prescription of psychoactive drugs. Many visits concerned minor ailments and problems, which in other circumstances, would not require any physician intervention. Their explanations for the increased use correlated with that of the previous review and were: poorer health status, lack of access to other health services or informal health advice, prison rules (which accounted for many of the administrative visits) and mental health issues related to the difficulties of life in prison.

Within each of the descriptive categories more specific reasons for the visit were also assessed. The request for medication was the single most frequent reason for attending and one of the top four reasons for all categories of attendance[10,12].

2.3 Condition Prevalence

Only one American study cited prevalence comparisons for common conditions in a American population. There were no comparable United Kingdom (UK) based studies.

The American study found that rates of many chronic diseases in the prison populations were more than double of those in the general population. This included diabetes (5.0% vs. 2.4%), chronic respiratory conditions (e.g., chronic obstructive pulmonary disease (COPD), 34.1% vs. 19.2%), and liver disease (10.0% vs. 0.6%). Women, Black Asian Minority and Ethnic (BAME), older adults and those who do not have permanent accommodation between time spent in prison all had a greater risk of mortality and worse health outcomes due to treatable, chronic conditions[13].

Of the medical conditions self-reported by participants the most common were: hypertension (35.9%), high choleterol (17.8%), arthritis (17.5%), asthma (14.9%), diabetes and pre-diabetes (12.3%), liver conditions (11.9%), and bronchitis (7.2%). Sixty one percent of participants were overweight or obese[13].

Their work also mapped the strength and number of connections between the conditions reported. They found the conditions which had the greatest number of connections to other conditions (i.e. most likely to be co-morbid with one or more other conditions) were: anxiety, depression and Post Traumatic Stress Disorder (PTSD)[13].

2.4 Head injury

The risk factors for sustaining a Traumatic Brain Injury (TBI) and for criminal offending overlap, and include lower socioeconomic status, being young, male gender and problem alcohol use. Personality changes associated with antisocial behaviour are often reported after severe TBI, and these include: aggression, poor judgment, egocentricity, poor insight, tactlessness and a lack of concern for others. It is proposed that significant head injury may in part lead to offending behaviour and chance of imprisonment and there has been considerable research interest in this association[14].

A systematic review of head injury in adults in prison found a wide range of prevalence estimates, from 25% to 86%, with an accompanying wide range of definitions used and variable investigation or assessment of severity. Of the 4 studies reported which used a validated tool to assess head injury, the range was only slightly narrower, from 36 to 78%. None of the studies reviewed reported on the prevalence of disability associated with head injury. The researchers concluded that the service needs for prisoners with head injury is unclear but potentially very high[14]. It is worth noting however, that more than 90% of TBIs in the general population are mild and the prognosis for a single mild TBI tends to be good, so there may be risks with over estimating the need without accurately ascertaining the severity or impact of injury. The authors were also keen to distinguish between head injuries and TBI secondary to head injury. The prevalence estimates reported here reflect head injury only[14].

Given the wide range of prevalence estimates and the resulting unclear implications for care, the University of Glasgow, in partnership with the National Prisoner Healthcare Network (NPHN) are undertaking further research on this topic. Their preliminary findings are that the severity of head injury was an independent predictor of anxiety, cognitive function and disability in daily life, after adjusting for factors such as education, age and problem alcohol or drug use.

Of those identified they estimated that 30-55% of the sample would benefit from assessment in relation to their head injury but that this estimate is tentative and a larger sample size is required. Almost 90% had multiple head injuries (median four per prisoner) and the number of head injuries was associated with the number of arrests and convictions. This suggests a link between a history of multiple or more severe head injury and offending[15]. Data analysed so far suggests that a significant proportion of prisoners with head injury require assessment with a view towards intervention. The authors concluded head injury is an important feature in the presentation of men in prison and that there is a need for screening to triage those requiring specialist assessment. Work is ongoing both to confirm prevalence estimates, link to hospital records, to establish a recommended screening tool and to develop an educational module for prisoners on head injury prevention and impact[15].

2.5 Medication

A mixed methods qualitative review of prisoner self-possession of medication across twelve prisons in England and Wales found that the primary benefit was empowerment. It was found to encourage greater independence, personal responsibility and control which, in turn, could improve self-management and health. Healthcare staff were supportive of this approach for patients and also recognised benefits for their own practice by reducing staff time spent on dispensing and supplying medication. This then allowed staff more time to utilise their other nursing skills.

From the patient perspective it was felt to be more comparable with community care, more effective

preparation for release, closer to "normality" and the added convenience of not queuing daily for medication[16].

All of the prisons in the study had some medication in-possession system in place. Nearly 70% had a list of medication that was not suitable for in-possession and 94% had a structured method of assessing a prisoner's suitability to receive medication in-possession. Only 45% of establishments had specific storage facilities for patients with in-possession medication and this was lower (20%) in adult male local prisons serving the courts. Prisoners identified this as a weakness describing there should be a safe place to store medication in order to realise the benefits[17].

Risk management was a major concern for staff both in terms of the potential for trading or misuse, the potential of putting vulnerable patients at risk of exploitation and the risk of "hoarding" with a view to overdosing. While it was acknowledged that risk could not be eliminated three strands of risk management were identified: risk assessment, risk monitoring and risk calibration.

The reviewing team received 56 examples of risk tools with the following factors being most commonly assessed:

- risk of self-harm or suicide
- vulnerability to bullying
- ability to understand instructions
- previously known security breaches
- current mental state

Generally the following medications were universally considered higher risk: controlled drugs (e.g. methadone), opiate analgesics, antipyschotics, benzodiazepines and tricyclic antidepressants. Amongst those generally routinely permitted were: antibiotics, antihistamines and certain antidepressants, particularly Selective Serotonin Reuptake Inhibitors (SSRIs).

Monitoring remained important with health care staff continuing to frequently monitor adherence, check medication was collected and that requests for repeat prescriptions were timely. Other procedures used were written contracts signed by patients, random cells searches and medication counts. Calibration was more variable across the prisons reviewed, with some treating risk assessment as a one-off event and others as a dynamic approach with the person's risk fluctuating. Those with more flexible approaches tended to have fewer blanket rules about drugs and were able to personalise healthcare more[17].

2.6 Deaths in Prison

The Ministry of Justice for England and Wales reported an increase in deaths in prison by 21% over a one year period between 2015 and 2016. This was both due to an increase in self-inflicted deaths from 90 to 119 but also an increase in deaths due to natural causes from 147 to 196. Death due to natural causes is now the leading cause of death in prison[18].

Further examination by the Prison and Probations Ombudsmen of 402 deaths due to natural causes in prison found the leading causes were diseases of the circulatory system (including coronary artery disease and strokes: 43%) followed by neoplasms (cancers: 32%). Of those who died, 30% had been in custody for more than 5 years and almost half had been in custody for less than two years. People in prison were found to die significantly younger in prison compared to the general population, even from natural causes[19].

One initiative designed to address the emerging issues of the ageing prison population and chronic disease management in prison is implementing a version of the NHS Health Check, which is available to the general population in the community. The NHS Health Check is a national risk assessment and prevention programme available in GP surgeries in the community, with the Scottish equivalent being Wellwomen and Wellman checks. These checks involve an assessment of risk of developing heart disease, stroke, diabetes and kidney disease. This is assessed through a combination of personal

details, family history of illness, smoking, alcohol consumption, physical activity, Body Mass Index (BMI), blood pressure and cholesterol. People are then provided with individually tailored advice and possibly medication[19,20].

2.7 Staff Perspectives

The relationship and culture clash between the aims of the healthcare service and prison service was recurrently explored in the literature[21,22]. While this was primarily through the lens of nursing staff it would also be largely applicable to other healthcare providers in a prison setting.

A recurrently reported source of frustration among nursing staff was the prioritisation of security over healthcare, leading to a feeling of loss of professional autonomy[23]. Another source of conflict was the "dual role of custody and care" as staff struggled to reconcile the sense of being manipulated by medication requests and self-harming behaviour with their personal feelings and professional obligations to care for, and respond to symptoms.

Additionally, the potential risks posed by service users and their limited autonomy made building trusting relationships challenging which limits the ability for shared decision making[24].

The worsening prison estate and reducing prison officer numbers translates simultaneously into both, more expressed need for healthcare and more barriers for health professionals having reliable access to people. This was thought to particularly affect opportunities for practicing preventative healthcare or management of more complex, chronic cases. More recently, many prisons have reported having to provide more unplanned medical care to respond to New Psychoactive Substances (NPS) use. The literature recommendations for building staff relationships included: supportive induction programmes, ongoing training, especially collaborative training between health and prison staff and engaging in reflective practice around both conscious and subconscious bias[22].

Some of the most positive aspects of prison nursing reported in the literature were; the opportunity to get to know patients better over a long time periods and being part of rehabilitation for some of the most serially disadvantaged people. Job satisfaction and confidence built over time, with nurses having been in post for eight or more years reporting high levels of both. An area of policy which the literature felt policy was behind practice was promoting healthy prisons, particularly in relation to staff wellbeing. Despite the fact that most health policies in prison are aimed solely at those in the care of the prison, staff can experience high levels of stress which can negatively impact on their health and wellbeing.

While prison staff also reported positive asects of their work, including a sense of unity and camaraderie as a professional group, there was a greater focus on negative aspects. These include: fear of personal safety and exhaustion due to challenging and often hostile encounters. Prison governors interviewed felt that most of the stress among staff was imported and actually reflective of home issues, rather than the work environment[25]. There was also a consensus view among prison officers that senior level commitment determined how much time and resources were dedicated to health promotion or prevention programmes, which ultimately determined their overall sustainability[25]

2.8 Perspective of People in Prison

In the literature, prisoners reported various barriers to accessing health services, both in and out of prison. These barriers included organisational ones (e.g. not having a registered address), in addition to their own lifestyles and their own personal opinions. Manyof those interviewed reported being put off whole services after encountering a single negative experience or a minor hurdle, such as being asked to return for an appointment on another day. They also reported using direct access services, such as ambulances and emergency departments for conditions that would normally have been treated in primary care. Futhermore, having previously been in care of the prison created some very practical barriers to accessing care. These include: re-registering with a GP, delays in accessing prescriptions and a disruption of community links and previous referrals[26].

Prison healthcare was viewed as easier to access, which therefore offered an opportunity to proactively address various health concerns, from addiction to weight gain. This, however, was followed by a period of increased disruption after being released from the care of the prison. Many reported GPs, in particular, as making a significant positive impact on their health, both through giving their time and by facilitating more flexible, less formal access arrangements for post release care[26].

People in the care of prison described it as providing a stable, even "healthy" structure to their life, which enabled them to take more control. For some, time in prison was not even viewed as a punishment but a "welcome interruption" from their life outside which offered fewer barriers, not only to healthcare but also to broader development, such as qualifications and skills. People described some of the barriers in accessing healthcare after being released from prison, which included stigma, finances, education and transport.

Despite this, people within prison used various measures to create a feeling of escape from prison life which included: using drugs, participating in creative projects and writing to friends and family.

Healthcare and Physical Health Key Points

Responsibility for healthcare moved from SPS to NHS in 2011 and while this has led to improved access to wider healthcare, there continues to be challenges, including staffing levels and continuity of care through to the community.

Cultural differences between the prison and healthcare service can lead to frustration for healthcare staff due to the double burden of providing care and custody and a feeling of decreased autonomy.

The prison population have higher level of need than in the community, they make little use of health services outside prison but have high usage in prison and there are fewer options for accessing self care or alternative advice. This results in less staff capacity for management of chronic conditions and preventative healthcare.

NHS health checks leading to individually tailored risk assessment and advice are recommended.

Requests for medication are a common reason for health service use and maximising self-possession of medication is supported for fostering independence and maximising staff time.

Death due to natural causes is the leading cause of death in prison with diseases of the circulatory systems and cancer being the most common causes.

As part of a healthy prison culture, staff involvement and wellbeing should also be considered.

People in prison often view prison healthcare positively as having fewer barriers than in the community.

3 Communicable Diseases

While as a closed environment prisons would be a high risk setting for the transmission of any communicable disease, the primary conditions of interest are Blood Borne Viruses (BBVs) and tuberculosis (TB). BBVs as a collective term refers to hepatitis B, hepatitis C and Human Immunodeficiency Virus (HIV).

3.1 Scottish Policy Context

The Scottish tuberculosis (TB) framework acknowledges imprisonment as a factor which increases risk of TB alongside: being born in a country with a high incidence of TB, alcohol use, poverty, poor nutrition, reduced access to healthcare, homelessness and problem drug use. They also note that a further decline in TB epidemiology will require reaching Under Served Populations (USPs) as defined in the NICE guidelines which would include prisoners alongside other groups such as the homeless and asylum seeker populations. A subgroup of the Scottish TB network has been convened and plans to make specific recommendations for Scotland for this group[27].

At the same time, the framework notes that TB is not a significant problem in Scottish prisons, with very few cases in the last ten years. Across Scotland as a whole the number of cases has decreased from a peak in of 4.9 cases per 100,000 to 2.6 cases per 100,000 between 2009 and 2015. The majority of active TB cases diagnosed in Scotland are a result of the reactivation of Latent TB Infection (LTBI) and the framework recommends systematic screening and treatment of individuals with LTBI in order to significantly decrease the incidence of active TB disease in Scotland. This starts with LTBI screening for new entrants to Scotland who are arriving from areas with a high incidence of TB[27].

The NICE clinical guidance document on TB recommends that prisons receiving prisoners from high incidence areas should offer a Interferon-Gamma Release Assay (IGRA) blood test for TB to prisoners younger than 65 years who are in regular contact with substance misuse services or other support services. This is provided that arrangements have been made for support to continue after release. They also recommend that prison health services should incorporate IGRA testing, with screening for Hepatitis B, C and Human Immunodeficiency Virus (HIV) and that healthcare professionals in prisons should ensure prisoners and detainees are screened for TB within 48 hours of arrival[28].

Strong evidence exists for successful adherence to treatment for those who received directly observed preventative therapy in prison and alongside regular opioid substitution therapy. Mobile X-Ray screening and investment in comprehensive multidisciplinary teams was not found to be cost effective in prisons serving low prevalence populations (<100 per 100,000)[29].

The 2015-2020 sexual health and BBV framework update identifies people in prison as a priority group and supports the introduction of an opt out BBV testing during the induction period for all new prisoners in Scotland. They should also receive an offer of hepatitis B vaccination and if prisoners are hepatitis C antibody positive, they should be offered immunisation against hepatitis A. It was reported that increased tested, including in prison settings played a large part in a 17% increase in diagnosis among the estimated hepatitis C population in Scotland. This resulted in nearly three times as many people being started on antiviral therapy[30] .

3.2 Tuberculosis (TB)

A cross sectional prevalence study of Latent Tuberculosis Infection (LTBI) amongst the homeless population in the United Kingdom (UK) found an estimated prevalence of 10% (95% CI 8-13%) and that those with a history of incarceration have a significantly increased risk of LTBI (OR 3.49 (95% CI 1.10-11.04)[31].

A 2016 audit of TB services in 12 London prisons and Immigration Removal Centres (IRCs) found that all sites asked individuals on entry if they had previously been taking TB medication and all sites assessed new individuals for their TB risk by self-reported symptoms in a questionnaire during the initial health

screen. Only one healthcare provider was reported to be providing IGRA testing for those under 35 years old from high risk groups but were not routinely performing screening. No healthcare provider had incorporated IGRA testing within a wider blood borne virus service as recommended by NICE and none of the health providers with a digital x-ray machine (i.e. those with serving population with a high prevalence of TB) were conducting active case finding in new prisoners[32].This indicates TB screening remains underdeveloped nationally in prison settings.

3.3 BBV Prevalence

A systematic review of hepatitis B surface antigen (HBsAg) and anti-hepatitis C virus (anti-HCV) prevalence estimates from 68 studies across 23 European Union (EU) countries found the highest HBsAg prevalence to be among people in prison (0.3-25.2%), people who inject drugs (0.5-6.1%) and Men who have Sex with Men (MSM) (0.0-1.4%). For HCV, people in prison were found to have a range of 4.3-86.3%, people who inject drugs having a range of 13.8%-84.3% and for MSM a range of 0.0-4.7%. The authors considered that the high prevalence in some prisons in certain countries may be due to high rates of imprisonment of migrants born outside the EU, which was over 15% in France, Germany, Italy, Portugal and Spain and as high as 72% in Luxembourg[33].

Extrapolating simply from prisons based the the UK, the estimates from two studies which reported a HBsAg prevalence of 0.0 and 2.2% and 4 studies on anti-HCV which reported a pooled prevalence of 17.4% (95% CI 16.4-18.4) in the UK. Suggesting that these prevalence estimates would be more in keeping with the UK prison population, which also correlates with a 2013 study of all Scottish prisons which found 19% of the population was positive for HCV antibodies, half of whom had a history of injecting drugs. It should be noted however, that while being anti-HCV is consistent with a presumptive diagnosis, it can only be confirmed by testing for HCV ribonucleic assay (RNA). Therefore these results could be overestimated[33].

No studies were found which reported on HIV prevalence in the prison population. The most recent estimates were found in 2007, which found the number of HIV positive people in Scottish prisons was 14[11].

3.4 Hepatitis C

An audit of hepatitis C practice across twenty one English prisons found variable compliance against national HCV guidelines considered relevant to the prison setting[34]. Of the prisons audited, only 29% had a steering group to oversee the hepatitis C pathway locally, 62% had a written HCV policy but the quality and content of policies were not consistent, with varying levels of information on delivery and management of positive and negative test results . To support prevention all had leaflets, booklets and disinfectant tablets readily available. Testing was offered in 95% of prisons and was carried out by on site staff as well as by sexual health services. To support continuity of care 86% of prisons reported ensuring prisoners would not move again while receiving treatment, however when people were transferred it was unclear what follow up arrangements were in place. Training was noted to be more available for healthcare workers than for prison staff but its availability was variable across prisons[34].

Psychosocial support for those diagnosed and being treated for hepatits C was an area which the audit found was particularly weak. It highlighted that the Hepatitis C trust free phone line, drug and alcohol services and mental health services could all contribute to support prisoners and they should be signposted and reffered to accordingly.

Another area which audit highlighted needed improving was their process of performing, recording and reviewing information about testing and treatment. In fact, although most prisons submitted venous samples which could be used to both perform a screening antibody test and confirmatory RNA, this was not automatically performed in many cases, which delayed diagnosis and subsequent treatment[34].

3.5 Staff Perspectives

A study of prison officer perspectives in England found there was support for hepatitis C testing and some even felt it should be mandatory to safeguard the wider prison population. This includes staff who

have been exposed to blood, for example during episodes of self-harm. There was sometimes a conflict between confidentiality for the person's medical information and concern for staff members or other prisoners who might have been exposed. The sharing of hair clippers between prisoners, if one was known to have a BBV, was given as an example[35].

While prison officers were well aware of the of BBV risk with drug taking, sharing equipment and prison tattooing, they were less informed about other modes of transmission. Several of those interviewed believed BBVs to be an airbourne infection causing them to wear masks around prisoners.

One study reported that 44% of prison officers believed HCV was transmitted by sneezing, indicating this might be a commonly held belief. Prison staff also reported being unsure about longer term effects on a person with HCVs health and felt security reasons should always prevail over the need for treatment and that prisoners should not be put on hold to receive treatment but that the NHS system should work around the prison. All prison staff interviewed expressed they did not have enough training about HCV and that this would help them manage their anxiety around exposure to it in work[35].

3.6 Sexual Health

Sexual health can be a higher priority for this group because before entering prison they are more likely: to have had a greater number of sexual partners, to have had sex with people who use drugs or are sex workers and have poorer condom use. A general healthcare review in 2007 reported data on Sexually Transmitted Infections (STIs) prevalence was sparse in this population but a single study reported that 22% of males in prison as ever having had an STI[9]. There does not appear to have been further research on prevalence of sexual health conditions in this population since.

Public health recommendations are that condoms should be available in prisons alongside dental dams and lubricants, that prisoners should be informed at induction of how to access condoms and when requested, they should be provided promptly and discreetly[36].

One study examined prisoner perspectives on harm reduction measures including condom use in a Scottish prison: 43% were supportive of free condoms, 27% were opposed and 30% weren't sure, indicating very mixed opinions. Even those in support of having condoms felt the need would be low and people on both sides of the debate worried about confidentially, the risk of misuse of the condoms (e.g. for concealing drugs) and the potential for unfairness as most prisoners would not be having sexual contact while in prison[37].

Communicable Diseases Key Points

People in prison are at higher risk of blood borne viruses and tuberculosis.

Hepatitis C is most prevalent of these conditions, affecting approximately 17% of people in prison and Hepatitis B affecting around 2%.

Ideally, screening for all of these conditions should be performed at admission to prison, with BBV screening well already established across Scottish prisons.

Preventative and harm reduction approaches are less developed and prison staffs' knowledge about BBVs was limited.

Condoms, dental dams and lubricants should be readily and discreetly available.

4 Mental Health

4.1 The Scottish Policy Context

Prisons and in the broader sense, police custody are included in the Mental Health Strategy 2017-2027, with a commitment to invest £35 million for 800 additional mental health workers across emergency departments, GPs, police custody suites and prisons. It also highlights the intention of the Justice strategy to work collaboratively across systems to support those with mental health problems and build upon innovations such as Distress Brief Interventions (DBIs). There is no further detail however on how this might manifest[38].

Much of the literature summarised here is from the context of English prisons. In England, all prisons are served by mental health in-reach teams which follow a similar model. A review of prison in-reach teams found that they have an average of five whole time equivalent staff members and 75% of teams took more than 50 referrals a month for more than 1 prison[39]. A further review of inspection reports found that the most common referral system was an open referral system, whereby all staff and prisoners could refer to the mental health team with urgent referrals being seen within 24-48 hours and non-urgent between two and ten days. Mental health team caseloads ranged between 4 and 135 individuals. While transfers to mental health hospitals were rare, when they did occur 58.3% had significant delays with the longest delay being 298 days[40].

4.2 UK standards for mental health services in prison

Both the National Institute of Clinical Excellence (NICE) (2017) and the Royal College of Psychiatrists (RCPsych) (2018) have published or updated their standards in the past few years in relation to prison mental health. It should be noted that these were developed as part of a service specification for NHS England Health and Justice Commissioning and therefore may not all be applicable to the Scottish setting[41].

The RCPsych standards are grouped as type 1 (essential), type 2 (expected) and type 3 (desirable). There are 123 standards in total, which cover: admissions and assessment, referral, discharge and transfer, patient experience, patient safety, environment, workforce capacity and capability, work force training, Continuous Professional Development (CPD), support, governance and 24 hour mental healthcare[41].

NICE have developed four quality statements in relation to mental health in criminal justice settings[42]:

1. Adults in contact with the police because of suspected offences and who have any features of mental health problems are responded to in a way that reduces the risk of anxiety, self-harm or aggression.
2. Adults in contact with the police because of a suspected offence who have suspected mental health problems are referred for a comprehensive mental health assessment.
3. Adults with mental health problems who are in contact with the criminal justice system have a care plan that is shared with relevant services.
4. Adults who have a mental health risk management plan and are transferring within the criminal justice system have their plan reviewed by the receiving service.

4.3 Prevalence of mental health conditions

Mental health was the most researched topic in this updated literature review and a substantial amount of this evidence was related to prevalence estimates. Pooling these estimates is challenging however, as it could be defined by variety of methods including: self report, clinical interviews, recorded diagnoses, use of clinically validated screening or presence of mental health symptoms, rather than diagnoses. Additionally, some studies looked at overall mental wellbeing while others looked at specific conditions or separated out common mental disorders from severe and enduring chronic mental health conditions.

Table 1 summarises the most accurate and relevant prevalence estimates. Where systematic review estimates were available they have been used, otherwise the most recent UK estimates have been derived from robust studies which included clinical assessment, rather than self report. Depressive states, personality disorder and anxiety states were the most common conditions with a substantial

number of people having had previous contact with mental health services but only 10% having required hospitalisation in a psychiatric hospital. Comorbidity was common, with 70% of people having two or more mental health conditions.

Table 1 - Summary of prevalence estimates for mental health conditions or characteristics[43,44]

Condition or Characteristic	Prevalence Estimate in male Prisoners	Country, year
Mental Health Diagnosis		
Psychiatric co-morbidity 2 or more 5 or more	70%, 11.7%	England, 2017
Depressive states	49%	England , 2017
Personality disorder	40-70%	Systematic review, 2016
Anxiety states	29.1%	England , 2017
Severe and enduring mental illness*	15%	England, 2018
Major depression	10.2%	Systematic review, 2016
Psychosis	3.6%	Systematic review, 2016
Prior Contact		
Prior contact with mental health services	22-61%	England , 2017 and 2016
Prior psychiatric hospital admission	9-10%	England ,2017
Have a Key worker	31.1%	England, 2017

*psychotic disorder, bipolar affective disorder or current major depression

While prevalence estimates vary substantially they are consistently found to be greater than that of community or general population surveys by a factor of 3-5 times[43,45]. There is much debate over how much this reflects the negative impact of prison on mental health or the disenfranchisement of people with chronic mental illness in society, which subsequently leads to offending behaviour which is more likely to be detected and managed through the criminal justice system. The latter is termed the "importation hypothesis"[46] however, a recent Hard Edges Scotland report has found offending to be the form of disadvantage most likely to overlap with other forms of disadvantage, particularly homelessness, while mental health conditions having the least overlap. This suggests that the "importation hypothesis" is less likely, although this would require further consideration of the impact of common versus severe and enduring mental illness[47].

One study reported on wellbeing across the Scottish prison estates using the Warwick Edinburgh Mental Wellbeing Scale (WEMWBS) with mean scores of 41.2- 43·4 over a three year period compared to a Scottish average of 49.8. People on remand had lower mean scores (meaning lower wellbeing) than people who had been sentenced. Mean scores were also significantly lower among people in prison than in their peers of the same age group and sex in the most deprived quintile of the general population, except among those aged 50 years or older[48].

4.4 Foreign National Prisoners

Approximately 13% of the UK prison population are foreign national prisoners and this proportion has increased 93% since 2000. They have been found to be significantly under referred to mental health teams in comparison to other prisoners and to be over represented in terms of pre-detention trauma, self-harming and suicidal ideation[44].

Foreign national prisoners are considered particularly vulnerable to mental health issues and suicidal behaviour in prison. The three major problems identified from the literature which this group face are: language, maintenance of family ties and immigration. Suggestions for improvement include: improved interpretation services, staff training and using internet based calling companies and secure email access for connecting with family. Immigration procedures were felt to be out of scope for the prison service but where possible clear, timely and accurate information should be provided[49].

4.5 Symptom Course

While mental health symptoms remain elevated in the prison population in comparison to the general population while incarcerated, there is some evidence across individual studies that mental health issues tend to stabilise or improve during time spent in prison[50,51].

One study examining subgroups, reported that mental health did not improve uniformly but that the greatest improvements were seen by those who either had pre-existing mental health problems, for which they had received treatment in the last year or had problem drug or alcohol use. Furthermore, these studies reflected that it was unknown whether the improvements seen were specifically due to the healthcare provision in prison or through the prison offering some security, routine and limited access to drugs and alcohol compared to the community[50].

Those with pre-existing mental health or drug and alcohol problems were also found to have significantly higher levels of mental health symptoms shortly after arrival[50]. Other factors associated with higher levels of mental health symptoms on arrival included: living with a chronic disease, being aged 30 or over and being unemployed prior to imprisonment.

A UK based study found that cases who displayed a suicide risk at arrest and a history of inpatient care were at an increased risk of acute deterioration in the first few weeks of imprisonment with a mean of 55 days from being received into prison to presenting acutely[52].

4.6 Suicide and Self-Harm

In 2016 there were 40161 self-harming behaviours in UK prisons and 113 prisoners took their own lives, 70% of whom had been identified as having mental health needs[12]. Suicide in male prisoners is around 3-6 times greater than the general population. One prevalence study amongst prisoners in England and Wales estimated 5-6% of men had self-harmed in the previous 12 months of custody[46]. In a review of mental health referrals to in-reach teams over a third of those seen had received special measures during their time in prison because of their assessed risk of self-harm and/or suicide. A similar number had a history of self-harm or a history of attempting suicide[44].

Having a pre-existing mental health condition is only one risk factor for suicide with the strongest risk factor being a previous history of attempted suicide. Suicide can also have a contagion effect, with people who recently lost someone to suicide also being at heightened risk, therefore in a closed environment, such as a prison this would also be a risk. Prison specific risk factors include: being on remand, being convicted of a violent offence and being given a life sentence. Risk factors for severe self-harm in prison include: having a history of self-harm, having a mental health diagnosis, being in prison previously, having been in prison for less than 30 days and use of drugs[46].

4.7 Prisoner and Staff Perspectives

The Centre for Mental Health identified core periods of vulnerability to self-harm and suicide as being arrival, transfer and release from prison. Their research found that relationships between staff and prisoners were of key importance with two particular barriers to maintaining a good relationship were identified. These were staff shortages or inexperience and disbelief that expressed distress by prisoners was genuine[53].

Mental health services in prisons were viewed by those in the care of the prison as primarily sources of medication, rather than services which provide a more holistic treatment. Other sources of support

which were identified as helpful were: wellbeing groups, chaplaincy and imam support and peer to peer listening schemes. One such scheme called 'Listeners', run by the Samaritans, trained prisoners to offer confidential, emotional support to other prisoners. Some of the particular benefits of this were that this support would be available daily, without prior appointment and that the peer to peer nature removed the fear of being judged or reported. In just one year Listeners across the UK responded to almost 90,000 requests for support; however the short term nature and unpredictable funding of projects like this was identified as a negative and limiting factor[54].

In addition to listening services, other proposals from people living in prison were: increasing staff numbers, especially mental health staff, better training of staff and formalising peer mentor roles so that there they were consistent and could be accessed in informal ways. Transition points were identified as times when a more proactive approach should be tried and it was recommended that, on arrival all prisoners should receive written record of what support and services there are and how to access them[55].

Prison staff felt that the training for managing risk and preventing suicide called Assessment in Custody and Teamwork (ACT) was insufficient and not suitable for their job role and remit. They felt they required more help from healthcare services to accurately manage risk. Staff also recognised the potential role for family and friend support, for example, one prison enabled them to make a referral on a prisoner's behalf if they noticed behavioural changes. Peer mentors, education and gym staff, chaplains and officers were described as delivering essential and often informal 'counselling', which both prisoners and prison staff felt could stall or prevent an escalation of distress. Some felt that evidence based psychological intervention should be included in service specifications for prison healthcare[53].

Safer cells are cells in which prisoners were clearly visible to prison staff at all times to allow for observation. These were criticised by prisoners as being stigmatising, increasing distress, removing privacy and doing nothing to address the root cause of that distress. The WHO also advocate that vulnerable individuals should not stay in isolated accommodation[55].

4.8 Intervention

In addition to the use of peer support, guidelines for suicide prevention have recommended the following effective interventions: early screening of prisoners at first reception to custody, ongoing risk monitoring, multidisciplinary information sharing and decision-making are emphasised along with, appropriate mental health treatment, staff training and environmental safety (e.g. removal of potential risks such as ligature suspension points)[46].

4.9 Triaging of Mental Health Need

Recurring themes in the literature were: the need for more effective point of entry screening and where applicable, referral on to either primary care or secondary care. Only half of those who died by suicide in prison with mental health conditions were identified with needs at reception screening. PriSnQuest was one screening tool recommended with a score of three of more indicating the need for further assessment of mental health[56].

A Canadian study of the impact of initial screening for mental health on receiving treatment found that screening had the potential to overcome structural barriers to accessing treatment such as knowledge and availability. Some of the main barriers for people however, were attitudinal ones, for example the personal preference to self manage or the perceived ineffectiveness of services. Screening was not very effective at overcoming these barriers. Newly admitted prisoners particularly reported higher rates of preferring to care for themselves and expressed anxiety about how other inmates and staff would perceive them for actively seeking help[57].

The authors found that screening of prisoners at admission with a computer based test had a sensitivity of 75% and specificity of 71%. This means it correctly identified as screen positive 75% of people who had underlying mental health conditions and correctly identified as screen negative 71% of people who did not have a mental health condition. The screening process involved: self reported diagnosis,

use of psychotropic medication, hospitalisation in the month prior to incarceration, the Depression Hopelessness Suicide Screening Form and the Brief Symptom Inventory[57].

A UK study across five English prisons found that among those who screened positive for a mental health condition, those with depressive disorder were more likely to be managed in primary care, while those with psychoses or related disorders were more likely to be managed by secondary care. Of those who screened positive, 23% received no interventions. 27% of whom had schizophrenia or other psychoses and 19% had major depressive disorder.

Those who misused drugs were more likely than those who misused alcohol alone to receive service intervention from drug and alcohol teams[16].

A series of studies assessing routes through mental health services found that there was a reliance on historical information, such as already being known to services or being prescribed a medication, rather than individual assessment. There was also an under use of primary care expertise in managing common medical disorders which is what normally occurs in the community[52,56]. The former finding correlates to the results across three studies, which reported on the in-reach mental health caseload and found that the majority of people had received intervention from them in the past, either in or out of prison.

4.10 Unmet Needs

Two studies specifically looked at unmet mental health needs among those known to mental health teams in English prisons. The first study found that among the case load of in-reach mental health teams people had six needs, of which on average, almost half (2.6) were unmet.

The most frequently reported unmet needs were for: daytime activities (54%), psychotic symptoms (31%), psychological distress (27%), accommodation (23%) and information on their condition and treatment (20%)[58]. A second similar study in a comparable population found a lower proportion of needs were being met and that the two most prevalent unmet needs were for psychological treatment (51%) and medication (32%). Furthermore, in conjuction with previous findings, people with problem drug and alcohol use were 10% more likely to be able to access psychological therapies than people with other conditions[39].

A review of inspection reports across English in-reach mental health teams identified four core areas of unmet need. These included: managing the process, staffing, the range and the quality of the services. They highlighted that prisons have been found to offer a limited range of interventions perhaps a third of that which is offered in the community. This includes both psychological and occupational interventions, with inspections giving less than half of prisons a positive rating for purposeful activity work. Understaffing was noted to be a chronic issue. This was demonstrated by low staffing and vacant posts being identified in 87% of reports, a quarter of frontline staff leaving within two years and acceleration of staff attrition between 2014-2017[40].

The inspection reports summarised that services were currently not provided to a sufficient standard. Prisoners often experienced long waiting times, limited specialist input and reception screening. Additionally, large caseloads and staffing concerns all continue to contribute to the relatively poor management of people in prison who present with mental health needs. They conclude that while this falls short of the principle of equivalence, it is perhaps an ineffective comparison point as many community mental health services are similarly struggling. They also concluded that funding is required to enhance services, starting with investing in staff time, support and training[40].

4.11 Psychotropic Medication

Psychotropic medications are commonly prescribed in prison and include antidepressants and antipsychotics. One study sought to explore staff and patient perspectives around psychotropic prescribing and found that 47% of psychotropic medicines were discontinued while in prison, often without justification[59]. Both groups viewed these medications as first and foremost, an effective treatment for mental health conditions but reported that they were additionally used to manage insomnia, as a coping strategy for being in prison, to support rehabilitation and integration both in and beyond prison and less commonly to maintain order in prisons.

While staff expressed concern about the potential overreliance on psychotropic medicines, patients perceived there was insufficient access to alternative non pharmacological forms of treatment in prison, including talking therapies. Healthcare staff described attempts by prison staff to pressure them into offering prescriptions for what they felt were not mental health problems but behavioural issues related to violence and aggression. No patients interviewed described using medication recreationally. From their findings, the authors recommended mental health awareness training for prison staff, clarifying that the role of the mental health team is not to manage behavioural issues but to offer more non pharmacological approaches to treatment and to improve access to non health activities[59].

4.12 Personality Disorder

Two studies examined personality disorder but there was no evidence of effective management in prison settings. One used a Delphi approach to consider case formulation in personality disordered offenders but failed to find a consensus that case formulation would be likely to lead to improved outcomes for this group. Case formulation integrates information about an individual using a collaborative approach involving friends and family to understand and address the factors causing and maintaining their current difficulties[60].

Another paper explored patient experiences of prison and secure hospital care in those categorised as having dangerous and severe personality disorder. This term is an administrative category rather than a diagnosis and there is much debate about which setting is most appropriate for their management[61].

This study found that although the individual timetables of participants in the study showed that those in prison spent a greater proportion of time in their rooms, hospital participants disproportionately talked of 'waiting' as a major factor and had far greater expectations that their time would be spent in therapies or structured activities. This led to: boredom, frustration, becoming 'wound up', aggression and making threats of violence to themselves and others. More participants in hospital (44%) than in prison units (7%) talked about security measures curtailing their autonomy, restricting access to activities and as difficult to understand or justify. They concluded that those managed within the hospital system were more focused on their entitlement to treatment, rather than their role as offender however this study offered no perspective on which setting was the most appropriate for management of this group of participants[61].

4.13 Interventions

Within this literature review few studies were found that looked directly at interventions. One review paper noted a paucity of evidence around the psychopharmacology research in prison settings but cited some small Randomised Controlled Trials (RCTs) in Swedish prisons, in which the use of Attention Deficit Hyperactivity Disorder (ADHD) medications improved global functioning and increased abstinence from amphetamines after release. This study reported that the strongest trial evidence existed for psychological therapies in prisoners, although these were also small trials. This included combined group and individual Cognitive Behavioural Therapy (CBT), Dialectical Behavioural Therapy (DBT) and yoga[46].

One study in a small sample of 14 prisoners reported improvements in anxiety, wellbeing, functioning and risk following a six session psychoeducation approach teaching CBT approaches in group evening classes. They also stressed that the benefits of this approach were that they were able to use resources to reach a wider group of patients and that there was interest from people who completed the course in

contributing to future sessions which might open up opportunities for joint delivery in the future[62].

One study looking across a series of case studies reported that Cognitive Analytical Therapy (CAT) was effective in working with those who had personality disorder, poor engagement and complex needs in a prison setting. Unlike CBT however, trial evidence is not available to support its use[63].

4.14 Care Programme Approach (CPA)

In England mental health in-reach teams in prisons were initially tasked with providing a Care Programme Approach (CPA) in prison and supporting a transition back to the community in line with this for patients living with Severe Mental Illness (SMI). In practice however, the extent of more general need and co-morbidity with problem drug and alcohol use and personality disorder meant that only 27% of the case load of people with SMI being supported with a CPA. This remains the ideal standard of care and the four core elements of a CPA are:

- systematic arrangements for assessing the health and social needs of people accepted into specialist mental health services
- the formation of a care plan which identifies the health and social care required from a variety of providers
- the appointment of a key worker to keep in close touch with the service user and to monitor and co-ordinate care
- regular review and, where necessary, agreed changes to the care plan

4.15 Telemedicine

Telemedicine has been proposed as a method of widening access to therapy. A review of the use of telemedicine in prison settings found that, across Western Europe, only 11 countries used it at all. The most commonly used service is teleradiology, followed by telepsychiatry and tele-ECG. Just two countries use teledermatology, and one has teleassistance for diabetes care. In this review however, there were no details of what interventions were provided[64].

4.16 Arts and Healthcare

A recent review of arts in healthcare, while not specific to prison settings, found positive effects on mental health and wellbeing. However, this review noted that 77% of the papers focused specifically on the positive effects of listening to music on patients or service users. The positive effects reported were found across a variety of outcomes including levels of stress, anxiety and pain and many of them were statistically significant. Positive benefits were also found on patient and family satisfaction and in significantly reducing hospital stays of inpatients. The remaining papers looked a wide range of other arts interventions from music and dance, to reading and creative writing. Evaluation of these studies was more often qualitative than quantitative but all reported positives outcomes in wellbeing, inclusion and enjoyment[65].

A separate systematic review of seven studies found that people with mental health conditions who participated in choir singing had significant improvements in their mental health and wellbeing and that this promoted a sense of belonging and enhanced self confidence. A range of different outcomes were used for assessment, including the WEMWBS and other mental health wellbeing scores. The primary contexts for these studies included in the review were community groups, with some specifically targeting the homeless population, however none took place in a prison setting[66].

Mental Health Key Points

While prevalence estimates vary substantially the burden of mental health issues is greater than in the community and remain so throughout time spent in prison. There is however, some evidence that mental health issues stabilise or improve during time in prison.

The best estimates for the most common conditions reported were: depressive states (49%), personality disorder (40-70%) and anxiety states (29%).

Psychiatric co-morbidity was common with 70% of those with a mental health condition having two or more conditions.

Suicide among male prisoners is three to six times greater than the general population and approximately 70% of those who have taken their own lives have been identified as having mental health needs while in prison.

Core periods of vulnerability to self-harm and suicide are arrival, transfer and subsequent release from prison.

People in the care of the prison from outside the UK are particularly vulnerable to mental health issues and suicidal behaviour in prison with additional barriers of: language, loss of family contact and immigration concerns.

Recommended suicide prevention interventions are: effective screening at admission, ongoing risk assessment, peer support models, use of chaplaincy, staff training, information sharing, environmental safety and appropriate mental health treatment.

More effective screening for mental health at admission with less reliance on historical contact or prescribing was also recommended. PriSnQuest was an example of a recommended tool.

Unmet needs among people with mental health conditions were commonplace and those most reported were: daytime activities, psychological treatment, psychotic symptoms and medication. People with problem alcohol and drug use are more likely to be able to access psychological therapies.

There is some evidence for psychological therapies in prison including Cognitive Behavioural Therapy (CBT) and Dialectical Behavioural Therapy (DBT). Yoga has also found to have been effective in upporting relaxation.

A Care Programme Approach (CPA) for those with Serious Mental Illness (SMI) is supported.

Involvement in creative or arts based activities, especially using music and singing have been found to have positive effects on wellbeing, stress, anxiety and pain.

5 Learning Disability and Learning Difficulty

Scottish estimates of the prevalence of learning disability vary from 6-20 per 1000, reflecting the uncertainty of the true prevalence[67,68]. Prevalence estimates also vary significantly depending on the severity of learning disability, with a far greater number of people having a mild, rather than moderate or severe learning disability[68].

A 2007 Prison Reform Trust paper on the prevalence of learning difficulties appears to remain the most commonly cited estimate of prevalence in a prison setting, reporting that 20-30% of offenders have learning difficulties or learning disabilities that interfere with their ability to cope within the criminal justice system[69]. The paper does not chooses to distinguish between learning disability and learning difficulties. Instead it identifies those who, due to their barriers of learning and understanding, would likely have difficulty navigating the system and therefore may be at risk of exploitation and so could be assisted by services. In practical terms, it was reported that that 20-30% of the prison population have some form of hidden disability which will affect and undermine their performance in both education and work settings. These conditions are distinct however and therefore should not be considered interchangeable.

In a more detailed literature review, it is reported that the prevalence of learning disability among offenders in the UK system is between 1% and 10% in comparison to population prevalence estimates of around 2%[69]. Another 2008 systematic review reported a much lower prevalence across 10 international studies of prison populations with a range of 0.5-2.4%, however it is worth noting that many of these papers were from the 1990s. In this current literature review only one additional point prevalence study was found from 2013, which again found that 9% of people in prison were affected[70]. There appears to be no contemporaneous estimates of the prevalence of learning disability in prison, which may range from the same as background population rates to more than four times greater.

For learning difficulties a prevalence estimate of dyslexia was provided with a wide range from 4-56%. The accuracy of these estimates were affected by a variety of factors including: self report, stigma, numbers already known to services and the type of screening tool used. Another important influencing factor in the prison setting is reduced literacy and numeracy with lows levels defined as abilities below that expected of an eleven year old. One study reported that 40 – 50% of prisoners were at or below the level of literacy and numeracy expected of an 11-year old (Level 1) and 40% of this group required specialist support for dyslexia[69].

5.1 Health Needs

People with a learning disability have a shorter life expectancy, different profile of major health conditions and can experience barriers to accessing health care with subsequent health inequalities[67,68,71]. In the case of mild learning disability life expectancy is similar to that of the general population. The main causes of death for people with a learning disability are coronary heart disease and respiratory disease. While people with a learning disability are less likely to die from cancer than the general public, they do have higher rates of some individual cancers, including gastrointestinal cancer and in the case of people with Down's syndrome, leukaemia. Other conditions which occur in a higher frequency in people with learning disability include: mental health problems, developmental disorders such as autism spectrum disorder, epilepsy, respiratory conditions, cardiovascular conditions, sensory and physical impairments and injuries[67,71].

In prison settings, people with a learning disability have co-morbidities of drug and alcohol problems (60%), personality disorder (22%) and mental health disorders (37%). People with a learning disability were also more likely than others to have more previous convictions and be convicted of violent offences[70,72]. One study found a 52% prevalence of aggressive behaviour among people with a learning disability in prison, with property damage being the most common and physical aggression the least common manifestations of this[72]. Challenges in navigating strict systems such as the prison system can result in aggressive behaviour and further exclusion.

5.2 Screening

Various screening tools have been used although none is universally accepted as a 'gold standard'. Those used for learning disability include the LIPS scale, the National Adult, the Hayes Ability Screening Index, the Weschler Scale and locally developed tools[69,72]. In 2011 the Department of Health (DoH) recommended the Learning Disability Screening Questionnaire and stressed that any screening would need to be accompanied by pathways for further assessment[11]. A literacy and numeracy screening and levelling tool for learning difficulties called the Big Plus Challenge has been used successfully in prison interventions.

For literacy and numeracy a number of effective strategies have been employed to "conceal" learning in other vocational or work programmes. These link attendance to privileges and also use family based literacy programmes for both people in prison and their children. Onward links to the community have also been found to increase efficacy[11].

In 2007 learning disability services were described as: inconsistent, variable, often not timely for managing the turnover of people in prison, particaurly remand prisoners and with patchy onward transition to the community. No more recent research in a prison setting was found to evaluate if this has improved. Good practice examples which were highlighted by the Prison Reform Trust for people with learning disabilities in 2007 are: the use of speech and langage therapists in prisons, specifically adapting offending behaviour programmes, such as the adapted sex offender treatment programme (SOTP), routine screening and staff training[69].

A review of systematic reviews of health and healthcare evidence for people with a learning disability did not include any reviews which looked exclusively at secure settings but their findings are likely to be applicable to a prison setting. They found ten reviews focused on pharmacological interventions and found only insufficient or poor quality evidence on effectiveness on which to base practice. The exceptions to this being the use of risperidone to manage behavioural problems in children and adolescents and that melatonin had been found effective and safe for treating sleep problems[73].

Twenty three reviews looked at psychological or behavioural interventions and the majority found positive findings but overall conclusions were limited by methodological weaknesses in the evidence. The only exceptions to this were employing behavioural interventions for self injurious behaviour which found that efficacy was highly variable and using CBT for anger management for which the evidence was supportive.

Ten reviews considered contact with health or related services, only two of which were considered as reviewing a sufficient number of studies to provide evidence. Three concluded that health checks are effective in identifying unrecognised health needs, including life threatening conditions. Across 68 studies it was concluded that small scale residential settings were preferable to larger congregate options. Three reviews concluded that physical exercise interventions improved muscular strength and balance and may also have had some psychosocial impact on self-esteem or quality of life. There was no clear evidence in relation to health promotion activities[73].

Learning Disability and Learning Difficulty Key Points

People in prison are frequently reported as having higher rates of learning disability and learning difficulties and lower rates of literacy than in the community.

These are all distinct issues but can interact, they can sometimes present similarly and those affected may encounter similar barriers in understanding and navigating new systems.

Most prevalence estimates are over ten years old but they found that approximately 10% of people in prison have been found to have a learning disability, up to 50% have dyslexia and 50% have literacy at or below the level of an eleven year old.

People with a learning disability in prison are more likely to have co-morbid substance use, mental health problems and a personality disorder, in comparison to those in the community.

There is no gold standard screening tool suggested for use in prison, although several do exist.

Good practice includes: screening, staff training, involvement of wider multi-disciplinary team, CBT, behavioural interventions, annual health checks and physical exercise interventions.

6 Drug and alcohol use

Problem drug use and alcohol use are both associated with offending behaviour and time spent in prison, as well as with increased risk of: other physical and mental health problems, social problems and exclusion which includes homelessness, reduced employability and negative impacts on social and family relationships.

6.1 Scottish Policy Context

In 2018 the national Rights Respect and Recovery strategy was published to improve health by reducing alcohol and drug use, harm and related deaths. Prisons were included as a core setting with a commitment to ensuring they meet the new Inspecting and Monitoring Standards (IMS) for Health and Wellbeing and advising health boards to ensure their delivery is in line with the National Prisoner Healthcare Network's Drugs, Alcohol and Tobacco Health Services in Scottish Prisons: Guidance for quality service delivery. It advocates taking every opportunity to identify and offer support to people affected by drug and alcohol use, reporting that only a quarter of those affected are currently being offered service, only a quarter of those go on to access drug treatment and only 14% go on to access alcohol services. Of those who did access treatment, 80% reported finding it useful, indicating how important it is for people to be identified and referred.

The additional challenge of reaching people on remand was highlighted, with the intention to work with the third sector to provide more through care support specifically for the remand population. Throughcare support was seen as an important strand of raising knowledge and access to health, social and harm reduction services with coordinated collaborative approaches required. Finally, support to maintain family contact was highlighted as essential[74].

The NPHN guidance for quality service delivery makes eleven recommendations including: reliable information sharing and data recording across criminal justice services, the need to identify and support people in recovery including with purposeful activity, ensuring adequate staffing levels, ensuring service user voices are heard and a proposal of a single service integrated release plan for all prisoners with drug and alcohol problems.

6.2 Prevalence

Problem alcohol and drug use is higher in prison in than the community and people who have been imprisoned are a substantial proportion of those seen by community services, with estimates of 25-28% of UK community service users having a history of offending[75]. From the Scottish Prisoner Survey 38% of people in prison stated their drug use was a problem for them in the community and a third reported drinking alcohol affected their relationship with their family. Positive testing for illicit drugs at reception remains high, with 78% testing positive for illicit substances and 28% testing positive for illicit opioids[74].

Although the above estimates offer a Scottish perspective from the prisoner survey, self report is not the most robust estimate. A systematic review and meta-analysis of 24 studies using clinical interviews or validated tools found 24% (95% CI, 21–27) of prisoners had an alcohol use disorder and 30% (95% CI, 22–38) had a drug use disorder[76]. A Scottish study looking at relative risk of mortality over a decade for adults imprisoned in Scotland for the first time found that the greatest number of deaths in that time period were related to drug and alcohol use[18].

While drug and alcohol problems can commonly coexist, people affected by alcohol alone may be less likely to recognise themselves as having difficulty or seek help for it including while imprisoned. Through using the Alcohol Use Disorder Identification Tool (AUDIT) screening approach twice as many people were identified compared to asking people whether they had a problem with alcohol. Additionally, of those that were identified through AUDIT as exceeding a hazardous level, nearly half were found to have scores consistent with dependency, therefore this shows that an otherwise unmet need was being identified.

A review of people referred to early detection and intervention mental health services across London

prisons confirmed high rates of substance use with only 16% having no prior history of substance use. The most commonly used substances were smoking (83%), alcohol use (79%, 20% daily drinking) and weed, hash and skunk (73%). Substances most associated with screening positive for psychosis specifically were inhalants, sedatives and hallucinogens. Those with psychoses were also more likely to have used substances from an earlier age, to have a longer duration of use and to have polysubstance use[77].

People in Prison Perspectives

Two studies explored attitudes toward different aspects of drug use and harm and no studies looked at alcohol use or harm specifically with this group. One study among people who use intravenous drugs found that people were often more motivated to stop injecting during a stay in prison. Beyond reduced access the most common reasons for stopping were: provision of opiate substitution therapy, risk of overdose, especially at night when drugs are mainly used and with fewer staff and so there's a higher chance of appearing asleep and therefore having an undetected overdose, a lack of sterile equipment and unknown blood borne virus status of fellow prisoners, fear of being held accountable for damage or loss of shared equipment and "making the most" of the healthcare and rehabilitation support available in prison to try and break cycles of drug use[78].

A second study looked at attitudes towards harm reduction initiatives among people in a Scottish prison, including needle exchange programmes. Needle exchange programmes operate in prisons in four European countries and Australia but are not used across the UK, although there is evidence that such services reduce blood borne infections and increase self referrals to prison addiction services[78]. The majority of prisoners (57%) in this study were not supportive of the idea, feeling that first action should be taken to reduce drugs in prisons, that they would feel at greater risk of needle stick injuries or assault and that it would be seen to be encouraging intravenous drug use in their home environment. Additional questions were raised about confidentiality and whether the service would be used, even if available. Of the 29% of people in prison who supported the idea, they reported that sharing of needles was already happening and that having a needle exchange would reduce this sharing and hence reduce risk of disease transmission[37].

6.3 Interventions

It was widely accepted that early identification and acute management of people at risk of withdrawal from alcohol or drugs was essential, ranging from benzodiazepines for alcohol withdrawal, to methadone or buprenorphrine for opioid withdrawal. Beyond effectively managing acute withdrawal, people in prison who use alcohol and drugs also require access to more holistic support including pharmacological, psychological and social support, which links with community services to reduce relapse risk[76].

All Scottish prisons provide acute detoxification from both drugs and alcohol and where indicated, provide Opioid Replacement Therapy (ORT). Most also provide a harm reduction group and two offer needle exchange packs at point of liberation. The NPHN reported, however, that there was little evidence of peer support in prison and that specialist drug treatment services were thought to be reaching about 1 in 4 of those eligible for entering treatment[79].

The most frequent interventions reported for support with alcohol was motivational interviewing, alcohol awareness, relapse prevention group work and alcohol brief interventions. Again few prisons reported peer support being available and only three reported having CBT available. It was estimated that only 1 in 5 of those eligible were entering specialist treatment[79].

The NPHN identified the following as best practice elements:

- appropriate substitute drug use for at least 2 years
- seamless transition of this on entering and leaving prison
- buprenorphine should be used in preference to morphine
- proactive engagement around harm reduction, treatment and recovery.

In relation to the final comment, this starts with effective screening assessment and triage on entry with

those assessed as complex leading to a comprehensive assessment and multidisciplinary, individualised care plan. Drug Abuse Screening Test (DAST) screening was recommended for people using drugs and Fast Alcohol Screening Tool (FAST) tool, followed by Alcohol Use Disorders Identification Test (AUDIT) for alcohol use. Assessing Readiness to Change through the self named questionnaire based on the stages of change model was also recommended as helpful (see Figure 1.1). An example pathway for the use of AUDIT screening and ongoing action is given in Appendix Three.

Ensuring the individual's goals are respected and represented, for example aiming for moderation rather than abstinence is likely to increase engagement in any form of support. For recovery planning it was highlighted that these goals should be more holistic, looking beyond substance use to their wider aspirations in their work, family and social life. Relapse is also part of cycle of change and can support continued learning, reflection and ultimately achieving overall wellbeing and long term recovery goals[79].

The features of a recovery based approach were emphasised:

- Being person centred
- Being inclusive of family and significant others
- Keeping people safe and free from harm
- Services that are connected to the community
- Services that are trauma informed
- Provision of individualised and comprehensive services (eg housing ,employability and education)
- Strengths based approach which takes account of an individual's recovery capital

6.4 Naloxone Kits

Relative to the general population, male prisoners are 29 times more likely to die in the week following release, the vast majority of these deaths were attributable to opioid toxicity[80]. A recent systematic review of naloxone Take Home Kits (THKs) concluded there is overwhelming evidence of their positive effect on safety and reduced mortality and was found to be more effective in preventing mortality post release from prison than post discharge from hospital[81]. Further investigation found that those who had received naloxone were three times more likely to have administered it to someone else than those who hadn't.

In 2011 Scotland became the first country in the world to implement a National Naloxone Programme with all prisons offering naloxone at release. A 2015 review of the programme found that while the proportion of prescriptions among people who inject drugs had significantly increased from 8% to 32% the proportion carrying naloxone with them on the day of interview was significantly decreased from 16% to 5%. A stable proportion of people over this time received naloxone on release from prison[82].

The highest prevalence rates of carriage were among some of those most vulnerable groups including those recently homeless (42%) and those injecting daily or more (40%). They explored various explanations for why carriage rates may be reducing including: more kits in circulation coupled with people administering to others leading to a 'diffusion of responsibility', fear of being "exposed" as a drug user to either friends, family or police and that current kits are bulkier or less discreet than in the pilot trail which fit inside a wallet. The authors acknowledged that had the initial pilot trial had similar uptake levels, the national programme may not have been able to launch or at least the anticipated effectiveness target may have needed to have been revised[82].

6.5 Drug Recovery Wings

Ten pilot sites across England have experimented with different models of Drug Recovery Wings (DRW) primarily aimed at supporting people currently on Opiate Substitution Therapy (OST) seeking to reduce or move to abstinence. Only one type of unit was felt to have demonstrated success with nearly all those interviewed having either achieved abstinence and significantly reduced their OST doses[80].

These units were characterised by being very small, voluntary wings of 8-20 people with both abstinent people and those receiving OST but with a shared understanding that rapid reduction and complete

detoxification was the aim. Those attending received intensive professional support, with a minimum of 19 hours a week primarily involving group treatment. A real focus of this pilot was the development of peer support and developing a safe therapeutic space. People in prison reported their peers as the most essential element of their recovery community[80].

The authors warned that larger units that automatically included all people who used drugs (rather than those actively seeking recovery or abstinence) or those that were smaller but with less psychosocial support and those which focused solely on achieving abstinence did not appear to be successful. Also units which focused solely on achieving abstinence without a more holistic approach tended to filter out heroin users from their DRW populations. These units were then primarily catering to people who used weed or cocaine and did not reach the intended target group of injecting drug users.

6.6 Chronic Non Cancer Pain (CNCP) Clinics

One study found the prevalence of Chronic Non Cancer Pain (CNCP) to be around 20% across two UK prison populations, compared to 13% in the community. People with drug dependence were more likely to be a CNCP patient in prison and 54% of them were receiving medication to alleviate its symptoms. Nearly half of CNCP patients also reported co-existing mental health problems or self-harm.

The most common chronic pain condition reported was musculoskeletal which affected 37% of people and was primarily back and lower limb pain. Many had a history of trauma from road traffic accidents or assaults. Amitriptyline, pregabalin and gabapentin were the main frontline analgesics prescribed to this patient group[83].

A trial of nine CNCP clinics was introduced to three prisons and a small sample of approximately 60 patients followed up. As a result of clinic review a third reduced their prescription of strong opioids and gabapentinoids, 25% had their medication increased or reintroduced and 41% did not change their medication following consultation. The intervention appeared more successful in men than in women at reducing medication as 41% of those in this category were men, however numbers were too small for any conclusive findings[83]. The consultation was forty five minutes in length and included the wider psychological and social context of the individual. The length of consultation was thought to enhance the likelihood of individuals engaging and few challenged the outcomes from the clinic.

Sixty five percent of patients were referred to physiotherapy, which is considered a key component in pain management and rehabilitation and 17% were referred to secondary care for an orthopaedic, neurological, neuropsychiatric review or for further investigation. At the time of the study there was no acupuncture service available but if there was, 8% would have been referred on. A significant number were also referred to mental health services[83].

The authors noted that there is no evidence that strong opioids improve quality of life in chronic pain and can cause a variety of harms from dependence such as opioid induced hyperalgesia, hormonal suppression and immunosuppression. This is corroborated in the Public Health England (PHE) guidance on managing persistent pain in secure settings, which agrees there is little evidence for opioid efficacy in long term chronic non cancer pain[84]. Furthermore, they recommend that if there is no demonstrable benefit at 120mg morphine equivalent over 24 hours then further increases are unlikely to help and the drug should be tapered and stopped. The guidance does however, acknowledge that these figures will be drawn from research in opiate naive populations.

The efficacy of opioid pain relief will ease over time and in these settings they also recommend against the use of immediate release opioids for breakthrough pain, as is used in cancer care. Instead they recommend using sustained release as first line and if managing a pattern of breakthrough pain then using immediate release preparations[84]. Where methadone is used for pain relief in people with long term pain and substance use, it should be given as a twice daily divided dose when reducing the total dose[84].

In terms of neuropathic pain, less than a third of patients respond to any given drug and pain reduction will be modest, the overall aim is reducing its intrusiveness, rather than providing substantial relief. In a secure

setting, due to risk of misuse, tricyclic antidepressants and carbamazepine are recommended as first line before gabapentin and pregabalin. Those arriving into prison care who are already on gabapentin and pregabalin should be considered for continuing pregabalin but if there is no perceptible benefit after four weeks of titration the drug should be tapered and stopped.

In terms of non pharmacological management of pain, addressing patients' fears and mistaken beliefs about pain can often be helpful in supporting recovery. Guided physical activity and goal setting is also helpful and promotes self management of pain. While acknowledging that these techniques are best combined with cognitive and behavioural intervention, the authors are clear that pain is not a side effect or symptom of neither anxiety nor depression and should therefore not be managed as such. Management of coexisting mental health conditions can support an individual to have the capacity to better engage in self management of pain[84].

6.7 Novel Psychoactive Substances

No published literature was found on the use of NPS in prison settings. Prison staff across England have reported NPS use as a "significant concern" in two thirds of prisons and healthcare staff report an increased work load in responding to acute adverse effects. From sampling data 83% of drugs being brought into prison and seized were found to be NPS. Over a three year period in England 64 deaths in prison were identified where the person was known or strongly suspected to have been using NPS before their death. It should be noted that this is an association only and therefore does not indicate causation.

ScotPHO reported that in 2017, 18% of Scottish prisoners reported using NPS prior to imprisonment, which is a reduction from 27% in 2015. However, 18% also reported using NPS while in prison, which is an increase from 11% in 2015, indicating that while it might not be a drug of choice in the community, the limited options of substances in prison had the consequence of increased use. In both contexts, 70% or more of NPS used were synthetic cannabinoids, with around 12% of people reporting not knowing what they had used. Synthetic cannabinoids are the most common form of NPS and include large number of drugs, of which Spice and Black Mamba are the most widely available. Synthetic cannabinoids can be a 100 times more potent than natural cannabis[85].

Public Health England (PHE) have created a toolkit for prison staff on this topic, however it is largely based on giving information rather offering evidence based interventions. It advises healthcare providers to "treat what they can see" and provide symptom directed, supportive care treatment, rather than trying to identify the specific drug. If the substance is known the National Poisons Information Service and TOXBASE may provide further advice. Individuals using these substances often do not perceive themselves as having a problem and therefore will be less likely to engage with services. It was suggested that a multimedia campaign for prisoners and visitors describing risks of NPS may be helpful in addressing this[86].

Examples of good practice in this area were described: use of observation cells rather than sending all people straight to hospital (unless clinically indicated), establishing a recovery circle where staff and prisoners discuss presentations and responses to NPS, making grab bags available for emergency use on the wings rather than in the healthcare centre, drop-in clinics to facilitate engagement with psychosocial services, harm reduction advice and information through prison radio and other media to raise awareness[86].

6.8 Veterans

A data linkage study of UK military personnel found that 17% of male military personnel had a criminal record for any offence and 1% were for violent offences although some of these offences had occurred before starting services. The latter figure is comparable to the general population prevalence for violent offences of 9%[87]. Current estimates of the proportion of prisoners who are veterans in England and Wales is 9.1% making them the largest occupational group in UK prisons[88].

Among military personnel, the risk of violent offending was significantly increased by being deployed in a combat role. Pre-military violent offending was also associated with being deployed in a combat role in

the first place, with 46.6% of those who had an existing history being deployed in this way compared to 27.5% of those who had not. When adjusting for this as a confounder, the associated risk was attenuated but remained significant with a 3-4 fold increase in risk of violent offending following a combat deployment, regardless of previous violence[87]. Risk of violent offending also increased with: increased exposure to traumatic events, alcohol misuse, Post Traumatic Stress Disorder (PTSD) and high levels of self reported aggressive behaviour [87].

The Howard League inquiry into former armed forces personnel in prison concluded that this group has a number of problems in common with the general prison population, including drug and alcohol problems, homelessness, financial pressures, and low educational attainment. Military service has also been found to increase risk of PTSD, anxiety, depression and alcohol misuse[89].

One pilot study, by third sector body Combat Stress, reported on the implementation and preliminary outcomes of the Veterans Forensic Substance Misuses Service (VFSMS). The VFSMS operated in four stages: assessing needs, developing case management plans, providing bespoke support and developing discharge plans. Once a case management plan was agreed, the trained substance misuse practitioner provided one-to-one, face-to-face support, dependent on the individual's needs. This could include psycho-educational, emotion regulation strategies and psychological therapeutic interventions such as graded exposure for trauma and anxiety. Service users, where appropriate, were also able to access group psycho-educational sessions held at the prison sites. A review was conducted at minimum intervals of every three months and then a discharge plan was mutually agreed, with progress being assessed by the Outcome Star tool. This pilot study found high engagement both, while in and post release from prison and descriptive case studies provided qualitative evidence of the impact[88]. Findings from case studies suggested that case management was a feasible approach with a range of interventions being used including drug and alcohol services, mental health services, housing and employment services. Outcome measures suggested that alcohol and drug use reduced and engagement with recovery improved following the VFSMS intervention, this indicates that case management approach to be effective. This remains only an exploratory finding however, as this was a small pilot study[88].

6.9 Veteran Perspectives

A qualitative study of professional and service user perspectives on treatment and barriers for veterans in prison found that they fundamentally viewed prison as an opportunity to access the help and support needed to ensure they would not return to prison. Veterans first port of call when seeking help was usually the Veterans in Custody officer, who was often reported as being ex-military themselves. An increased knowledge and awareness of the military was felt to be of importance in building trusting relationships with staff[89].

Several prisons ran veteran specific group meetings which were found helpful by the majority of men attending. These meetings took many forms, from being a primarily peer network for support, to being information giving. There are many examples of 3rd sector groups and others providing information sessions about external support for release. Information on employment opportunities was reported as the most valuable topic for such sessions. Other valued topics were: housing, continued support for mental health, and substance misuse concerns.

Many of the men had essentially never lived a civilian adult life because they had entered the army as a teenager followed by prison shortly after. Those in the care of the prison reported that they would worry less about the transition from prison if they were able to access information and take an active role in their release planning well in advance of their release date. Continuity in the service provision was also considered important[89].

6.10 Smoking

Consistently around 85% of people in prison report smoking. Scotland now operates a Smokefree prison policy with prisoners being offered e-cigarettes and vapes in addition to other smoking cessation advice and support. A 2015 report by Public Health England (PHE) found that e-cigarettes were around 95% less

harmful than smoking and in England where previously 50000 prisoners were buying tobacco it is now reported as 33000 prisoners buying over 65000 vaping products[90]. No research or data could be found on smoking behaviour post release from prison and whether it led to sustained change. Clearly there is still an ongoing need for smoking cessation support through personalised advice, Nicotine Replacement Therapy (NRT) and group sessions have also been found effective in prison settings[11].

Only one study focused on smoking and this was an evaluation study looking at the impact of a year long coordinator post in establishing and promoting smoking cessation across the criminal justice system from police custody, to prison and on to probation. It found prisons were the setting most amenable to improvements, as they already had established smoking cessation programmes, although they received variable uptake. It highlighted a gap in knowledge and access to Nicotine Replacement Therapy (NRT) for temporary cessation in police custody settings but was unable to gain the traction to address this[91].

6.11 Throughcare

Unfortunately the majority of people go on to re-offend, typically within two years of their release, with important predictors of reoffending including poor physical and mental health, substance misuse and social disadvantage. The need for continuity of care and throughcare to the community was a recurrent theme across the literature for all people in prison, not just those with drug and alcohol problems. Concerns about leaving prison were commonly reported by prisoners and barriers to onward follow up were also reported from prison and healthcare staff[79]. While recommending appropriate arrangements and follow up was a recurring feature of the literature, there were no published studies evaluating models of throughcare support.

From 2015 to 2019 SPS provided a dedicated throughcare support service. A 2017 independent evaluation of this service reported overwhelmingly positive outcomes. These included improvements in individual issues in relation to benefits, finance, housing, substance misuse, physical and mental health, education, employability, family relationships, self-efficacy and desistance from crime. There were also positive organisational outcomes including an increased understanding and awareness of throughcare and improved partnership working[92].

The NPHN have also reported on positive examples of throughcare support in Scottish prisons. This included overcoming barriers to registration pre-release from prison by community GP practices registering the person as a temporary resident until they are released from prison, which enabled dual registration. The organisation also praised some areas which used a Care Programme Approach (CPA) to liaising between prison and community services to ensure wider secondary care follow up for substance use and mental health services. They found connections between the prison led throughcare service and NHS healthcare throughcare service to be variable and one of the recommendations made was to strengthen these connections[79].

The Public Social Partnerships (PSP) mentoring programmes were also described as highly regarded among those with lived experience of prison. The NPHN praised the approach of Community Integration Plans (CIP) for remand and short term (<4 years) prisoners who are not covered by statutory throughcare. They felt that this should be applied to all prisoners and include a multiagency approach with each person's plan being individualised to them and building on their assets and strengths. In all the HPHN made 17 recommendations with an aim of ensuring the health pathway for those leaving prison is enhanced through:

- greater use of the Integrated Case Management System / Community Integration Plans enabling a plan for each prisoner
- the registration process for prisoners transferring back to community GP being well managed and effective
- electronic information systems between prison healthcare and community primary care, addiction and mental health services being well understood and applied
- strengthening the role of the healthcare teams input to care continuity

- prison healthcare teams working across the nation to develop navigation routes into local health networks/support services for prisoners not being released to communities local to their prison
- promoting the need for healthcare teams to strengthen the relationship with third sector organisations providing mentorship programmes.

Drug and Alcohol Use Key Points

People in prison have high rates of problems with drug and alcohol use compared to the community but reportedly only a quarter of those affected are offered services and only a quarter of those go on to access treatment.

Alcohol use affects a larger proportion of people than drug use but people were less likely to access help in prison for this. Using the Alcohol Use Disorders Identification Tool (AUDIT) screening tool can identify twice as many people.

People in prison report increased motivation to stop injecting drug use in prison in part due to increased risks and in part due to access to services.

Good practice in prison includes: screening, acute support to detox, Opiate Substitution Therapy (OST), naloxone on release, using goal setting for individualised holistic care plans, peer and family support, throughcare and repeated offers of support.

There is some emerging pilot evidence to support small drug recovery wings with intensive psychosocial group support and to support the use of chronic pain clinics to reduce co-morbid analgesic use.

Novel Psychoactive Substance (NPS) use appears to be increasing in prisons with synthetic cannabinoids being the most common type. Recommendations for addressing this issue include: symptomatic management, raising awareness of risk, drop in clinics and peer support.

Veterans are the largest occupational group in prison and often have problem drug and alcohol use. The most successful engagement with this group is through peer groups that link to external community services and help preparing for release.

Although not specific to drug and alcohol use, throughcare is pivotal and it is recommended that community integration plans are available for all people in prison and that there is better co-ordination of care between services including out of area prisoners.

7 Older People In Prison

7.1 Defining older for a prison population

There is not one single definition of 'older', for either the general or prison population. For the general population a threshold of 65 years is commonly used. The literature regarding prison has variously used ages from 39 to 65 years old[93]. The consensus view is that the prison population experience "accelerated ageing", meaning they experience a greater number of co-morbidities at a younger age than the general population and have a health status more akin to someone ten years older than them[94]. This has led to a preference for defining older prisoners as those aged 50 and over, assuming they have an equivalent health status to those aged 60 and over in the wider population[95,96].

7.2 The Scottish Policy Context

The number and proportion of older prisoners is increasing. This is due to a variety of factors, including: a shift to longer sentencing, more life sentences, increased numbers of recalls to prison and more first time offenders being convicted aged 50 and older (driven largely by increases in prosecution for sexual offences)[97]. From 2016 to 2017 alone the number of prisoners aged over 60 in Scotland was reported as increasing by a fifth[98] and across the UK the population of prisoners over 60 years old has increased 8 times since 1990[99].

The lack of a strategic approach to this growing issue is frequently highlighted in the academic literature on this topic, yet there is still no approach that has been provided to meet the needs of this group in Scotland. In 2017 Her Majesty's Inspectorate of Prisons for Scotland (HMIPS) carried out a thematic study of the lived experience of older prisoners in Scotland's prisons leading to a national Health and Justice Collaboration Improvement Board, with a Health and Social Care Integration in Prisons Workstream which is due for completion in March 2020[100].

As part of this work, a review of current social care provision in Scotland's prisons was commissioned from the University of Dundee. Multiple recommendations were made across seventeen key areas including: clarifying legal duties, staff training, awareness raising and more thorough screening on entry. They also highlighted the need to recognise both older people with social care need and younger people with disability requiring social care. These recommendations and the resources required to realise them are being considered by the workstream described earlier.

7.3 The Older Prisoner in Scotland

The 2017 work by HMIPS found that the majority of older prisoners were in their 60s and none were aged 90 or older. Nearly half (47%) were serving sentences of four years or more and nearly a fifth (18%) were serving life sentences, indicating that most older prisoners were likely to be in prison for a long period of time. Eighty five percent were currently prescribed medication and 58% reported that their health had deteriorated since being in prison. Of the 50% who responded to the questionnaire, the most commonly required medical aids were: walking stick (30%), hand rails (29%) and shower seat (23%). The three biggest fears reported by older prisoners were: dying in prison, worsening health and loss of family contact[98].

The report reflected on the importance of relationships for older prisoners. Those who were serving longer sentences or had been convicted of sexual offences were most likely to lack external sources of support and to be sceptical of connections with other prisoners. This often meant that relationships with staff took on additional significance and were generally described very positively. Low staffing on these wings was noted to lead to less socialising and less time spent out of cells, sometimes including mealtimes, which exacerbates isolation for this group. To support external visits, they recommended physical spaces for visits to be suitable for older family or friends to visit and that SPS could develop specialist training packages to equip staff with the skills and knowledge to meet the complex needs of caring for older people, in addition to ensuring sufficient staffing to support social interaction.

In contrast to the general literature this work reported that none of the older prisoners interviewed would wish to live exclusively within a wing of older people. The limitations of the physical prison environment were noted, especially in Victorian prisons, which do not have accessible facilities and face the inappropriateness of allocating older people to top bunk accommodation. Lack of appropriate facilities results in staff being unable to provide reasonable or safe alternatives. It was recommended that SPS's estates improvement programme continued to target these locations and that it anticipates and plans for the even greater need in the future[98].

Prisoners reported very varied experiences of healthcare, with some being very negative and compromising their dignity, particularly with regard to continence issues and use of handcuffing restraints in hospital settings. It was recommended that personal care plans were available for all elderly prisoners and made available to prison staff to alleviate some of these issues.

The final recommendations were largely focused on SPS and Scottish Government agreeing a strategic approach to assessing this group, ensuring their health and social needs can be met within the accommodation and regimes provided to them. Additionally, the need for staff training, encouraging family visits and support, and that activities provided are tailored to the abilities of this group were again highlighted.

7.4 Social and custodial needs

Only one academic study looked at social care need in prisoners in the UK and found the most common unmet needs were having no suitable accommodation on release, physical health and food. Personal care needs affected only 11% of their study sample, although half of those who did report needing personal care characterised it as an unmet need[96].

The findings of social isolation correlated to those of the HMIPS work, with less than half (48%) receiving visits from family and less than a quarter (23%) visits from friends. Approximately 20% rarely left their cell, while 65% took part in structured activities. The activity levels reported were variable but some prisons had specific gym sessions for older prisoners which concentrated more on mobility than muscle building.

They also explored advantages and disadvantages of being older in prison. Advantages found were: positive attitude from staff, respect from both prisoners and staff, being able to help other prisoners and the availability of older age services. Disadvantages included: loud noises or music on wing, mixing with younger prisoners, bullying, difficulty getting around prison and loss of freedom. When asked 70% of older prisoners thought they should be housed in a separate wing to younger prisoners and where such dedicated wings do exist the literature does support a higher quality of life for residents[96]. This finding is in contrast to that of the HMIPS.

7.5 Chronic Conditions

While it is generally accepted that older prisoner's health needs are greater than both their peers living in the community and those of younger prisoners, there is little evidence on the prevalence of specific heath conditions. It has been reported over 80% of older prisoners have at least one major illness, 77% were being prescribed medication (most frequently for a cardiovascular problem) and that up to 54% of older prisoners had some level of functional need in activities of daily living[95,101].

One small American study of older inmates (n=125) found that 74% described having at least one symptom of physical distress, most commonly pain (28%) or difficulty sleeping (15%). Of those reporting physical distress 89% reported concurrent psychological, social or existential distress. Figure 1.2 shows that nearly half of participants experienced three or more forms of distress and approximately a fifth experienced all four forms of distress.

Sixty one percent of participants had two or more chronic conditions with hepatitis C (48%), diabetes mellitus (16%), heart disease (12%) and congestive heart failure (6%) being the most common. In keeping with the earlier point on accelerated ageing these rates were comparable to those experienced by older

adults, on lower incomes in the community by the age of 72 whereas this groups average age was 60[101].

The authors also reported that having poor health or more symptoms of distress worsened the likelihood of a successful transition back in to the community, due to the knock on effect on people's ability to secure income and housing. They concluded that there was a need to integrate more holistic elements from older age medicine and palliative care into prison healthcare, to support "high touch" (high contact) healthcare and to facilitate transition from prison to the community[101].

7.6 Mental health in older prisoners

Mental health symptoms and conditions were found to be more prevalent in older prisoners than in their community peers or among younger prisoners. The prevalence of any psychiatric disorder was found to be 38% among ageing prisoners which is double the prevalence of comparable community studies[99]. The patterns of psychiatric illnesses were also reported as differing between younger and older adults. Younger adults are likely to receive a diagnosis of personality disorder, psychosis or drug use, whereas older adults are more likely to be diagnosed with depression, delusional disorders and organic brain syndrome[93]. They found that older people in secure psychiatric care showed less improvement on a range of personal and clinical well being outcomes between admission and discharge as compared to younger people.

The most common mental health diagnosis among older people in prison was reported as depression, with estimates ranging from 12%–56%. Seventy percent of older prisoners reported receiving treatment or counselling for a health problem in the year before prison entry.

An English study across nine prisons with older people with mental health conditions reported high levels of unmet needs. Most notably: knowledge about their condition and treatment (38%), psychological distress (34%), daytime activities (29%), benefits (28%), food (22%) and physical health (21%)[95]. The authors also found a significant association between symptoms of depression and unmet physical health need. This study did not offer an assessment of whether unmet physical health needs might contribute to depression, whether depression might influence physical symptoms or whether the presence of depression masks the reporting, recognition and subsequent health service response to physical ill-health. All of which would be plausible[95].

Mental health symptoms may also be harder to detect in this age group as depressive symptoms or early-stage dementia often presents as less sociable, more withdrawn behaviour, rather than more visible examples of distress or self-harming. This can result in the available mental health services being directed towards more vocal, younger prisoners[102].

7.7 Well-being

One systematic review sought to look beyond condition prevalence, to a more holistic experience of the older person in prison. The authors centered their findings around three themes: the hardship of imprisonment, addressing health and social care needs and the route out of prison[99]. As an underpinning model this review drew on the Good Lives Model (GLM), a strengths based approach, for which several studies have reported promising rehabilitation outcomes. It has three underlying principles: person-centredness, human agency and human rights.

Under their first theme of the hardship of imprisonment they encountered many of the same issues touched on earlier. This theme includes the inappropriateness of many 19th century facilities which do not meet disability access standards from narrow cell doors, inaccessible bathrooms and facilities on upper floors accessed only by stairs. The review also highlighted the paucity of dementia friendly approaches, facilities and age appropriate physical activities.

A lack of age appropriate activities could lead to social disengagement, compounded by a lack of family contact and deaths of a spouse or friends while in prison. An area in which older prisoners had been found to have a more active interest was in spiritual life and religious events which offered an opportunity for

social life and connectedness.

The second theme of the review addresses health and social care needs, the lack of funding and resources to support specialised care and some cultural prison factors. Cultural factors included an emphasis on punishment over care, a "macho" culture against help seeking and the reduced self advocacy of older prisoners in comparison to younger prisoners. This was found to be true for both physical and mental health care. Older people were more likely to be victims of bullying (38%) than younger prisoners (12%) and up to 50% of ageing prisoners reported to have suicidal thoughts which are often undisclosed due to the stigmatising nature of suicide watch[99].

In the final and third theme about routes out of prison, it was reported that 50% of ageing prisoners experience homelessness or destitution upon release. A commonly reported fear among ageing prisoners is being relocated with younger ex-offenders and becoming victims of physical and verbal intimidation, in addition to economic insecurity concerns. The review did not offer any specific example of interventions in this area but advocated for general awareness raising of older people's health in prison and regular health screening beyond admission screening to detect additional needs[99].

7.8 Evidence based interventions

A systematic review of care interventions for older people in prison detected seven studies. In two quantitative studies they did not find conclusive evidence of effectiveness for any of the wide range of outcomes for a physical activity intervention or for a multifaceted range of psychosocial support interventions. The remaining five qualitative studies looking at the development and evaluation of training programmes demonstrated high quality in research design and implementation but were low quality in providing sufficient data to analyse impact. The authors concluded that there was sufficient evidence to inform best practice[103].

The characteristics which the authors found enhanced engagement and positive evaluations of the programmes were[103]:

- involving both staff and prisoners
- giving prisoners more control over decision making
- promoting social interaction and creativity
- having a dedicated physical space
- applying interventions which already have a strong evidence base in elderly care.

The majority of the remaining literature on interventions and good practice were seen either through the lens of either dementia or end of life care, which follows in the section below.

7.9 Dementia

The United States of America (USA) has been responding to greater numbers of older, disabled and dying patients for a longer time due to their high incarceration rate and tougher sentencing, including life sentences. The UK has been described as having comparatively little dementia awareness or provision and therefore much of the research has come from either US examples, UK case studies or knowledge about positive interventions with older people in the community[99].

The prevalence of dementia among older prisoners remains largely undetermined with rates from 1-5% of the prison population estimated across US and UK studies. The studies taken from the UK appear to underestimate prevalence and included included examples of people in the care of the prison who knew neither how long they had been in custody, nor why they were there. Studies in first time offenders who were older found much higher rates of dementia from 25-30% and reported that symptoms of dementia were sometimes associated with the offence for which they were imprisoned[102].

Older persons with dementia in prison are more likely to experience some of the issues discussed above, including confusion around prison etiquette, rules and social norms. This may appear as being deliberately disruptive, aggressive or impulsive, which would make them more susceptible to intimidation

and punishment. Punishment of segregation which may further worsen their symptoms. As the disorder progresses, older people with dementia in prison are likely to have trouble with: accessing shower and toilet facilities, upper bunk beds, recognising common objects, or participating in social, educational, or exercise programs[104]. The case was also made that the structured regime of prisons may actually enable people to better cope with the onset of dementia and potentially hide the difficulties they are likely to face upon release[102].

All of the evidence encountered could be mapped to five recommendations from a 2013 paper which drew on international evidence and a survey by the Mental Health Foundation (MHF) about good practice for the ageing prisoner population. They made five recommendations, each of which is listed below and will be considered in turn. The evidence base for end of life care had considerable overlap with the evidence base for good practice in dementia care and with good practice for community care of older people[102].

- Routine screening for older prisoners
- Staff training
- Utilise the expertise of external agencies
- Promote information sharing, clear pathways and referrals
- Low cost modification to the prison environment

The authors of the paper reflected that the extent to which a prison will be able to implement each of these five recommended reforms will naturally vary, depending on specific factors, including building design, budget, regime, population, staff-prisoner ratio and security level. The report emphasised that even minor progression in each area could impact greatly on ensuring prisoners with dementia were managed humanely and supported to continue functioning.

Routine dementia screening for older prisoners

Screening for cognitive impairment is not yet universal but was performed in half of the prisons surveyed. The Mini Mental State Examination (MMSE) was the most commonly used tool. The recommendation was that basic cognitive screening should be conducted on all new arrivals over the age of 50 as part of their initial health assessment, with individuals attaining low scores being referred for further investigation. They also highlighted that serving prisoners over this age threshold should be reassessed at least once a year and screenings should also be conducted within the three-month period prior to release to inform and assist community resettlement[102].

A separate Australian paper used a Delphi method to establish a shared professional, clinical perspective of standards for dementia care in a prison setting. This also supported the use of MMSE at admission screening for those with English as a first language and the Rowland Universal Dementia Assessment (RUDAS) for those with English as a second language[104]. The authors reported the introduction of an initial, blunter screening tool of two questions. One question tested memory by asking the person to remember three words and the second question tested cognition by asking the person to draw a clock face. If screened positive they felt the ongoing process should be led by a multidisciplinary team with experience of older person's care who would then formalise a diagnosis, develop a care plan where required and consider the role of buddying[104].

Following admission screening to detect cognitive impairment, most prisons catering specifically for older, cognitively impaired populations had additional routine health reviews at regular intervals to detect emerging issues. These varied in frequency from annually to every 30 days[102].

Staff training in dementia awareness

All good practice example prisons supported wider training of staff including prison staff and in all cases external agencies and charities had been the training providers. Age UK and Dementia UK were the prime providers in the UK. Some programmes targeted both those in the care of the prison and staff with training and support aids which was thought to be of added benefit.

Despite being the most commonly implemented intervention, further training and awareness raising

with staff was also the most common additional resource desired. This was followed by being able to appoint staff members with a specific remit for older people's health and implementing changes to the infrastructure to enhance privacy and facilitate safe wandering. The ideal standard was for prisons to have a lead for older offenders who worked closely with an identified healthcare lead and that together, they would coordinate health and social care need in prison and post release. Internationally most prisons which catered specifically for older people had similar systems to this in place[102].

Utilise the expertise of specialist external agencies

The third sector was seen as fundamental to supporting and improving dementia friendly services. A number of good practice establishments had set up day care centres run by the voluntary sector which offer less arduous activities and provide older people in the care of the prison somewhere to socialise. Examples of activities which have proved popular are: reminiscing activities, memory cafes or "brain gyms", board games, arts and crafts and documentary showings. Alternative physical activity sessions were also a common intervention with five establishments offering chair based workout classes or running lower intensity physical exercise classes such as Tai Chi or Qi Gong. The latter has been found to significantly improve mobility and balance and reduce risk of falls. Others offered separate times for older people to access the gym facilities.

The single most popular intervention, reported in ten good practice example prisons, was prisoner carer and buddy schemes in which younger peers provided support to older peers. The type of support varied significantly from meal collection, letter writing, playing cards or walking to appointments to active involvement in personal or medical care. These also ranged from voluntary positions to paid work in prison. Some prisons across England were working towards developing buddy training programmes so it would provide participants with accreditation in the form of a National Vocational Qualification (NVQ) in social care. All schemes have rigorous application processes and regular monitoring to ensure applicants are suitable and not exploiting their roles[102].

In a systematic review of end of life care in prison, involving people in prison as carers was again the most frequently encountered intervention and positively perceived by the care givers, healthcare staff and prison administration[105]. It was also noted that there was a lack of quantitative data on outcomes and limited feedback from those being cared for. The benefits for the care giver that were identified included: a positive impact on self-esteem, sense of empowerment and the opportunity to atone for their previous actions. It was described by staff working in prison as "transformative" for those involved as carers[105].

Promote information sharing and adopt clear procedures and referral pathways

Good practice prisons equipped front line prison staff with clear procedures and pathways for referring on people who they felt might have some cognitive impairment. This could be to their GP, mental health team or through a Wellman clinic.

Additionally, in order to ensure this population in prison had a voice, five prisons reported having older adult or over 50s specific forums where prisoners could raise issues relevant to them or highlight concerns about peers who may be struggling. Beyond ensuring clear opportunities for information sharing, this was also reported as improving identification of those with both depression and early stage dementia through having open routes of communication.

Low cost modifications to prison living environments

Suggested alterations ranged from structural additions, such as grab rails, wider door frames and specially designed bathroom facilities, to 'dementia friendly' design changes that make it easier for the individual to find their way around. The latter could include extra lighting, labelling each cupboard with pictures of the contents and using contrasting colours to make everyday items easier to identify. Additional changes that can be made with little effort include the removal of any mirrors, the introduction of clear signposts with relevant pictures and large font lettering.

In one prison meetings with those in the care of the prison were held in cells or recreational spaces rather

than in offices to maintain a familiar environment.

Six establishments had created specific employment roles for those in the care of the prison who were older which were designed to be less labour intensive such as feeding fish, watering plants and wrapping silverware in napkins[102].

7.10 End of Life Care

The older population are the primary target group for end of life care in a prison setting. As the UK has one of the highest incarceration rates of Western Europe and is less likely to use compassionate release, allowing this care to be provided in the community, this will likely be of increasing relevance to the prison service. Dying in prison is also a common fear of those in the care of the prison who are older[99]. An investigation of deaths due to terminal or incurable diseases in prisons in England and Wales over a five year time period, reported that the average age at death was 61 years and that 29% of cases reviewed did not have a palliative care plan[106].

A systematic review of end of life care in prison drew primarily on American studies, where end of life care in prisons is already a prominent issue. They found that the eligibility for receiving end of life care in prison varied from having a defined life expectancy of one year to six months, to ending curative treatment or having a Do Not Attempt Resuscitation (DNAR) order in place[105]. Some of these strict criteria appeared to be necessary to enable coverage of medical care through insurance policies and are unlikely to require such strict application in the UK. The preferred model for decision making regarding the appropriateness of end of life care, is for decisions to be made clinically by a physician[105].

The role of a "prisoner caregiver" in a prison setting has been discussed earlier and was the most frequently reported intervention. Provision of psychological and spiritual counselling services were reported to occasionally assist people and it was considered good practice to proactively contact families and support arranging flexible visits. As in community based end of life care, pain management was a core focus, with most prisons supporting hospice programmes offering the same range of pain relief options that are available in the community[105]. In practical terms, some UK research found that administering this was not always possible due to the requirement for two nurses to be present to dispense controlled drugs[97].

Additional physical infrastructure barriers identified by staff in prison are: being unable to access bathing facilities or clean sheets overnight for people with episodes of incontinence, beds being too small to support pressure mattresses, cells too small to accommodate hospital beds and family, friends and pets being unable to visit in the cell. Even the location of the healthcare centre could be physically difficult to access in some prisons[97].

In an a UK survey of healthcare staff in prisons 68% of the sample reported having undergone some training in end of life care practices, most commonly through previous experience while working as a community nurse and short courses being delivered at or by a hospice. The survey reported less than 50% of the prisons responding had a written policy for end of life care. Most respondents reported there were some special considerations or privileges given to terminally ill prisoners the most common being: less restricted visiting times, compassionate leave and an open cell policy[106]. Survey respondents advocated for having good links with community services for: advice, in-reach care, releasing terminally ill people to hospice or hospital were appropriate care cannot be provided in prison, supporting visits (potentially unlimited) to family, having an end of life care policy in place and if risk assessment allowed, a twenty four hour unlock policy to allow round the clock access to nursing care.

8 Oral Health

8.1 Scottish Policy Context

The 2019 national Oral Health Improvement Plan does not specify people in prison as a priority group, although it does identify actions relating to reducing oral health inequality. These include: a community challenge fund for organisations to support changes in oral health behaviours in deprived communities, ensuring practice paymentsreflect the social deprivation status of patients in practice, providing strategic oversight of existing oral health programmes and supporting priority patients to received their dental care in a practice close to their home[107].

In 2011 the Scottish Oral Health Improvement Prison Programme (SOHIPP) examined the oral health and psychosocial needs of Scottish prisoners and young offenders to inform the planning of healthcare following the move to the NHS in 2011. The SOHIPP reported that prisoners with more experience of prison, especially those on remand, with previous drug use and with more prescribed medications had greater numbers of missing teeth due to tooth decay. Additionally, those with greater experience of prison had more obvious decay and more missing teeth due to decay and caries. Their oral hygiene was found to be good however, with plaque covering less than a third of the tooth surfaces examined and care of dentures increasing with longer lengths of imprisonment[108].

Approximately half (47%) had accessed dental services in prison and 45% had attended a dental practice within the previous year, in or out of prison. Pain in the teeth or gums was the most common reason for attending a dentist (59%) and fillings were the most cited dental treatment received. Only 30% stated they had had fluoride preventative treatment or scale and polish. Oral health related quality of life was found to be equivalent to the Scottish homeless population. Nearly a third (27-28%) reported feeling embarrassed

Older People In Prison Key Points

The population of older people in prison has increased eight times since 1990 and is forecast to continue to increase.

Greater numbers of older people in prison will mean greater requirement for chronic condition management, social care, dementia care and end of life care, which prison systems are currently not designed to meet.

People in prison have a health status comparable with that of people who are 10 years older in community, so the literature recommends defining older as 50 years and over for this population.

Older people have higher levels of co-morbidity of both physical and mental health conditions, with the latter often presenting differently to younger adults and compounded by individuals being less vocal in reporting symptoms.

Cognitive impairment can lead to disruptive and aggressive behaviour which can exacerbate issues in prison.

Fear of dying in prison, loss of family contact and concern about accommodation on discharge were common issues for this group.

Good practice examples for supporting older people include those with dementia are: screening for dementia, active health screening, staff training, peer support schemes, activities which support socialising, adapting physical exercise options, modifications to the physical space and multiagency release planning.

Additional recommendations for end of life care include: staff training, having established policies, connections to community or hospice care and releasing to the community where appropriate care cannot be provided.

or self-conscious about the appearance of their teeth[108].

SOHIPP recommendations included: equivalence of access and treatment across the NHS dental estate, provision of knowledge and tools to promote oral hygiene in prison, in terms of diet, smoking cessation and suitable toothbrushes and toothpastes and that information about accessing dental care at discharge becomes an integral part of throughcare[108].

8.2 General Dental Health

A 2007 systematic review of research in dental health in prisons found 21 relevant papers. The primary focus of the papers identified was the oral health status of those in the care of the prison, assessed by clinical examinations of Decayed, Missing and Filled teeth (DMFT), periodontal status, self-report measures of oral health behaviours and service utilisation. A comparison of decayed, missing and filled teeth in the prison population to reported Scottish prevalence is shown in Table 2. These estimates indicate that those in the care of the Scottish prison system have a lower prevalence of decayed teeth but numbers of missing teeth in the upper range of that found in the general population[109].

Table 2 - Comparison of decayed, missing and filled teeth to reported Scottish prevalence[108,109]

Measure	Range of Prevalence Estimates in General Adult Prison Population	SHOIPP Prevalence (95% CI)
Mean DMFT	9.8- 16.8	12.37 (11.39-13.34)
Decayed Teeth	2.4-7.1	1.51 (1.26-1.76)
Missing Teeth	3.5-7.4	6.95 (0.03-7.96)
Filled Teeth	4.1-6.0	3.87 (3.44-4.30)

8.3 Oral Health Related Quality of Life

An English study of oral health related quality of life (OHQoL) in 700 prisoners found that worse OHQoL was associated with: taking a greater interest in oral health, previous regular use of dental services, perceived need for treatment and use of prison dental services. The number of decayed teeth and proxy socioeconomic status factors such as employment and qualifications did not predict OHQoL. Over two thirds of participants (68.9%) were not satisfied with the appearance of their teeth and 75% perceived they needed treatment. However 63.4% only visited a dentist when they had a problem while 20% attended for occasional checkups and 15.8% for regular examinations[110].

Another study found that having a high DMFT index of between 22 and 32 was significantly associated with oral health dissatisfaction, difficulty speaking and shame of talking and smiling. This reflects the wide psychosocial impact of poor oral health[111].

A third small study found higher rates (29.7%) of bruxism (teeth grinding) among those in the care of the prison compared to the general population which correlates with lower Health Related Quality of Life (HRQoL). The study reported that this particularly affected subjects at first prison experience and for higher education levels which likely reflects the effects of increased levels of stress[112].

8.4 Triage

Only one study was found which evaluated a service model change. A young offenders institute in Belfast performed a pilot study of an oral health assessment and triaging by a dental nurse followed by an dentist led oral health check at monthly screening clinics or sooner if required. Referrals led to 95% of patients being triaged appropriately and 72% being seen within the appropriate timeframes. All patients had received oral health promotion advice and information on accessing dental care at point of admission[113].

The initial nurse assessment used a standard questionnaire, following which all patients were assigned to one of four categories: emergency care, urgent care, routine care and no treatment required (six month review). People would then be reviewed by the dentist either at a screening clinic or sooner if identified as

requiring emergency or urgent care.

Fifty nine percent of triages were routine, 11% were urgent and seen at the next dental clinical session and 3% were emergency and seen within four hours. Nine percent were triaged as needing a check-up in six months time[113]. An additional 56 prisoners were referred per month out of a population of 253 prisoners with less strict assessment of prioritisation on an as required basis for emerging issues.

This pilot was reported to be a success, enabling all those admitted to be assessed for dental care, receive oral health promotion material at point of entering prison and the prison could switch from a demand led service to a targeted approach. Additionally, it was felt that this system was fairer as it relied less on patients being vocal about their needs or those staff who work on the prison landings being proactive in referring[113].

Oral Health Key Points

The prison population have higher than community rates of poor oral health including decayed, missing and filled teeth.

Nearly two thirds only visited a dentist when they had a problem.

Oral health related quality of life is also low, with two thirds of the prison population being unsatisfied with the appearance of their teeth which has a wider psychosocial impact.

There was some pilot evidence for a nurse led triage system for effectively managing demand and supporting a targeted approach.

9 Additional Topics

9.1 Democratic therapeutic communities

Utilising peer models and supporting social capital and self management was a recurring theme across all topics in the literature and only one example was found of a prison which operates entirely as a series of democratic therapeutic communities. HMP Grendon is the only prison in the UK which uses this model and has found a wide range of benefits including reduced levels of disruption in prison, reduced self-harm, improved well-being, a more humane environment and reduced levels of reoffending[114].

A cornerstone of this approach is that the men are actively involved in both the prison community and in their own therapeutic group work. People in the care of HMP Grendon hold elected positions, get to vote on communal decisions, raise funds for offending support charities, invite families in for longer visits including meals and have both voluntary and paid work.

The cost of one place at Grendon is £4,556 per year more than a general category B prison (given as £34,222 in 2017). An approximate cost-benefit analysis has tentatively indicated that every £1 additional investment may yield up to £2.33 return, through reduced reoffending, improved health and well-being and diversion from other more expensive services, such as higher security category prisons and forensic mental health services[114].

There are many aspects of everyday practice that residents and staff believe could be developed in other prisons that do not have a wholly therapeutic approach. These include: active engagement of staff and those in the care of the prison, developing constructive and positive relationships, having a proactive, positive culture of visits and creating a sense of safety and purpose.

The rest of this section looks at topics for which no additional literature was found during this review but findings from the previous review in 2011 have been summarised below.

9.2 Diet and Physical Activity

No studies in this review examined healthy weight initiatives in prison. While obesity is likely to affect a significant proportion of people in the care of the prison as it does in the community, this group may also be affected by malnourishment and being underweight. SPS procure and provide meals including healthy option choices and fruit is available daily.

The benefits of tailored physical activity that is suitable for older adults and people with learning disabilities has been considered earlier. From the previous literature review effective recommendations for the general prison population were[11]:

- to offer a range of activities
- ensuring they don't clash with other activities
- use holistic interventions (e.g. promote gardening, physical activity and cooking skills)
- create protected exercise times for groups, such as people with mental health conditions
- social prescribing of exercise initiatives

9.3 Parenting

Although the evidence base was relatively weak for parenting programmes, these were reported as valuable by people in the care of the prison and appeared to improve knowledge and attitudes about parenting. The core elements of successful programmes based in the community and were recommended to extend to the prison setting were: having concrete objectives, tailored to need, combine individual and group work, opportunities to practice and delivery by experienced practitioners[11].

9.4 Employability

The following were identified as elements of good practice in employability interventions[11]:

- early intervention in prison
- follow through to the community
- using peer support
- multiagency coordination for those with complex needs
- involving employers and linking to real employment opportunities
- improving literacy and numeracy
- opportunities for further education

10 Conclusion

This updated literature review has highlighted some of the most pressing issues facing the prison system today, from the conflicted role of custody and care to the complexity of needs facing people in prison, which include problems with alcohol and drugs, mental health, ageing and even dying in prison. All of this is occurring on a backdrop of a decade of austerity, ageing prison estates and reducing staff numbers.

The current evidence base remains disproportionately focused on descriptive evidence rather than on effective interventions and impact. Across all topics some core themes have emerged including: proactive admission screening, holistic, individualised care, maximising use of peer support and supporting throughcare into the community.

11 Reference List

1. Ismail N, de Viggiani N. How do policymakers interpret and implement the principle of equivalence with regard to prison health? A qualitative study among key policymakers in England. J Med Ethics 2018 November;44(11): 746-750.

2. Charles A, Draper H. 'Equivalence of care' in prison medicine: is equivalence of process the right measure of equity?. J Med Ethics 2012 Apr;38(4): 215-218.

3. Exworthy T, Samele C, Urquia N, Forrester A. Asserting prisoners' right to health: progressing beyond equivalence. Psychiatric Services 2012 Mar;63(3): 270-275.

4. Scottish Public Health Network (ScotPHN), Scottish Prison Service (SPS), and Scottish Health Promotion Managers (SHPM). Better health, better lives for prisoners:A framework for improving the health of Scotland's prisoners. 2011. Available from: https://www.scotphn.net/wp-content/uploads/2015/10/A-framework-for-improving-the-health-of-Scotlands-prisoners-Volume-1.pdf.

5. Her Majesty's Inspectorate of Prisons in Scotland (HMIPS). Inspection and Monitoring: Standard 9: Health and Wellbeing. 2019. Available from: https://www.prisonsinspectoratescotland.gov.uk/publications/inspecting-and-monitoring-standard-9-health-and-wellbeing?page=1.

6. Her Majesty's Inspectorate of Prisons in Scotland (HMIPS). Report of HMP Inverness. 2017. Available from: https://www.prisonsinspectoratescotland.gov.uk/publications/report-hmp-inverness-13-24-november-2017?page=5#st4.

7. Royal College of Nursing (RCN). Five Years On: Review of the transfer of prison healthcare from the Scottish Prison Service to NHS Scotland. 2016. Available from: https://www.rcn.org.uk/about-us/policy-briefings/sco-pol-five-years-on

8. National Institute of Clinical Excellence (NICE). Quality statement on the physical health of people in prison. 2017. Available from: https://www.nice.org.uk/guidance/qs156/chapter/Quality-statements.

9. Condon L, Gill H, Harris F. A review of prison health and its implications for primary care nursing in England and Wales: the research evidence. J Clin Nurs 2007 Jul;16(7): 1201-1209.

10. Feron J.M., Paulus D., Tonglet R., Lorant V., Pestiaux D. Substantial use of primary health care by prisoners: Epidemiological description and possible explanations. J Epidemiol Community Health 2005 August 2005;59(8): 651-655.

11. NHS Greater Glasgow and Clyde. Prison Health in NHS Greater Glasgow & Clyde. 2011. Available from: https://www.nhsggc.org.uk/media/226237/FINAL%20PRISON%20HNA%20REPORT%202012.pdf

12. Forrester A, Till A, Simpson A, Shaw J. Mental illness and the provision of mental health services in prisons. Br Med Bull 2018 September;127(1): 101-109.

13. Trotter R.T., Lininger M.R., Camplain R., Fofanov V.Y., Camplain C., Baldwin JA. A survey of health disparities, social determinants of health, and converging morbidities in a county jail: A cultural-ecological assessment of health conditions in jail populations. International Journal of Environmental Research and Public Health 2018;15(11)

14. Moynan CRDC, McMillan TM. Prevalence of Head Injury and Associated Disability in Prison Populations: A Systematic Review. J Head Trauma Rehabil 2018;33(4): 275-282.

15. McMillan T. National prisoner healthcare network report on brain injury and offending: implementation of research recommendations at the University of Glasgow. Unpublished letter correspondance; 2018.

16. Hassan L, Rahman MS, King C, Senior J, Shaw J. Level of mental health intervention and clinical need among inmates with mental illness in five English jails. Psychiatric Services 2012 Dec;63(12): 1218-1224.

17. Hassan L., Weston J., Senior J., Shaw J. Prisoners holding their own medications during imprisonment in England and Wales: a survey and qualitative exploration of staff and prisoners' views. Criminal behaviour and mental health : CBMH 2012 Feb 2012;22(1): 29-40.

18. SturupToft S, O'Moore EJ, Plugge EH. Looking behind the bars: emerging health issues for people in prison. Br Med Bull 2018 March;125(1): 15-23.

19. Sturup-Toft S, O'Moore EJ, Plugge EH. Looking behind the bars: emerging health issues for people in prison. Br Med Bull 2018;125(1): 15-23.

20. Frater A, Bartlett A. Human cost of delivering healthcare in unhealthy prisons. BMJ 2017;356: j1374.

21. de Viggiani N. A clean bill of health? The efficacy of an NHS commissioned outsourced police custody healthcare service. Journal of Forensic & Legal Medicine 2013 Aug;20(6): 610-617.

22. Dhaliwal KMN, Hirst SGNC. Caring in Correctional Nursing: A Systematic Search and Narrative Synthesis. Journal of Forensic Nursing 2016 January/March;12(1): 5-12.

23. Choudhry K, Armstrong D, Dregan A. Prison Nursing: Formation of a Stable Professional Identity. Journal of Forensic Nursing 2017 January/March;13(1): 20-25.

24. Felton A, Repper J. Therapeutic relationships, risk, and mental health practice. International Journal of Mental Health Nursing 2018 June;27(3): 1137-1148.

25. Woodall J. Identifying health promotion needs among prison staff in three English prisons: results from a qualitative study. Health promotion practice 2013 Mar 2013;14(2): 256-262.

26. Quinn C, Denman K, Smithson P, Owens C, Sheaff R, Campbell J, et al. General practitioner contributions to achieving sustained healthcare for offenders: a qualitative study. BMC Family Practice 2018;19(1): 22.

27. Scottish Health Protection Network. TB Framework for Scotland. 2018. Available from: https://hpspubsrepo.blob.core.windows.net/hps-website/nss/2304/documents/1_TB-Framework-v1.1-May-2018.pdf.

28. National Institute of Clinical Excellence (NICE). NICE Guidance TB. 2016. Available from: https://www.nice.org.uk/guidance/ng33/resources/tuberculosis-pdf-1837390683589.

29. National Institute of Clinical Excellence (NICE). Identifying and managing tuberculosis in hard to reach groups. 2012. Available from: https://www.nice.org.uk/guidance/ng33/evidence/appendix-n-ph37-80851860866.

30. Scottish Government. Sexual Health and Blood Borne Virus Framework, 2015-2020 Update. 2015. Available from: https://www.gov.scot/publications/sexual-health-blood-borne-virus-framework-2015-2020-update/

31. Aldridge R.W., Hayward A.C., Hemming S., Yates S.K., Ferenando G., Possas L., et al. High prevalence of latent tuberculosis and bloodborne virus infection in a homeless population. Thorax 2018;73(6): 557-564.

32. Mehay A., Raj T., Altass L., Newton A., O'Moore E., Railton C., et al. An audit of tuberculosis health services in prisons and immigration removal centres. Journal of public health (Oxford, England) 2017 01 Jun 2017;39(2): 387-394.

33. Falla AM, Hofstraat SHI, Duffell E, Hahn S, Josien Maria, Tavoschi L, Veldhuijzen IK. Hepatitis B/C in the countries of the EU/EEA: a systematic review of the prevalence among at-risk groups. BMC infectious diseases 2018 02/12;18(1): 79-79.

34. Humphreys C, Railton C, O'Moore E, Lombard M, Newton A. An audit of hepatitis C service provision in a representative sample of prisons in England. Journal of Public Health 2015, 37(1): 151-156.

35. Jack K., Islip N., Linsley P., Thomson B., Patterson A. Prison officers' views about hepatitis C testing and treatment: a qualitative enquiry. J Clin Nurs 2017 01 Jul 2017;26(13-14): 1861-1868.

36. Peate I. Prisoner health: HIV infection and other blood-borne viral infections. British Journal of Nursing 2011 608, 610; May 27-;20(10): 605-606.

37. Pulford A.J., Aspinall E., Hardie S., Murphy L., McDevitt R.M., Watts M. Prisoners' self-reported health and attitudes to health promotion initiatives in a Scottish Prison. Health Educ J 2013 January 2013;72(1): 5-12.

38. Scottish Government. Mental Health Strategy: 2017-2027. 2017. Available from: https://www.gov.scot/publications/mental-health-strategy-2017-2027/

39. Jakobowitz S., Bebbington P., McKenzie N., Iveson R., Duffield G., Kerr M., et al. Assessing needs for psychiatric treatment in prisoners: Met and unmet need. Soc Psychiatry Psychiatr Epidemiol 2017 01 Feb 2017;52(2): 231-240.

40. Patel R., Harvey J., Forrester A. Systemic limitations in the delivery of mental health care in prisons in England. Int J Law Psychiatry 2018 September - October 2018;60: 17-25.

41. Royal College of Psychiatrists (RCPsych). Standards for Prison Mental Health Fourth Edition. 2018. Available from: https://www.rcpsych.ac.uk/docs/default-source/improving-care/ccqi/quality-networks/prison-quality-network-prison/prison-qn-standards/prisons-standards-4th-edition.pdf?sfvrsn=465c58de_2.

42. National Institute of Clinical Excellence (NICE). Mental health of adults in criminal justice settings. 2018. Available from: https://www.nice.org.uk/guidance/qs163/resources/mental-health-of-adults-in-contact-with-the-criminal-justice-system-pdf-75545598761413.

43. Bebbington P., Jakobowitz S., McKenzie N., Killaspy H., Iveson R., Duffield G., et al. Assessing needs for psychiatric treatment in prisoners: Prevalence of disorder. Soc Psychiatry Psychiatr Epidemiol 2017 01 Feb 2017;52(2): 221-229.

44. Forrester A, Singh J, Slade K, Exworthy T, Sen P. Mental health in-reach in an urban UK remand prison. International journal of prison health 2014;10(3): 155-163.

45. Prins SJ. Prevalence of mental illnesses in U.S. state prisons: A systematic review. Psychiatric Services 2014 01 Jul 2014;65(7): 862-872.

46. Fazel S, Hayes A, Bartellas K, Clerici M, Trestman R. Mental health of prisoners: prevalence, adverse outcomes, and interventions. Lancet Psychiatry 2016;3(9): 871-881.

47. Heriot-Watt University, i-SPHERE, Lankelly Chase, The Robertson Trust. Hard Edges Scotland. 2019. Available from: https://lankellychase.org.uk/wp-content/uploads/2019/06/Hard-Edges-Scotland-full-report-June-2019.pdf.

48. Mental wellbeing in prisoners in Scotland: an analysis of repeat cross-sectional surveys. The Lancet. Conference: Public Health Science: A National Conference Dedicated to New Research in UK Public Health. United Kingdom. 2018, 392 (Supplement 2) (pp S11)

49. Barnoux M., Wood J. The specific needs of foreign national prisoners and the threat to their mental health from being imprisoned in a foreign country. Aggression and Violent Behavior 2013 March 2013;18(2): 240-246.

50. Dirkzwager AJE, Nieuwbeerta P. Mental health symptoms during imprisonment: a longitudinal study. Acta Psychiatr Scand 2018 October;138(4): 300-311.

51. Goncalves L.C., Endrass J., Rossegger A., Dirkzwager AJE. A longitudinal study of mental health symptoms in young prisoners: Exploring the influence of personal factors and the correctional climate. BMC Psychiatry 2016;16(1): 91

52. Slade K, Samele C, Valmaggia L, Forrester A. Pathways through the criminal justice system for prisoners with acute and serious mental illness. Journal of Forensic & Legal Medicine 2016 Nov;44: 162-168.

53. Centre for Mental Health. Preventing prison suicide: staff perspectives. 2017. Available from: https://howardleague.org/wp-content/uploads/2017/02/Preventing-prison-suicide.-Staff-perspectives.pdf.

54. Public Health England (PHE). Local suicide prevention planning: a practice resource. 2016. Available from: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/585411/PHE_local_suicide_prevention_planning_practice_resource.pdf.

55. Centre for Mental Health. Preventing prison suicide: perspective from the inside. 2017. Available from: https://howardleague.org/wp-content/uploads/2016/05/Preventing-prison-suicide.pdf.

56. Senior J., Birmingham L., Harty M.A., Hassan L., Hayes A.J., Kendall K., et al. Identification and management of prisoners with severe psychiatric illness by specialist mental health services. Psychol Med 2013 Jul 2013;43(7): 1511-1520.

57. Martin M.S., Crocker A.G., Potter B.K., Wells G.A., Grace R.M., Colman I. Mental Health Screening and Differences in Access to Care among Prisoners. Canadian Journal of Psychiatry 2018 01 Oct 2018;63(10): 692-700.

58. Harty M., Jarrett M., Thornicroft G., Shaw J. Unmet needs of male prisoners under the care of prison Mental Health Inreach Services. Journal of Forensic Psychiatry and Psychology 2012 01 Jun 2012;23(3): 285-296.

59. Hassan L, Edge D, Senior J, Shaw J. Staff and patient perspectives on the purpose of psychotropic prescribing in prisons: care or control?. Gen Hosp Psychiatry 2013 Jul-Aug;35(4): 433-438.

60. Vollm B. Case formulation in personality disordered offenders - a Delphi survey of professionals. Criminal Behaviour & Mental Health 2014 Feb;24(1): 60-80.

61. Sinclair J., Willmott L., Fitzpatrick R., Burns T., Yiend J., Clarke M., et al. Patients' experience of dangerous and severe personality disorder services: Qualitative interview study. British Journal of Psychiatry 2012 March 2012;200(3): 252-253.

62. Breese L., Maunder L., Waddell E., Gray D., White J. Stress control in prison health care: An audit. British Journal of Forensic Practice 2012 November 2012;14(4): 292-301.

63. Roper L. "A Drop in the Ocean": A Reflection on the Application of Cognitive Analytic Therapy Within a Prison Setting. Journal of forensic nursing 2018 01 Jul 2018;14(3): 135-140.

64. Gualano MR, Bert F, Andriolo V, Grosso M, Minniti D, Siliquini R. Use of telemedicine in the European penitentiaries: current scenario and best practices. Eur J Public Health 2017 February 01;27(1): 30-35.

65. Boyce M, Bungay H, MunnGiddings C, Wilson CBS. The impact of the arts in healthcare on patients and service users: A critical review. Health & Social Care in the Community 2018 July;26(4): 458-473.

66. Williams E, Dingle GA, Clift S. A systematic review of mental health and wellbeing outcomes of group singing for adults with a mental health condition. Eur J Public Health 2018 December;28(6): 1035-1042.

67. British Medical Assoication (BMA). Recognising the importance of physical health in mental health and intellectual disability: achieving parity of outcomes. 2014. Available from: https://www.bma.org.uk/collective-voice/policy-and-research/equality/achieving-parity-of-outcomes

68. Scottish Government. The keys to life: Improving quality of life for people with learning disabilities. 2013. Available from: https://www.gov.scot/binaries/content/documents/govscot/publications/strategy-plan/2013/06/keys-life-improving-quality-life-people-learning-disabilities/documents/keys-life-improving-quality-life-people/keys-life-improving-quality-life-people/govscot%3Adocument/00424389.pdf

69. Loucks N. The prevalence and associated needs of offenders with learning difficulties and learning disabilities. 2007. Available from: http://www.prisonreformtrust.org.uk/uploads/documents/noknl.pdf.

70. Dias S., Ware R.S., Kinner S.A., Lennox NG. Co-occurring mental disorder and intellectual disability in a large sample of Australian prisoners. Aust N Z J Psychiatry 2013 October 2013;47(10): 938-944.

71. Learning Disabilities Observatory. Health Inequalities & People with Learning Disabilities in the UK. Available from: https://pureportal.strath.ac.uk/files-asset/7402206/vid_7479_IHaL2010_3HealthInequality2010.pdf.

72. Sondenaa E., Rasmussen K., Nottestad JA. Forensic issues in intellectual disability. Current Opinion in Psychiatry 2008 September 2008;21(5): 449-453.

73. Robertson J, Hatton C, Baines S, Emerson E. Systematic Reviews of the Health or Health care of People with Intellectual Disabilities: A Systematic Review to Identify Gaps in the Evidence Base. Journal of Applied Research in Intellectual Disabilities 2015 November;28(6): 455-523.

74. Scottish Government. Rights, Respect and Recovery: Scotland's strategy to improve health by preventing and reducing alcohol and drug use, harm and related deaths. 2018. Available from: https://www.gov.scot/publications/rights-respect-recovery/

75. Rose A.K., Winfield H., Jenner J.H., Oyefeso A., Phillips T.S., Deluca P., et al. National survey of alcohol treatment agencies in England: Characteristics of clients. J Subst Use 2012 October 2012;17(5-6): 389-398.

76. Fazel S., Yoon I.A., Hayes AJ. Substance use disorders in prisoners: an updated systematic review and meta-regression analysis in recently incarcerated men and women. Addiction 2017 01 Oct 2017;112(10): 1725-1739.

77. Cooper J, Jarrett M, Forrester A, di Forti M, Murray RM, Huddy V, et al. Substance use and at-risk mental state for psychosis in 2102 prisoners: the case for early detection and early intervention in prison. Early intervention in psychiatry 2018;12(3): 400-409.

78. Tompkins CNE. Exploring motivations to stop injecting in English prisons: qualitative research with former male prisoners. International journal of prison health 2013;9(2): 68-81.

79. National Prisoner Healthcare Network (NPHN). Drugs, alcohol, and tobacco health services in Scottish Prisons: Guidance for Quality Service Delivery. 2016. Available from: https://www.nphn.scot.nhs.uk/wp-content/uploads/2016/02/20160226-NPHN-Substance-Misuse-Report-Final-v1.0.pdf.

80. Page G., Templeton L., Grace S., Roberts P., McKeganey N., Russell C., et al. Conspicuous by their abstinence: The limited engagement of heroin users in English and Welsh Drug Recovery Wings. International Journal of Drug Policy 2016 March 01, 2016;29: 49-56.

81. Chimbar LBSN, C.C.R.N., Moleta YBSN. Naloxone Effectiveness: A Systematic Review. Journal of Addictions Nursing 2018 July/September;29(3): 167-171.

82. McAuley A, Munro A, Bird SM, Hutchinson SJ, Goldberg DJ, Taylor A. Engagement in a National Naloxone Programme among people who inject drugs. Drug & Alcohol Dependence 2016 May 01;162: 236-240.

83. Sondhi A, Garrett T. Non-cancer pain clinic in three English prisons: understanding prisoner needs and prescribing practice in relation to chronic non-cancer pain (CNCP). International journal of prison health 2018 12 17;14(4): 268-275.

84. Public Health England (PHE). Managing persistent pain in secure settings. 2013. Available from: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/669606/Managing_persistent_pain_in_secure_settings.pdf.

85. Scotland's Public Health Observatory (ScotPHO). Drug misuse: availability and prevalence. 2018. Available from: https://www.scotpho.org.uk/behaviour/drugs/data/availability-and-prevalence.

86. Public Health England (PHE). New Psychoactive Substances (NPS) in prisons: a toolkit for prison staff. 2018. Available from: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/669541/9011-phe-nps-toolkit-update-final.pdf.

87. MacManus D., Dean K., Jones M., Rona R.J., Greenberg N., Hull L., et al. Violent offending by UK military personnel deployed to Iraq and Afghanistan: A data linkage cohort study. The Lancet 2013 March 2013;381(9870): 907-917.

88. Turgoose D., Busuttil W., Ashwick R., Booth K., Murphy D. Describing the feasibility of using case management in a specialist forensic substance misuse intervention for UK veterans: a case study. Journal of Forensic Psychiatry and Psychology 2018 03 Sep 2018;29(5): 717-732.

89. Wainwright V, McDonnell S, Lennox C, Shaw J, Senior J. Treatment Barriers and Support for Male Ex-Armed Forces Personnel in Prison: Professional and Service User Perspectives. Qual Health Res 2017 April;27(5): 759-769.

90. Public Health England (PHE). Successfully delivering smokefree prisons across England and Wales. 2018. Available from: https://publichealthmatters.blog.gov.uk/2018/07/18/successfully-delivering-smokefree-prisons-across-england-and-wales/.

91. Eadie D., MacAskill S., McKell J., Baybutt M. Barriers and facilitators to a criminal justice tobacco control coordinator: an innovative approach to supporting smoking cessation among offenders. Addiction 2012;107 Suppl 2(Suppl 2 (pp 26-38), 2012. Date of Publication): 26-38.

92. Reid-Howie Associates Ltd. Evaluation of the SPS Throughcare Support Service. 2017. Available from: http://www.communityjusticeayrshire.org.uk/wp-content/uploads/sites/118/2017/12/Evaluation-of-SPS-Throughcare-May-20175247_2432.pdf.

93. Girardi A., Snyman P., Natarajan M., Griffiths C. Older adults in secure mental health care: health, social wellbeing and security needs measured with HoNOS-secure across different age groups. Journal of Forensic Psychiatry and Psychology 2018 03 Sep 2018;29(5): 824-843.

94. Queen A.B., Lowrie R., Richardson J., Williamson AE. Multimorbidity, disadvantage, and patient engagement within a specialist homeless health service in the UK: An in-depth study of general practice data. BJGP Open 2017;1(3)

95. O'Hara K., Forsyth K., Webb R., Senior J., Hayes A.J., Challis D., et al. Links between depressive symptoms and unmet health and social care needs among older prisoners. Age Ageing 2016;45(1): 158-163.

96. Hayes A.J., Burns A., Turnbull P., Shaw JJ. Social and custodial needs of older adults in prison. Age Ageing 2013;42(5): 589-593.

97. Turner M, Peacock M, Payne S, Fletcher A, Froggatt K. Ageing and dying in the contemporary neoliberal prison system: Exploring the 'double burden' for older prisoners. Soc Sci Med 2018;212: 161-167.

98. Her Majesty's Inspectorate of Prisons in Scotland (HMIPS). Who cares? The lived experience of older prisoners in Scotland's prisons. 2017. Available from: https://www.prisonsinspectoratescotland.gov.uk/sites/default/files/publication_files/SCT03172875161.pdf.

99. Di Lorito C, Vollm B, Dening T. The individual experience of ageing prisoners: systematic review and meta-synthesis through a Good Lives Model framework. Int J Geriatr Psychiatry 2018;33(2): 252-262.

100. Scottish Government. A Fairer Scotland for Older People: A framework for action. 2019. Available from: https://www.gov.scot/publications/fairer-scotland-older-people-framework-action/

101. Bolano M., Ahalt C., Ritchie C., StijacicCenzer I., Williams B. Detained and Distressed: Persistent Distressing Symptoms in a Population of Older Jail Inmates. J Am Geriatr Soc 2016 01 Nov 2016;64(11): 2349-2355.

102. Mental Health Foundation. Losing track of time. Dementia and the ageing prison population: treatment challenges and examples of good practice. 2013. Available from: https://www.mentalhealth.org.uk/sites/default/files/losing-track-of-time-2013.pdf.

103. Stevens BA, Shaw R, Bewert P, Salt M, Alexander R, Loo Gee B. Systematic review of aged care interventions for older prisoners. Australasian Journal on Ageing 2018 March;37(1): 34-42.

104. Patterson K, Newman C, Doona K. Improving the care of older persons in Australian prisons using the Policy Delphi method. Dementia 2016 September;15(5): 1219-1233.

105. Wion RK, Loeb SJ, Fgsa FAAN. CE: Original Research: End-of-Life Care Behind Bars: A Systematic Review. AJN, American Journal of Nursing 2016 March;116(3): 24-36.

106. Papadopoulos I, Lay M. Current and emerging practice of end-of-life care in British prisons: findings from an online survey of prison nurses. BMJ supportive & palliative care 2016 Mar;6(1): 101-104.

107. Scottish Government. Oral health improvement plan. 2019. Available from: https://www2.gov.scot/Resource/0053/00530479.pdf.

108. Scottish Oral Health Improvement Prison Programme (SOHIPP). The oral health and psychosocial needs of Scottish Prisoners and young offenders. 2011. Available from: https://dentistry.dundee.ac.uk/sites/dentistry.dundee.ac.uk/files/media/SOHIPP-report.pdf.

109. Walsh T., Tickle M., Milsom K., Buchanan K., Zoitopoulos L. An investigation of the nature of research into dental health in prisons: A systematic review. Br Dent J 2008 28 Jun 2008;204(12): 683-689.

110. Marshman Z., Baker S.R., Robinson PG. Does dental indifference influence the oral health-related quality of life of prisoners?. Community Dent Oral Epidemiol 2014 01 Oct 2014;42(5): 470-480.

111. Cavalcanti A.L., Rodrigues I.S.A., Silveira I.T.M., de Oliveira T.B.S., Pinto M.S.A., Xavier A.F.C., et al. Dental caries experience and use of dental services among Brazilian prisoners. International Journal of Environmental Research and Public Health 2014 25 Nov 2014;11(12): 12118-12128.

112. Cavallo P., Savarese G., Carpinelli L. Bruxism and health related quality of life in Southern Italy's prison inmates. Community Dent Health 2014 June 2014;31(2): 117-122.

113. Gray R, Fawcett T. Dental triage Hydebank Wood Prison and young offenders centre, Belfast. Br Dent J 2014 May;216(9): E19.

114. Bennett J, Shuker R. The potential of prison-based democratic therapeutic communities. International journal of prison health 2017 03 13;13(1): 19-24.

Appendix One - Search Strategies

These search strategies were re run in EMBASE in June 2019 for the intervening time period with the original search strategies described in the 2012 Greater Glasgow and Clyde Healthcare Needs Assessment [11].

Health Needs of Prisoners

1. prisons/
2. jail.tw.
3. penitentiar$.tw.
4. incarcerat$.tw.
5. "penal system".tw.
6. "criminal justice system".tw.
7. "correctional facilities".tw.
8. prison$.tw.
9. prisoners/
10. inmates.tw.
11. convicts.tw.
12. offenders.tw.
13. "health services needs and demand".tw.
14. "health services needs and demand"/
15. needs assessment/
16. "health needs assessment".tw.
17. "health care need".tw.
18. (health adj3 (need or requirement)).tw.
19. exp Great Britain/
20. "United Kingdom".tw.
21. Uk.tw.
22. ((or/1-8) or (or/9-12)) and (or/13-18) and (or/19-21)
23. limit 22 to (english language and humans and yr="1995 -Current").

Health care delivery in prison

1. prisons/
2. jail.tw.
3. penitentiar$.tw.
4. incarcerat$.tw.
5. "penal system".tw.
6. "criminal justice system".tw.
7. "correctional facilities".tw.
8. prison$.tw.
9. prisoners/
10. inmates.tw.
11. convicts.tw.
12. offenders.tw.
13. "delivery of health care"
14. "patient acceptance of health care"/
15. attitude to health/
16. health knowledge, attitudes, practice/
17. health services accessibility/
18. (("health service" or "health care") adj1 (delivery or provision)).tw.
19. exp Great Britain/
20. "United Kingdom".tw.
21. UK.tw.
22. ((or/1-8) or (or/9-12)) and (or/13-18) and (or/19-21)
23. limit 22 to (english language and humans and yr="1995 -Current")

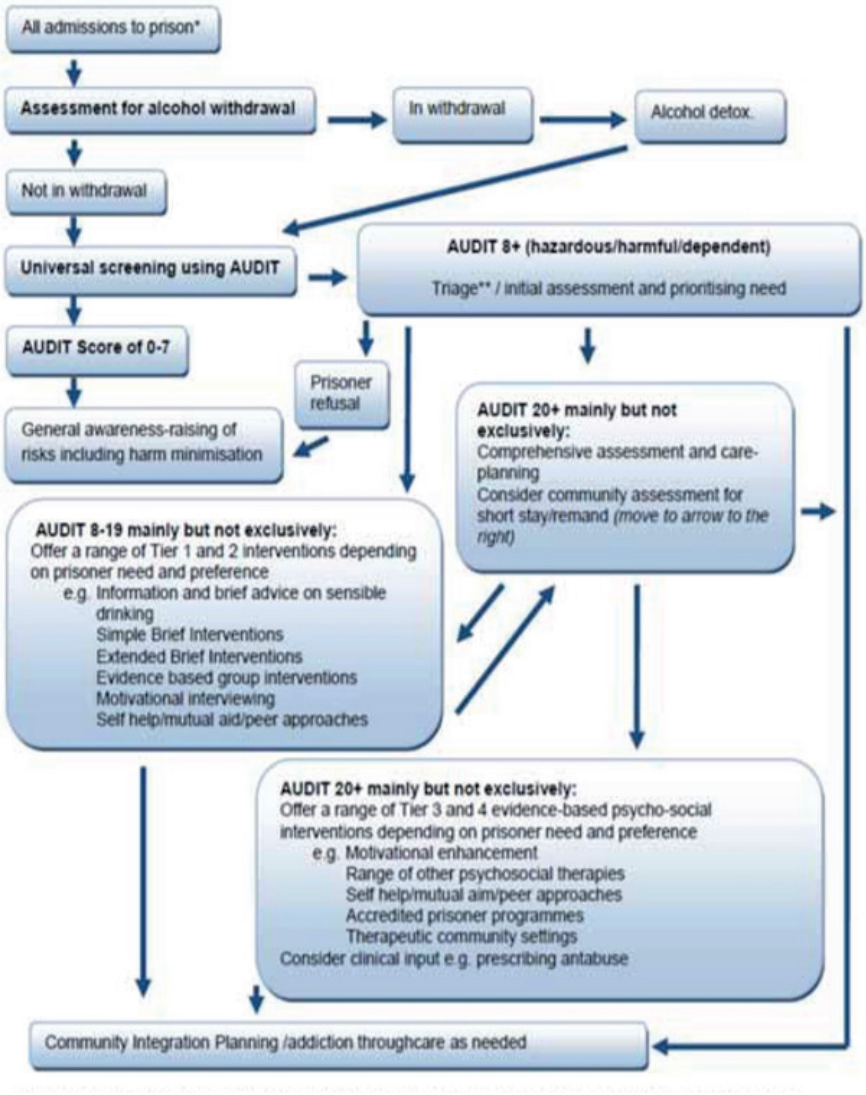
Appendix Two - Summary Table of Prevalence Estimates from Literature

Topic	Prevalence in Prison (%)	Level of Evidence (country, year)
Chronic Conditions		
Epilepsy	1	Report of individual studies (UK, 2007)
Diabetes mellitus	5	Individual study (USA, 2018)
Chronic Obstructive Pulmonary Disease (COPD)	34	Individual study (USA, 2018)
Liver disease	10	Individual study (USA, 2018)
Hypertension	36	Individual study
High cholesterol	18	(USA, 2018)
Arthritis	18	Individual study
Asthma	15	(USA, 2018)
Overweight or obese	61	Individual study (USA, 2018)
Head injury (any severity)	36-78	Systematic review (Multiple, 2018)
Chronic non cancer pain	20	Single study (England, 2018)
Cause of Death		
Deaths in prison due to natural causes	62	National data review (UK, 2018)
Deaths in prison due to suicide	38	National data review (UK, 2018)
Leading natural causes of natural death: Diseases of circulatory system Cancer	 43 32	 National data review (UK, 2018)
Communicable Diseases		
Hepatitis B	0.0-2.2	Systematic review (Multiple, 2018)
Hepatitis C	17	Systematic review (Multiple, 2018)

Mental Health		
Psychiatric comorbidity - 2 or more - 5 or more	 70 12	 Single study (England, 2017)
Personality disorder	40-70	Systematic review (Multiple, 2016)
Anxiety states	30	Single study (England, 2017)
Severe and enduring mental illness (psychotic disorder, bipolar affective disorder or current major depression)	15	Single study (England, 2018)
Major depression	10	Systematic review (Multiple, 2016)
Psychosis	4	Systematic review (Multiple, 2016)
Self-harming behaviour	5-6	Single study (England and Wales, 2016)
Previous contact with mental health services	22-61	Two studies (England, 2016 and 2017)
Has a key worker	31	Single study (England, 2017)
Prior psychiatric hospital admission	9-10	Single study (England, 2017)
Learning Disability and learning difficulties		
Learning disability	0.5-10	2 Systematic reviews (Multiple, 2007 and 2008)
Learning disability and co-morbidity with drug and alcohol problems	60	Single study (UK, 2008)
Dyslexia	4-56	Systematic review (Multiple, 2007)
Literacy and numeracy below that of an 11 year old	40-50	Single study (UK, 2007)
Substance Use		
Alcohol use disorder	24 (95% CI 21-27)	Systematic review and meta-analysis (Multiple, 2017)
Drug use disorder	30 (95% CI 22-38)	Systematic review and meta-analysis (Multiple, 2017)
Smoking	83	Single study (England, 2018)

Older People in Prison		
Living with at least 1 major illness	80	Single study (USA, 2016)
Living with 2 or more chronic conditions	61	Single study (USA, 2016)
Living with a mental health condition	38	Systematic review (Multiple, 2018)
Depression	12-56	Systematic review (Multiple, 2018)
Dementia	1-30	Literature review (Multiple, 2013)
Prescribed medication	77-85	Two studies (USA, 2016 and Scotland, 2017)
Some need with Activities of Daily Living (ADLs)	54	Single study (USA, 2016)
Existing personal care needs	11	Single study (UK, 2013)
Oral Health		
No of decayed teeth	2-7	Systematic review (Multiple, 2008)
No of missing teeth	4-7	Systematic review (Multiple, 2008)
No of filled teeth	4-6	Systematic review (Multiple, 2008)
Bruxism (teeth grinding)	30	Single study (Italy, 2014)

Appendix Three - Example Pathway for Use of AUDIT Screening In Prison



Produced by

December 2020