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Chapter 6

Re-Framing and Re-Thinking Dementia in the Correctional Setting

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Additional information is available at the end of the chapter

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Abstract

Overall, the populations of Western countries are ageing, and new technologies in forensic science, changes in prosecution and sentencing laws, alongside reduced options for early release, have contributed to the growth of the older prisoner population. This increase in the ageing population in the correctional setting has given rise to increasingly complex healthcare needs in the prisoner population who present with poorer physical, social and mental health than the general population. Prisons have not been developed for older people or their healthcare, or for management of declining cognitive abilities associated with dementia. This leaves the older prisoner with chronic health problems vulnerable to poorer health outcomes in this setting. Healthcare services within the correctional environment needs to match that in the general community and this requires the development of policies to support staff to put processes in place that will improve health outcomes for prisoners.

Keywords: correctional setting, dementia, healthy prison, human rights, older prisoner, policy agenda, prisoner

1. Introduction

The percentage of the population in the over 65 year age group is estimated to double by the year 2055. This increase in life expectancy is related to developments around improved education, health and public safety [1]. Internationally, all countries are experiencing increasing growth in the population aged over 65 years and in turn there is an expected rise in chronic diseases including dementia [2]. Dementia is a growing challenge for society, and is expected to increase further in coming decades [3]. In the general population of those people aged 65 years and older, dementia is recognised as the leading reason for disability [3].

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Dementia is a chronic condition represented by impaired functions of the brain with the affected areas being memory, cognitive skills, perception, behaviour, language, mobility and personality [3, 4]. Another area impacted by the development of dementia is executive function, causing problems with word-finding, judgement and reasoning [5]. These impairments are irreversible and generally have a gradual onset and progression, leading to a decline in the person's ability to perform self-care activities [3, 4].

Due to modern technologies and changes in sentencing requirements there has been an increase in the number of people entering the correctional environment and an increase in admissions of older people, which is expected to continue rising in correlation with the increased ageing population in the general community [6, 7]. Being classified as old in the correctional setting occurs at a younger age than in the general population and with this comes the incidence of chronic diseases and dementia as found in the general community, but at a younger age [8]. Prisoners have poorer health status than the general community due to their pre-incarceration lifestyle which increases their health risk resulting in poor health outcomes [9].

Identifying dementia in the early stages provides the opportunity to put strategies and supports in place with the person, while they are still able, and allows the person to be informed about their diagnosis [10]. Being informed about a diagnosis of dementia provides a chance for the person to make decisions about their care in the future and their continued wellbeing [10]. Early identification and diagnosis in the correctional setting presents the opportunity to build awareness of staff and other prisoners about the condition and its progression [10]. Even though healthcare providers have acknowledged that early identification of dementia is important, about two thirds of those with dementia die without it being diagnosed [11, 12]. This means that many people will never receive important interventions in the early stages, or have the opportunity to prioritise their care into the future [11].

There is minimal information around policies, organisational systems and practices in relation to management of prisoners with cognitive impairment and dementia, and evidence shows that this section of the community is marginalised and victimised. There is growing urgency to improve access by prisoners to appropriate healthcare for screening and management of cognitive impairment, as well as general health promotion to improve long-term outcomes. The World Health Organisation guide for prison health suggests adopting a simple model for correctional settings to create a healthy prison and provides a resource for prisons that are struggling to address the increasing older prisoner population [13].

This chapter highlights the issue generally and sets out strategies for organisations to use in identifying dementia and developing a healthier correctional environment which will lead to improved health outcomes for prisoners and also for staff and for the communities where these prisoners will be released.

1.1. Definitions

Correctional facilities are where people are housed when they have been accused or convicted of breaking the law by committing crimes in a country, and the criminal justice system has

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deemed they are dangerous to the public [14]. They are placed in correctional facilities to be segregated, to protect the population of that country from their actions and to maintain societal laws [14]. There are many different terms used across the world to refer to the correctional environment including corrections, correctional setting, correctional facility, correctional institution, prison, gaol, jail, lock-up, penal institution, penitentiary and incarceration [15].

There are many different terms used to describe the people who reside in correctional facilities including prisoner, crim, criminal, inmate, offender, convict, con, incarcerated, gaolbird [16].

The morbidity classification of an aged or elderly prisoner commences at 50 years whereas in the broader population group the morbidity classification begins at 60–65 years of age which is an equivalent disparity of 10 years [8, 17–19], therefore someone 50 years old is classified as being aged in the correctional setting. This difference in age is related to lifestyle factors including minimal medical care, substance misuse, low education levels prior to the prisoner entering the correctional environment, as well as the effect of life in prison with isolation from family and threats of violence [18, 20].

Dementia has been defined by the World Health Organisation [4] (p. 2) as "a syndrome, usually of a chronic or progressive nature, caused by a variety of brain illnesses that affect memory, thinking, behaviour and ability to perform everyday activities [9]." The impairment that this causes is permanent and not reversible, resulting in the person not being able to live independently [3, 4].

Cognitive impairment is where the person is unable to make everyday decisions, has problems with remembering things, being unable to concentrate on activities or learn new things [21]. Cognitive impairment can be an early sign for the development of dementia and has many differing causes [21].

2. Current policy agenda

The World Health Organisation has developed a prison health guide [13], 'Health In Prisons', to firstly set out the critical requirements in health service provision and delivery of care, including information around standards in prison health. Secondly, it argues that prisoners should receive health care that is comparable to the general community and cites several international standards to support this entitlement. Thirdly, the guide highlights best practice based on the idea that there should not be any discrimination against prisoners based on their legal situation. Furthermore, it argues that prisoners have the right to receive the same quality and level of healthcare as the general population in the country [13, 22].

The World Health Organisation [4] has identified that the incidence of dementia is increasing at an alarming rate across the world and therefore all countries need to place dementia on the public health agenda. Many countries have developed plans and policies for addressing the increasing concerns relating to dementia, including Australia, England, Scotland, France, South Korea, Norway, Denmark, Netherlands, Japan, United States of America and Canada [23].

However, these plans and policies concentrate on the general community and do not translate into the correctional setting or provide any plans for moving into this environment.

Australia has developed the 'Corrections Ageing Prisoner and Offender Policy Framework 2015-20', which identifies that ageing prisoners have varying individual and system needs, and these needs should both be considered [24]. There are four fundamental principles characterised: supporting age-appropriate regimens and accommodation, enhancing health and wellbeing, tailored age and interest-relevant programs and building strong partnerships [24]. Situated under these principles there are four key priority areas. The first requires support for staff to ensure they are delivering evidence-based best practice within the facility as well as system enhancement. Secondly, prisoners require access to age appropriate services for their health and well-being. The third priority is about building staff capacity to ensure the workforce is assessing and supporting common ageing conditions. Finally, the fourth provision requires of monitoring of ageing demographics to ensure all prisoners and staff needs are being addressed in a timely manner [24].

3. Demographics/epidemiology

Overall, the populations of Western countries are ageing, and it has been suggested new technologies in forensic science, changes in prosecution and sentencing laws, alongside reduced options for early release, have contributed to the growth of the older prisoner population [6, 7]. Australian population statistics show the numbers of Australians aged 50 years and over increased by 36.8% in the period 2000–2010 [25, 26]. However, there was an increase of 70.4% in prisoners aged 50–54 years, 79.7% in prisoners aged 55–59 years, 81.8% in prisoners aged 60–64 years and 141.7% increase for the over 65 year old group from the year 2000 to 2012 [26]. This increase in the number of older prisoners has been identified across the world [27]. Accompanying this there is an expected rise in the rate of chronic disease including cognitive impairment and dementia in correlation to the rise in the general population [25, 28].

The World Alzheimer Report 2016 [29] identified in 2016 that there were approximately 46.8 million people across the world with dementia and this is expected to increase by the year 2050 to 131.5 million people. Alzheimer's Disease International [29] recognised that different income level countries have different levels of identification of dementia. For example in low and middle income countries there are only 10% of people with diagnosed dementia, whereas in high income countries this rises to about 50% being diagnosed [29].

Approximately 13% of the general US population aged over 65 years have dementia whereas in the prisoner population it can be as high as 44% [30]. Baldwin and Leete [31] reported that a UK survey of prison inmates provided evidence that 15% of those surveyed exhibited signs of cognitive impairment. This was then used as an indication that there could be many unrecognised instances of dementia in prisons [31]. Correctional settings have not been prepared to address the needs of older, infirm or disabled prisoners which create a strain on staff [31]. For instance, it is now recognised that correctional services staff are not trained to identify

a person with a cognitive impairment or care for someone who is disabled, rather, they are employed to manage prisoners' behaviour [31].

Despite the fact that an increased awareness of the ageing population and dementia has been a major focus of literature on older people, there is minimal documentation about how this is impacting the correctional setting [5]. Maschi et al. [30] (p. 442) state that there is 'no national study to estimate prevalence of dementia among the U.S. prison population'. Williams et al. [32] also identified that there has been minimal research into the prevalence of dementia in the correctional setting, and based on other data, they expect cognitive impairment to be high and unrecognised in the older prisoner population. There is limited research into the early identification of dementia in the prisoner population, with correctional healthcare services having a strong focus on acute healthcare issues rather than long term preventive measures [33]. This correctional setting has given rise to increasingly complex healthcare needs in the prisoner population which is directly linked to the increase in the ageing population in this setting [34].

4. Community and correctional settings

4.1. Individual (national framework and health status)

A high proportion of those people who enter the correctional environment are from disadvantaged and/or minority groups in society, with the majority of the marginalised being well represented and generally from a particular socioeconomic quintile [35]. Those people who become involved in the criminal justice system have a higher incidence of health problems, such as untreated chronic conditions and mental illness, than the general population [35, 36]. It is well documented that people from low socioeconomic lifestyles have a high incidence of unhealthy behaviours such as alcohol and substance misuse, smoking, poor nutrition and living conditions and they rarely visit healthcare services [35, 37]. Health conditions such as mental illness and some unhealthy choices and behaviours, for example alcohol and illicit substance misuse place people at greater risk of arrest and once they are incarcerated, they sometimes enter an overcrowded and at times violent environment [36]. These lifestyle factors prior to incarceration and then within the correctional environment creates negative effects on the mental health of the prisoners due to overcrowding, isolation, lack of mental stimulation, lack of privacy, and separation from family or supports, which in turn puts prisoners at greater risk of developing dementia [17, 35].

Prisoners who have early stages of dementia are treated the same as the rest of the inmates within the correctional environment which causes additional problems. For example, a person with dementia is unable to follow simple instructions or directions from correctional staff which can result in or to lead punishment for non-compliance [31]. This subsequently increases the prisoner's confusion, leading to an exacerbation of the dementia symptoms and processes [5, 31]. It was also identified that the dementia process could cause confusion for a prisoner around social standards or customs in the correctional setting.

Baldwin and Leete [31] acknowledge that a person with dementia in the correctional setting is vulnerable to abuse and bullying from other prisoners. Cognitive impairment is an early identifier for dementia, and failure to identify cognitive impairment early in prisoners could lead to adverse health outcomes including victimisation, the inability to conform with complex instructions, and poor judgement resulting in disciplinary actions [30, 32]. This is supported by other studies which acknowledge that older prisoners who have dementia are at a greater risk of becoming victims of violence, bullying and victimisation [5, 38].

4.2. Correctional setting

Prisons exist for three reasons; to provide safety for the community by removing someone who has demonstrated criminal activity from society, as a form of punishment for these activities and lastly for rehabilitation prior to returning to the community [39]. Prisons therefore have not been developed for a person's healthcare, or for management of the declining cognitive function which occurs with dementia [39, 40]. This leaves the older prisoner with cognitive impairment and dementia vulnerable to poorer health outcomes in a correctional setting [40].

Prisons have not been designed to accommodate older or infirm prisoners, therefore inflicting further punishment if the prisoner is unable to navigate the facility due to cognitive impairment or dementia [30, 31, 41]. Older prisoners are not able to easily access bathroom facilities, climb up to top bunks or attend some exercise sessions [31, 41]. Equipment to support the older, frail prisoner is not generally available in this setting and activities are not structured for the older person with reduced cognitive or physical abilities [18, 41]. The inflexible environment of the correctional setting could also intensify the loss of independence and functional ability of the older prisoner [41]. The older prisoner may present with multiple and complex healthcare needs, which are difficult to manage in an unprepared setting [41]. Prisoners are at increased risk of developing depression which can be exacerbated by the lack of stimulation and distance from family and support networks [31].

In Australian prisons, the rate of older prisoners is increasing faster than the same age in the general population, and there has been a substantial increase in the number of older prisoners in the correctional system during the decade between 2000 and 2010 [10, 25]. This increase in the number of older prisoners has been identified across the world [27]. For example, England and Wales report a 74% increase in older prisoners in the past decade and the United States reports the number has tripled in the same time period [7].

United States citizens 65 years and older who have dementia represent about 13% of the general population, and the prisoner representation can be as high as 44% [30]. In the United Kingdom a survey on prison inmates provided evidence that 15% of those surveyed exhibited signs of cognitive impairment that had not been previously identified. These findings were then used as an indication that there could be many unrecognised instances of dementia in prisons [31]. In the United States there are prisoners with dementia who have been neglected, due to being incarcerated in facilities where medical and mental health care for this group of the population is sub-optimal [30].

Due to the structured routine of life in a correctional facility, a person with dementia may not be identified early or easily and the routines in the correctional setting can mask the signs and symptoms of dementia [10, 18]. Prisoners are not expected to coordinate their daily routine or act independently and the inability to do this, because of the dementia process, may not be recognised [10]. They may therefore not be identified as having any cognitive impairment until their behaviour begins to clash with expectations of the correctional environment [10].

Not being identified as having dementia until the late stages means that strategies or treatment cannot be put in place during the early stages to slow or relieve symptoms [10]. As the disease progresses the older prisoner will develop problems following instructions which could lead to punishment which will in turn further impact on their health [10]. As the process of the disease advances the affected person will also develop problems with being able to socialise with others and undertaking general activities of daily living such as performing hygiene needs [10]. The inability to understand and perform general tasks could also lead to being reprimanded or punished and therefore will adversely impact on the physical and mental health of the person [10]. Failure to identify cognitive impairment and dementia in prisoners could lead to such adverse outcomes as victimisation, the inability to conform to complex instructions, and poor judgement resulting in disciplinary actions [30, 32]. This is further supported by other authors who state this lack in understanding may lead to the older prisoner with dementia becoming vulnerable to abuse and bullying from younger prisoners [18, 38].

If the correctional environment is not designed for prisoners with cognitive impairment and dementia, they will find it takes a greater effort to navigate their way around it, and they will be at greater risk of confusion and becoming lost in their surroundings [42–44]. This suggests the reduced independence caused by confusion has an impact on the person's sense of identity and can lead to an exacerbation of the progress of dementia [42–44]. Those with dementia have been identified as 'among the most marginalised, socially excluded and highly stigmatised groups in society' [42] (p. 188). Prisoners are a marginalised and socially excluded group because they are placed in an environment which has been developed to disempower, control and put the prisoner in a submissive position [33].

4.3. Case studies (globally)

There is minimal research around dementia screening and management in the correctional environment, however some prisons have implemented or are developing processes for older prisoners.

Fishkill, in New York (United States of America) has created a dementia specific unit to provide accommodation for dementia prisoners from the state's prisons, which is attached to the prison's medical centre [10, 25]. Staff are required to attend 40 hours of training, designed by the Alzheimer's Association, to assist them in working with prisoners in this unit [10]. The supposition is that dementia-specific staff training provides a way to create knowledgeable staff and reduce the occurrence of confusion or anxiety in prisoners with dementia [10].

The California Men's Colony (Unites States of America) was developed for any prisoner with a severe cognitive impairment to reduce the incidence of victimisation, and meet the needs

of this group of prisoners [10]. Prisoners need to meet special requirements for entry into this facility, with dementia being one of the requirements [10]. The facility offers a 'Special Needs Program for Inmate-Patients with Dementia (SNPID)' which supports prisoners by modifying either their social or physical environment [10, 45]. This program includes the use of specially selected prisoners to provide support to the prisoner with dementia and ultimately improving their quality of life [10, 45].

Training of prisoners to become carers has been used as a strategy in Queensland (Australia) by providing Carers Certificate 2 training to selected prisoners to assist with older prisoner care [46]. This provides extended care for the prisoner with cognitive impairment when needed, while also providing the prisoner carer with a potential career on discharge from prison [46]. These carers work under the direction of a registered nurse to ensure safe and quality healthcare is provided.

Long Bay Correctional Complex in Sydney (Australia) is developing access to allied health professionals who specialise in areas of need for prisoners with dementia [10]. They will provide long term supported care in the correctional health service, which will include an '…aged-care offender's independent living in segregation from the mainstream prison, with support from a disability service…' [10] (p. 15).

4.4. Community settings

There have been various strategies for early identification and support for people in the general community with cognitive impairment and dementia for some time, however this has not translated into the prison setting. Specialised tools are used in the community to assess a person's functional abilities as these skills are the first ones affected by cognitive impairment and dementia [5]. Two of the community tools are 'activities of daily living' (ADLs) and 'instrumental activities of daily living' (IADLs). A person in a correctional environment would not be responsible for developing or using these skills so an alternative tool has been developed in the United States of America called 'prison activities of daily living' (PADLs) [5]. Although this tool has been identified by a couple of authors it does not appear to have been picked up in other countries. Each country and each correctional facility will have slightly different processes and these could be used to modify the PADLs to suit their specific facility.

In Australia, 'The National Framework for Action on Dementia', which aimed to make dementia a national priority, was developed to support communities to provide assistance to carers and those in the community with dementia [23]. A national framework for action was agreed upon by Australian Health Ministers and this framework listed five priority areas [3]. These priority action areas were: 'care and support services, access and equality, information and education, research and workforce and training strategies' [3]. Even though this was developed for the general Australian population, the correctional setting is yet to follow these recommendations [10]. In England a national dementia strategy was developed to provide support for early diagnosis and intervention, and Scotland developed a dementia strategy to achieve similar outcomes [23]. In the United States of America preventing and reducing dementia has been identified as a 'national public health priority' [30].

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5. Healthcare in correctional settings

5.1. Prisoners access to healthcare is a human right

The question has been raised about whether it is appropriate to continue to hold someone in prison if they no longer remember their criminal act due to dementia [47]. Dementia can contribute to a prisoner having no knowledge about his/her wrong doing and the loss of the ability to understand this [31]. There is also the situation where a prisoner was initially aware of their guilt when admitted to the correctional facility, however in time they no longer have an understanding of this or their surroundings [31]. In all of these situations there is no opportunity for rehabilitation, which is the main reason for incarceration prior to release back into society [31].

Compassionate release from prison revolves around four different points: 'the chance of recidivism, the rights of the victim, the costs involved in continued incarceration versus the cost of external healthcare, and the continued welfare of the prisoner with dementia' [31]. This raised the question of the ethics of keeping a prisoner, whose psychological and physical needs cannot be met, in prison [31].

Older prisoners are more costly as they require resources that are more expensive compared to prisoners who are younger and generally healthier [48]. One of the increased resources needed is increased healthcare generally due to a lack of healthcare throughout their lives [48]. Older prisoners have a higher incidence of physical and mental health issues than those in the community who are the same age and therefore need ready access to healthcare services [48, 49].

Prisons were initially designed for young people, with narrow staircases and cement buildings and floors which can be harsh on old bodies [50]. Prison healthcare systems were initially designed for young and healthy men, therefore older females and males from marginalised backgrounds and/or minority groups, who have higher incidences of chronic conditions, have different healthcare needs which can challenge the traditional models of care [51].

Many older prisoners have chronic medical conditions. Approximately 95% of prisoners will eventually be released back into society, therefore proper management of these conditions in the correctional setting will reduce the costs and the impact on communities when prisoners are released [32]. Even though being incarcerated could be the optimal time to identify and mange health problems, this is not occurring adequately or consistently across correctional facilities internationally [49]. The guidelines of many countries state that healthcare provision to prisoners should be to the same standard as the general population, however this has not occurred in many prison healthcare services, with frequent lapses in care [19, 49].

As the correctional population is becoming older, increasingly release is through death, and therefore there is a growing need for end of life options in this environment, making it difficult for correctional services to meet the special needs of the ageing population while remaining humane [52]. In some countries there is a movement toward penal harm which means that disciplinary measures, which extend to the healthcare clinic, are the focus in correctional

facilities [53]. This penal harm also occurs when correctional staff feel that policies of the facility and security override the need for medical attention [53]. When this occurs the quality of the healthcare provided can deteriorate significantly and can be seen as standard care for the facility even though it is well below what is provided in the general community [53].

Of prisoners aged between 50 and 54 years, about 50% had mental health problems, and only one third of these people would have adequate access to treatment during the time they were in prison [30]. Although there is a section in the US constitution protecting against cruel punishment, and supporting the rights of prisoners to appropriate medical care, many criminal justice system healthcare providers are not prepared to support the needs of older prisoners in a cost- effective way [32, 40]. Williams et al. [32] and Ahalt et al. [40] identified that healthcare systems within the prison setting increasingly need to provide healthcare for rising chronic conditions as the population in correctional facilities becomes older.

5.2. Individual (determinants of health)

People within the correctional setting have poorer social, education and economic circumstances which impact on their determinants of health. For example, being in an environment not designed for older people with aged conditions, the socioeconomic indicators demonstrate most have a low education level, are homeless, generally unemployed and have substance misuse [20, 25, 54]. A person's lifestyle, geographical location, employment status and social connections strongly influence their health, with studies establishing the links between health, poverty and social exclusion [35]. Those incarcerated in a correctional setting are at a higher risk of developing dementia and/or related problems due to the isolation of the setting, being exposed to violence, at times being in overcrowded facilities as well as being separated from their families [33]. Older prisoner's health is vastly poorer than those of a comparable age residing in the community. It has been highlighted that, of prisoners in the over 60 years age group, 85% had chronic disease, and in particular a high incidence of mental illness, which was found to be five times greater than a comparable sample group in the community [18].

Those who become incarcerated have higher rates of substance misuse and chronic diseases, including those affecting mental health, and, if these are not recognised, treated and managed in the correctional environment before the prisoner is released, there will be an increased burden on the community [55]. There is also evidence of a cycle of reoffending caused by links between the determinants of health, such as employment and housing, once as person is released from prison, with a high number of these people becoming homeless [35].

Older prisoners entering a correctional setting, where the majority of inmates are young and can be quite violent, are becoming more vulnerable and at risk of violent episodes from those more physically fit [52]. Health disparities and poorer health outcomes occur where appropriate healthcare is not provided to individuals in the correctional environment, which not only affects the person with dementia but also the prisoners around them, as well as the community they will be released back into [55].

Health promotion is an important aspect of providing healthcare and has been a growing trend internationally. Health promotion activities are the foundation of the WHO guide to prison health which also encompasses the Ottawa Charter for Health Promotion and the Declaration of the Alma-Ata [56–58]. 'Peace, shelter, education, food, income, a stable ecosystem, sustainable resources, social justice and equity' are critical to a person's health and are the foundation for the Primary Health Care principles [57]. The principles acknowledge that the Health Promotion approach is not restricted to just the individual but also applies to the setting or environment, and highlights practices to reduce the impact of the 'wicked' problems within communities and/or populations [59].

For a prisoner to feel 'at peace' they need to be feeling safe and not be in fear or stressed about their wellbeing in the environment they are in [56]. Being in an environment where a person's circumstances create stress over an extended period can lead to feelings of insecurity, for prolonged periods of time can be both physically and emotionally harmful [60]. If a person has long periods of feeling insecure or anxious, accompanied by being socially isolated and with poor self-esteem, they will have an increased incidence of mental illness. Not only does this increase psychological problems, it also leads to increased death at an early age [60]. These problems are recognised in greater numbers across industrial countries in the section of the population classified as low socioeconomic, which includes the correctional population [60]. Therefore unless healthcare in the correctional setting is supported by using guidelines such as the World Health Organisation prison health guide, prisoners will not be able to achieve the Primary Health Care and Health Promotion approaches and principles such as achieving peace.

Social isolation will and has a great impact on a person's wellbeing and creates barriers to being in a place where they are feeling at peace [60]. Being excluded from social interactions and distanced from family and loved ones will also create stress and feelings of unease leading to health problems and premature mortality [60]. This social isolation can be harder on some sections of the community, including the older prisoner population, and even on release they remain quite vulnerable [60]. There is a greater risk of early death in people who are stigmatised by their position, such as being a prisoner, and being looked down upon, along with exclusion from society, can have a significant impact on a person's health [60]. Furthermore, if prison healthcare and management do not address these issues and develop policies for healthy prisons, there will be an increase in deaths within this particular population group.

5.3. Correctional healthcare services (incorporation of health performance framework)

Prisoners within the correctional setting are seen as being in communities which are isolated and self-contained, away from the general population and the public health umbrella [61]. As a consequence, many opportunities for health improvement have been missed for both the individual and the community inside and outside the prison [61]. The health status of prisoners does not match their counterparts in the community for physical, social and mental wellbeing, resulting in a much poorer health status and outcomes [17, 18, 54].

Correctional healthcare services are responsible for the provision of care to prisoners and are the key personnel to support those with cognitive impairment and dementia [62]. The increase in the numbers of older prisoners, and their higher incidence of chronic disease and disability, are challenging and place a burden on correctional healthcare service providers who are generally not educated in aged care [40]. Therefore, where there are prisoners with multiple comorbidities, and especially for prisoners with mental health or cognitive impairment such as dementia and who have a reduced capacity to articulate their health problems, this can lead to under diagnosis of conditions/illness.. This is compounded by the key system issue of the regime in the correctional setting. Furthermore, as these regimes have not been developed with consideration of older prisoners with frailer and poorer health, many conditions and illnesses go unrecognised. More recently, overcrowding within correctional settings has compounded the complexities in delivering best practice healthcare, service provision and diagnosis of people with cognitive impairment [19].

Correctional healthcare services have a strong focus on acute healthcare issues rather than long term preventive measures [33]. In fact, correctional healthcare services are in an optimal position to deliver primary healthcare services that can be a disease prevention and health promotion service that is equivalent to that received on the outside [9]. If this style of healthcare is delivered within the correctional setting not only will it reduce the impact on communities once prisoners have been released, it will also provide optimal care within the national health performance framework and provide equivalent care to the community [9, 54].

It has been identified that prisoner's healthcare needs can be complex, and many are too extensive for prison healthcare services to manage [33]. In Australia, this leads to the health system performance in the correctional setting not meeting the requirements of the National Health Performance Framework [54]. This causes inequity across the range of patient care needs because the service provided within the correctional environment is vastly different to that in the general community [18, 54].

Correctional facilities were not designed for prisoners who are dependent on others for care, creating challenges for correctional healthcare services in identifying and supporting those with cognitive impairment and dementia [63]. This leads to incidences where care needs have gone unrecognised and health needs have been unmet [63]. There is very little information in the literature about early screening, identification and support of prisoners with cognitive impairments or dementia, and as a consequence there is little evidence to direct practice around this vulnerable group in the correctional setting.

Effective healthcare provision in the correctional environment can be obstructed due to the routine of the prison, correctional staff unavailability, time constraints and demands from prisoners [62]. There are barriers for nurses to develop therapeutic relationships with those they are caring for due to correctional requirements and the physical environment which can affect nurse-patient relationship building [64]. Correctional health clinic attendance is dependent on prisoners being able to attend, and this can be restricted by correctional services procedures and constraints [34, 62]. This creates a competition between the custody aspects of the correctional environment and the caring aspects, at times providing barriers to care and limiting nurse's autonomy [64]. A key point from the World Health Organisation

guide for prison health is that healthcare staff within the correctional setting need to have professional independence and this should be to the same level as healthcare staff in the community [22].

Healthcare needs of prisoners and care delivery by healthcare professionals is affected adversely by the culture in the correctional environment and the tension this creates can affect the recruitment and retention of nursing staff in the prison [62]. Due to staffing retention issues, nurses may undertake longer or double shifts to ensure healthcare coverage which means spending longer hours behind bars, and this can lead to similar feelings to the prisoners of isolation and segregation from the community which could lead to mental illness such as depression [64]. Nurses working in the correctional environment can feel marginalised by other staff such as doctors who are in attendance for a short time, and who instruct the nurses on what to do without really understanding the complexities of setting and without being with the prisoners for long periods of time [64]. Correctional officers, although in attendance for similar periods of time, have a vastly different role and do not have the same pressures as the nurse who is expected to sort out the health problems of the prisoners [64]. Innovative delivery of healthcare in the correctional setting is often obstructed and the initiation and ongoing management of these resources is held back by environmental procedures [62].

In Australia each state and territory government is responsible for the healthcare provided in their correctional facilities [3]. As a result there are variations between jurisdictions about how and what healthcare service is provided [3]. The differences in healthcare provision and the function of clinics can range both between and within states and territories [3, 34]. Some jurisdictions will provide allied health and mental health services within the prison healthcare setting, while others will use external providers [3]. While there is restricted access to different allied healthcare professionals, there are challenges with retention and recruitment of staff [34]. There is limited information about the differences between prison healthcare in the different states in Australia, and how they identify and support prisoners with cognitive impairment and dementia in their jurisdictions.

5.4. Case study (international initiatives)

California Men's Colony (CMC) provides an environment with areas specifically for those inmates with moderate to severe dementia and provides tailored programs for those with cognitive impairment [7]. This prison identified that there was a need to assist prisoners with severe cognitive impairment in order to reduce the incidence of victimisation and meet the needs of this group of prisoners [10]. The outcome of these programs has provided evidence that there is an improvement in social skills, attention levels and depression [7]. They also have a program where they buddy a prisoner without dementia with one that has dementia [7]. The prisoner buddies need to have a record of good behaviour, and receive training from the Alzheimer's Association so they can provide care for those with dementia and protect them from victimisation and bullying [7, 10].

Onomichi prison has a ward for older prisoners which provides nutritional support, and they changed the requirement that prisoners march in formation so that it wasn't as strict as other areas in the prison [65]. This environment was designed for prisoners who are not very

mobile, with ramps and hand rails being provided instead of stairs, and they have customised their wash rooms to accommodate the less mobile [7].

Fishkill Correctional facility in New York provides a unit for inmates who have been identified with cognitive impairment, and once admitted to the unit, there is a policy of regular assessment [7]. Apart from the commonly used assessment tools for cognitive impairment they also use 'Early Warning Signs' and 'Dementia Symptoms and Behaviour Triggers' [7]. All staff working in this facility are chosen from a pool of people who want to work there rather than being allocated to this facility, and they all must complete a 40-hour program of training developed and delivered by the Alzheimer's Association [7, 10].

Long Bay Correctional Complex in Sydney provides a program that collaborates with agencies specialising in dementia care to deliver better services to prisoners with dementia and cognitive impairment [10]. Some of these are the provision of access to allied health professionals who specialise in areas of need for these prisoners, long term supported care in the hospital facility, an aged-care offender's area of independent living that is separate to the mainstream prison with support from disability services [10]. A program is being developed to support appropriate aged care placement within the correctional setting, and collaboration on the development of processes for identification and assessment of prisoners with dementia as well as their management [10].

The state of Texas in the United States of America has geriatric units that have been designed for prisoners who are 60 years and older to provide more support for these prisoners with the activities of daily living [18]. They also have a geriatric unit for prisoners that is higher level and arranges access for the prisoners in this unit to specialist services for their higher acuity health needs such as dialysis and physiotherapy [18].

6. Environmental and sustainable practice approaches in correctional settings

6.1. Building competencies and workforce capacity

The World Health Organisation [4] (p. 3) states that 'Capacity-building of the workforce is essential to improve knowledge and awareness of the benefits of a coordinated response to care'. Correctional healthcare services have the opportunity to provide screening and treatment for a section of the population recognised as marginalised where healthcare is involved [61]. Providing services using standardised clinical guidelines will ensure the healthcare provided is of the same standard of care provided in the general community, and does not set lower standards of care for prisoners [61]. Developing agreements between correctional healthcare and correctional services to reduce the barriers that currently exist between healthcare and security will provide a more streamlined standard of care [61]. Ensuring all staff within the facility where there are prisoners identified as having cognitive impairment or dementia have education on recognition and management of dementia will reduce the vulnerability while in prison [61]. These actions will support the National Health Performance

Framework by addressing Health System Performance to provide improved 'effectiveness, safety, responsiveness, continuity of care, accessibility, efficiency and sustainability' [54].

Best practice management recognises early identification of dementia as being important, and also specific training in dementia care and support for correctional staff [10]. It is suggested that dementia training should incorporate information on helping staff to understand what dementia is and signs of its development, as well as how it can impact the person with dementia and those they are living with [10]. If staff are adequately informed and trained this could lead to early identification of the person with dementia, which can ultimately lead to early interventions and support being provided [10]. Feczko [5] supports this by acknowledging that correctional staff need to be trained in identifying the early stages of dementia, and how to recognise a prisoner's inability to undertake basic tasks rather than staff focusing on behaviour problems. It has also been identified that correctional officers need education and training to help them understand that if a prisoner is not following an order or direction it may not mean they are deliberately being disobedient, rather it may be due to their deteriorating cognitive abilities through the dementia process [52]. Prison health staff are not trained in aged care or early identification and care support for those with cognitive impairment and dementia, therefore specific training will assist those predominantly responsible for prisoner health to care for this vulnerable group [32].

The other aspect of training and support for correctional and healthcare staff is to ensure those working closely with people who have dementia are provided regular debrief sessions to safeguard their own wellbeing [10]. This will then link into the World Health Organisation prison health guide where health promotion and management is needed for correctional staff to reduce stress and to maintain the workforce [66]. Developing resources for health promotion should not only encompass prisoner care, it should also develop a partnership to provide for staff across the facility [66]. There can be high sick leave in some correctional settings and if staff members feel that they have a health promotion service available to them through work this could lead to them feeling more fulfilled in their employment and therefore lead to reduced sick days [66].

Other strategies to improve workforce capacity within the correctional setting are modifications or adaptions in the correctional environment which can help to avoid disruptive or unacceptable behaviour from a person with dementia. Meanwhile, if prisoner behaviour becomes easier to manage, the staff will have a reduced burden within their work shifts [10]. This modification could be as simple as a process change to provide carers within corrections by training selected prisoners to be support people for the prisoner with dementia [10].

6.2. Re-framing of practice to improve quality of life for prisoners

The development of policies and procedures for health checks, screening and assessment on admission and at regular intervals, along with the use of risk reduction program such as 'Your Brain Matters', will help in supporting and educating healthcare staff to provide quality care to prisoners that matches services provided in the community [1]. The World Health Organisation guide for prison health provides advice around the need for development of

health policies in prisons which are integrated into the health policy of the nation [22]. The development of these policies and procedures will provide staff with resources to support decision making around dementia in prisoners and present a structure for initial screening and regular follow up to ensure those with cognitive impairment and dementia do not miss out on early interventions to improve the progress of their health and outcomes. This is supported by Hayton in the World Health Organisation guide for prison health, where it is stated that there need to be regular assessments and screening with prevention strategies and health promotion included [67].

Policies and procedures can be developed to identify the specific age group where these screenings should begin and the staff member responsible for the identification. For example the correctional officer may identify that a specific prisoner who did not raise any flags in their admission screen is demonstrating behaviour that may show the early development of cognitive impairment. This correctional officer would then arrange for a referral to the nurses at the health clinic who could undertake a more comprehensive assessment, and then if the prisoner meet certain requirements as per the policy and procedure, they are referred to a geriatrician or medical practitioner who can provide a diagnosis. Once a diagnosis has been made, strategies developed with an individual plan of care for the prisoner to ensure the remainder of their time behind bars is managed in a safe manner free from victimisation.

Cashin et al. [41] states that another option is to develop a facility within a prison that simulates a hostel environment which provides housing for the aged prisoner in a more cost effective environment. These facilities should be developed to be similar to the community aged care centre and use trained younger inmates as care assistants, therefore reducing the staffing costs [41]. These carers would receive formal aged care training which can lead to a formal qualification for use once released from prison [41]. These trained carers would be supervised by qualified healthcare professionals who can observe the standard of care they provide as well as their level of skill development [41]. This provides the older prisoner with personalised care not previously available in a general prison, as well as providing the care assistant with a role within the prison that can translate to employment once released [41].

The older offender who has dementia may not be able to stand trial. However if their crime has been serious or involved violence they need to be placed under supervision in a facility that can accommodate their diminished mental capacity, to protect other prisoners and wider community [38]. It is recommended a secure unit be provided for the older adult with dementia to provide security and appropriate healthcare without the physical restraints imposed in the acute care setting, therefore not compromising safety and providing a comfortable environment [38]. This environment needs to be staffed by people trained in the care of these prisoners and how to address any incidents which may arise [38].

Another strategy is to collaborate with specialists in the field of aged and dementia care for support and education program development (for example Alzheimer's Association, geriatricians, physiotherapists, occupational therapists, carer supports and training). These specialists can help to develop the polices for identification and support for both the prisoners and staff as well as specific staff training programs to skill them in aged and dementia care. Dementia specific training provided to all staff working in the correctional environment where there are

potentially prisoners with cognitive impairment and dementia, strengthens the workforce by ensuring they have the capacity to work safely in this environment with minimal stress.

There may be the need to redevelop areas of the correctional environment to accommodate older and infirm prisoners. This may mean that organisations need to modify environments in areas where dementia prisoners, those at risk of dementia or cognitive impairment are housed to reduce poor behaviours as well as poor outcomes. If the facility is of a substantial age then modification could be difficult therefore simple actions would be around clear signs and directions, which could assist the prisoner with dementia in identifying their specific cell, where to go for meals and hygiene needs. It may also mean these prisoners are housed in an area with no or minimal stairs and that bunk beds are not used as the old, infirm prisoner who will have difficulty climbing up onto them.

6.3. Developing a healthy prisons approach

The World Health Organisation (WHO) was the first to discuss the promotion of health in prisons, for not just prisoners but for correctional and healthcare staff as well [13]. Their 'Health in prisons' publication, developed as a guide to prison health, that there needs to be a focus on 'health promotion' and 'health protection' which can be successful within the correctional environment [13]. The guide provides recommendations on how to develop a healthier correctional environment for both prisoners, staff and the environment which will also reduce the amount of harm in these settings [13]. The guide explains the fundamental steps that need to be included when developing health and health promotion in prisons [13, 68]. It states that all staff need to be involved from senior management down, and to make it sustainable there need to be links between the correctional healthcare service and healthcare in the community [13, 68]. This will then ensure that all interested parties are involved in the process, including prisoners, community healthcare in the local vicinity, politicians, staff and management [13, 68]. There needs to be a shift in perception around corrections and health so that creating a healthy prison is supporting the public not just those that are incarcerated [68].

Being able to create a healthy correctional environment using the whole prison approach is not always clear and can be quite difficult in areas that are resource-poor [68]. For example low and middle income countries may not have the resources to manage change in the correctional environment using a whole prison approach to develop health promoting prisons. There are many models for health promotion but there are few publications that provide direction to prison staff and administrators around this process [68]. One model that has been designed to guide correctional organisations in developing healthy prisons is the TECH model. This model was designed following the World Health Organisation guide for health in prisons [13, 68]. The TECH model is described as a way to improve health in any country no matter the level of resources they have and is about health promoting approaches using four domains that move across long term chronic care to short term acute care [68]. The TECH model uses the World Health Organisation guide for prison health as a foundation in its development, and it also meets the requirements of the Primary Health Care principles within the 'Declaration of Alma-Ata' and the Ottawa Charter for Health Promotion with both documents developed by the World Health Organisation to guide and direct health internationally [57, 58].

The first of the four domains is 'T: test and treat infectious diseases and provide vaccinations, if available'. This guides prisons to screen and treat for infectious diseases [68]. These infectious diseases include sexually transmitted infections and, diseases contracted as a result of substance abuse which has a high incidence in prison populations [68]. Depending on the location of the correctional facility there may be infectious diseases endemic in the location and therefore identifying and treating would provide optimal outcomes, not only for the facility but also the community the prisoners will eventually be released back into [68]. After this initial identification and treatment, arranging childhood vaccinations where appropriate will provide important cover of some conditions which could be transmitted to visitors, children and correctional staff [68]. Once these two actions have been completed undertaking any further immunisation as part of prevention and age specific for the older population will reduce the opportunity of diseases being spread through the correctional population [68].

The second domain is 'E: Environmental modification to prevent disease transmission' which includes not only the physical environment but also factors such as insects which may cause the transmission of disease [68]. For this there may need to be a program of spraying the area for insects especially if there are areas of stagnant water which is a good breeding area for insects such as mosquitos [68]. A survey of the physical environment is needed to identify if there is anything present that could be a source of infection transmission such as home-made tattoo equipment [68]. Another consideration would be the provision of condoms, and although management may not want to acknowledge it, consensual or non-consensual sexual activity does occur and providing protection will reduce the transmission of sexually transmitted infections [68]. Another environmental impact on health is the move to banning smoking in correctional facilities which will have a long term impact on health, and improved nutrition can improve health without being too costly [68]. Longer term planning for environmental modification should be considered especially where overcrowding will impact both the physical and mental health of the prisoners [68].

The third domain is 'C: Chronic disease identification and treatment'. Because the ageing population in the correctional setting is increasing so is the incidence of chronic disease [68]. Once chronic diseases are identified their treatment can be reasonably low cost and many can be improved by improving the prisoner's nutrition and increasing opportunities for exercise [68]. Mental health problems in this older group in the prison are also higher than the general community population and can worsen in a correctional setting if not identified or treated in a timely manner [68]. Therefore screening when on admittance and early treatment can reduce the impact on prisoners and improve health outcomes [68]. Once screening has identified health issues then a treatment plan can be developed for the individual targeting the specific needs of the prisoner and therefore reducing the potential of increased costs for unmanaged chronic health conditions [68].

The fourth domain is 'H: Health maintenance and health education'. This domain is about maintenance of the actions taken during the previous domains to develop a healthy prison [68]. Therefore this domain is about continuing to provide screening as well as chronic disease management and ongoing management and treatment of infectious diseases [68]. This continued management is required so the incidence of infectious diseases and chronic health

conditions does not increase in a closed environment such as a correctional setting [68]. Being in close confines with multiple other prisoners means that if there is an infectious disease present it will move through the prisoner population fairly quickly, making it more costly to treat in the long term [68]. This affect both prisoners and the correctional service officers working with them by putting staff at risk of contracting the infectious disease and potentially taking it home to their families [68]. Management incudes education which should be undertaken regularly for both prisoners and staff [68]. Education for prisoners needs to be conducted regularly to ensure those with short sentences do not miss out on important information about health education that will improve their own and community health outcomes [68]. One option is for peer educators within the prisoner population to educate other prisoners in a culturally appropriate way and who, after release, can become community educators [68]. Peer educators are a cost effective way to ensure interested parties receive the correct and timely education where it is needed [68].

This TECH model of four domains provides information to be used by any correctional facility in any country and is not dependent on being in a higher income country. Each of the four domains explains aspects of health that need to be considered with minimal or no financial impact of the facility. It has been designed to develop a 'healthy prison' using the 'World Health Organisation guide to the essentials in prison health' as the foundation, providing whole prison health for prisoners and staff [13]. Providing education and optimal healthcare services in a correctional setting moves the organisation from just thinking about health in their prison to being a healthy prison [13, 68].

There are many different suggestions around building a healthy prison, ranging from major structural changes to policy development and procedural changes. A 'whole-prison approach' identifies initiatives in other areas of the community and adapts them to the correctional environment [9]. Some of the other programs that could inform this approach are 'Healthy Hospitals', 'Dementia Friendly Community', 'Healthy Cities/Towns' which all have components that could be adapted to the correctional environment [9]. All these programs have provided development across multiple domains to achieve their health outcomes and therefore the approach should be taken across the entire correctional facility [9]. Health promotion is an important aspect of healthcare in any community and if this direction is used in the correctional setting then diseases and disorders will be identified in a timely manner to allow early treatment, as well as support through to and past release from prison. To ensure this approach is successful there must be development of an assessment process which can incorporate all interested parties to ensure it encompasses all needs [9]. This also means there must be a system in place to manage and develop the change that is required to move the correctional facility from its current practices and systems to working with external stakeholders, for example including community and industry partners, to provide a system wide approach to health care and promotion. This is important as it not only focuses on health promotion for the prisoner but is also inclusive of the health of staff to ensure it is underpinned by the core principles of health promotion [35]. This is a systems approach where responsibility is not exclusively given to the healthcare service within the correctional setting but is shared by other areas of the system working together to provide a healthy prison [35].

7. Policy to practice recommendations

7.1. Prisoner/individual

- Policies developed for screening prisoners on admission for cognitive impairment and then regular health checks with an annual cognitive impairment screen
- If a prisoner is suspected of cognitive impairment on admission then allocation to a designated safe area with further assessments and referrals to follow.
- Development of activities and work in which older and infirm prisoners are able to participate.
- Development of a program for screened prisoners to become buddies or carers for those unable to care for themselves (potentially where the carers could do further study and receive a certificate at the end of their time in prison for potential employment prospects on release).
- Development of a discharge policy for prisoners with cognitive impairment or dementia back into the community where there are designated supports in place for the prisoner, their carer and the community (for example ensuring medical and community supports are in place).

7.2. Management/systems

- Policy development
    - Between general correctional services and correctional healthcare services to provide timely healthcare when needed and streamline prisoner access.
    - For processes in areas where prisoners with cognitive impairment and dementia are located to enable recognition and management strategies, as well as resources for support.
    - Adopting the World Health Organisation's guide to Health in prisons standards and principles.
- Improved coordination and communication between general correctional services and correctional healthcare services to avoid cancellation of health appointments outside of the prison or specialist visitors into the prison.
- Development of a regular training schedule for all staff working in areas where there are, or may be, prisoners with cognitive impairment. This should be developed by accessing organisations that specialise in the areas of aged care and dementia care.
- Support process developed for regular staff debriefs as well as ad hoc sessions after an incident.

7.3. Workforce

Correctional employees

- Training and education for all correctional employees including:
  - What is cognitive impairment and dementia?
  - Resources to identify strategies for identification and referral, as well as behaviour management.
  - Specific aged care and support for frail and aged prisoners.

Healthcare employees

- Training and education in aged care including:
  - Comorbidities in the older prison population.
  - Early identification assessment including screening tools
  - Management and treatment of dementia.
- Development of partnerships with organisations who manage aged and dementia care in the community.

7.4. Environment/setting

- Modification of a specific setting or area in a timely manner for older prisoners with aged specific healthcare issues or cognitive impairment.

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