

People with Mental Health Disorders and Cognitive Disabilities in the Criminal Justice System

Impact of Acquired Brain Injury

Report prepared for:

Brain Injury Association of NSW

and

Brain Injury Australia

**By Leanne Dowse, Melissa Clarence, Eileen Baldry, Julian Trofimovs and
Sharleen James**

April 2011

Contact: L.Dowse@unsw.edu.au

Contents

Table of Figures	2
1. Project Description.....	4
2. Background	5
2.1 Difficulties in identifying ABI and TBI	5
2.2 Responses to ABI	8
2.3 Significance of ABI for the CJS	9
2.4 Links between ABI and criminal behaviour	10
2.5 Experience of the criminal justice system	11
2.6 Areas for further investigation	12
3. MHDCD Cohort Description	12
4. ABI Cohort Description.....	15
4.1 Brain injury definitions	15
4.2 Demographics.....	15
a) Age	17
b) Gender	18
c) Indigenous status	20
d) Other diagnosis.....	23
4.3 Criminal justice contacts	26
a) Police contacts.....	26
b) Offences and convictions.....	29
c) Custodial Episodes.....	35
d) Juvenile Justice	37
e) Experiences in custody	39
4.4 Service Agency Interactions	41
a) Housing	41
b) Disability services.....	44

c) Legal Aid	45
5. Example pathway of an Individual with ABI	46
a) General Description	47
b) Criminal Justice Contacts	47
c) Custody.....	51
d) Service Agency interactions.....	52

Table of Figures

Figure 1: MHDCD study groups and definitions and number of individuals	13
Figure 2: MHDCD Study Groups.....	14
Figure 3: Number of individuals reporting ABI in the cohort	16
Figure 4: Percentage of individuals with ABI in each study group	17
Figure 5: Age by MHDCD study group and ABI	18
Figure 6: Gender breakdown by ABI Group.....	19
Figure 7: ABI group by study group and gender	20
Figure 8: Indigenous and non Indigenous persons with ABI in the cohort.....	20
Figure 9: Gender breakdown of Indigenous persons with ABI	21
Figure 10: Indigenous and non Indigenous persons by ABI group across the study groups.....	22
Figure 11: Percentage of individuals experiencing ABI diagnosed with a psychiatric disorder	23
Figure 12: Percentage of individuals experiencing ABI and also diagnosed with a mental health disorder	24
Figure 13: Substance use and ABI.....	25
Figure 14: ABI cohort in complex needs study groups and reported substance abuse	25
Figure 15: ABI cohort and personality disorder	26
Figure 16: Average age of first police contact for ABI by gender	27
Figure 17: Person of interest and victim contacts by ABI group	28
Figure 18: Person of interest contact by study group and ABI group	29
Figure 19: ASOC category offence types for individuals with an ABI by number of convictions & proportion of persons convicted	30
Figure 20: Distribution of individuals across alcohol related offence groups by ABI.....	31
Figure 21: Average number of alcohol related offences for those with and without ABI	32

Figure 22: Average number of alcohol related offences by ABI across study groups	33
Figure 23: Finalised matters, convictions, occasions of finalisations and occasions of convictions by ABI group.....	34
Figure 24: Average number of convictions by ABI study groups	35
Figure 25: Average custody episodes by ABI	36
Figure 26: Average custody days by ABI and average length of stay	36
Figure 27: Average days in custody by ABI across study groups	37
Figure 28: DJJ client in ABI cohort by study group.....	38
Figure 29: DJJ custody in the ABI cohort by study group	39
Figure 30: Percentage of DCS protection by ABI	39
Figure 31: Average of offences in custody by presence of ABI.....	40
Figure 32: Rates of self harm in ABI cohort across the study groups.....	41
Figure 33: Proportion of ABI cohort who at some point had NFPA.....	41
Figure 34: ABI by study group who at some point had NFPA.....	42
Figure 35: Number within the ABI cohort to have applied for Housing assistance	43
Figure 36: ABI cohort across study groups to have successfully received Housing assistance	43
Figure 37: Numbers in ABI cohort receiving ADHC assistance with numbers of those with BID/ID	44
Figure 38: Number of ABI cohort receiving ADHC by study group.....	45
Figure 39: Legal Aid applications in the ABI cohort	45
Figure 40: Individuals to have a case with Legal Aid in the ABI cohort	46
Figure 41: Span of criminal contact with number of criminal charges per year	48
Figure 42: Individuals offence types	49
Figure 43: Police events incident category	50
Figure 44: Individuals involvement type in Police contact	51
Figure 45: Percentage of proven convictions	51

1. Project Description

The project reported here draws on the data from a large-scale study investigating People with Mental Health Disorders and Cognitive Disabilities (MHDCD) in the Criminal Justice System (CJS) in New South Wales. Conducted at the University of New South Wales and lead by Chief Investigators Professor Eileen Baldry and Dr Leanne Dowse, the Australian Research Council funded study involves partnerships with Justice Health, NSW Corrective Services, NSW Police, Housing NSW, NSW Council for Intellectual Disability and Juvenile Justice NSW. The study uses an innovative data merging and pathway building method to link the administrative records from a range of NSW government criminal justice and human service agencies for 2,731 people whose MDCHC diagnoses are known and who have been in prison. This report, developed for Brain Injury NSW and Brain Injury Australia, describes the group of individuals in the MHDCD study who have been identified as having Acquired Brain Injury (ABI), details their interactions with criminal justice and human service agencies and uses a case study to give a rich and contextual description of the typical pathway of an individual with ABI into, through and back in to the CJS. Where relevant comparative data is presented to highlight the particularity of the experiences of people with ABI as compared with those with other Mental Health and/or Cognitive Disability or those with no diagnoses.

The sample used in the MHDCD study is purposive and not representative and is taken from the Justice Health 2001 NSW Prisoner Health Survey and from the Corrective Services NSW Statewide Disability Services Database. The dataset uses linked but de-identified extant administrative records from CJ agencies (NSW Departments of Corrective Services; Juvenile Justice; Police; Justice Health; Courts, and Legal Aid) and Human services (NSW Departments of Community Services; Disability, Ageing and Home Care; Housing, and Health). Linking data across CJS subsystems with Health and Human Services data represents an innovative approach to researching complex populations by creating a detailed dataset on life-long CJ involvement with the potential to reveal a coherent picture of the multiple factors contributing to the complicated pathways of people into and through the CJS.

A note on terminology

A range of terminology is used to describe the phenomenon and to refer to individuals who are the focus of this report. There is a degree of dissonance within the field as to accepted definitions and use of these terms as discussed in detail in Section 2.1 below. Broadly speaking Acquired Brain

Injury (ABI) is the term used to describe all types of Brain Injury that occurs after birth. Brain Injury may also occur before or during birth and would usually be identified by the more widely encompassing term Intellectual Disability. ABI may occur as a result of a traumatic event such as a blow to the head and in this case may be known as Traumatic Brain Injury (TBI). TBI may therefore be understood to be the result of a Head Injury (HI). Alternatively ABI may also be the result of other forms of damage to or degeneration of the brain including stroke, hypoxia and disease or be the result of substance abuse. The cohort of individuals described in this report have either identified as having had a Head Injury which has given rise to a TBI or have had an ABI identified as part of a clinical assessment process. Since the etiology of the brain injuries experienced by those in the cohort is not known in all cases, for the purposes of consistency, the term ABI is used in describing the group throughout.

2. Background

ABI and TBI have a number of implications for the Australian population. The severity and range of sequelae, which can occur as the result of an ABI or TBI, vary greatly between individuals making diagnosis and management difficult. Common problems include poor memory, poor cognitive functioning and aggressive and impulsive behaviour. In creating the context for the description of the cohort of people with ABI who have been in prison present in the MHD CD study, this section identifies and explores a range of key issues for this group including the range of difficulties encountered in defining ABI, the current responses to ABI, the significance of ABI for the criminal justice system, links between ABI and criminal behaviour and the experiences of people with ABI through the criminal justice system.

2.1 Difficulties in identifying ABI and TBI

The incidence and prevalence rates of ABI and TBI are difficult to identify accurately due to a range of diagnostic and definition complications (Fortune 1999; AIHW 2007). Some studies however, suggest that ABI is a significant issue in Australia and New South Wales (NSW), particularly for the prison population. In 2003, 432,700 people in Australia (2.2% of the population) were identified, as living with an ABI (AIHW 2007; Rushworth 2010); a 2004 study indicated that the rate of hospitalisation as a result of TBI in NSW was estimated at 126 per 100,000 population (Trevena 2004); and Schofield et al (2006) identified that the incidence of ABI was higher across all

offending categories in the NSW prison population than it was for the general population. It has been argued these figures are an underestimation of the real incidence of ABI and TBI because ABI is difficult to diagnose, and because many individuals experiencing a mild ABI do not seek medical attention (Fortune 1999).

Fortune & Wen identified the following five elements as commonly occurring in definitions of ABI:

- I. specification of whether actual injury to the brain has occurred (as opposed to head injury only);
- II. cause (and the related issue of whether brain injury present at birth is included);
- III. the presence of specific symptoms during the critical stage (e.g. loss of consciousness);
- IV. functional effects (at the body, person or society level); and
- V. the duration of functional effects.

These elements are identified from definitions used in research, legislation, service administration and planning, advocacy and across international jurisdictions. 'The elements included in a particular definition will vary depending on the purpose for which the definition has been developed.' (1999:6).

The primary difficulty in diagnosing ABI is the complexity involved in determining alterations in brain functioning and their relationship to identifiable causative factors. Debate within the literature highlights two main approaches to diagnosis of ABI (Fortune 1999). The first approach is to diagnose the cause of the ABI; this is particularly applicable in cases of TBI.

TBI is defined as

a brain injury caused by a traumatic event, during which external force is applied to the head, which results in a damage to the brain or an alteration of brain functioning (Magaletta 2007; Rushworth 2010).

The most common identified causes of TBI are motor vehicle accidents, physical assaults, contact sports, and falls. Multiple occurrences of TBI, even if singly mild, can be equally as damaging as one severe occurrence of TBI (Magaletta 2007). This is important when considering the rates of

ABI in a population, as individuals may not seek medical attention for minor injuries, but if and when they do perhaps at a later date, it is possible their injuries are only recorded as a head injury (HI) rather than an ABI or TBI. The key difference in these terms/definitions highlights a central conundrum in understanding brain injury, that is, the impact of the presence of an injury and its relationship to an individual's functioning.

The second approach to diagnosing ABI is to focus on the sequelae of the injury rather than the injury itself (Fortune 1999). This approach is particularly useful when the ABI occurs over a prolonged period of time, rather than as a traumatic incident.

The most common causes of **ABI** are:

misuse or abuse of drugs and alcohol, stroke, tumour or haemorrhage, infection and degenerative neurological disease (Help 2008; Rushworth 2010).

When ABI is caused in this way it is difficult to identify an exact point of change in brain function, as such it is more appropriate to diagnose on the basis of the sequelae of the injury and the presence of ABI risk factors. Sequelae of ABI can include (but are not limited to);

- seizures;
- visual and hearing disturbances;
- chronic pain;
- cognitive impairments such as poor memory and concentration;
- depression;
- impulsive behaviour;
- irritability;
- difficulty in interpreting social settings;
- reduced ability to solve problems (AIHW 2007).

Diagnosis through sequelae of ABI also presents a significant problem as the sequelae of ABI are unique for every individual (BIA). Injury to the same part of the brain does not reliably or directly map onto particular effects, and an individual with ABI can present with any number, combination and severity of sequelae. This potential for infinite variation and limited predictability of

presentations means that there is no universal definitive mechanism by which an ABI can be identified for all individuals. Instead diagnosis and identification requires careful consideration of a number of factors and their interaction.

2.2 Responses to ABI

It is not possible to treat, or cure, ABI as it is physical change or damage to the brain; instead management of the sequelae of ABI is the primarily rehabilitative response, largely through the use of educational and therapeutic programs to help individuals cope or manage their specific issues (Trevena 2004). For example, it has been shown that the use of well maintained diaries and electronic alarms can help individuals experiencing poor memory functioning to keep appointments, pay bills and maintain employment; and therapeutic tools have been shown to assist individuals to manage impulsive behaviour and anger responses in social situations (Trevena 2004).

Individuals with ABI are also likely to face one, or more, additional medical or psychological issues, which may or may not be related to their ABI (AIHW 2007). Problems such as chronic alcohol and drug abuse, mental health issues, intellectual disability, and physical disabilities (which usually occur when the ABI is a result of a trauma such as a motor vehicle accident or assault) are just a few of the issues that can further complicate the management of an ABI. The presence of an ABI in conjunction with one or more medical or psychosocial condition signals more than the simultaneous existence of multiple diagnoses or conditions. Multi conditions are likely to interact and coalesce in multifarious and unique ways for each individual and are more appropriately conceptualized as signaling the presence of *complex needs*. This latter term is often used but not always well defined. Rankin and Regan (2004) define it as

A framework for understanding multiple, interlocking needs that span health and social issues. People with complex needs may have to negotiate a number of different issues in their life, for example learning disability, mental health problems, substance abuse. They may also be living in deprived circumstances and lack access to suitable housing or meaningful daily activity. As this framework suggests, there is no generic complex needs case. Each individual with complex needs has a unique interaction between their health and social care needs and requires a personalised response from services. (p 1)

'Complex needs' is an important concept for understanding the service interactions of those with ABI. Service interventions are developed to target specific aspects of an individual's life, for example drug and alcohol rehabilitation targets substance abuse issues, but services often do not recognise or address other social, medical and psychological needs of the individual which could significantly affect the success of the intervention (Rankin & Regan 2004). This is particularly problematic for those with an ABI as failure to manage the sequelae of an ABI may lead to individuals continuing to relapse after receiving treatment.

Having 'complex needs' is also a barrier for individuals in gaining access to services. Often individuals with complex needs have a range of issues which coincide to create a chaotic and unstable lifestyle, however, when the individual's needs are assessed independently by services they may not be deemed severe enough for them to be seen as a priority for any one of the services and they may be placed on a waiting list or receive inadequate intervention for their needs (Rankin & Regan 2004). A holistic approach to assessing needs could help to identify those individuals whose broad range of issues place them at risk of being excluded from specific service interventions.

2.3 Significance of ABI for the CJS

It is important for the criminal justice system to develop policies for managing individuals with ABI as studies indicate a significant proportion of the prison population has a confirmed ABI, and the demographics of prisoners indicate they have a high risk of ABI due to alcohol and drug abuse and TBI as a result of physical assaults (Schofield 2006). The 2001 Inmate Health Survey identified concerns of correctional staff in regard to the lack of "dedicated services for TBI inmates in the NSW correctional system and little recognition of the problem within the criminal justice system" (Butler & Milner 2003:66). It is unclear whether this has been addressed as both the 2001 and 2009 Inmate Health Surveys only mention ABI briefly, instead focusing on the incidence and sequelae of head injury (HI).

This is an important distinction, as HI does not necessarily result in ABI. The 2009 survey showed only 23% of participants who had sustained HI resulting in loss of consciousness had received or obtained a brain scan (Indig 2009), essential for confirming whether a person has an ABI. HI can

initially present with sequelae similar to that of ABI (for example the presence of prolonged headaches, poor concentration, communication difficulties, problems with coordination, and associated anxiety or depression) however, in the case of HI these sequelae are likely to resolve after a period of time; 67% of participants in the 2009 Inmate Health Survey reported such sequelae had resolved (Indig 2009). It is unlikely for the sequelae of ABI to resolve as the physical damage to the brain is permanent.

It has been argued that the occurrence of ABI amongst prison populations could be higher than estimated in the research quoted above because the presence of an ABI often requires a family member or friend to notice a change in the affected individual's behaviour and individuals who frequently cycle in and out of custody often do not have strong family connections (Smith & Trimboli 2010).

2.4 Links between ABI and criminal behaviour

There are a number of reasons proposed as to why prisoners present with such high rates of ABI and TBI. One such argument is that the "link between TBI and crime is thought to be damage to the frontal lobes of the brain" (Turkstra 2003:39). Injuries to the frontal lobe are associated with poor social perceptions, lack of self-control, and increased impulsive and violent behaviour. These deficits make those with TBI more likely to overreact or lash out violently in situations they find stressful, thus resulting in increased contact with the criminal justice system (Turkstra 2003). A 2003 study of 15 death row inmates in the United States found that all 15 had a TBI and this has often been used to support the argument for a causal link between TBI, impulsivity, violence and criminal behaviour (Slaughter et al. 2003).

Another explanation for the high rates of ABI amongst prisoners, is the same for those with Intellectual Disability, that is, that cognitive impairments associated with ABI and TBI make individuals more susceptible to contact with the criminal justice system:

they may be more easily caught in the act or left 'holding the bag'; they may be susceptible to being exploited by others as an accomplice; their intentions may be misunderstood; they may express sexuality in a naïve and unacceptable way; intellectual disability may be

associated with other organic disorders which result in impulsive and unpredictable behaviour (Gray et al 2009:5).

There is a strong systemic argument as well: that the link between criminal behaviour and ABI and TBI is not causal, rather the demographic variables which are associated with criminal behaviour are also those which are associated with high risk of TBI (Turkstra 2003). These demographics include low socio-economic backgrounds, low levels of education and employment, high rates of drug or alcohol use, high rates of homelessness, histories of domestic violence, and poor mental and physical health (Baldry 2008; Gray 2009; Smtih 2010).

2.5 Experience of the criminal justice system

In the event that people with ABI do come in to contact with the CJS, they are likely to have difficulty understanding legal proceedings and be less able to deal with the demands of meeting the requirements placed on them by the courts, resulting in violations of parole and probation orders (Gray 2009). This is due to difficulty in interpreting and understanding social settings and instructions. Gray et al (2009) highlight that individuals with cognitive impairment, such as those with ABI and TBI, are excluded from a number of diversionary programs and prison educational programs as a result of their impairment. This not only indicates that offenders with cognitive impairments are more likely to receive a custodial sentence than those who do not (supported by evidence noted above of their over-representation in prison), it also suggests individuals with a cognitive impairment will face difficulty in obtaining parole as they cannot complete appropriate rehabilitative and educational programs whilst in custody.

Effective management of the sequelae of ABI within the community could reduce contact with the criminal justice system, and access to diversionary programs for offenders with ABI could significantly reduce the prison population. Life-time recidivism rates in NSW are approximately 70% (Corben 2010) and individuals with a disability have higher recidivism rates than offenders who do not have a disability (Borzycki 2005), indicating that the criminal justice system is not the appropriate or best place to address these complex needs.

2.6 Areas for further investigation

A 2007 study indicates that the prevalence of ABI in the general population increases with age, finding those “aged 65 years or over were more than twice as likely as those aged under 65 years to have ABI with activity limitations or participation restrictions” (AIHW, 2007:1). Incidence of ABI in this age group is likely to reflect the rising incidence of dementia with increasing age but represented less than 17% of the NSW prison population in 2009 (Corben 2010). It is well established that the greatest contributing factor to desisting from offending is ageing therefore it is no surprise that this age group is such a small proportion of the prison population. It is also the case that the majority of those in this age group are long term prisoners who are serving life or very long sentences for very serious crime. Nevertheless, with the ageing of the Australian population, consideration must be given to the possibility of increasing levels of first time offending by people over 65 associated with dementia and other BI due to ageing. Already there is anecdotal evidence of ageing people with BI being convicted of offences such as repeated lewd behaviour, and being imprisoned on remand. There is currently no literature addressing this emerging phenomenon.

Another significant gap in the literature is the absence of data on the rates of ABI and TBI within Indigenous populations, both within prison populations and the general population although it has been established that rates of head injury are generally higher among Indigenous Australians than those among other Australians (Jamieson et al, 2008). The social disadvantages faced by Indigenous communities make them more vulnerable to exposure to causes of ABI, such as alcohol consumption at a young age; petrol sniffing; and violence. Approximately 21% of incarcerated persons in NSW in 2009 identified as Aboriginal or Torres Strait Islander, making them 13 times more likely to be imprisoned than non-Indigenous peoples (Corben 2010) so it is important for the criminal justice system to understand how these elements interact to develop culturally appropriate responses.

3. MHDCD Cohort Description

This section describes the MHDCD cohort and sets the context for the analysis presented in Section 4. It outlines the composition of the MHDCD cohort and indicates cohort divisions by primary diagnoses, developed to allow ease of analysis. ABI is not a primary diagnosis used by agencies that have provided data to the study, instead individuals with ABI fall across all categories

of primary diagnosis. The MHDCD cohort consists of 2, 731 individuals who have been divided into the groups listed in Figure 1.

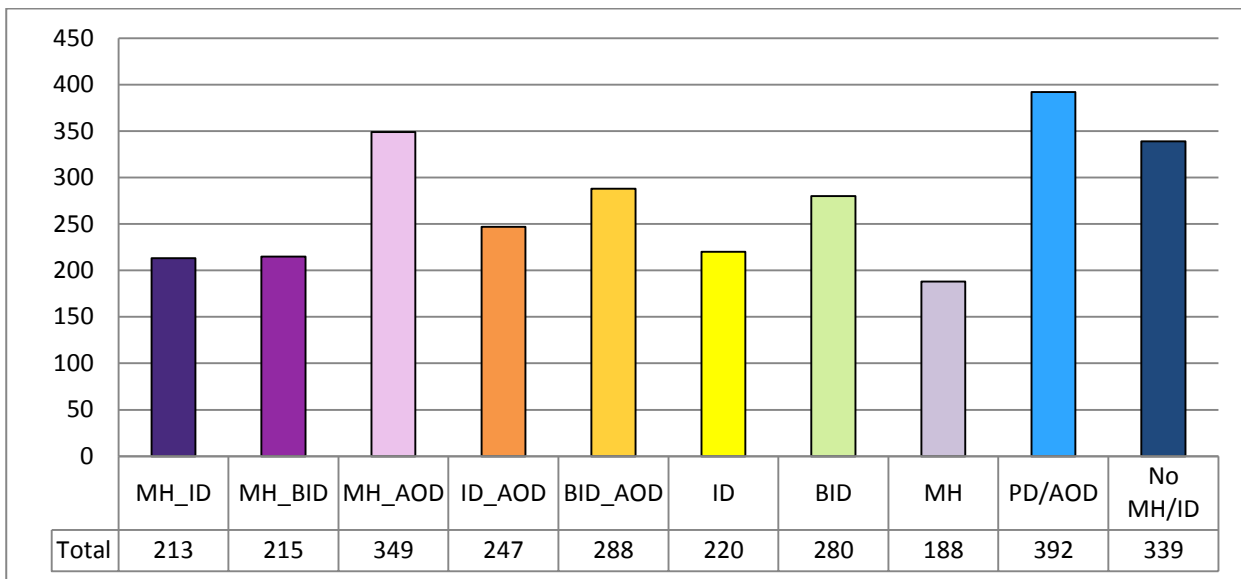
Figure 1: MHDCD study groups and definitions and number of individuals

Study Group	Definition	Number of Individuals
MH_ID	History of mental health problems and an intellectual disability	213
MH_BID	History of mental health problems and a borderline intellectual disability	245
MH_AOD	Mental health disorder and a history of substance use	349
ID_AOD	Defined as an intellectual disability and a history of substance use	245
BID_AOD	Defined as borderline intellectual disability and a history of substance use	288
ID	IQ scores less than 70 - no confirmation of adaptive functioning or age of onset	220
BID	IQ scores between 70 and 80 - no confirmation of adaptive functioning or age of onset	280
MH	Any anxiety disorder, affective disorder or psychosis in the previous 12 months	180
AOD/PD	Any personality disorder or substance use disorder in the previous 12 months and an absence of other category	392
No MH_ID	No mental health or cognitive disability diagnosis	330

Individuals have been assigned a group (see Figure 2) according to their primary diagnosis (remembering that the majority have multiple diagnoses), giving rise to the following cohort profile:

- Intellectual disability N=680
- Borderline intellectual disability N=783
- Mental health N=965
- No MHCD diagnosis N=339
- Substance abuse disorder N= 1276

Figure 2: MHDCD Study Groups



Women make up 11% of the cohort, while 25% are Indigenous Australians. Figure 1 above indicates that many individuals in this group experience multiple issues and have dual or complex diagnoses.

There are 1463 people in the cohort with a cognitive disability, defined as the presence of an intellectual disability (ID), borderline intellectual disability (BID) and either of these with other diagnoses (complex) and acquired brain injury (ABI) with either below 70 or between 70 and 80 IQ. Of these 1463 there are:

- 680 (46%) in the ID range (>70 IQ)
- 783 (54%) in the BID range
- 465 (68%) have multiple diagnoses (Complex)
- 517 (66%) have multiple diagnoses (Complex)
- 215 (32%) have no other diagnosis
- 266 (34%) have no other diagnosis

These figures indicate that approximately 2/3rd of the CD group has complex needs.

4. ABI Cohort Description

4.1 Brain injury definitions

An individual is included in the ABI cohort of the MHDCD dataset through two different means:

- a recorded flag in the CS NSW Statewide Disability Service Database for an individual as having an ABI

or

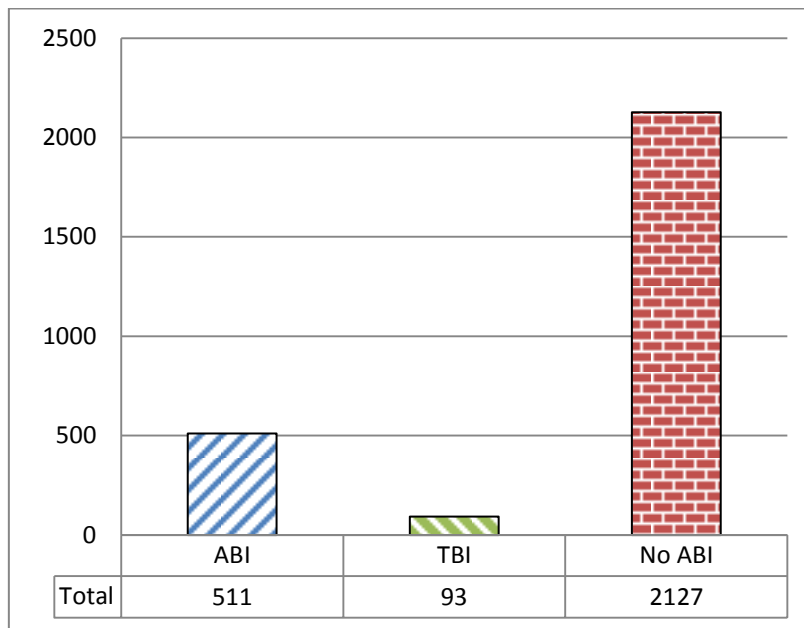
- self-report on the Justice Health 2001 Inmate Health Survey as receiving at least one head injury resulting in unconsciousness. Individuals who reported sequelae following on from the head injury were included in the ABI group.

Individuals who reported on the Justice Health 2001 Inmate Health Survey as receiving at least one head injury resulting in unconsciousness and did not report any sequelae will be included in the group comprising individuals with a traumatic brain injury, though they will not be discussed in this report. Eighty five percent of individuals in this ABI cohort have had a brain injury resulting in ongoing sequelae.

4.2 Demographics

There are 511 individuals in the cohort who have evidence of an ABI, comprising 18.7% of the total MHDCD cohort of 2731 (as show in Figure 3). Women make up 9% (N=44) of the ABI cohort, with 466 (91%) being male. Thirty percent of the cohort is Indigenous (N=153) and 68.7% (N=358) are non-Indigenous with the remaining seven individuals having an unknown Indigenous status. Sixteen percent of the ABI group has a personality disorder (the MHDCD cohort generally is 22%) and 58 % has a history of substance abuse, which is the same of the MHDCD cohort generally. Seventy-three percent of the ABI group has a broadly defined mental health disorder including personality, substance abuse, and a disorder of anxiety, mood or psychosis. The MHDCD cohort has a 70% incidence of broadly defined mental health disorder. Individuals with an ABI have a mean age of 36.7 years at the time the dataset was compiled.

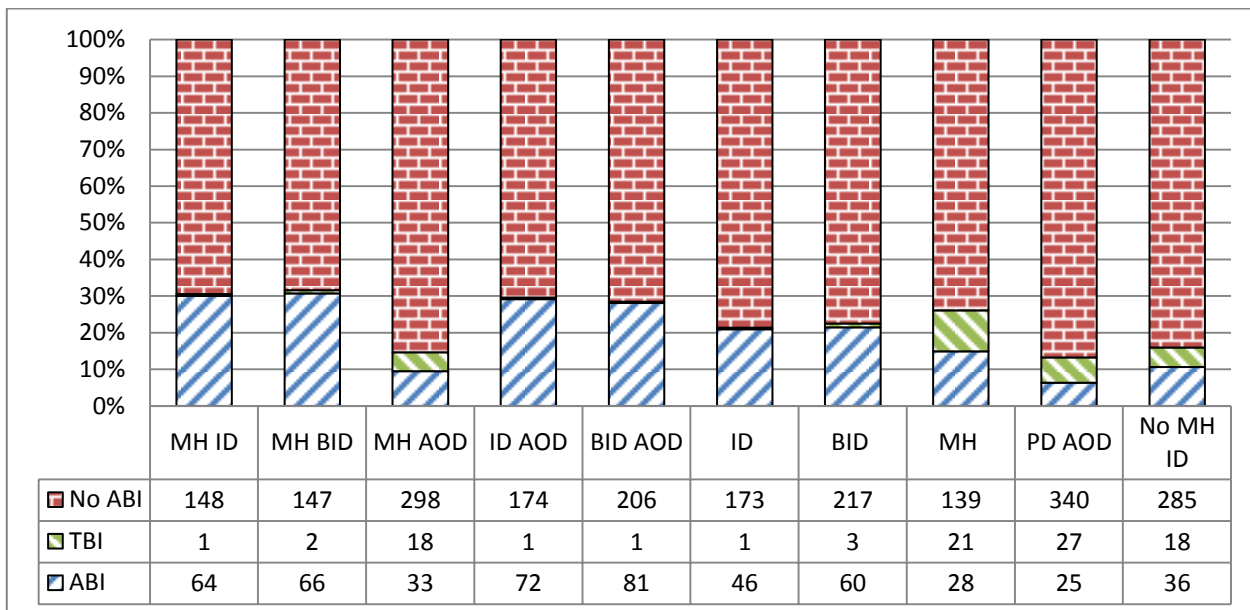
Figure 3: Number of individuals reporting ABI in the cohort



For those individuals described in the MHDCD dataset according to primary diagnosis, the presence of ABI is evident across all study groups. Figure 4 reveals that ABI does not occur evenly across the study groups, that is, a number of the cohort groups show a higher rate of incidence ABI, with 31.6% of the MH BID group, 30.5% of the MH ID group and 29.6% of those with ID AOD having experienced an ABI. The higher prevalence of ABI in the ID and BID groups should be interpreted with care, as the definitions that have been applied to the MHDCD cohort could be responsible for this trend. Individuals are assigned to different study groups based on IQ scores, excluding age of onset and the adaptive functioning test. It is thereby likely that many individuals are in the ID and BID groups as a result of their acquired brain injury, instead of their IQ score reflecting a developmental disorder.

Figure 4 also indicates the number count of individuals with an ABI according to which of the study groups the individual is assigned. This indicates that ABI appears to occur at higher rates in those with complex diagnoses (MH_ID; MH_BID; ID_AOD) and is more prevalent in the BID_AOD group, a not unexpected result.

Figure 4: Percentage of individuals with ABI in each study group



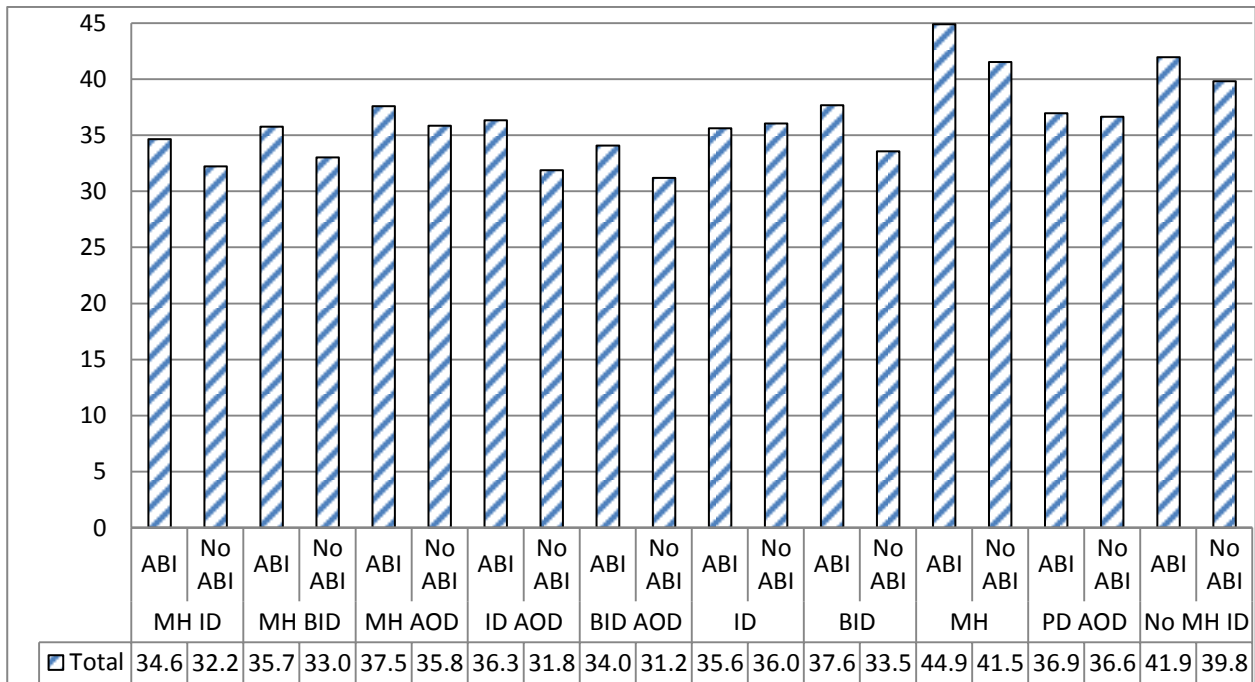
The distribution of ABI across the MHDCCD groups in Figure 4 above indicates a higher incidence of ABI in those study groups that are recognized to have complex needs and particularly for those who have a cognitive disability related diagnosis. Due to limitations in the data which prevent the identification of the chronological point at which the ABI occurred in the individual’s lifecourse, it is not possible to establish a relation or pattern of causality between ABI and complex needs. These findings however pose the significant and key question as to whether these individuals with complex needs are more vulnerable to and likely to experience ABI or in fact whether the presence of ABI is a causative factor in the conglomeration of complex needs.

a) Age

The compilation of the cohort involving the collation of two datasets as described above resulted in a wide age profile across the study. Particularly, there is a large difference in age when comparing individuals identified from the Justice Health 2001 Inmate Health Survey, which is largely the mental health cohort, with individuals identified from the Department of Corrective Services Statewide Disability Services Dataset, which is largely individuals in the intellectual or borderline intellectual disability groups. As the Inmate Health Survey was conducted in 2001 with individuals incarcerated as an adult at the point of the study, this group has an older age profile compared with individuals in the ID and BID groups where the data were added as individuals were identified, including people incarcerated for the first time as an adult possibly as late as 2008. For instance, the MH group is on average almost ten years older than individuals in the MH

ID group (see Figure 5). Both datasets have individuals with ABI, which means that there is a difference in ages and consequently different opportunities to have committed offences. This will be discussed later in the section on offending.

Figure 5: Age by MHDCD study group and ABI

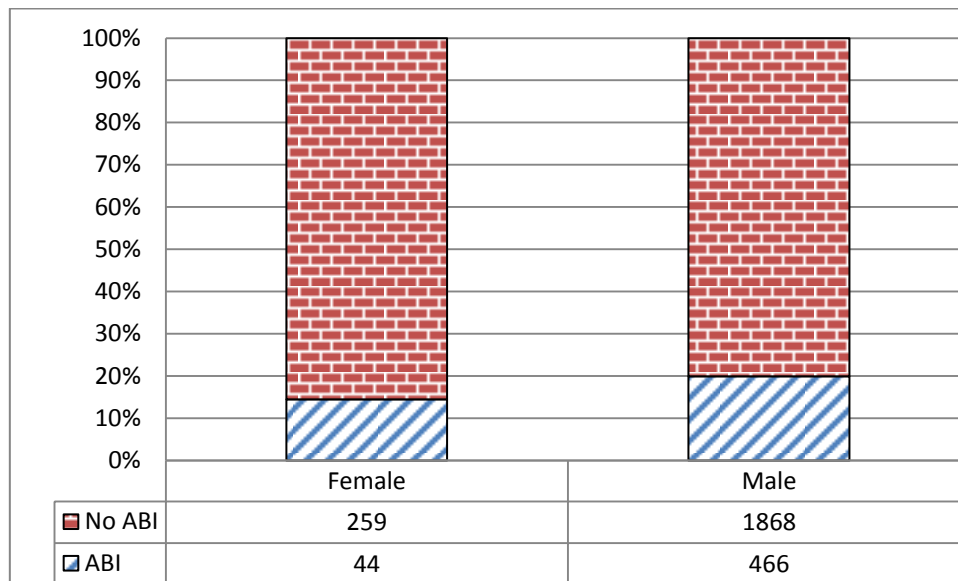


When comparing the age profiles of individuals in the study in the ABI and no ABI groups, individuals with an ABI were on average older, except in the instance of the ID group, where individuals without an ABI were slightly older (less than half a year) than those with an ABI. In most instances, individuals in the ABI group were at least two years older.

b) Gender

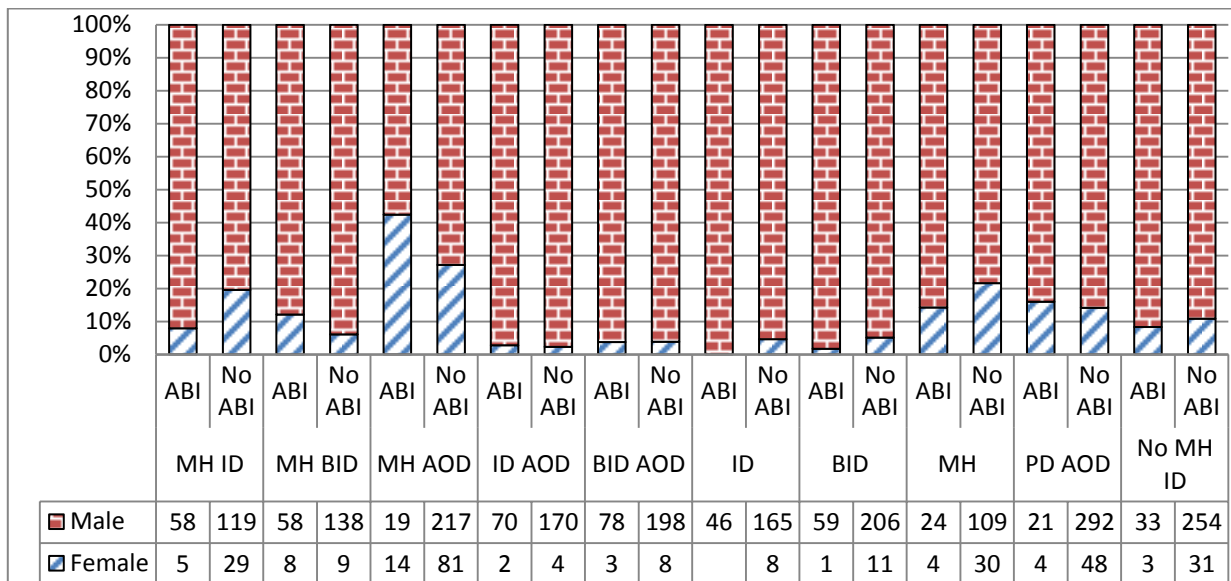
Figure 6 shows the difference in numbers by gender in the ABI group. One person having an unknown sex has been excluded from Figure 6. Females comprise 9% (N=44) of the ABI group compared to males who comprise 91% (N=466) in the ABI group. The proportion of females (14.5%) with an ABI is lower than the proportion of males with an ABI, with 20% of the males in the study having an ABI.

Figure 6: Gender breakdown by ABI Group



This smaller proportion of women presenting with an ABI is expected due to the lower numbers of women in the study being diagnosed with cognitive impairment, however Figure 7 below indicates that a number of study groups have a higher than would be expected number of women with ABI. In Figure 7 the study group with the highest number of females experiencing ABI is the MH_AOD group. The MH_AOD group contains a total of 14 females, a representation of 42% of those who experienced an ABI in the MH_AOD group. It was expected that females would have higher numbers in the MH_AOD group because females are more likely to develop an ABI through a drug and alcohol addiction, as opposed to males who are more likely to develop an ABI through a traumatic event (TBI). Very small numbers in many of these cells indicates that care should be taken when interpreting this figure.

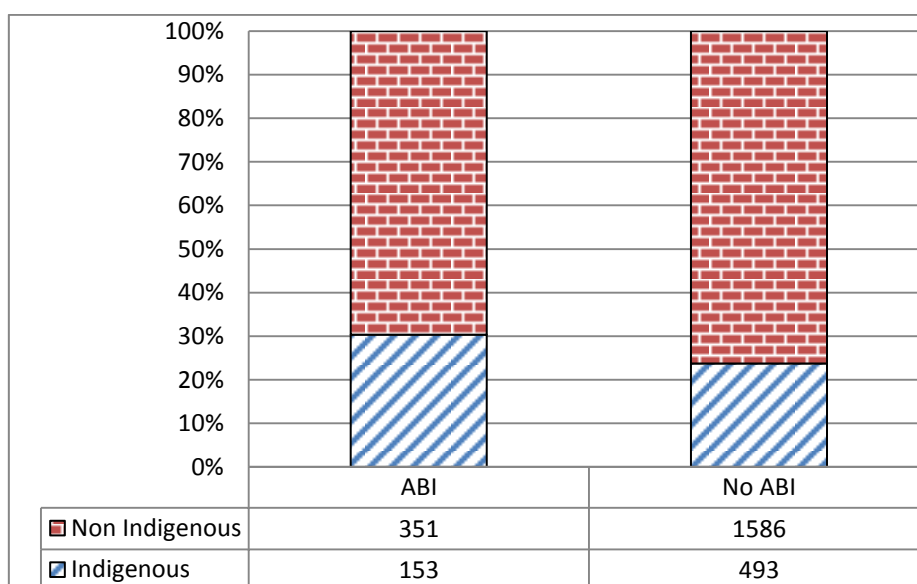
Figure 7: ABI group by study group and gender



c) Indigenous status

The proportions of Indigenous and non-Indigenous people who have experienced an ABI within the cohort are illustrated in Figure 8. The ABI cohort consists of 153 Indigenous people (30.3%) and 493 (69.6%) non-Indigenous people (7 individuals had an unknown Indigenous status). Indigenous people comprise 24.7% of the MHD CD study, and therefore they are over-represented in the ABI group.

Figure 8: Indigenous and non Indigenous persons with ABI in the cohort



Female Indigenous persons have a slightly lower rate of individuals in the ABI groups than non-Indigenous females, whilst Indigenous males in the ABI group appear at a much higher rate than all other groups. Of 153 Indigenous persons, 12 (7.8%) are female and 141 (92.2%) are male (see Figure 9).

Figure 9: Gender breakdown of Indigenous persons with ABI

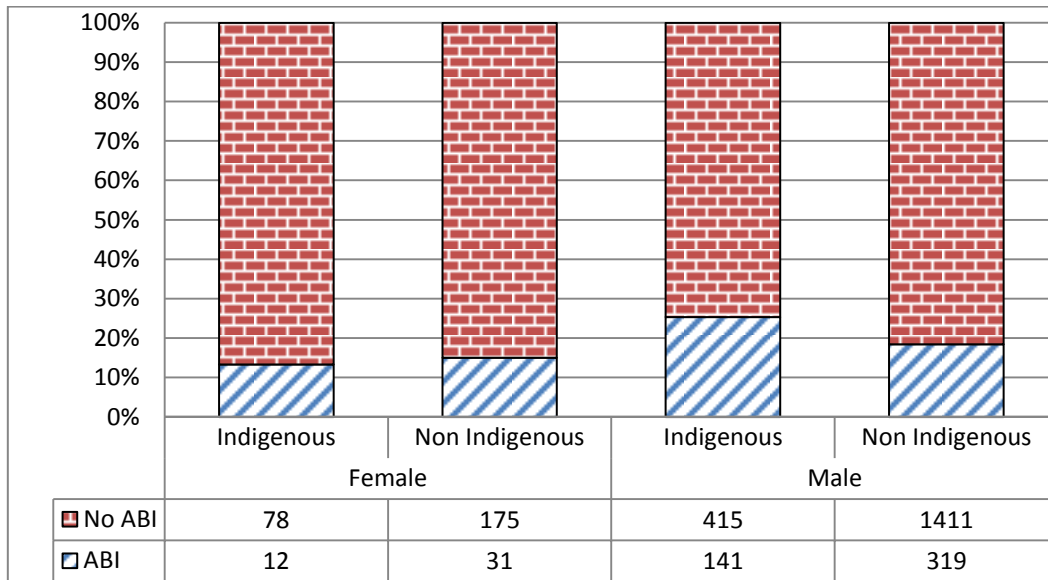
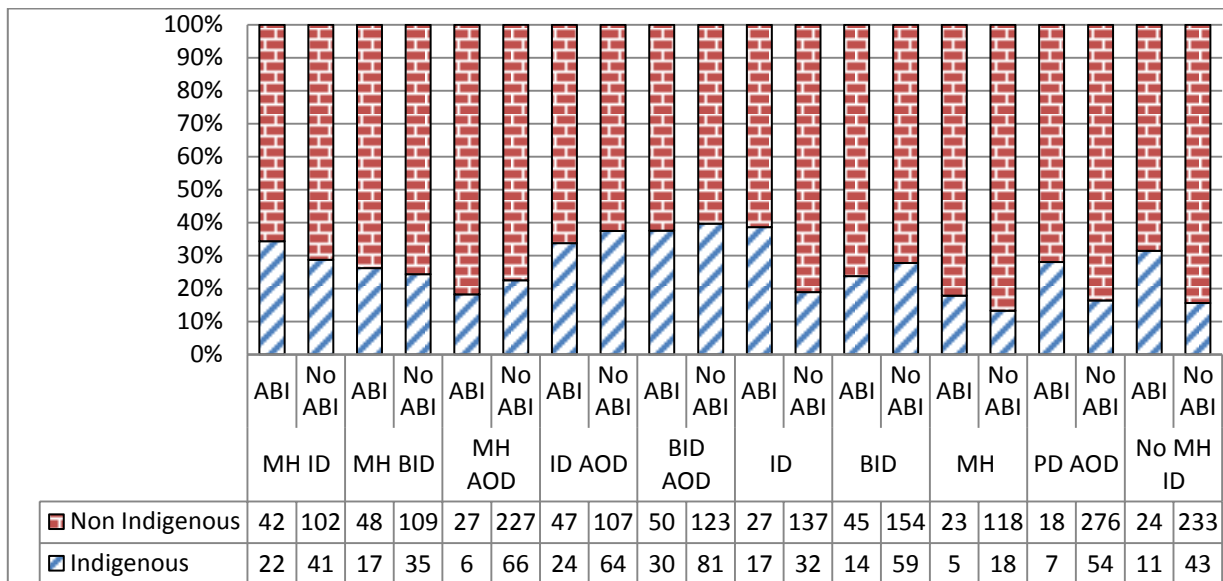


Figure 10 compares the numbers of Indigenous and non-Indigenous persons with ABI across the study groups. Seven respondents were of an unknown Indigenous status and were excluded. Indigenous persons with an ABI comprise substantial proportions of several of the study groups, particularly those with complex presentations that include ID or BID. While Indigenous persons make up 30% of the ABI cohort, they make up 37.5% (N=30) of the BID_AOD group; 33.8% (N=24) of the ID_AOD group and 38.6% (N=17) of the ID group.

Figure 10: Indigenous and non Indigenous persons by ABI group across the study groups



Overall the picture revealed by these figures indicates that there is a significantly higher incidence of ABI amongst Indigenous persons in the MHDCD cohort or that Indigenous persons are disproportionately experiencing ABI. In particular, Indigenous Australians in the cohort who have a cognitive disability, (either a borderline intellectual disability or an intellectual disability) have a higher incidence of ABI. It is important to note that the presence of a low IQ score in this group is in addition to ABI, indicating the potential for a significantly debilitating cognitive impairment for individuals who experience both diagnoses. For this group of Indigenous persons, the presence of a low IQ score appears to make these individuals more vulnerable to, or likely to experience ABI at higher rates than their non-Indigenous peers. While the relationship between cognitive impairment and ABI appears strongly causal for this group, the impact of issues related to being an Indigenous person is also likely to be additionally complicating in currently under-researched and poorly understood ways.

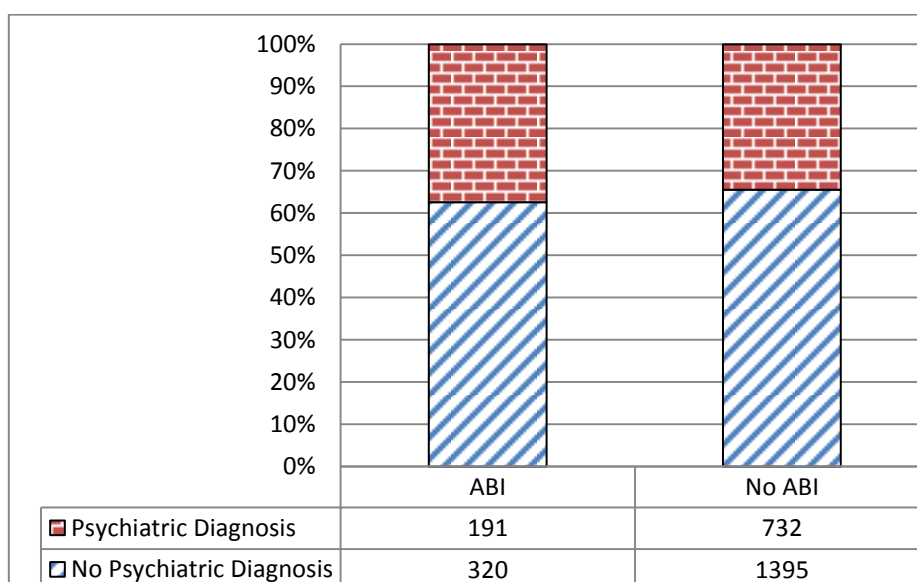
Moreover, the presence of complex needs, in particular the combination of intellectual/borderline intellectual disability with alcohol and drug issues for Indigenous persons, appears to be particularly salient. For non-Indigenous individuals the pattern of complexity appears somewhat different from their Indigenous peers, in that the presence of a BID/ID appears to be more strongly associated with ABI without the complicating presence of AOD. In other words AOD appears to have a more significant compounding effect for Indigenous persons with ABI than for their non-Indigenous peers. As previously stated, data limitations mean that relational or causative patterns

cannot be inferred from the data, these findings suggest that problematic substance use is significantly related to or implicated in ABI for this group.

d) Other diagnosis

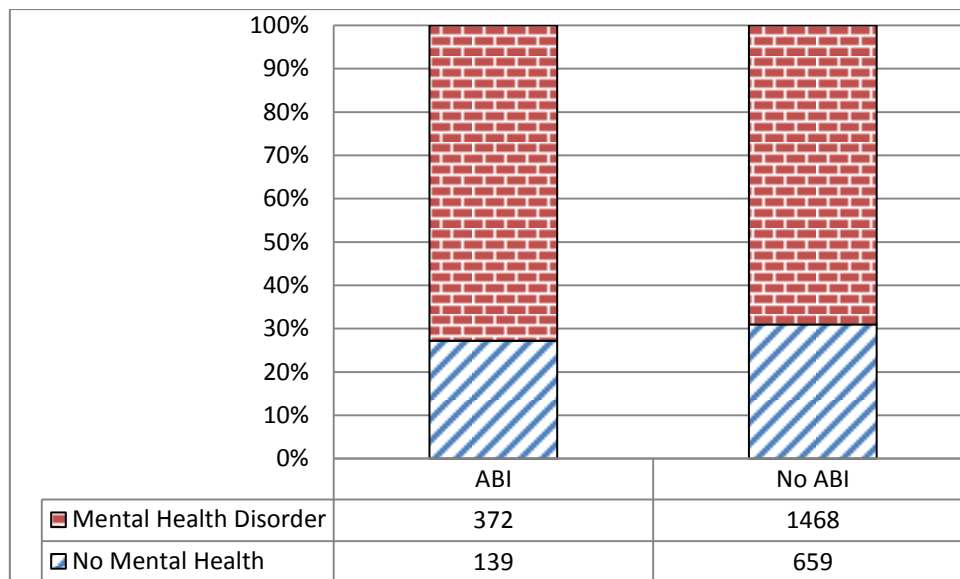
Figure 11 shows the percentage of the respondents who were diagnosed with a psychiatric disorder. A psychiatric disorder includes anxiety, affective or psychotic disorders. Over one third (37.4%) of individuals with an ABI, have also been diagnosed with a psychiatric condition. Again the incidence of a psychiatric diagnosis is slightly higher in the ABI group with 37.4% of this group having a psychiatric diagnosis compared to 34.4% for those without an ABI. This high incidence of psychiatric disorders is an expected finding, as the literature suggests that depression is commonly associated with an ABI.

Figure 11: Percentage of individuals experiencing ABI diagnosed with a psychiatric disorder



The proportion of respondents with an ABI who have also been diagnosed with a mental health disorder is shown in Figure 12. Mental health disorders encapsulate a broader definition than psychiatric disorders, and includes psychiatric disorders as well as substance use disorders and personality disorders. A total of 372 (72.8%) individuals who indicated having an ABI were also diagnosed with a mental health disorder, slightly higher than the 69% of individuals without an ABI.

Figure 12: Percentage of individuals experiencing ABI and also diagnosed with a mental health disorder



Together the findings reported in Figure 11 and Figure 12 indicate that mental health disorders and psychiatric disorders occur at high rates for those who have an ABI in this study. This is consistent with the literature, which suggests that there is a common association between mental health disorders such as depression and ABI. Again, while the data limitations do not allow the inference of patterns of causality, the vulnerability to and experience of ABI in individuals with a psychiatric condition is of significant concern.

The incidence of substance use for those with an ABI is illustrated in Figure 13. This indicates the high rate of substance use for the ABI group, with almost 58% of this group having a diagnosed substance use disorder or history of problematic drug or alcohol use. This is closely followed by the non ABI group at 55%.

Figure 13: Substance use and ABI

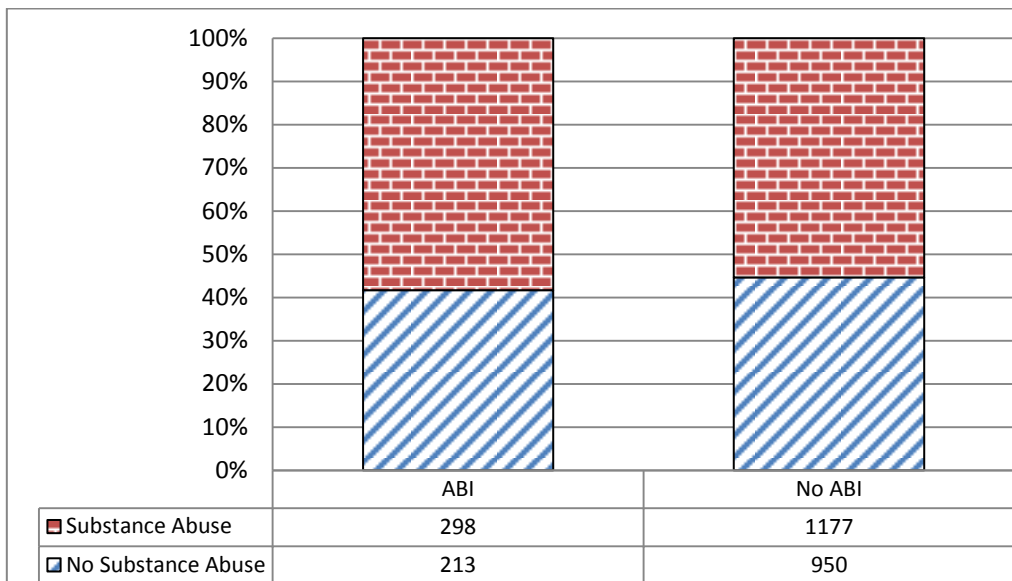
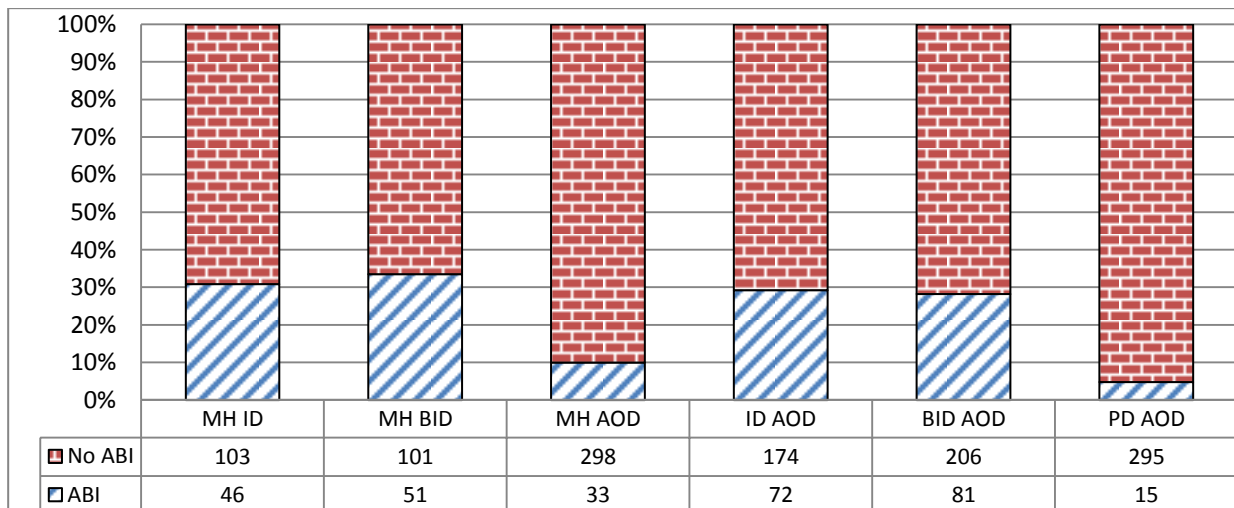


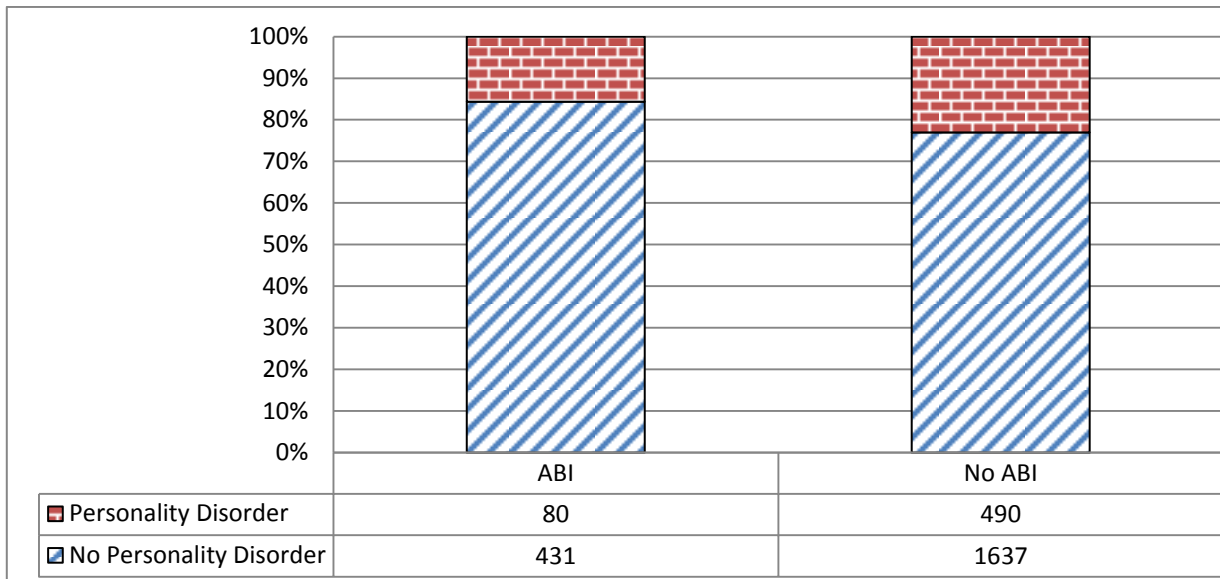
Figure 14 shows specifically the ABI cohort in the complex needs study groups and the levels of reported substance abuse. The MHDCD study groups where drug and alcohol use is not involved are not displayed. It is clear from Figure 14 that the rate of problematic drug and alcohol use is highest for individuals with an ABI in the ID/BID groups.

Figure 14: ABI cohort in complex needs study groups and reported substance abuse



The proportion of individuals in the cohort with personality disorder is displayed in Figure 15 and compares those with an ABI to those without an ABI. The ABI group has a lower rate than the general rate in the MHDCD study for individuals without a brain injury (23%), with 16% of individuals with an ABI also having a personality disorder.

Figure 15: ABI cohort and personality disorder



4.3 Criminal justice contacts

a) Police contacts

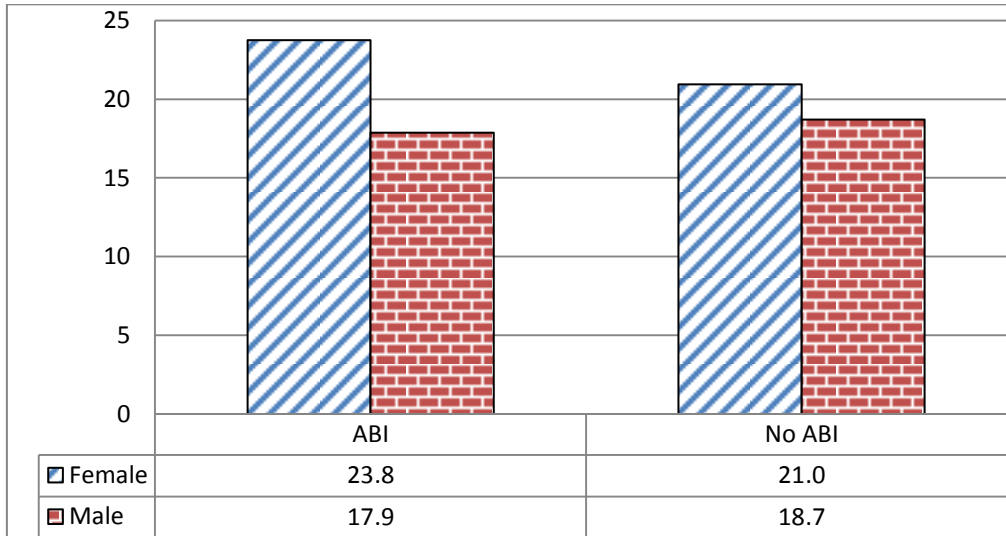
Police contacts encompass a wide range of contact with NSW Police, and include contacts that are not criminal, so it is therefore not a measure of offending. Contacts with police for individuals as person of interest are reported in this document (except where specified in Figure 17). This contact includes a wide range of events, including for example;

- when an individual is charged or a court attendance notice is issued,
- when an individuals is a suspect in an offence,
- when powers are exercised, such as the powers to move an individual on,
- the issue of a warning, and
- when an individual has been reported as missing.

Figure 16 shows the average age of first police contact by gender and by ABI status. The mean age of first contact for individuals with an ABI is 18.4 years old. When compared with the average of first police contact for those in the MHDCD cohort without ABI (19.0 years) no significant difference was found. When examining the influence of gender, there is little variation across the three ABI groups for males, though for females the age of first police contact is different across the three groups. Females in the ABI group are on average the oldest (23.8) at first police contact,

on average almost three years older than females without an ABI, and six years older than males with an ABI. In both ABI groups females were older than males at age of first police contact.

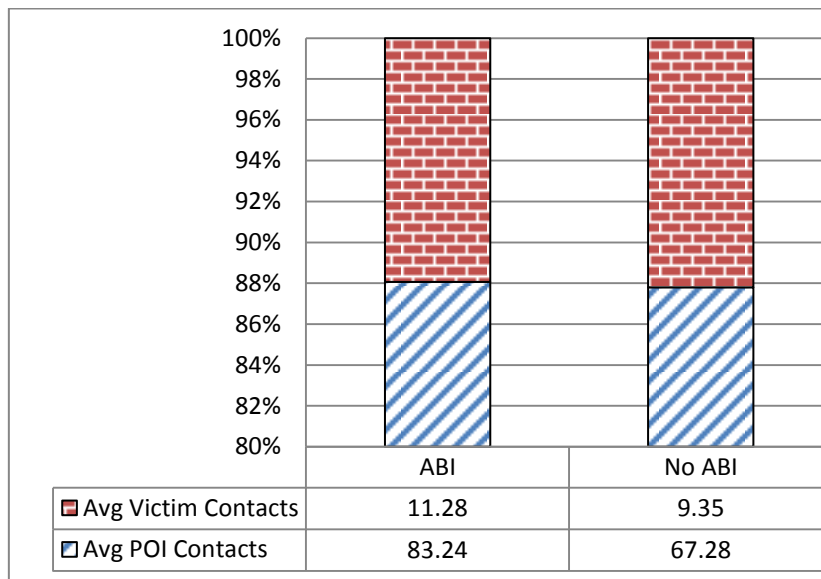
Figure 16: Average age of first police contact for ABI by gender



This finding is of interest and perhaps somewhat surprising in that it would be expected that, because TBI in males particularly is expected to occur between 15 and 35 years, age at first police contact would be expected to be greater than those not experiencing ABI. Instead there is no significant difference between the age at first police contact for these two groups. This finding suggests two possibilities, firstly that ABI, even occurring in the later teens to the early 30s has no differential impact on the likelihood of bringing an individual into contact with police or alternatively that ABIs are potentially more widespread within the prison population than is acknowledged and that the group of individuals in this study may actually be experiencing ABIs at a younger age than is expected for the general population.

Despite the ABI group commencing contact with police at a similar age to the group without ABI, the volume of contact for individuals in the ABI group is greater. Figure 17 displays the proportion of contacts with police for individuals as both persons of interest and as victims. This illustrates that both groups have very similar proportion of contacts as victims and persons of interest, however the data table indicates the vastly different overall volume of contact across these groups. Individuals in the ABI group are more frequently both victims of crime and persons of interest. On average, the ABI group has an additional 16 contacts with police as persons of interest than the group with no ABI.

Figure 17: Person of interest and victim contacts by ABI group



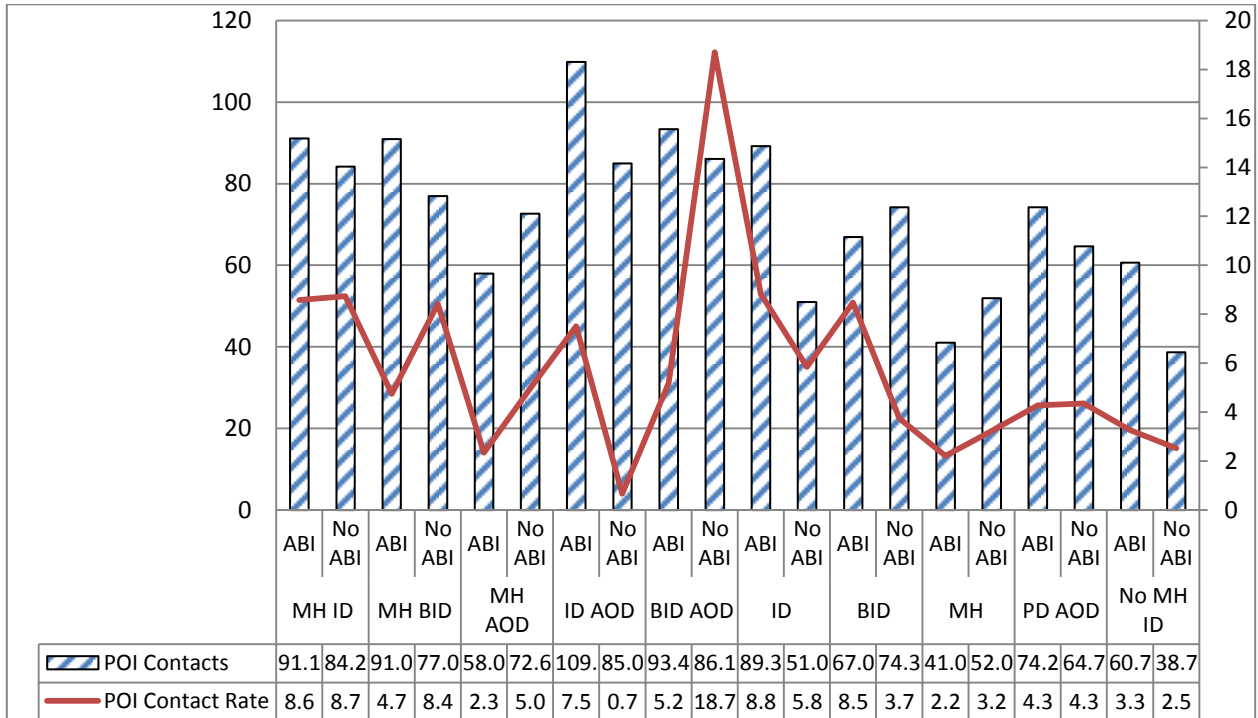
Different trends emerge in the average number of police contacts when comparing individuals across the MHDCD study groups and those with and without an ABI (see Figure 18). In seven of the ten study groups, individuals with an ABI had an average higher amount of contact with police as a person of interest, with the exceptions being the MH AOD group, the BID group and the MH group. The ID AOD group with an ABI (N=72) had the highest number of police contacts, with an average of almost 110 contacts per person, with the BID AOD, the MH ID and the MH BID groups all having an average of over 90 police contacts per person.

Individuals with an ABI had, on average, an additional 16 police contacts. As indicated previously, the difference in age profiles across the study groups means that there are differential opportunities for police contact. A rate of police contact was calculated by subtracting the average age from the average age of first police contact to create a variable for years offending. The number of contacts as a person of interest was then divided by the years offending variable to create an offending rate.

The ABI group, in addition to having a higher volume of police contacts, also had a higher rate of police contact. The ABI group overall had an average 6.07 police contacts per year compared to 5.85 for individuals without an ABI. After splitting the data into the MHDCD study groups and comparing the ABI and no ABI groups, the rate of police contact appears varies substantially. The offending rate detailed in Figure 18 on the right axis, illustrates that the group with the highest

rate of police contact after controlling for differences in age and years offending is the BID AOD group without an ABI.

Figure 18: Person of interest contact by study group and ABI group



b) Offences and convictions

Theft and road traffic/motor vehicle regulatory offences are the most common offences committed by the group of people with an ABI, making up over 40% of offences for the group. The next most common offences are Public Order offences (12%), closely followed by Justice Offences (11%) and Acts intended to cause injury (10%). Figure 19 below also indicates the proportion of individuals with ABI who have had a conviction by Australian Standard Offence Classification (ASOC) category, with the highest proportion of individuals convicted for theft and related offences, followed by acts intended to cause injury, justice offences and public order offences. Interestingly, the proportion of individuals with road traffic and motor vehicle regulatory offences (53%) is much lower than that of the theft and related offences category despite a similar total number of offences. This indicates that there is a much higher average number of offences for individuals having ever committed a road traffic or motor vehicle regulatory offence. Predominantly this category is comprised of individuals driving under the influence of drugs or alcohol, driving without a license, or driving an unregistered/ uninsured vehicle.

Figure 19: ASOC category offence types for individuals with an ABI by number of convictions & proportion of persons convicted

ASOC Group	Convictions	Individuals Convicted
Theft and related offences	2917	72%
Road traffic and motor vehicle regulatory offences	2678	53%
Public order offences	1671	68%
Justice Offences	1520	69%
Acts intended to cause injury	1451	71%
Illicit drug offences	803	48%
Unlawful entry with intent/burglary, break and enter	785	42%
Property damage and environmental pollution	780	50%
Dangerous or negligent acts endangering persons	418	27%
Deception and related offences	318	23%
Robbery, extortion and related offences	295	26%
Miscellaneous offences	235	24%
Sexual assault and related offences	154	13%
Weapons and explosives offences	147	18%
Homicide etc.	33	5%
Abduction and related offences	8	1%
Missing	3	1%
Total	14216	

The role of alcohol in offending for individuals with an ABI is demonstrated in Figure 20. The study was divided into four groups to allow comparison, these groups were based on individuals who had:

- a diagnosed alcohol disorder an offence was committed where alcohol was identified as a contributing factor,
- a diagnosed alcohol disorder without any offences with alcohol a contributing factor,
- committed an offence where alcohol was identified as a contributing factor, and
- no alcohol disorder and no offences with alcohol as a contributing factor.

Figure 20 demonstrates the difference across the four alcohol groups when comparing ABI. Individuals with an ABI had higher rates of diagnosed alcohol related disorders both with and without alcohol related offences. Only 18% of the ABI group had no reported alcohol involvement, being neither diagnosed with an alcohol use disorder, nor having offences with alcohol involvement, compared to 27% for the group without an ABI. The ABI group had much a higher proportion of individuals with an alcohol use disorder with 60% of individuals having a diagnosed alcohol problem, compared to 46% of the group without an ABI. There was little difference in the proportion of individuals in the two groups to have committed an alcohol related offence, with 66.7% of individuals in the ABI group having committed an alcohol related offence. A similar proportion of individuals without an ABI (63%) had an alcohol related offence, however, a much larger proportion of this group did not have an alcohol diagnoses

Figure 20: Distribution of individuals across alcohol related offence groups by ABI

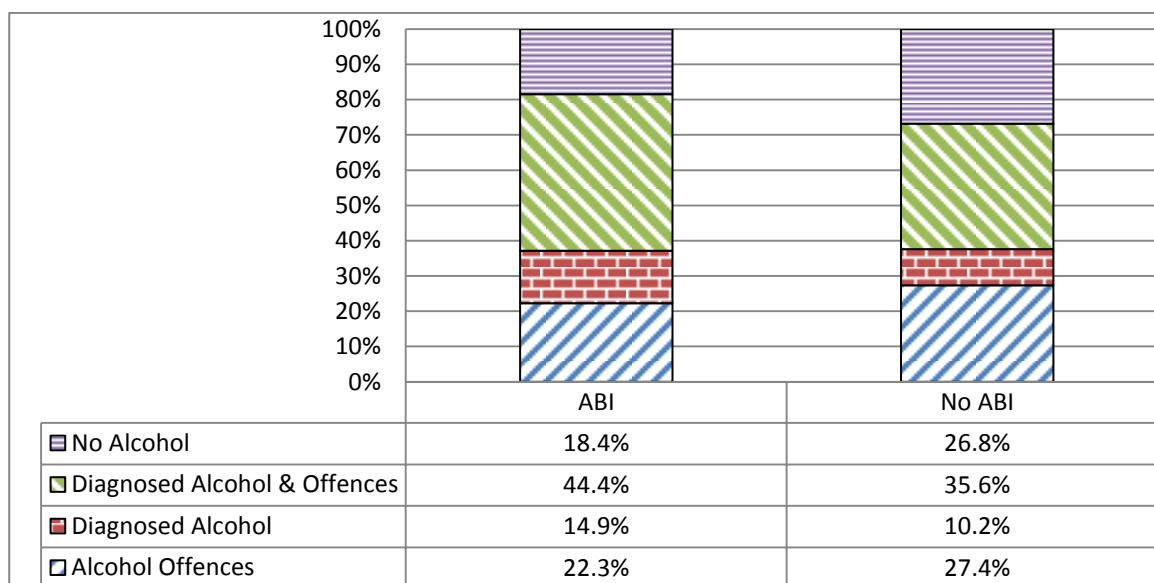
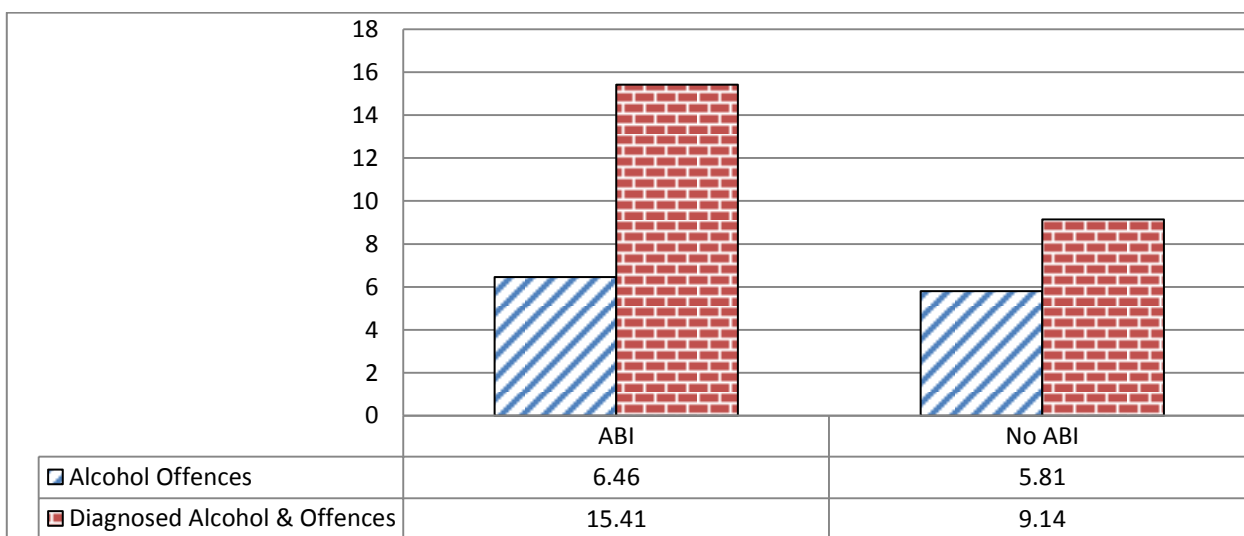


Figure 20 however, does not consider the number of alcohol related offences committed. When examining the number of alcohol related offences for individuals who had ever committed an alcohol related offence, those in the MHDCD cohort with an ABI appear to have a significantly higher incidence of alcohol related offences as compared with those in the cohort without an ABI. Individuals with an ABI committed 12.5 offences where alcohol was a factor, compared to 7.7 offences for individuals without an ABI. However, when comparing the average number of alcohol related offences against those diagnosed with an alcohol disorder the trend is even stronger. As indicated in Figure 21, individuals with a diagnosed alcohol disorder had much higher numbers of

alcohol related offences across all groups. However, the increase in average numbers of alcohol related offences between those with and without a diagnosed alcohol related disorder was much higher for individuals with an ABI.

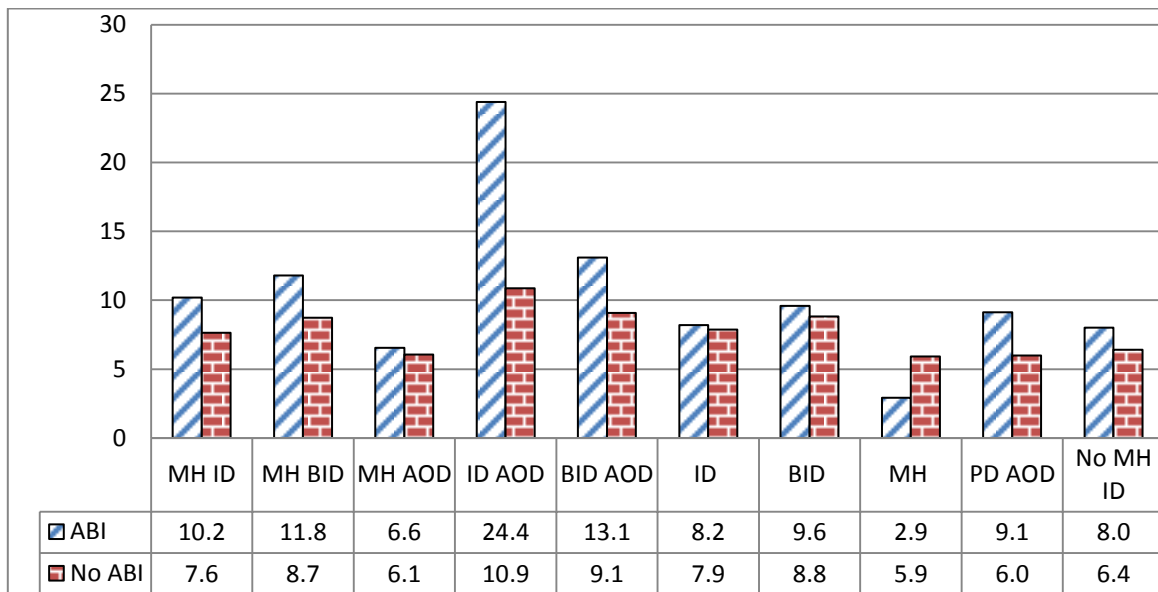
As indicated in Figure 17, there are differences in the overall number of persons of interest contacts, with the ABI group having substantially higher volume of contacts with police. Proportionally, for the ABI group, alcohol is a greater contributor to offending for this group, with alcohol involved in approximately 18.5% of all police contacts, compared to 13.6% for individuals without an ABI.

Figure 21: Average number of alcohol related offences for those with and without ABI



To further explore the impact and nature of alcohol related offences for the ABI group, Figure 22 demonstrates that again those with ABI who also have complex needs, particularly those where intellectual disability and borderline intellectual disability are also part of the picture, have significantly more alcohol related offences than those where ABI is not present. In particular, again those with an intellectual disability or a borderline intellectual disability when also identified as having an AOD, had very high levels of alcohol related offences. Only one study group (MH) had a higher average number of alcohol related offences where ABI was not present.

Figure 22: Average number of alcohol related offences by ABI across study groups



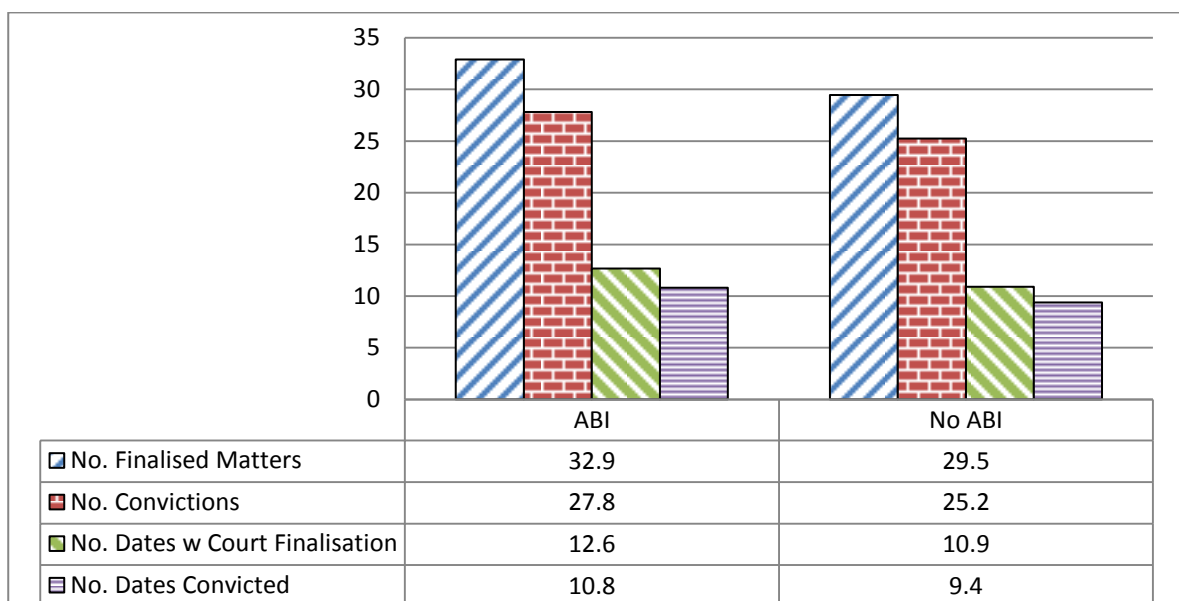
This finding highlights the difference in the average number of convictions for alcohol related offences between those with an ABI and those without. Whilst findings in Figure 4 above indicate the rate of co-occurrence of AOD for those who have ABI is high, the findings here indicate that this high usage of alcohol has the effect for this group of bringing them into contact with the criminal justice system in the form of alcohol related offences. Evidence from the broader MHDCD study indicates that once an individual with MHDCD comes into contact with the CJS, there is a significant likelihood that they will continue to cycle in and out of the CJS for some time.

These offences or police contacts lead to court appearances, which is shown in Figure 23. Court appearances are reported here as finalised matters, which is a count of all offences at the point of the offence being finalised. The number of convictions represents the number of offences where there was a finding of guilt, whilst the dates with court finalisation is a measure of how many times an individual was going through a court process, because many offences can be dealt with concurrently at court. Likewise, the number of dates convicted details the instances at court on which at least one finding of guilt was made.

A similar pattern emerges where individuals in the ABI group have higher numbers of finalised matters than the group without an ABI, however this difference is not as marked as in the volume of police contact, indicating that much of this contact is likely to be for nuisance contacts or where police are exercising powers to move an individual on. Those experiencing an ABI have a higher

average number of convictions (with 27.8) whilst those without an ABI have an average of 25.2 convictions, as shown in Figure 23. Many of these matters are finalised at court on the same day, which often indicates that they were charged with a range of crimes resulting from one series of offences¹. On average, there was little difference between the groups, with approximately 2.7 matters finalised on any single court date. Of all matters finalised, the conviction rate was very high, with around 85% of charges resulting in conviction.

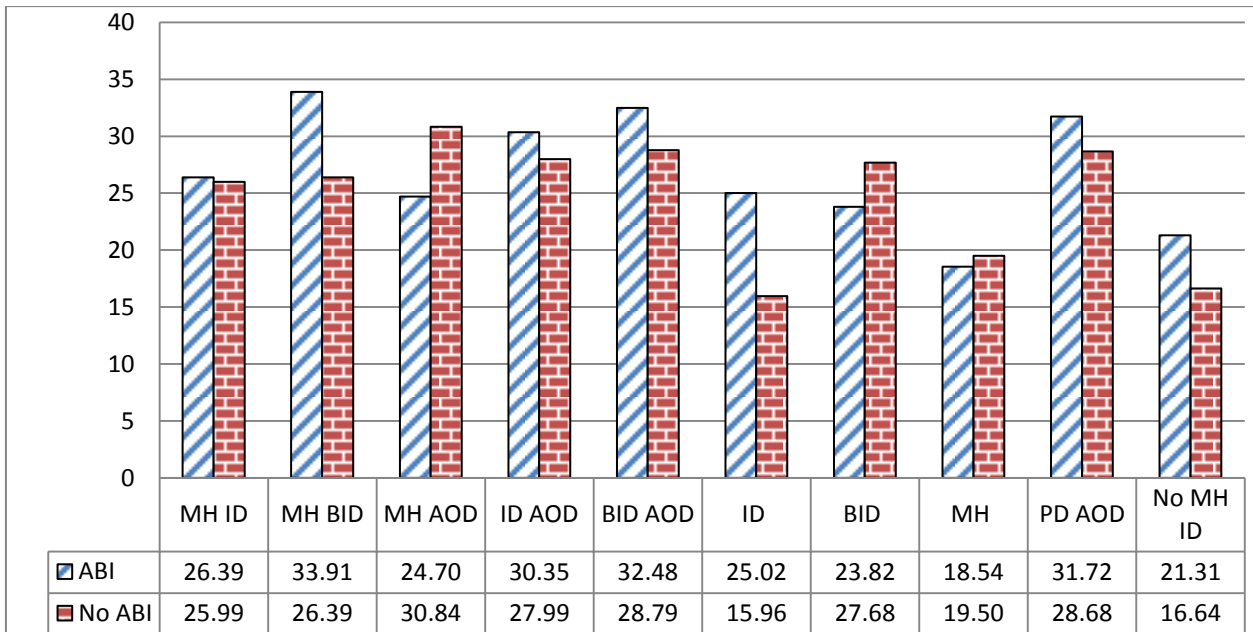
Figure 23: Finalised matters, convictions, occasions of finalisations and occasions of convictions by ABI group



In terms of convictions, individuals who experience ABI as part of a set of complex needs appear to be convicted more frequently than those who do not have ABI, however the pattern of convictions is similar to the amount of police contact had across the study groups. Figure 24 below demonstrates that those with complex needs specifically including borderline/intellectual disability, and combined with alcohol and other drug issues (MH_BID; BID_AOD and ID_AOD) experience significantly higher average conviction rates even compared with those who have similarly complex needs without the presence of ABI. In addition it appears that the presence of ABI increases the frequency of conviction for most other study groups, this being particularly marked for those with PD/AOD, ID and even for those who do not have an ID or MH diagnosis. In fact, Figure 24 suggests that only the MH_AOD and MH groups show an exception to this trend.

¹ When an individual has multiple charges proceeding through the courts simultaneously, these proceedings can also be dealt with at the same time resulting in one finalised matter date.

Figure 24: Average number of convictions by ABI study groups

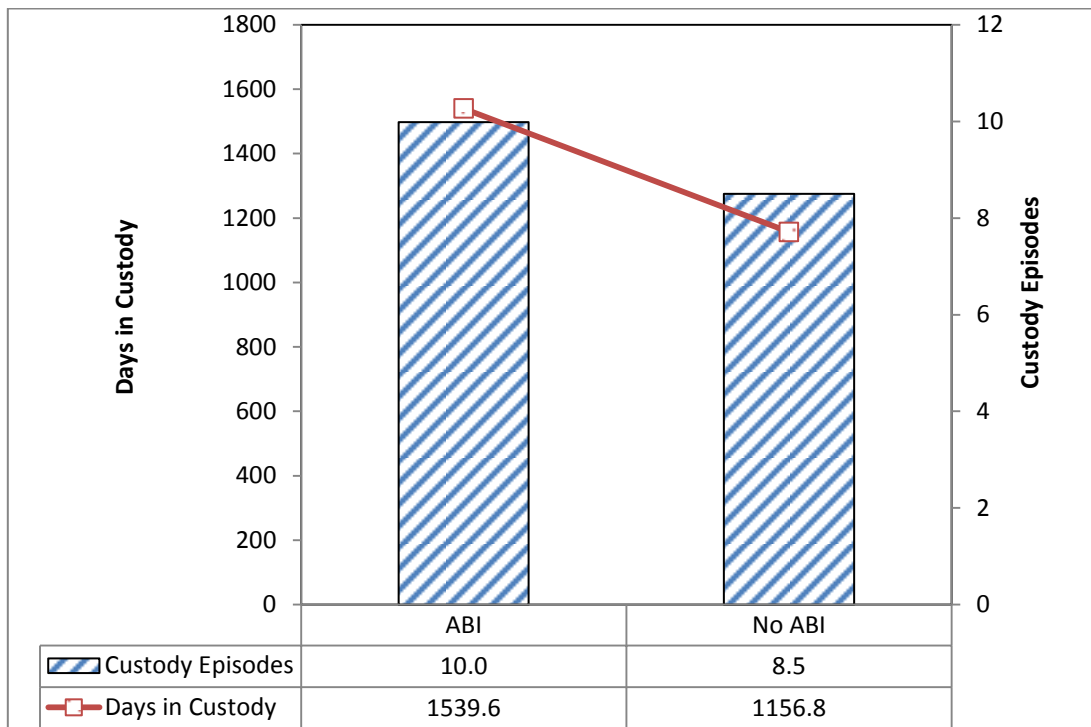


c) Custodial Episodes

On average, individuals with an ABI show a higher average number of of custodial episodes, (on average 10.0), compared to those without an ABI who have on average 8.5 custodial episodes. Figure 25 shows the difference in the average number of custody episodes by presence of ABI and the average number of days spent in custody. The ABI group have both the highest number of instances of incarceration, and have also spent on average a much longer period of time incarcerated, on average over one year more than the group with no ABI. Exploring the differences in offence profiles across these groups could explain some of these differences.

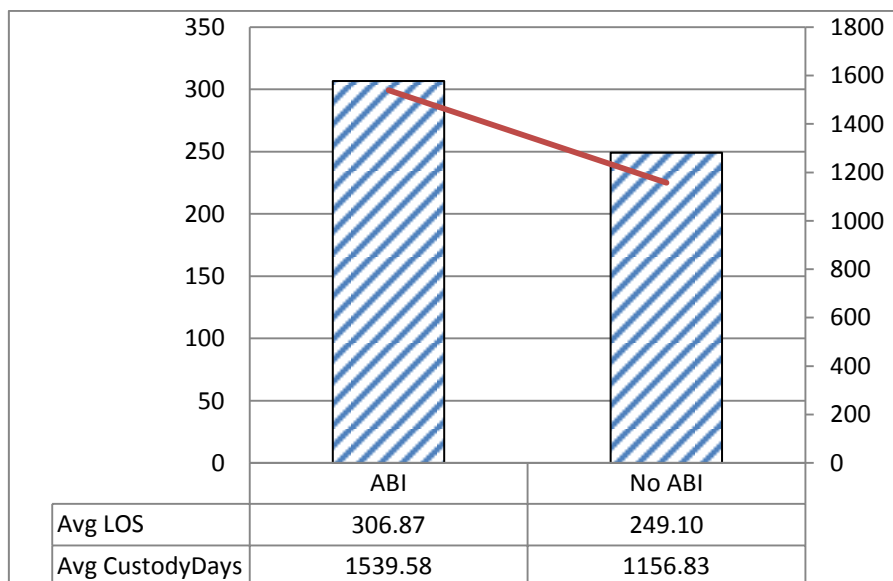
As well as more frequent episodes of incarceration, individuals with ABI also show higher average custody days when they go into prison than those without ABI. Figure 25 reveals a higher average number of days in custody for those with an ABI (1539.6) as compared to those without an ABI (1156.8).

Figure 25: Average custody episodes by ABI



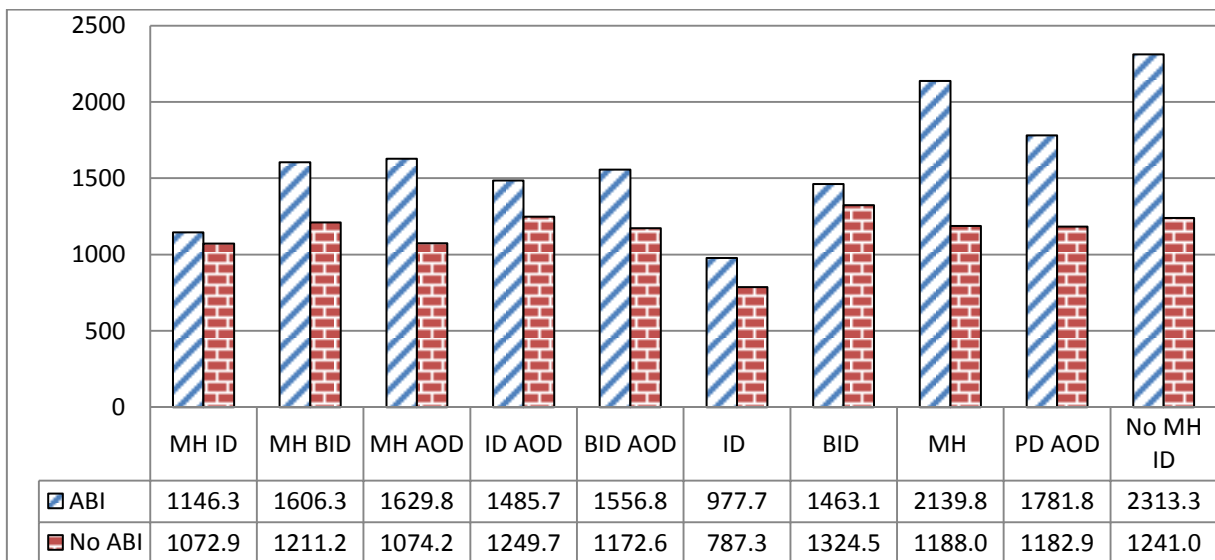
It should be noted however that this higher average number of days in custody for those with an ABI could be a reflection of the higher average number of custody episodes set out in Figure 25 for those with an ABI. Figure 26 displays the difference in the average length of stay in custody. Individuals in the ABI group stay on average an additional two months per episode of incarceration compared to individuals without an ABI.

Figure 26: Average custody days by ABI and average length of stay



Interestingly it appears (as in Figure 27) that those with ABI and MH and those with ABI and no other MH or ID diagnosis experience the most significant differential in the average amount of custody days served, with those with ABI having significantly higher average custody days than those without.

Figure 27: Average days in custody by ABI across study groups

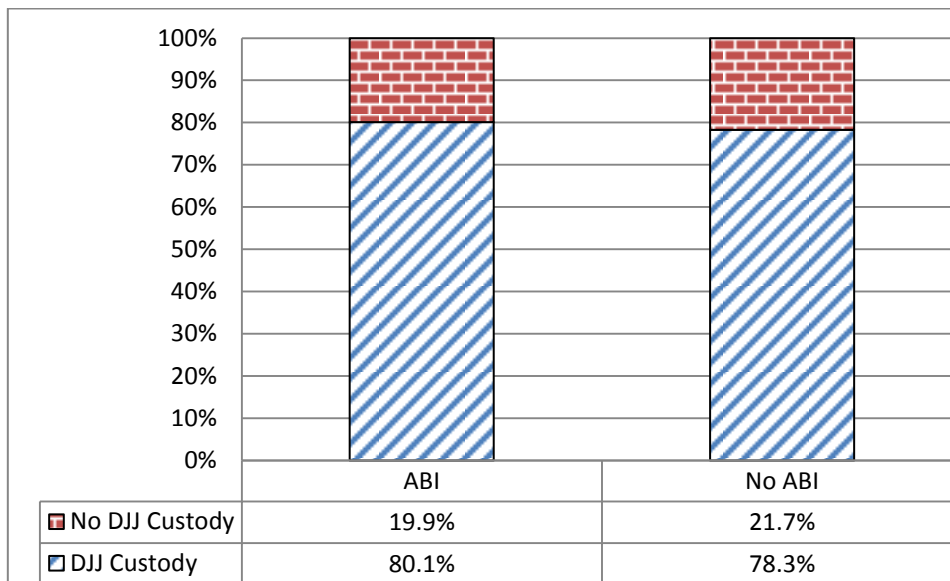


These findings taken together indicate that individuals with ABI in the MHDCD cohort have high rates of cycling into and out of prison. While those in the MHDCD cohort in general experience very high average rates of incarceration, the presence of ABI appears to intensify this pattern.

d) Juvenile Justice

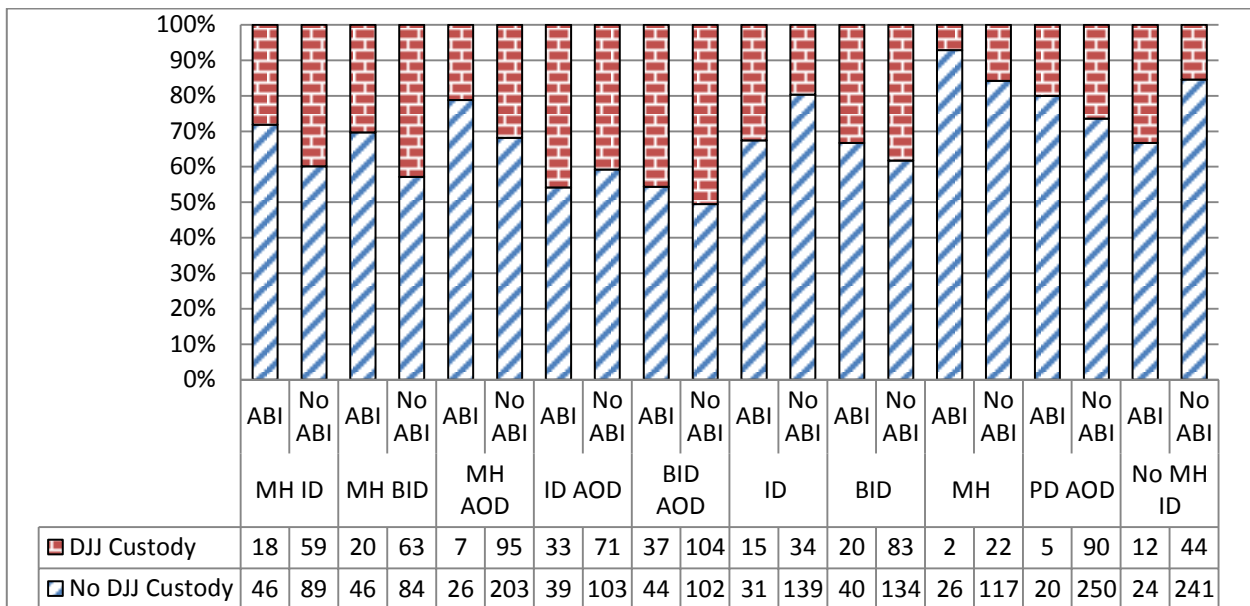
Overall 39% (241) of individuals with an ABI in the MHDCD cohort have had contact with the DJJ. This rate is similar to that for individuals with No ABI in the MHDCD cohort, 40% (849) of whom have had contact with DJJ. Figure 28 indicates the difference in number of respondents who have been in DJJ custody between those with an ABI and those without. There is a significantly lower rate of individuals with an ABI entering DJJ custody in comparison to the rate of DJJ custody for those without ABI. This trend holds for all study groups, where those with ABI have consistently lower DJJ custody episodes.

Figure 28: DJJ client in ABI cohort by study group



Despite the similarities overall between the two groups, clear differences exist within the ABI study groups in relation to DJJ contact. Figure 29 shows that generally individuals with ABI and a single or no other diagnosis are less likely to have been known to the Juvenile Justice system, with the exception of those with complex needs such as those in the BID_AOD and ID_AOD categories. This may indicate the primacy of the the presence of early drug and alcohol use in the trajectories of people with ABI. A number of the study groups show the opposite trend, with a significant differential between those with an ABI having not been a DJJ client. The MH group (83.7%) and the MH_AOD group (78.4%) have a high number of individuals who have not been DJJ client's. This would be an expected finding given the later emergence of mental health disorders in the lifecourse as compared with intellectual or borderline intellectual disability, which are often present from birth.

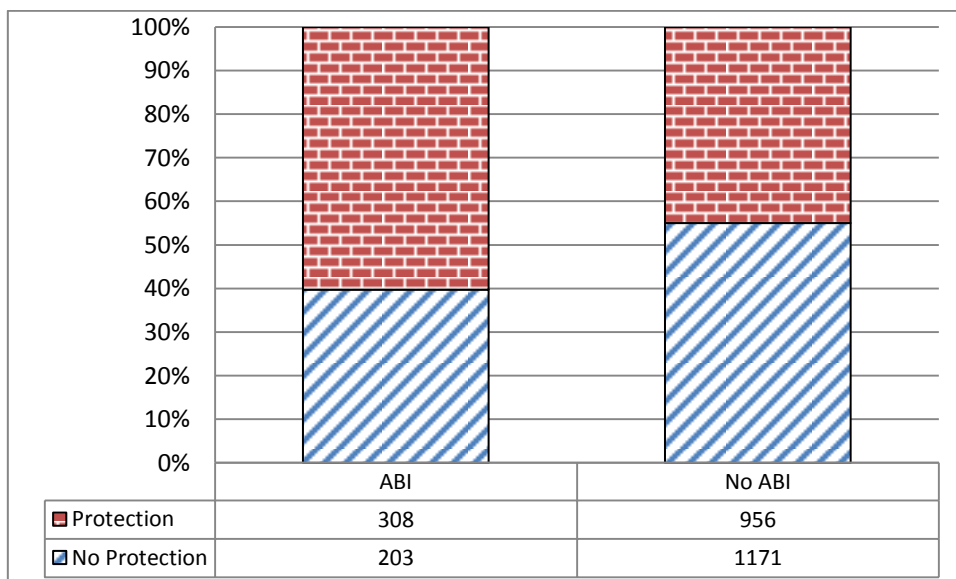
Figure 29: DJJ custody in the ABI cohort by study group



e) Experiences in custody

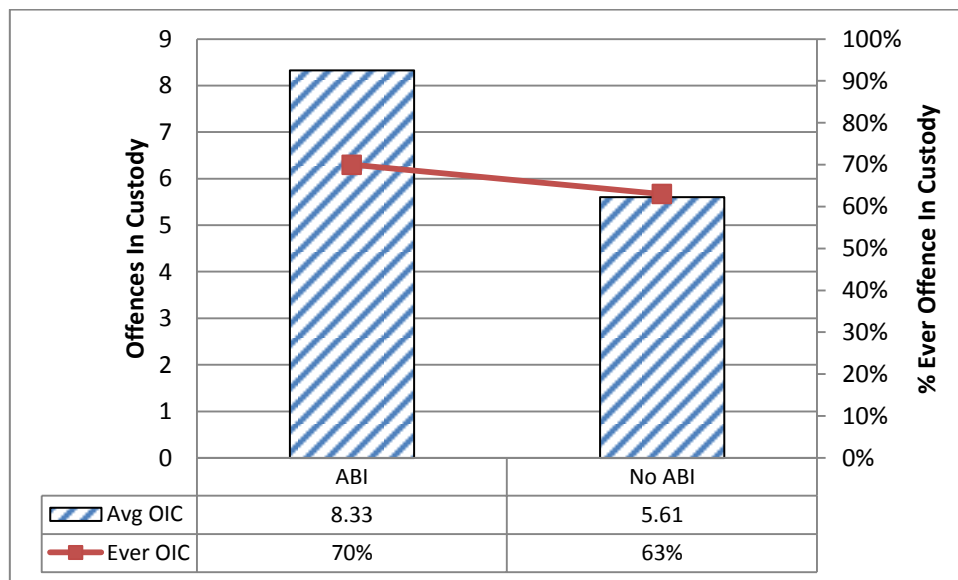
Individuals with ABI are likely to experience a range of disadvantages and difficulties whilst in custody. Figure 30 shows the count of protection within Corrective Services which differs between those with an ABI and those without. Those with an ABI have a higher number of instances of protection 60.3% (308) compared to those without an ABI 44.9% (956) requiring protection whilst in custody.

Figure 30: Percentage of DCS protection by ABI



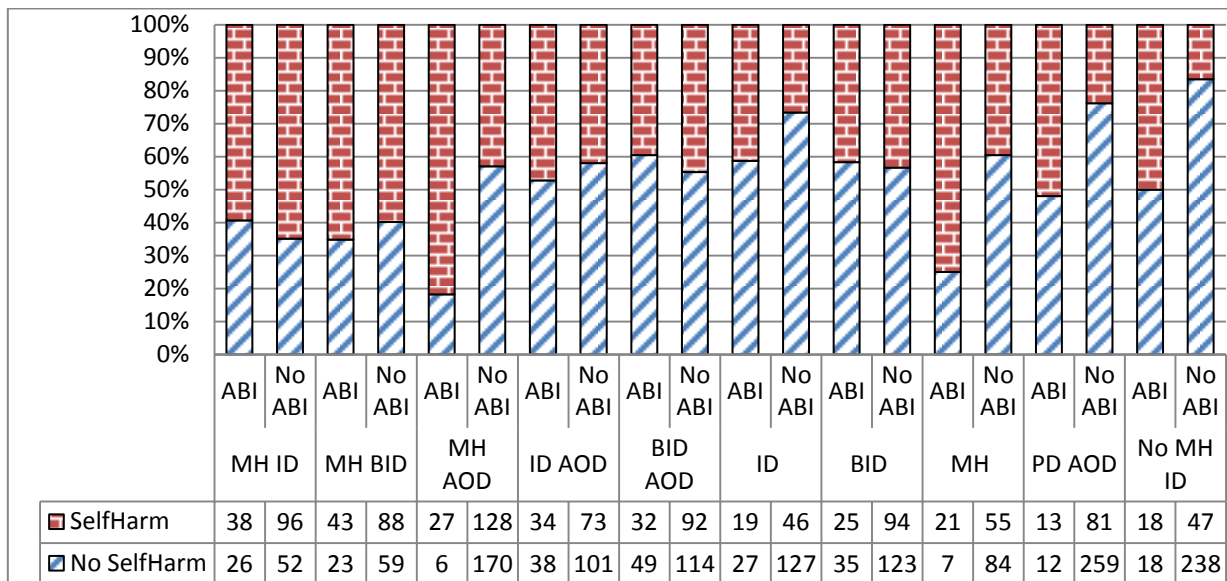
Individuals with an ABI also appear more likely to commit offences whilst in custody. Figure 31 highlights the average number of offences in custody (OIC) according to the presence of an ABI. The ABI group has a higher average number of OICs with an average of 8.33, compared to the no ABI group with 5.61.

Figure 31: Average of offences in custody by presence of ABI



Individuals with ABI appear to have high rates of self-harm whilst in prison. In the ABI group 53% of individuals (N=270) indicated having self harmed, compared with 38% (N=800) in the No ABI group having indicated instances of self-harm. Figure 32 highlights the stark contrast between the rates of self-harm for those with ABI across the cohort study groups, with a number of the groups showing substantially higher incidents of self-harm than others. For example 65.3% of individuals in the MH group, 80.4% of those in the MH_AOD group and 64.7% of those in the MH_BID group have attempted self-harm. Interestingly self-harm is one of the few parameters which occurs at significantly higher rates in those with an mental health issue combined with ABI, rather than an BID/ID.

Figure 32: Rates of self harm in ABI cohort across the study groups

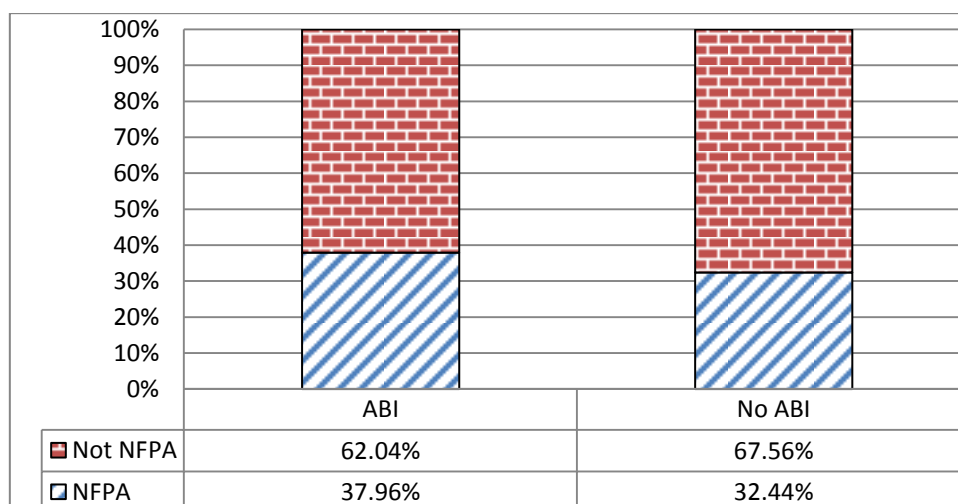


4.4 Service Agency Interactions

a) Housing

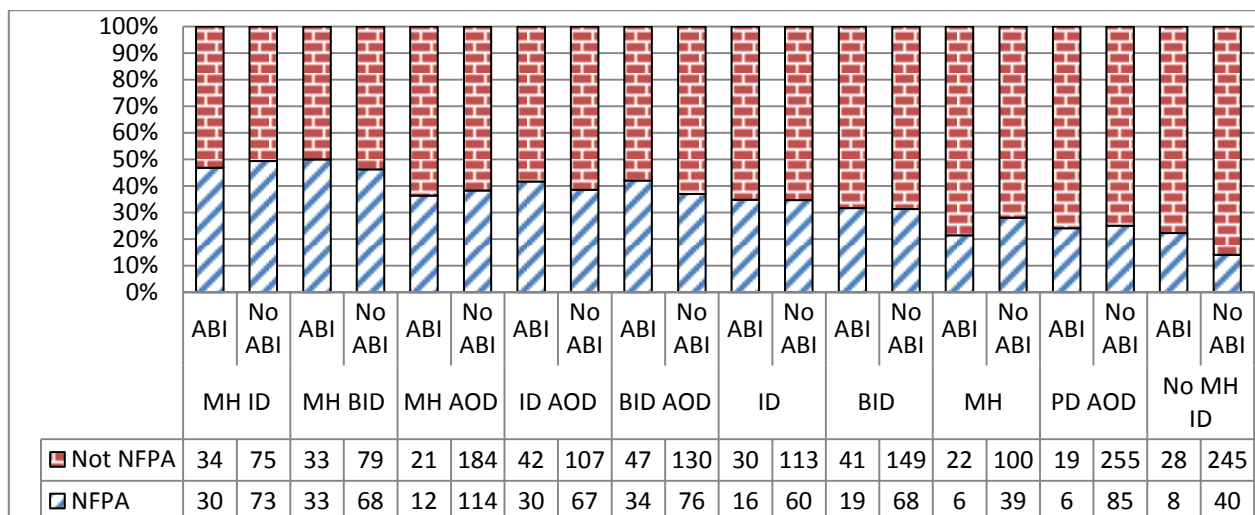
Of the 604 individuals in the cohort who experienced an ABI, 34.78% (N=210) have a recorded instance of being homeless (NFPA). Figure 33 shows the proportion of the ABI cohort that has ever had an instance of homelessness. It should be noted that this is an under-representation of homelessness in the cohort, as currently homelessness can only be detected when an individual has received a service whilst homeless or has come into contact with the criminal justice system. Many individuals are expected to have had instances of homelessness in addition to what is reported here.

Figure 33: Proportion of ABI cohort who at some point had NFPA



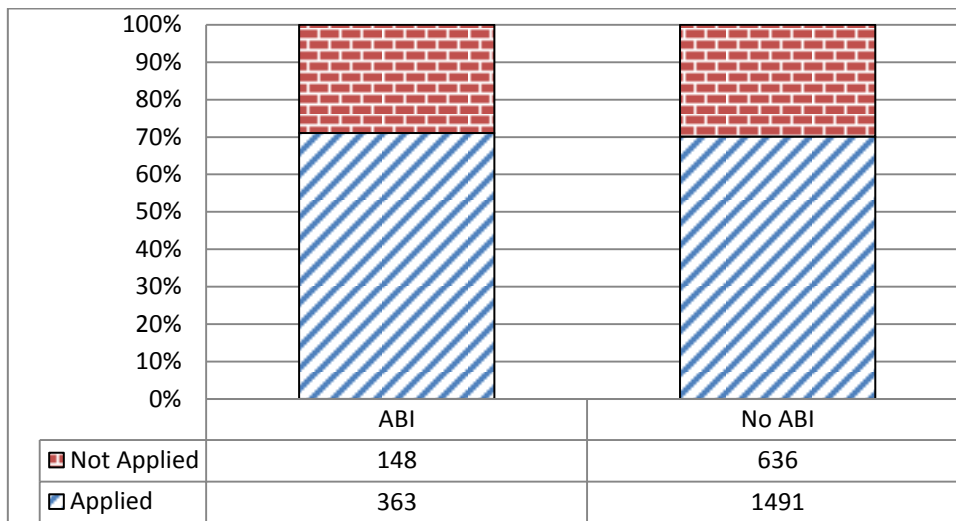
More specifically Figure 34 gives a breakdown of those who experienced an ABI across the study groups according to whether they had ever been recorded as having been homeless (NFPA). A number of the study groups reveal higher rates of homelessness. The MH_BID and the MH_ID group both show high numbers of respondents having been homeless. Forty nine percent (N=33) of the MH_BID group indicate having at some point being of NFPA and 48% (N=31) of the MH_ID group also indicate having NFPA at some point. The pattern notable in the figure below indicates that those individuals with complex needs including both MH, BID/ID and AOD are more likely to have a recorded experience of homelessness than those with ABI who have a single diagnosis or no other diagnosis. There is also very little difference between individuals with and without an ABI.

Figure 34: ABI by study group who at some point had NFPA



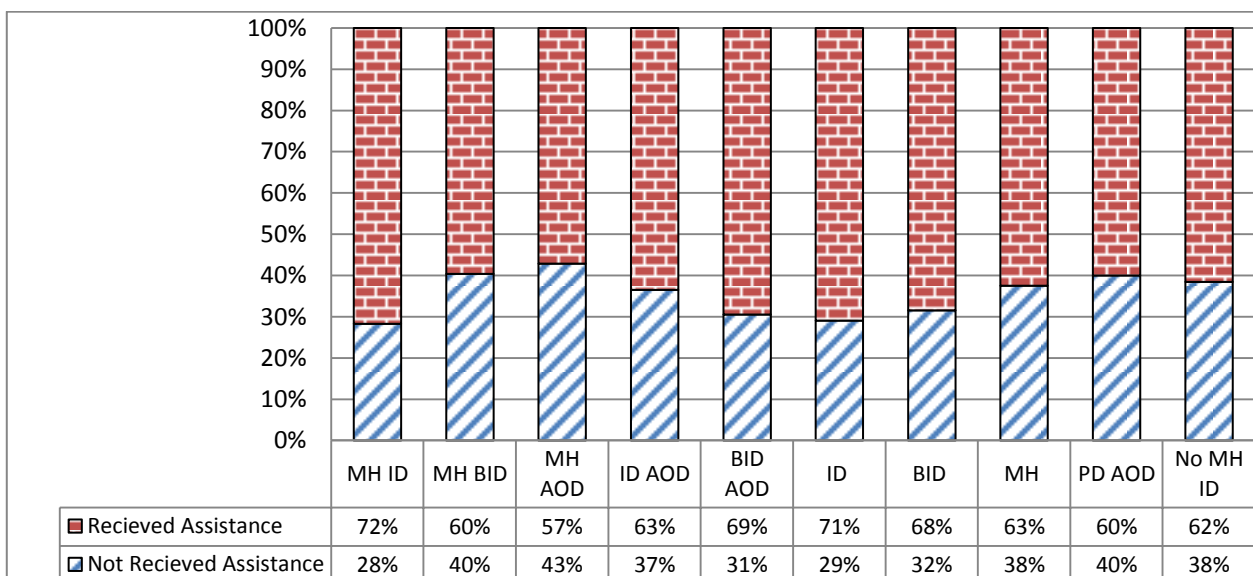
Whilst there is a significant incidence of homelessness experienced by those with ABI, there are also significant rates of application for Housing assistance with NSW Housing. Figure 35 shows that over two thirds of the ABI cohort have applied for housing assistance (N=363; 71%).

Figure 35: Number within the ABI cohort to have applied for Housing assistance



When comparing the success rate of individuals ever to receive housing assistance after an application, individuals without an ABI were slightly more likely (69% success rate) to have received assistance compared to the ABI group (66%). Evidence presented in Figure 36 indicates a reasonable success rate for people with ABI in gaining housing assistance compared to individuals without an ABI across the study group. Some groups demonstrated a high success rate in gaining housing assistance, with over 70% (N=38) of individuals in the MH ID group who had ever applied for housing having received housing assistance, whilst the lowest success rate for individuals having received housing assistance was the MH_AOD group.

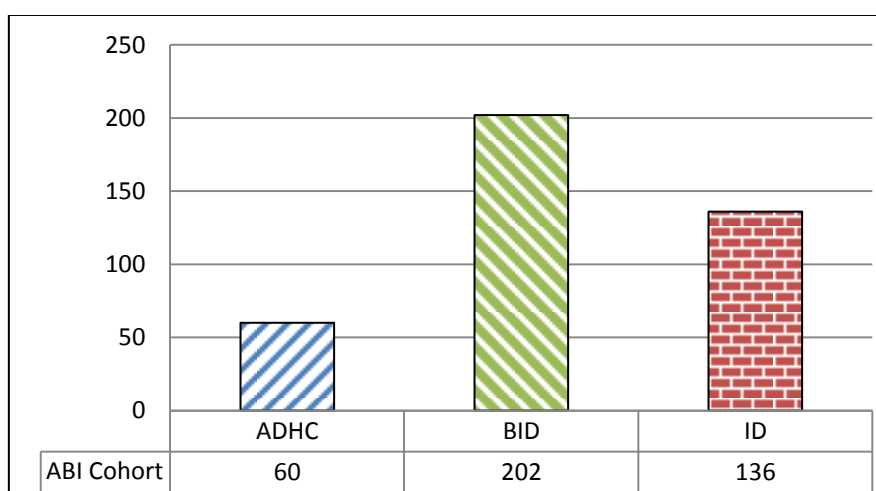
Figure 36: ABI cohort across study groups to have successfully received Housing assistance



b) Disability services

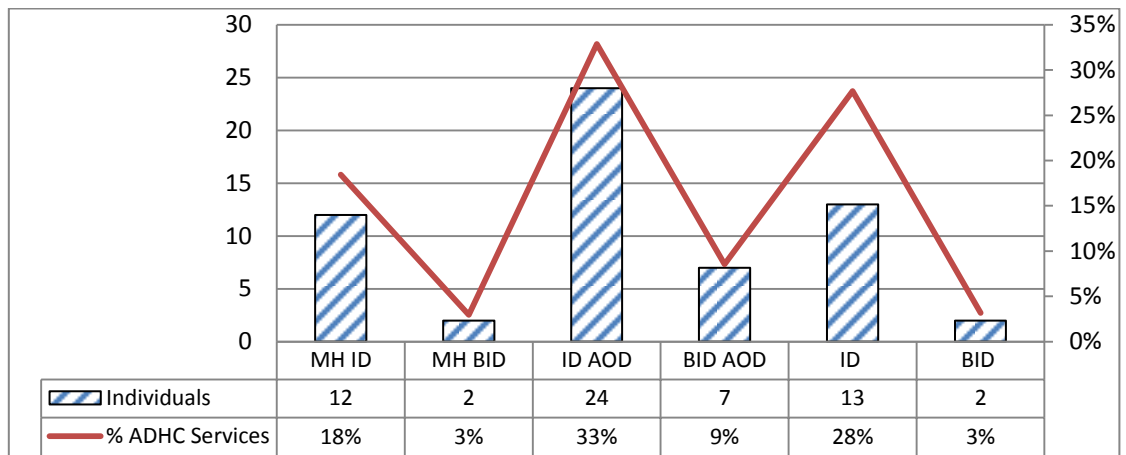
Disability service usage for this group is identified through their contact with NSW Ageing Disability and Home Care (ADHC). Overall there are a total of 60 individuals with an ABI who are receiving ADHC assistance, while a further 136 who have a score in the ID range and are therefore deemed eligible, are not receiving ADHC assistance. Figure 37 reveals the spread of individuals in the ABI cohort who are receiving ADHC services together with those who are in the ID and BID study groups.

Figure 37: Numbers in ABI cohort receiving ADHC assistance with numbers of those with BID/ID



However as indicated in Figure 38 it appears that some individuals with ID and complex needs (ID_AOD; & MD_ID) together with those with ID are receiving services, as are a number of individuals with a BID and BID/complex needs.

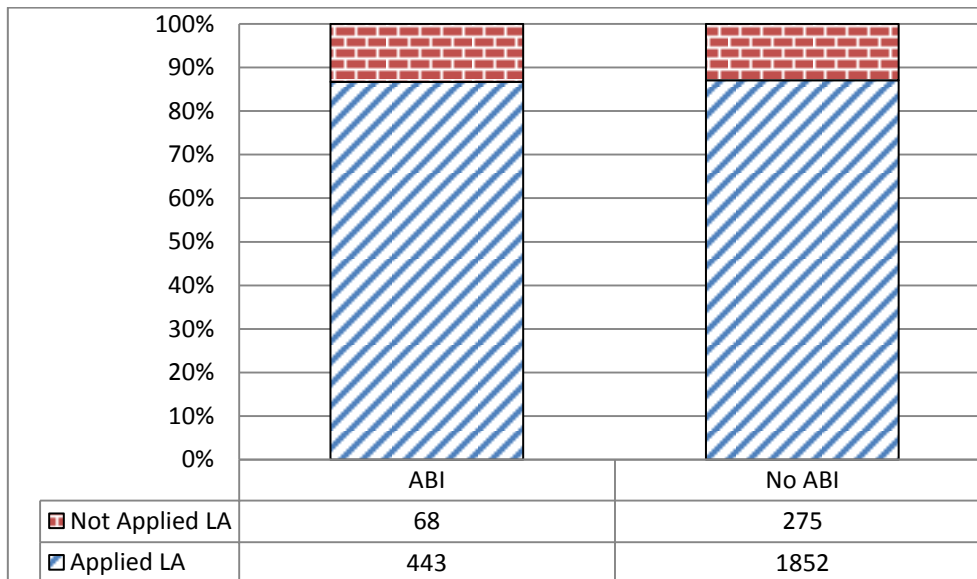
Figure 38: Number of ABI cohort receiving ADHC by study group



c) Legal Aid

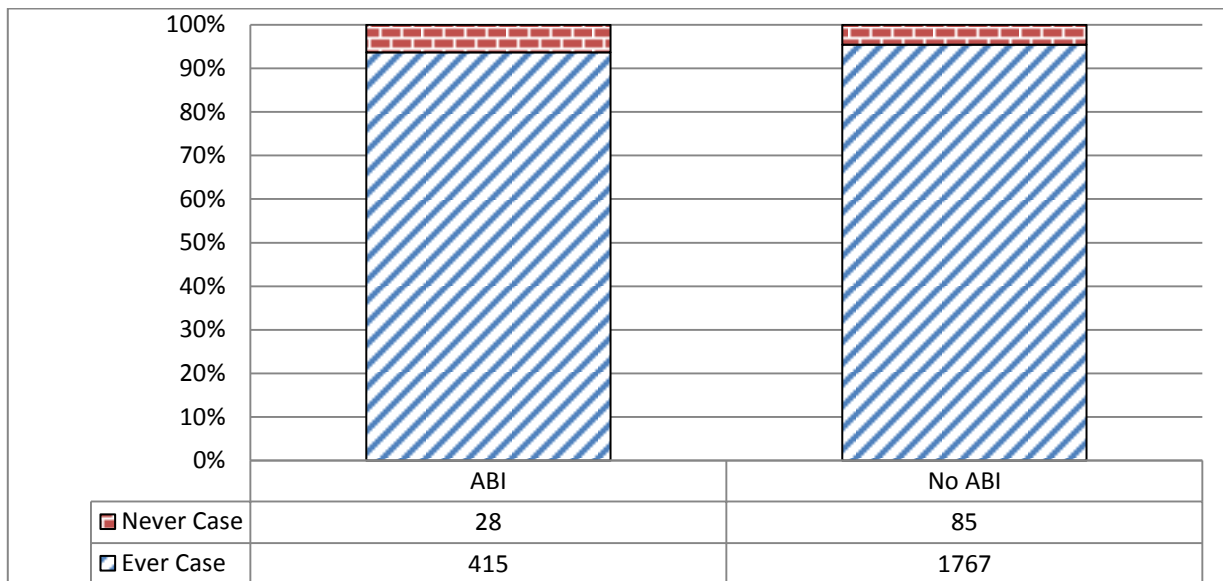
A majority of individuals in the ABI cohort have applied for Legal Aid. Figure 39 shows the number of respondents in the ABI cohort who have made an application for Legal Aid, indicating that out of 511 individuals with ABI in the cohort, 443 (87%) have made an application.

Figure 39: Legal Aid applications in the ABI cohort



Of those who have made such an application, there was a high level of service response as indicated in Figure 40. Ninety-four percent of the ABI group and 95% of the group with no ABI had had a legal case funded through Legal Aid.

Figure 40: Individuals to have a case with Legal Aid in the ABI cohort



This high service recognition and response noted in the interaction between individuals with ABI and Legal Aid is in contrast to the relatively limited contact the ABI group has with other services such as disability services.

5. Example pathway of an Individual with ABI

The following presents a case study of an individual chosen from the ABI cohort of the MHDCD dataset in order to bring further into focus the possible impacts that the presence of an ABI may have on an individual's interactions with Criminal Justice and Human Service systems. The criteria for selection of the individual was as follows:

- male (for whom the incidence of ABI is highest)
- age at first police contact being between 18 and 30 years (when ABI is most likely to occur in males)
- an offence profile that was low in offence severity to reflect the typical characteristics of offences for this cohort
- age of first custody older than or equal to 20 (to ensure no previous contact with the Juvenile Justice system previous to acquiring an ABI)

These criteria were identified in an effort to profile an individual whose contact with the criminal justice system is likely to be causally related to the presence of an ABI, where first offending occurs at a later age and no contact with the Juvenile Justice system is present. This is an attempt to avoid the potentially confounding and complex effects that have been amply demonstrated in the description of the cohort in Section 4 of this report, in which the data suggests a high proportion of individuals with ABI also have multiple other diagnoses and therefore complex needs. The limitations of the MHDCD data do not allow for a chronological or causal picture to be drawn for an individual with complex needs, since the date at which the ABI was acquired is not recorded. The profile provided here aims to bring a rather more simple focus, which while not capturing the full picture of complexity drawn throughout the overall cohort description, at the same time clearly highlights the vulnerabilities associated with having an ABI and subsequent risks of coming into contact with the CJS this creates. Nonetheless, the individual profiled has an ABI, and a history of both personality disorder and substance use disorder. So while not experiencing the multiple conglomeration of these issues in addition to a mental health disorder or an intellectual disability, the individual profiled does have complex needs and has a substantial police charge history, numerous court appearances, a significant number of custodial episodes and has had service interactions with legal aid, housing assistance and hospital admissions.

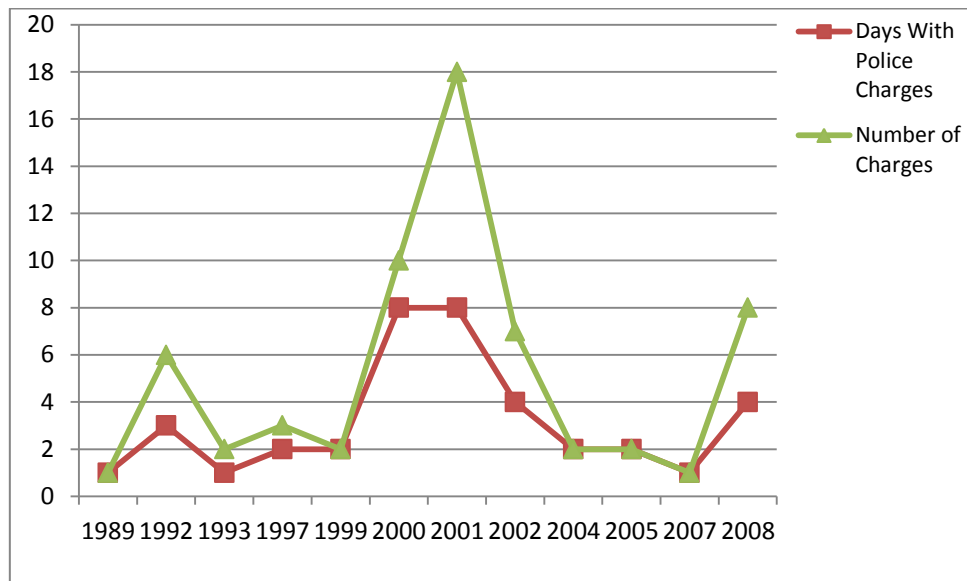
a) General Description

The individual is male, was born in Australia in 1968, has a history of both personality disorder and substance use disorder, is single and employed. Despite a lengthy history of contact with the criminal justice system as an adult the person had no contact with the Department of Juvenile Justice.

b) Criminal Justice Contacts

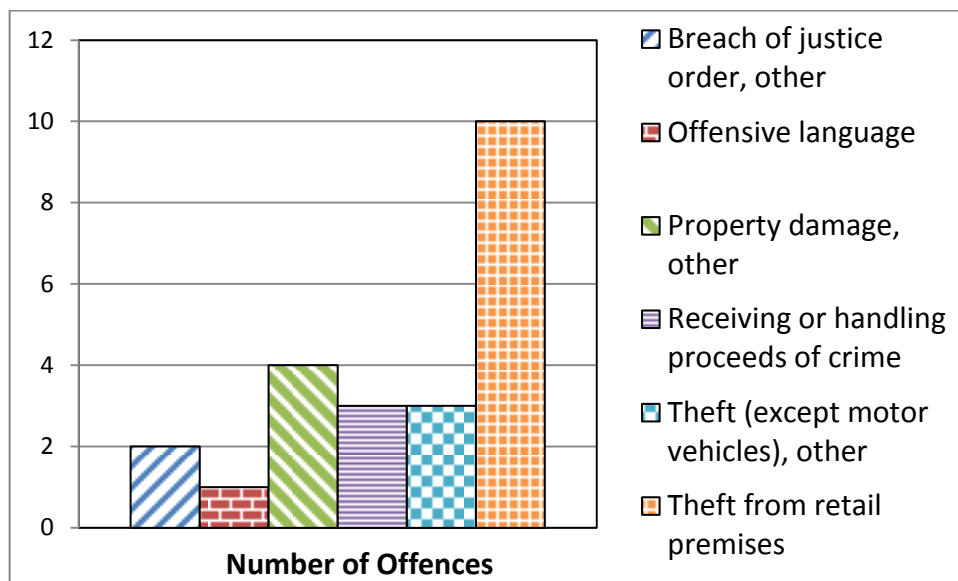
The individual first came into contact with the police at 21 years of age with a charge for 'offensive language' for which they were not convicted. They subsequently appear as a person of interest (POI) in police events records a total of 125 times over the nineteen year period to September 2008 when the data was drawn on the individual from the NSW Police database. The first conviction for this person is in 1992 for malicious damage. The vast majority of the crimes the individual is charged with are property related theft offences. Figure 41 below indicates the spread of Criminal Justice contacts over this period, showing persistent low levels of offending over the period with a spike in early 2001.

Figure 41: Span of criminal contact with number of criminal charges per year



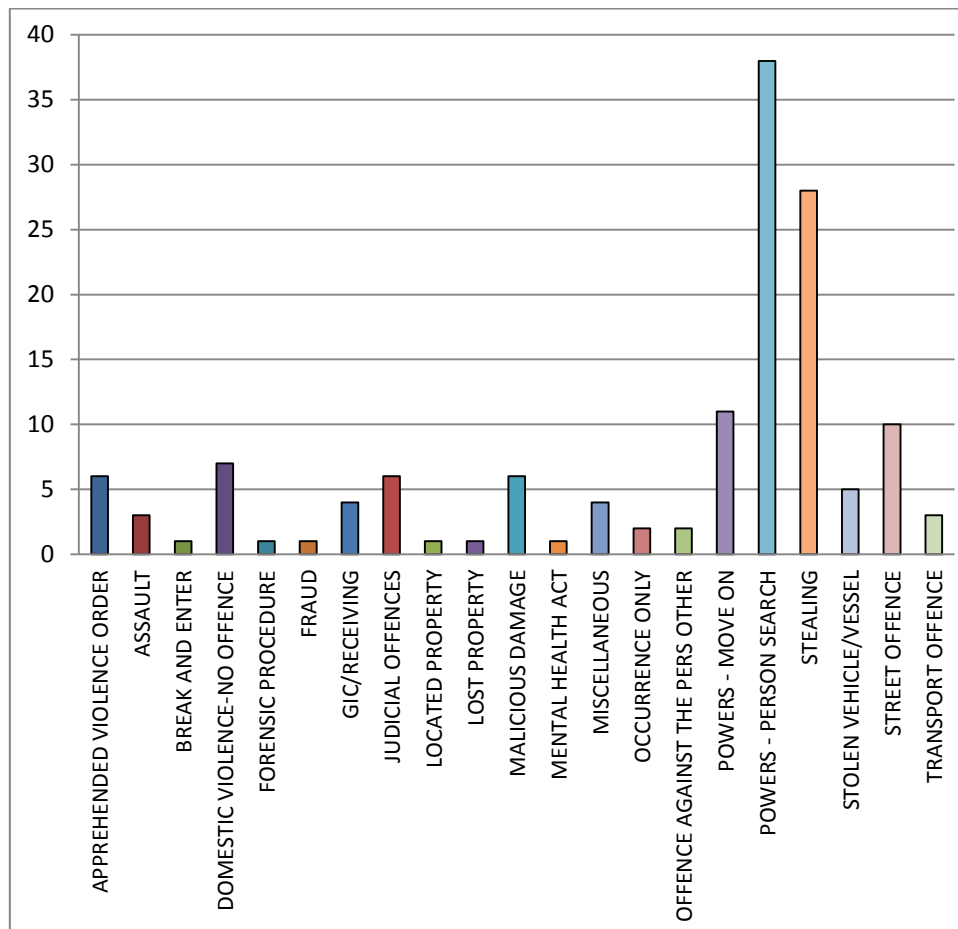
In relation to this offending behaviour Figure 42 below sets out the Incident categories within which the individual's offences broadly fall. Figure 43 also shows that overall there is a prevalence of minor offences such as 'offensive language', 'malicious damage', and 'transport offences'. Higher frequency offences include 'stealing' with 'theft from retail premises' appearing 10 times. The individual, in one instance, shoplifted seven items from the one store, (with the most frequently shoplifted item being razor blades) and was subsequently banned from entering a major supermarket chain. These relatively minor, impulsive petty crimes are often associated with the sequelae of ABI, as Gray argues "they may be more easily caught in the act or left 'holding the bag'; they may be susceptible to being exploited by others as an accomplice... or have "impulsive and unpredictable behaviour" (2009:5).

Figure 42: Individuals offence types



Importantly there is a significant discrepancy between the offences with which the individual with ABI is charged and the overall picture of the types of incidents for which they come into contact with the police. By far the most common incident types for this individual, are less to do with offences against a person or property but are instead related to low level public nuisance type incidents which results in ‘person searches’ ‘powers - move on’ and ‘street offences’ which together make up a significant majority of all incident types. This pattern implies that the individual is likely to come to the attention of the police very frequently for low-level nuisance incidents rather than for significant offences against person or property.

Figure 43: Police events incident category



As well as having been named as a ‘Person of Interest’ (POI) on 125 occasions, the individual has also been identified as a ‘Victim’ 7 times and ‘Person Named’ and ‘Person to be Notified’ on one or two occasions as shown in Figure 44. These 125 police contacts related to 117 events. This distribution of involvement types indicates that whilst the individual may have been the victim of crime more than would be expected than for a member of the general public, his primary contact with the criminal justice system is as an offender. His contact as a ‘Patient’ indicates that on one instance police have detained him under the Mental Health Act 1990. Contact with police resulted in the individual being charged on 34 occasions.

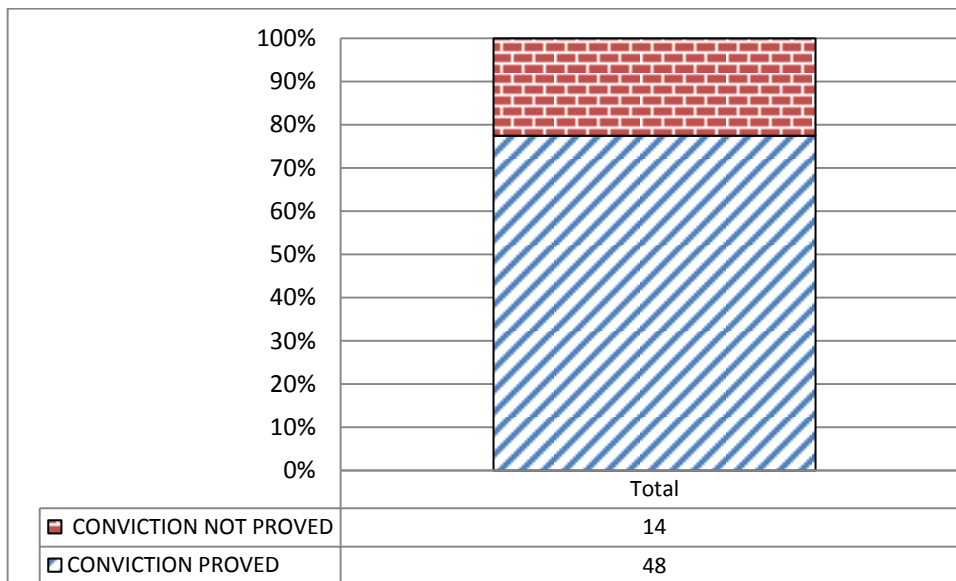
Drug and alcohol were a contributing factor in many of these police contacts. In 31 of these 117 police events, drugs and alcohol were involved. In the two incidents where the individual was a victim of a trauma, drugs or alcohol were involved, and once the individual was noted as being severely intoxicated.

Figure 44: Individuals involvement type in Police contact

Involvement Type	Instances
Corrective services client	1
Owner	3
Patient	1
Person named	3
Person of interest	125
Person to be notified	1
Victim	7
Total Police Contacts	141

So while this individual appears to be coming into contact with police very frequently, these contacts are, on the whole, for minor incidents rather than serious offences. However for those offences for which the individual is charged, there appears to be a relatively high rate of conviction, at around 77% as shown in Figure 45 below.

Figure 45: Percentage of proven convictions



c) Custody

The individual has 12 custody orders resulting in 6 custodial episodes. These have resulted from offences related to shoplifting, breaching of a good behavior bond, failure to appear, and larceny. Over the 19-year period the individual has had 6 custody episodes ranging from 1 day to 2 months in length.

d) Service Agency interactions

The individual has had a range of interactions with various service agencies over the nineteen years of available data, including Health, Housing and Legal Aid. In terms of housing, the individual appears to have been able to maintain private rental tenancies over time and has had one contact with Housing in which he applied for and received 'rent start' in 2006. The individual was admitted to hospital on 4 separate occasions over these years, with duration of stay ranging from 1 day to 15 days.

This individual was diagnosed with viral encephalitis in 2006 resulting in a 15 day stay in hospital. At this same admission, the individual was identified as having hepatitis C, and had an opioid dependence. In 2007, this individual was admitted to hospital due to convulsions, resulting in a fall and a wound to the head, requiring an 11 day admission to hospital. In 2008, they were twice admitted to hospital as a result of convulsions for a period of two days. At this point it was also noted that the individual was a dependent cannabis user, and also that the patient was non-compliant with treatment. It is not known whether the treatment that they were non-responsive to was for the drug dependence or to control the seizures. The second admission in 2008, the diagnosis was for non-intractable epilepsy and an abnormal complication of a medical device such as cardiac or vascular prosthetic devices, implants or grafts. This admission resulted in a one day stay. On all occasions, the individual presented to the same hospital.

By far the most frequent contact with a service agency is individual's interaction with Legal Aid, with nine separate occasions of service between 2001 and 2008. So whilst it appears that it took some time for the individual to make an application for legal aid services, a serious legal matter occurring around the middle of 2001 precipitated contact with the agency. Since that first contact with Legal Aid it appears that the individual has then repeatedly sought Legal Aid assistance, with 8 further instances of service during the subsequent seven and a half years.

The frequency, with which the individual has come into contact with Legal Aid, highlights the contrast as noted above, of the difference in the amount of contact individuals with ABI have with Legal Aid compared to other service providers. Despite having complex needs, contact with Housing and Health is infrequent and there is no recorded contact with disability services at all. The broader issue of the problems of having complex needs is evident in the inability of the individual to have any in depth interaction with the array of service agencies. Individuals with an

ABI are more likely to have one or more additional medical or psychological issues that will require them to interact with one or more service agencies. Problems ranging from alcohol and substance abuse, mental health issues, intellectual disabilities, physical disabilities are a number of issues that together with an ABI amounts to *complex needs*. The individual as well as experiencing an ABI also has a history of personality disorder and substance abuse. The fact that the individual has *complex needs* should theoretically find him in contact with a number of service sectors.

Complex needs by definition require assistance from a wide range of services, however as individual issues are assessed by individual agencies independently the impact of the sum of these issues is left underappreciated (Rankin & Regan; 2004). So despite the individual having both a personality disorder and substance abuse disorder the most frequent interaction that is had is with a justice agency (Legal Aid) once an offence has been committed, rather than potentially addressing some of the underlying causes for the repeated minor incidents and offences which were evident at least seven years before.

REFERENCES

- AIHW 2007, *Disability in Australia: Acquired Brain Injury*, Australian Institute of Health and Welfare, Canberra
- Slaughter, B, Fann, J & Ehde, D 2003, 'Traumatic brain injury in a county jail population: prevalence, neuropsychological functioning and psychiatric disorders' *Brain Injury* vol. 17, no. 9, pp. 731-741.
- Baldry, E 2008. The Booming Prison Industry: Australian Prisons. Australian Prisons Project. Sydney, University of New South Wales.
- Brain Injury Australia, viewed 8/11/10 <<http://www.bia.net.au/>>
- Borzycki, M 2005, *Interventions for Prisoners Returning to the Community*, Australian Institute of Criminology, Canberra.
- Corben, S 2010, *Inmate Census 2009: Summary of Characteristics* Statistical Publication 34, NSW Department of Corrective Services, Sydney.
- Fortune, N & Wen, X 1999, *The definition, incidence and prevalence of acquired brain injury in Australia*, Australian Institute of Health and Welfare, Canberra.
- Gray, A, Forell, S & Clarke, S 2009, *Cognitive Impairment, legal need and access to justice*, Justice Issues Volume 10, Law and Justice Foundation of New South Wales, Sydney.
- Help, Y, Henley, G & Harrison, J 2008, *Hospital Separations due to traumatic brain injury, Australia 2004-05*. AIHW Research and Statistics Series, Flinders University.
- Indig, D, Topp, L, Ross, B, Mamoon, H, Border, B, Kumar, S & McNamara, M 2009, *2009 NSW Inmate Health Survey: Key Findings Report*, Justice Health NSW, Sydney.
- Jamieson, LM, Harrison, JE & Berry, JG 2008, 'Hospitalisation for head injury due to assault among Indigenous and non-Indigenous Australians, July 1999 – June 2005' *Medical Journal of Australia*, vol. 188, pp. 576-579.
- Magaletta, PR, Diamond, P, Schwab, KA, Corrigan, JD, Quintero, M.K & Daoust, S August 2005, 'The brain behind bars: Perspectives on injury and aggression' *Symposium presented at the Annual Convention of the American Psychological Association*, Washington, D.C
- Rankin, J & Regan, S 2004, *Meeting Complex Needs: The Future of Social Care*, The Institute for Public Policy Research, London
- Rushworth, N 2010, Policy Paper: Inflicted Traumatic Brain Injury in Children. H. Australian Government Department of Families, Community Services and Indigenous Affairs, Brain Injury Australia.
- Schofield, P, Butler, T, Hollis, S, Smith, N, Lee, S and Kelso, W 2006, 'Traumatic brain injury among Australian prisoners: Rates, recurrence and sequale.' *Brain Injury* vol. 20, no.5, pp. 499-506.
- Smtih, N & Trimboli, L 2010, *Comorbid substance and non-substance mental health disorders and re-offending among NSW prisoner*. Crime and Justice Bulletin Contemporary Issues in Crime and Justice no. 140, Sydney.
- Trevena, L, Cameron, I and Porwal, M 2004. Clinical Practice Guidelines for the Care of People Living with Traumatic Brain Injury in the Community, University of Sydney.
- Turkstra, L, Jones, D & Toler, L 2003. 'Brain Injury and Violent Crime.' *Brain Injury* vol.17, no.1, pp. 39-47.