

# Identifying Traumatic Brain Injury and Developmental Disability in Prison

## Background



Cognitive deficits marked by low intellectual functioning and serious traumatic brain injuries (TBI) resulting from a jolt to the head, make it difficult for offenders to focus on required tasks, respond to directions and understand or remember rules. In some TBI cases, irritability or anger might be difficult to control. For both groups, slowed verbal and physical responses may be interpreted by staff as uncooperative behavior. Uninhibited or impulsive behavior may provoke other offenders. The prevalence of low intellectual functioning and traumatic brain injury needs to be established. Screening for these conditions is the first step in establishing a standard to address the needs of offenders with cognitive disabilities.

A representative random sample of 690 offenders across all DOC facilities was selected for screening. The incidence of low intellectual functioning and TBI amongst offenders can be reliably estimated from the test results. The goal was to screen 100% of the sample population and identify the number of offenders with the following conditions:

- Traumatic Brain Injury – Concussions with loss of consciousness of a few minutes to longer than 24 hours.
- Low Intellectual Functioning/Developmental Disability (DD) – IQ of 79 or lower

### TBI Findings in Prison

	Number of Offenders*	Percent**
None to Possible Mild	10,483	64.4%
Mild	4,563	28.0%
Moderate	751	4.6%
Severe	491	3.0%
<b>Total</b>	<b>16,287</b>	<b>100.0%</b>

### DD Findings in Prison

	Number of Offenders*	Percent**
IQ – 69 or lower	114	0.7%
IQ – 70 -79	1,352	8.3%

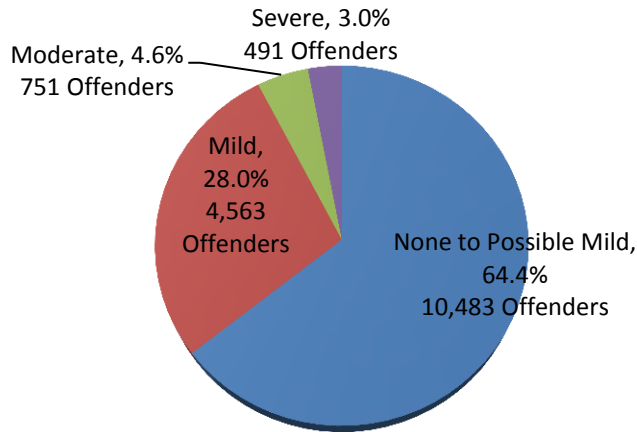
\*As of November 30, 2012.

\*\*Estimate based on sample of 690 offenders given the Ohio Assessment and IQ testing with a Confidence Interval of 99% and plus or minus 1% error level.

### For more information

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## Percent and Number of WA Prison Offenders with Traumatic Brain Injury (TBI)



**1,242 Offenders in prison (7.6%) have Moderate and Severe Traumatic Brain Injury (TBI) history.**

### TBI Facts

**Offender with Severe and Moderate TBI compared to General Prison Population GP**

	TBI	GP
Female	2.4%	7.2%
Male	97.6%	92.8%

**Chemical Dependency Issues**

	95.2%	60.5%
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**Risk Level**

LOW	11.9%	19.3%
MOD	11.9%	17.2%
HNV	16.7%	18.8%
HV	59.5%	44.7%

**Most Serious Crime**

MURDER	11.9%	13.6%
SEX CRIME	14.3%	21.6%
ASSAULT	28.6%	23.6%
PROPERTY	23.8%	17.4%
DRUG	16.7%	8.5%
OTHER	4.8%	3.0%

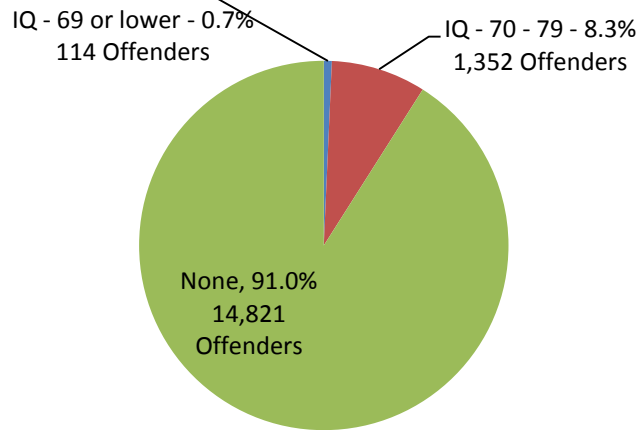
### Objectives

Screening will identify the prevalence of DD and TBI in our prison population. Offenders needing accommodations for safety, housing, understanding rules, communicating, and offender programming will be known. Upon release, we will pinpoint offenders needing to be referred to the Department of Social and Health Services (DSHS), Division of Developmental Disabilities (DDD) and community agencies. We will acquire data that can be used to prepare Legislative funding requests for screening, accommodations, and programming for offenders with disabilities. Lastly, we will know if the Quick Test correlates well with the TONI-4. It is much easier to introduce a brief screening tool at our Reception Centers than a lengthier one.

### Methodology

Validated IQ and TBI screening tools were used, as well as the Correctional Adaptive Support Evaluation (CASE). The CASE has been used in the California prison system for over 10 years. It measures how well an offender with disabilities functions in prison. The TBI tool was the Ohio State University TBI identification method. Two IQ tests were administered. One was the TONI-4 and the other was Ammon’s Quick Test. The TONI-4 is a language free intelligence test that presents problems using abstract figures. The Quick Test is an English vocabulary test for native speakers. Offenders

## Percent of WA Prison Offenders with Developmental Disability (DD)



***1,466 Offenders in prison (9.0%) have Low Intellectual Functioning/DD***

### DD Facts

	DD	GP
Female	1.9%	7.2%
Male	98.1%	92.8%

**Chemical Dependency Issue:**  
 DD: 71.1%      GP: 60.5%

Risk Level	DD	GP
LOW	26.9%	19.3%
MOD	13.5%	17.2%
HNV	42.3%	18.8%
HV	17.3%	44.7%

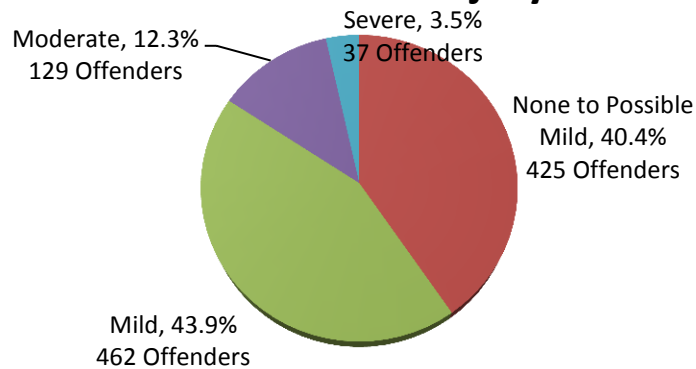
Most Serious Crime	DD	GP
MURDER	3.8%	3.8%
SEX CRIME	32.7%	21.6%
ROBBERY	3.8%	10.5%
ASSAULT	28.8%	23.6%
PROPERTY	19.2%	17.4%
DRUG	5.8%	8.5%
OTHER	5.8%	3.0%

who are non-native English speakers received only the TONI-4. Both tools were used for comparative purposes. The Quick Test takes 3-5 minutes to administer. The TONI-4 takes 15 - 20 minutes to administer.

Offenders with IQ's of 79 or lower regardless of when or how it originated have cognitive deficits that cause difficulties with communication, self-care, social or interpersonal skills, self-direction, academic skills, and safety. In a correctional environment, these adaptive deficits can create serious problems for an offender. The primary goal of addressing the unique needs of this population is to provide them with the opportunity to acquire skills that will promote successful integration into the community upon release.

Several aspects of an offender's lifetime history of TBI are associated with the likelihood of experiencing cognitive and behavioral consequences. Moderate and severe TBI's characterized as loss of consciousness at or above 30 minutes, are nearly certain to leave some permanent effects. When injuries with shorter periods of loss of consciousness occur close enough together that the brain did not heal from the first when the next one happened, they can cause consequences typical of moderate or severe TBI's. Injuries occurring before 15 years of age are also associated with greater cognitive and behavioral difficulties.

## Percent of WA Prison Offenders who are Veterans with Traumatic Brain Injury



***Of those Offenders identified as Veterans in Prison, 15.8% were identified with Moderate to Severe Traumatic Brain Injuries (TBI).***

- Screening assists in improved decisions regarding accommodations
- Screening assists in developing improved strategies for the management of offenders with unique medical, behavioral, and intellectual support needs. These offenders are more vulnerable than the average offender and often have difficulty conforming to rules and regulations.
- Successful communication and collaboration upon release with DSHS and VA about community supports is effective at reducing recidivism.
- DD screening will identify offenders reluctant to self-identify as having special needs.
- The Department will be able to provide the Legislature with a researched based projection of the number of DD and TBI offenders in prison.

### Findings

The Comprehensive Adult Student Assessment System (CASAS) reading scores of offenders identified as DD or TBI were reviewed after the screening was completed. The CASAS is administered to offenders at the Reception Centers and later at their assigned facility. An offender's reading level is linked to intelligence 75% of the time at the sixth grade reading level. Our CASAS reading scores correlated well with the TONI-4 but not the Quick Test (45%) or TBI (52%). We will consider using the CASAS as an initial DD screen. It will screen approximately 8% - 12% of offenders rather than requiring that 100% be screened. Using the CASAS scores can save time and resources. CASAS reading scores are not a proxy for TBI screening. TBI Screening is needed for all offenders. The CASE provided useful information that would be helpful during classification.

### Conclusion

Offenders with limited cognitive capacities regardless of origin have deficits that cause difficulties adapting to prison. In a correctional environment, functioning deficits can create serious problems for an offender. The primary goal of screening for offenders with disabilities is to address their unique needs and to provide them with opportunities to acquire skills that will promote successful integration into the community upon release.