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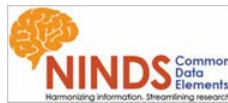
## Quick Start Guide: Preclinical TBI Common Data Elements

The quick start guide provides a reference for each of the tests/outcomes for the preclinical TBI common data elements (CDEs). All CDEs (except the ones defined under general health – animal experiment CDEs) have been identified primarily for small (rodent) animal models.

- Round 1 of review (Table 1) includes a subset of outcomes broadly defined for behavior domains. Round 2 of review (Table 2) will include other domains and further subsets of behavior domains.
- Column 1, lists the domain of interest, Column 2 provides the tests that are used for that domain and Column 3 provides the impairment that can be researched by these tests.

**Table 1: Available for Round 2 – Public Review 12/01/18-02/15/18 (December, 2017-February, 2018)**

DOMAIN	TEST/OUTCOME	IMPAIRMENT
GENERAL HEALTH		
(Animal Experiment CDEs)	<b>**NOTE:</b> The Injury Model CDEs (1-8 below) are in draft form and require community input **	
	1. Blast-induced Neurotrauma Model	Experimental descriptors commonly captured for animal injury model <a href="#">Refer File: DraftInjuryModelS24_113017.xlsx</a>
	2. Controlled Cortical Injury Model	Experimental descriptors commonly captured for animal injury model <a href="#">Refer File: DraftInjuryModelS24_113017.xlsx</a>
	3. Fluid Percussion Injury Model	Experimental descriptors commonly captured for animal injury model <a href="#">Refer File: DraftInjuryModelS24_113017.xlsx</a>
	4. Increased Intracranial Pressure model	Experimental descriptors commonly captured for animal injury model <a href="#">Refer File: DraftInjuryModelS24_113017.xlsx</a>



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	5. Intracranial Hemorrhage and Subdural/subarachnoid Hemorrhage Model	Experimental descriptors commonly captured for animal injury model <a href="#">Refer File: DraftInjuryModelS24_113017.xlsx</a>
	6. Penetrating Ballistic-like Brain Injury Model	Experimental descriptors commonly captured for animal injury model <a href="#">Refer File: DraftInjuryModelS24_113017.xlsx</a>
	7. Projectile Concussive impact model	Experimental descriptors commonly captured for animal injury model <a href="#">Refer File: DraftInjuryModelS24_113017.xlsx</a>
	8. Weight Drop Injury Model	Experimental descriptors commonly captured for animal injury model <a href="#">Refer File: DraftInjuryModelS24_113017.xlsx</a>
<b>Affective Disturbance</b>		
<b>(Depression/Anxiety)</b>		
	1. Forced Swim Test	Depression <a href="#">Refer File: ForcedSwimTest_113017.xlsx</a>
	2. Predatory Odor Test	Anxiety <a href="#">Refer File: PredatoryOdor_113017.xlsx</a>
	3. Startle Response	Anxiety, PTSD <a href="#">Refer File: StartleResponseTest_113017.xlsx</a>
<b>Affective Disturbance</b>		
<b>(Social Interaction)</b>		
	1. Partition Test	Aggression, Impulsivity, Dominance, Impaired social interaction <a href="#">Refer File: PartitionTest_113017.xlsx</a>
	2. Urine Open Field test	Aggression, Dominance <a href="#">Refer File: UrineOpenField_113017.xlsx</a>
<b>Cognition &amp; MOTOR</b>		
<b>(Sensory/Motor)</b>		
	1. Cylinder Test	Motor skills <a href="#">Refer File: CylinderTest_113017.xlsx</a>



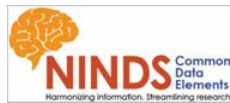
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	2. Neurological Severity Score	Neurological function <a href="#">Refer File: NeurolSeverityScoreSmallAnimals_113017.xlsx</a>
	3. String Test	Motor skills, Balance <a href="#">Refer File: StringTest_113017.xlsx</a>
<b>Large Animal Models (Swine)</b>		
<b>(Behavior/Cognition)</b>		
	1. Human Approach Test	Behavior, Ethological and Affective States, Social and Exploratory Behaviors <a href="#">Refer File: HumanApproachTestLargeAnimals_113017.xlsx</a>
	2. Neurological Severity Score	Neurological function <a href="#">Refer File: NeurolSeverityScoreLargeAnimals_113017.xlsx</a>
	3. NeuroCognitive Test	Neurological Cognitive function <a href="#">Refer File: NeuroCognitiveTestLargeAnimals_113017.xlsx</a>

Table 2: Available Round 1 – Public Review 06/13/17-08/13/17 (June-August, 2017)

DOMAIN	TEST/OUTCOME	IMPAIRMENT
<b>GENERAL HEALTH</b>		
<b>(Animal Experiment CDEs – for Small and Large Animal Models)</b>		
	1. All Tests Common CDEs	Common data elements used across all tests wherever applicable for data harmonization <a href="#">Refer File: AllTestsCommonCDEs_061217.xls</a>
	2. Animal Assessments and Outcomes	Experimental descriptors commonly captured for animal assessments and outcomes. <a href="#">Refer File: AnimalAssessmentsOutcomes_061217.xls</a>
	3. Animal Characteristics	Experimental descriptors commonly for animal characteristics.



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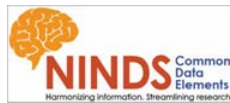
		<a href="#">Refer File: AnimalCharacteristics_061217.xls</a>
	4. Animal History	Experimental descriptors commonly captured for animal history. <a href="#">Refer File: AnimalHistory_061217.xls</a>
	5. Animal Injury Model	Experimental descriptors commonly captured for animal injury model <a href="#">Refer File: AnimalInjuryModel_061217.xls</a>
	6. Main Group CDEs on all Forms	Data elements used on each form for commonly captured information <a href="#">Refer File: MainGroupCDEs_061217.xls</a>
<b>GENERAL HEALTH</b>		
<b>(General Health)</b>		
	1. Body Conditioning Score	General impairment, Health status <a href="#">Refer File: BodyConditioning_061217.xls</a>
	2. Change in Body Weight	General impairment, Health status, , Injury severity <a href="#">Refer File: ChangeBodyWeight_061217.xls</a>
	3. Grooming and Coat Conditions	General impairment, Health Status <a href="#">Refer File: BodyConditioning_061217.xls</a>
	4. Health and welfare	General Impairment, Health Status <a href="#">Refer File: BodyConditioning_061217.xls</a>
	5. Morbidity/mortality	Injury severity, Health Status <a href="#">Refer File: MorbidityMortality_061217.xls</a>
<b>Affective Disturbance</b>		
<b>(Depression/Anxiety)</b>		
	1. Elevated Plus Maze	Anxiety <a href="#">Refer File: ElevatedPlusMaze_061217.xls</a>
	2. Elevated Zero Maze	Anxiety <a href="#">Refer File: ElevatedZeroMaze_061217.xls</a>
	3. Learned Helplessness Paradigm (Inescapable Shock)	Depression, Helplessness, Despair (Despair-like), Affect <a href="#">Refer File: LearnedHelplessness_061217.xls</a>
	4. Marble burying	Naturalistic, Anxiety, Repetitive-like behavior , Obsessive



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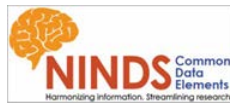
		compulsive behavior (OCD) <a href="#">Refer File: MarbleBurying_061217.xls</a>
	5. Open Field Test	Anxiety, Depression, Motor, Activity level <a href="#">Refer File: OpenField_061217.xls</a>
	6. Sucrose preference test	Depression, Despair (Despair-like), Affect, Anhedonia <a href="#">Refer File: SucrosePreference_061217.xls</a>
	7. Tail Suspension	Depression, Helplessness, Despair (Despair-like), Affect <a href="#">Refer File: TailSuspension_061217.xls</a>
<b>Affective Disturbance</b>		
<b>(Social Interaction)</b>		
	1. Resident Intruder Test (included in Social interaction)	Aggression, Impulsivity, Dominance, Impaired social interaction <a href="#">Refer File: SocialInteractionResIntruder_061217.xls</a>
	2. Social Interaction	Aggression, Impulsivity, Dominance, Impaired social interaction <a href="#">Refer File: SocialInteractionResIntruder_061217.xls</a>
	3. Three-chamber Test	Aggression, Impulsivity, Dominance, Impaired social interaction <a href="#">Refer File: ThreeChamber_061217.xls</a>
	4. Tube Dominance Test	Aggression, Impulsivity, Dominance, Impaired social interaction <a href="#">Refer File: TubeDominance_061217.xls</a>
<b>Cognition &amp; MOTOR</b>		
<b>(Learning/Memory)</b>		
	1. Alternating (Attentional) Set Shift	Frontal lobe function, Attentional function <a href="#">Refer File: AttentionalSetShift_061217.xlsx</a>
	2. Barnes Maze	Spatial learning and memory, Working memory <a href="#">Refer File: BarnesMaze_061217.xls</a>
	3. Conditional Place Preference	Contextual learning, Addiction <a href="#">Refer File: ConditionalPlacePreference_061217.xls</a>
	4. Contextual Fear Conditioning	Associative learning (cue and context) <a href="#">Refer File: ContextualFearConditioning_061217.xls</a>



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	5. Morris Water Maze	Spatial learning and memory, Working memory <a href="#">Refer File: MorrisWaterMaze_061217.xls</a>
	6. Novel Object Recognition	Recognition memory, Working memory <a href="#">Refer File: NovelObjectRecognition_061217.xls</a>
	7. Radial Arm Maze	Spatial learning and memory, Working memory <a href="#">Refer File: RadialArmMaze_061217.xls</a>
<b>Cognition &amp; MOTOR</b>		
<b>(Sensory/Motor)</b>		
	1. Angle Board/Inclined plane	Motor function, Balance <a href="#">Refer File: InclinedPlane_061217.xls</a>
	2. Beam Walk	Gross motor function <a href="#">Refer File: BeamWalk_061217.xls</a>
	3. Grip Strength	Sensorimotor <a href="#">Refer File: GripStrength_061217.xls</a>
	4. Hole Poke Test	Implicit learning, Procedural learning, Spatial learning, Perseverance, Motor function <a href="#">Refer File: HolePoke_061217.xls</a>
	5. Neurological Deficit Score	Neurological function. Neurological Severity Score (NSS) test variations CDEs will be defined in Round 2 <a href="#">Refer File: NeurologicalDeficitScore_061217.xls</a>
	6. Righting Reflex	Vestibular motor, Assessment of consciousness; Also used for sensorimotor assessment <a href="#">Refer File: RightingReflex_061217.xls</a>
	7. Rotor rod/ Rotarod	Motor coordination, Balance, Motor skill learning <a href="#">Refer File: Rotarod_061217.xls</a>
	8. Sticky Paper Test	Sensorimotor, Proprioception. <a href="#">Refer File: StickyPaperTest_061217.xlsx</a>



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**Table 3: Scheduled for Round 3 – Public Review (March-August, 2018)**

DOMAIN	TEST/OUTCOME	IMPAIRMENT
<b>Imaging</b>		
	1. Imaging (MRI, fMRI, CT)	
<b>Pharmacology</b>		
	1. Drug Metabolism, Toxicology	
<b>Neurochemical</b>		
	1. Neurochemical Assays	
<b>Histopathology</b>		
	1. Histopathology	
<b>Physiological Measurements</b>		
	1. Blood Gases, Blood Pressure, Heart Rate	
	2. EEG	
	3. Sleep Disorders	
<b>Biomarkers</b>		
	1. Biomarker Assays	
<b>'omics</b>		
	1. Reporting standards	