

Supplemental Table 2: Studies exploring work-related injuries with a wrTBI subset (n=33)

(Sample sizes are for entire study population unless otherwise specified)

Author & Year, Location [Period]	Design [sample size] (work-related injury)	Study Population	Data source	Case definition: TBI	Case definition: work	% TBI [Severity]	Quality Assess.
Al-Abdallat et al. 2015 Amman, Jordan [2008-2012]	Descriptive cross-sectional study [N=88]	Fatal occupational accidents in three Jordanian hospitals	Hospital records of deaths	"Head Injury" Severity: Fatal	"Occupational deaths resulting from accidents"	21.6% [all fatal]	17/28 (61%)
Amiri et al. 2016 Iran [2007-2011]	Descriptive, retrospective cohort study [N=21,864]	Work-related injuries in Insured construction workers	Iranian Social Security Organization	"Body part affected: Cranium and brain"	"Insured workers"	3.65% <i>*Calculated from table 3 based on sample size and 799 cranium and brain injuries reported</i>	23/34 (68%)
Baragaba et al. 2016 Unites States [2000-2011]	Longitudinal cohort study [N=1,638,856 (weighted)]	Individuals reporting work-related injury on national survey	Medical Expenditure Panel Survey	"Type of injury: Head"	Self-reported: whether or not the injury occurred at work	9.4% (weighted)	20/32 (63%)
Barnetson and Foster 2015 Canada [2012]	Descriptive secondary analysis of claims data [N=246,342]	Media reports vs Worker's compensation claims	Association of Workers' Compensation Boards of Canada	"Intracranial Injury"	Workers' compensation time-loss injuries and fatalities claims data	2.1% (as reported by worker's compensation claims)	23/34 (68%)
Bunn et al. 2014 Kentucky, United States [2008-2012]	Descriptive secondary analysis of surveillance data [N=1,827]	Kentucky trauma centres	Kentucky Trauma Registry database	GCS: "Coma/severe brain injury"	Primary payer: Worker's compensation	7%	24/28 (86%)
Case et al. 2018 Alaska, United States [2000-2003]	Descriptive secondary analysis of surveillance data [N=117]	Alaska's aviation industry	Alaska Trauma Registry	ICD-9-CM Severity: non-fatal injuries	"worker in the aviation industry" as recognized in the Alaskan Trauma Registry	29% (n=8) of crash related injuries (n=28) Not reported for non-crash injuries	27/32 (84%)
Cryer et al. 2014 New Zealand [2002-2004]	Descriptive secondary analysis of claims data [N=1,104]	Accident Compensation Corporate compensated claims data	Hospital discharge records and workers' compensation	ICD-10 "traumatic brain injury with or without skull fracture" Severity: ICD based ISS	Primary payer: Accident Compensation Corporation of New Zealand	24%	28/32 (88%)
da Silva and Pereira 2014 Bahia, Brazil [2005-2007]	Descriptive cross-sectional study [n=83, work typical accidents]	Private hospitals in the southwestern region of Bahia, Brazil	Unified Health System Hospital Information System	ICD-10 codes for intracranial injury, designated as "Traumatic Brain Injury"	"Work typical accidents"	3.6% <i>*Reported as 3 cases, 4.9% of fall-related traumas</i>	23/34 (68%)
Dethleff et al. 2016 Germany [2011-2013]	Descriptive cross-sectional study [n=19, traumatic injuries]	Medical evacuations from offshore wind farm	Wind farm documents, Emergency protocols	"Cerebral concussion" Severity: GCS	Employed on the wind farm	10.53% <i>*2 cerebral concussions out of 19 traumatic injuries</i>	16/28 (57%)

Fitch et al. 2015 Savar, Bangladesh [2014]	Retrospective cohort study [N=181]	Center of Rehabilitation of the Paralyzed	Survey	"Concussion, internal injury"	"Injured garment workers"	21.6%	17/28 (61%)
Green et al. 2019 Twin Cities, United States [2016-2017]	Retrospective cohort study [N=111]	Janitors who were members of the Service Employees International Union	Survey	"Concussion"	"Work-related injury was based on the National Center for Health Statistics and Bureau of Labor Statistics"	3.60%	20/28 (71%)
Gupta et al. 2017 Jhansi, India [2015-2016]	Cross-sectional study [N=309]	Railway wagon repair workshop urban area	Semi-structured questionnaire administered by an interviewer	"Crushing head injury"	Self-reported: Injuries occurring inside the working environment of the workshop	0.97%	17/28 (61%)
Hekimoglu et al. 2015 Van, Turkey [2010-2012]	Retrospective hospital document review [N=245]	Occupational accidents reported to 2 hospitals in Van both before and after an earthquake	Hospital documents	"Head trauma"	"Injuries due to occupational accidents"	Pre-earthquake period: 2.4% Post-earthquake period: 4.9%	16/30 (53%)
Herttua et al. 2019 Denmark [2004-2014]	Retrospective cohort study [N=1,401]	Merchant ships	Contacts from ships to Telemedical Assistance Service	ICD-10 diagnoses: injuries to the head (S00-S09)	Employed on merchant ships	13%	24/28 (86%)
Holloway-Beth et al. 2016 Illinois, United States [1980-2008]	Descriptive secondary analysis of claims data [N=18,892]	Law enforcement personnel injured on the job	Illinois Workers' Compensation Commission	"Body part affected: Head"	Workers' Compensation Commission claims, when disputes re: compensation are not resolved directly with employer	5.62% <i>*Calculated from table 3</i>	26/32 (81%)
Kim et al. 2016 Korea [2010-2012]	Case-control study [N=1,298]	10 emergency departments	ED-based Occupational Injury Surveillance	ICD-10 codes: "Head injury (S06.0–S06.9); Intracranial injury (S06.1–S06.9)"	Emergency Department-based Occupational Injury Surveillance database reports of injuries from falls related to paid work	13.4% head injury, 6.9% intracranial injury [10.1% of intracranial injuries fatal]	26/30 (87%)
Maguire and O'Neill 2017 United States [2012-2015]	Retrospective cohort study [N=1,630]	Emergency medical services workers	Bureau of Labor Statistics	"Body part injured: Head"	Bureau of Labor Statistics	11.66% <i>*Reported in text as 190 head injuries</i>	22/32 (69%)
Maxwell and Wozny 2015 United States [2005-2010]	Exploratory secondary analysis of surveillance data [N=800,791]	Work-related injuries in federal employees	Federal Employees' Compensation Act and FedScope	"Area of injury: Head, internal"	Federal Employees' Compensation Act workplace injury and illness claims	6.17%	26/32 (81%)
§ McIntosh et al. 2016 Australia [2000-2013]	Retrospective case series [n=53, work-related subset of study population]	Quad bike fatalities	National Coronial Information System	AIS: 'Specific injury pathology: Traumatic brain injury'	"Work activity"	20.80% [all fatal] <i>*Reported in supplemental table A9</i>	22/32 (69%)

§ Mollayeva et al. 2016 Ontario, Canada [2004]	Cross-sectional study [Total work-related injuries N=74,332]	WSIB insured workers with lost time claims	Workplace Safety and Insurance Board	Diagnosis of 'concussion', 'closed head injury', 'contusion', or 'head injury with sequelae consistent with brain injury'	WSIB lost-time claims	1.35%	23/32 (72%)
Mroz et al. 2014 Maryland, United States [1998-2008]	Descriptive secondary analysis of claims data [N=232,072]	Workers insured by IWIF	Injured Workers' Insurance Fund (IWIF) claims database	"Injury type: head"	Workers' compensation claims	2.75% <i>*Calculated from 6,386 reported head injuries</i>	25/32 (78%)
§ Nosaka et al. 2015 Okayama, Japan [2012-2014] <i>*excluded from meta analysis</i>	Retrospective cohort study [n=3, work-related subset of study population]	Okayama University Hospital	Clinical records related to hospitalizations due to falls	AIS: H= head Severity: ISS	"Working settings: Occupational"	66.67%, [50% fatal] <i>*Calculated from table 1 based on 2 reported fatalities</i>	27/30 (90%)
O'Connor et al 2017 Ireland [2011-2015]	Descriptive epidemiology study [N=944]	Horse race meetings	Race meeting injury report forms related to falls	"Concussion", "Structural brain injury"	Licensed professional jockeys	6.78% <i>*Calculated from table 3 based on sample size and 64 concussions and structural brain injuries reported</i>	26/32 (81%)
Onder and Mutlu 2017 Soma, Turkey [2006-2011]	Retrospective cohort study [N=231]	Opencast coal mines of the Aegean Lignite Enterprise of Turkish Coal Enterprises	ELI lignite coal mine accident records	"Part of body: Head"	"All accidents at work in which the person is unfit for work for more than 3 full days"	16.45%	18/28 (64%)
Ozer et al. 2014 Zonguldak, Turkey [2005-2008]	Retrospective autopsy report review [N=42]	Coal mines	Autopsy reports	"Cerebral damage secondary to blunt head trauma" Severity: Fatal	Employed in Zonguldak coal mines	26.2% [all fatal]	19/32 (59%)
Rorat et al. 2015 Wroclaw, Poland [1991-2011]	Retrospective autopsy report review [N=120]	Farm-related fatalities	Medico-legal autopsy reports by the Department of Forensic Medicine	"Isolated lethal cranio-cerebral injuries"	"Activity related to (work on the farm) agriculture."	14.17% [all fatal] <i>*Reported as 17 lethal cranio-cerebral injuries</i>	16/28 (57%)
Sears et al. 2014 Washington, United States [1998-2008]	Retrospective cohort study [N=4,700]	Insured workers in Washington state	Washington State Trauma Registry & worker's compensation claims	ICD-9-CM code of 800.0-801.9, 803.0-804.9, 850.0-854.1, 950.1-950.3, or 959.01. Severity: ISS	Workers' compensation claims	19.83% [1% fatal] <i>*Reported as 932 TBI, 9 fatal</i>	33/34 (97%)

Swanberg et al. 2016 United States [2013-2014]	Cross-sectional study [n=97, participants reporting an injury in the past year]	Workers currently employed at a thoroughbred farm	Questionnaire	"Injury site: head"	Self-reported: "Thinking about your current job on the horse farm, in the past 12 months have you had a work-related injury?"	7.22% <i>*Calculated based on sample size and 7 reported head injuries</i>	20/28 (71%)
Syron et al. 2018 Alaska, United States [2010-2015]	Cross-sectional study [N=304]	Commercial fishing industry vessels	Commercial Fishing Safety Research and Design Program surveillance data, Coast Guard reports	OIICS: "Nature of injury: intracranial injury"	Traumatic injuries among seafood processors that were reported to the US Coast Guard	5.26%	30/34 (88%)
Tsioras et al. 2014 Austria, [2000-2009]	Cross-sectional study [N=1,077]	ÖBf wood-cutting activities	ÖBf registries	"Type of injury: Concussion"	ÖBf employed fulltime forest workers	1.2%	13/30 (43%)
van Leeuwen and Harte 2017 Netherlands [2011]	Retrospective cohort study [N=1,294]	Dutch mental health professionals working in inpatient psychiatric facilities	Online questionnaire	"Concussion"	Working in inpatient psychiatric facilities	1.62% <i>*Calculated from table 3 based on sample size and 21 reported concussions</i>	20/28 (71%)
Witt et al. 2018 Kentucky, United States [2005-2015]	Descriptive secondary analysis of claims data [N=4,377]	Kentucky Department of Workers' Claims	WC first reports of injury data	"Nature of injury: Concussion"	Workers' compensation claims	1%	25/32 (78%)
Yadav 2019 Dadra and Nagar Haveli, India [2017]	Capture-recapture epidemiological study [N=113]	Dadra and Nagar Haveli territory	Police First Information Reports, government health facility records	ICD-10 (otherwise unspecified) "Body part: Head"	"Accident in industrial unit"	7.08%	20/32 (63%)

Acronyms: AIS - Abbreviated Injury Score, ED - Emergency Department, GCS - Glasgow Coma Scale, ICD - International Classification of Diseases (versions 9 or 10), ISS - Injury Severity Scale, mTBI - mild traumatic brain injury, OIICS - Occupational Injury and Illness Classification System, TOOCS - Type of Occurrence Classification System, WC - Workers' Compensation, WSIB - Workplace Safety and Insurance Board (Ontario)

§ indicates studies in multiple summary tables