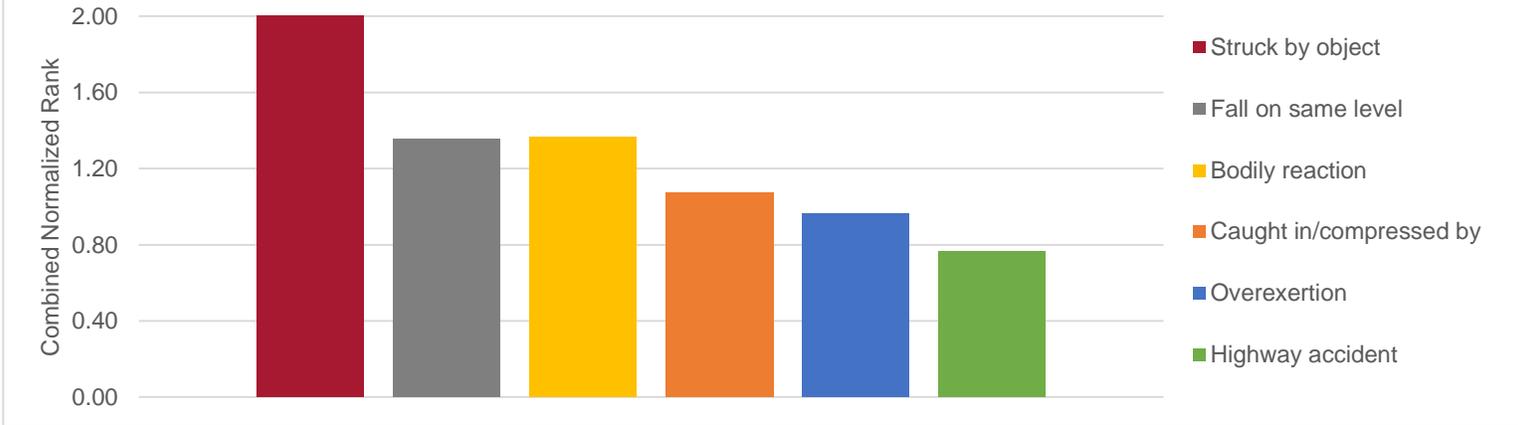


# Top Target Injuries for Upstream Oil & Gas Industry in Saskatchewan (2013-2017 Q2 Data)

Data Source: Saskatchewan Workers' Compensation Board (WCB), as of 2017 Q2

**Fig 1: Top Injuries in Upstream O&G Industry in SK (2013-2017 Q2) By Claim Severity & Claim Frequency**



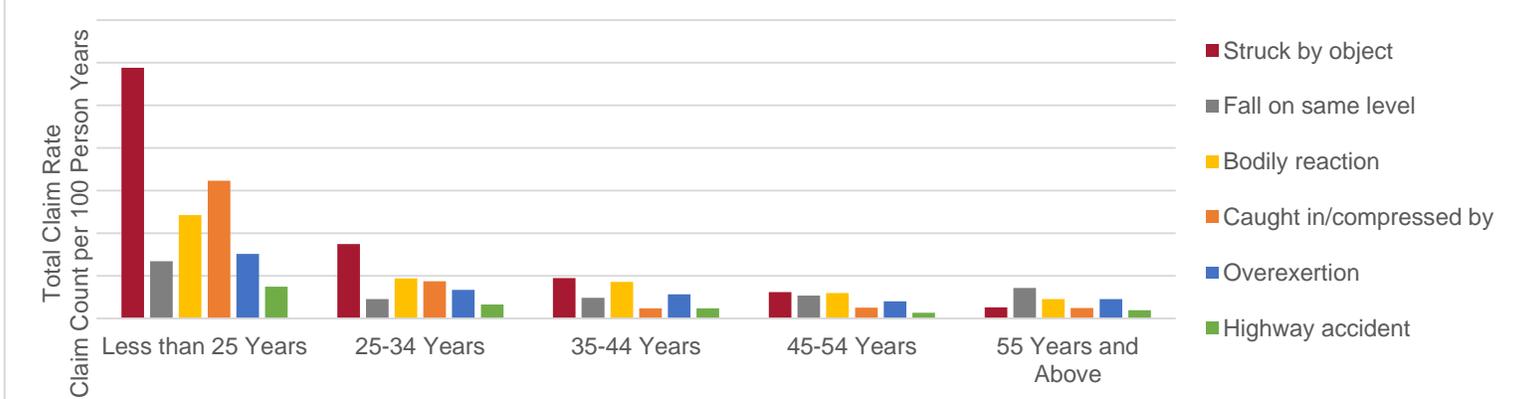
**Table 1: SK Top 10 Injuries - by Severity (Claim Cost)**

#	Top Injuries-Type of Accident	Total Claim Cost (2013-2017 Q2)	% of Total Cost
1	Struck by object	\$2,799,737	15%
2	Fall on same level	\$2,599,499	14%
3	Bodily reaction	\$2,023,408	11%
4	Caught in/compressed	\$1,677,524	9%
5	Highway accident	\$1,599,153	8%
6	Fall to lower level	\$1,511,163	8%
7	Overexertion	\$1,448,842	8%
8	Exposure-noxious substance	\$924,984	5%
9	Fire-unintended/uncontrolled	\$625,949	3%
10	Bodily condition, NEC	\$519,706	3%
<b>Grand Total</b>		<b>\$15,729,966</b>	<b>83%</b>

**Table 2: SK Top 10 Injuries - by Frequency (Claim Count)**

#	Top Injuries-Type of Accident	Total Claim Count (2013-2017 Q2)	% of Total Count
1	Struck by object	630	21%
2	Bodily reaction	405	13%
3	Caught in/compressed by	299	10%
4	Overexertion	283	9%
5	Fall on same level	270	9%
6	Exposure-noxious substance	183	6%
7	Struck against object	137	4%
8	Highway accident	125	4%
9	Fall to lower level	111	4%
10	Contact with temperature extreme	82	3%
<b>Grand Total</b>		<b>2,525</b>	<b>82%</b>

**Fig 2: Top Injuries in Upstream O&G Industry in SK (2013-2017 Q2) By Worker Age Group**





## Glossary

**Target Injuries:** Claims grouped by type of accidents (event or exposure) over the given period of time.

**Age Groups:** Age groups are based on the worker's age when injury was incurred.

**Claim Severity:** It is the function of claim cost, and is based on the assumption that claims involving higher costs are more severe in nature.

**Claim Frequency:** It is the function of claim count. Higher claim frequency implies higher claim count for a specific injury type over a period of time.

**Claim Cost:** It is the cost covered by the Alberta WCB for all claims. This includes medical costs, rehabilitation costs, compensation costs and pension costs.

**Claim Rate:** The number of work-related injury claims per 100 person years worked. The claim rate for age groups is calculated using Statistics Canada data.

**Person Years:** The estimated number of full-time equivalent workers at a company. Full-time workers = 2000 person hours per year. It is derived from the employer's reported insurable earnings and the rate code's average weekly wage.

**Normalized Ranking:** For both claim severity and frequency, each of the target issues was given a normalized ranking using a method called feature scaling. This method scales the observed values to a range between 0 and 1, using this formula:

$x' = (x - \min(x)) / (\max(x) - \min(x))$ , where  $x$  is an original value, and  $x'$  is the normalized value.

Ranks from both variables (frequency and severity) are then combined together to give the final ranking.

**Upstream Oil & Gas Industry in Saskatchewan:** Includes four Rate Codes (21 Sub Codes) that fund Enform as their Safety Association:

1. Operation of Oilwells - D32
2. Oilwell Servicing - D41
3. Service Rigs and Water Well Drilling - D51
4. Seismic Drilling - D52

**Type of Accident:** Manner in which injury or disease was produced or inflicted by identified source (e.g. struck by object). The following definitions of top target injuries are sourced from CSA standard Z795-Coding of Work Injury or Disease Info.

**Struck by Object:** The "struck by" codes apply to injuries produced by forcible contact or impact between the injured person and the source of injury when the motion producing the contact is primarily that of the source of injury rather than the person.

**Fall on Same Level:** Fall on same level applies to instances in which the injury was produced by impact between the injured person and the source of injury, the motion producing the contact being that of the person, under the following circumstances: (a) the motion of the person was generated by gravity following the person's loss of equilibrium; and (b) the point of contact with the source of injury was at the same level or above the surface supporting the person at the inception of the fall.

**Bodily Reaction:** Codes in this major group apply to injuries or illnesses resulting from a single incident of free bodily motion which imposed stress or strain on some part of the body. Generally, codes in this major group apply to the occurrence of strains, sprains, ruptures, nerve damage, or other internal injuries or illnesses resulting from the assumption of an unnatural position or from voluntary or involuntary motions induced by sudden noise, fright, or efforts to recover from slips or loss of balance (not resulting in falls).

**Caught In or Compressed by Equipment or Object:** This major group includes cases in which the injury was produced when a person or part of a person was injured by being squeezed, crushed, pinched, or compressed between two or more objects, or between parts of an object. Codes in this major group apply when a person, or part of a person's body, was squeezed, pinched, compressed, or crushed in operating equipment, between other meshing objects, between a moving and stationary object, or between two or more moving objects.

**Overexertion:** Overexertion applies to cases, usually non-impact, in which the injury or illness resulted from excessive physical effort directed at an outside source of injury. The physical effort may involve lifting, pulling, pushing, turning, welding, holding, carrying, or throwing the source of injury.

**Highway Accident:** Highway accidents include accidents to vehicle occupants occurring on that part of the public highway, street, or road normally used for travel, as well as the shoulder and surrounding areas, telephone poles, bridge abutments, trees aligning roadway, etc.

Data Disclaimer: While every reasonable effort has been made to ensure the accuracy of the data used in this report, data should be read as indicative of scope rather than exact figures. The variable nature of WCB claims management may be reflected in the data shown.

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