



Work at Height Training, Knowledge and Understanding Forum

Working at Heights Association

Reaching new levels of safety

13th May 2021



Working at Heights Training

Time for a New Approach

Presented by Michael Biddle

13th May 2021

Training In the height safety industry

- A review of the numbers / statistics
- The need for a standardised training approach
 - ASQA and Nationally Recognised Training
 - AS/NZS 1891.4
 - OSHA 1926 Subpart M
 - Oil Sands Safety Association
 - Singapore – Ministry of Manpower
 - IRATA
- Setting a New Standard
 - Developing a curriculum and framework to delivery outcomes based on safety and not compliance, without increasing cost and time to business
- Next Steps

- Serious injuries from 2000 – 2019 due to falls have virtually stayed the same.
 - 2000
 - 26,000 total
 - 24% of all serious injuries
 - 2019
 - 26,000 total
 - 23% of all serious injuries

Source: Work related traumatic injuries fatalities report – SafeWork Australia 2019

- Median Lost time (weeks) from 2000 - 2019 due to falls
 - Fall from height
 - 5.6 - 7.9(fall from height)
 - Increase of 41%
 - Same level fall
 - 4.2 - 6.4
 - Increase of 52%

Source: Work related traumatic injuries fatalities report – SafeWork Australia 2019

- Median WCB Payout from 2000 - 2018 due to falls
 - Fall from height
 - \$5,800 - \$16,800
 - Increase of 189%
 - Same level fall
 - \$4,200 - \$12,200
 - Increase of 191%

Source: Work related traumatic injuries fatalities report – SafeWork Australia 2019

- Despite advancements in:
 - Equipment
 - Legislation
 - Standards
- We seem to be getting no further ahead in protecting our workers, *particularly with regard to injuries;*
- The cost to business in terms of gaining 'compliance' is ever increasing.
- Training is our outlier. It is simply not delivering the outcomes intended.

The core principles and design for heights training has not substantially changed in the past 25 years. However:

- Courses are becoming condensed and commoditised.
- Achieving a “ticket” has become the goal versus attaining a skill.
- No consistency from training company to training company or often even within a single training organisation between instructors.
- Workers lack the knowledge to apply core theories and techniques to changing situations. Companies must re-train workers to their site systems to ensure compliance.

“Compliance Safety”

But doesn't our National VET system ensure quality training?

- ASQA ensures that Registered Training Organisations comply to the ASQA standards and that courses meet the competencies on the RTO scope.
- ASQA does not assess if the training is “good”, “effective” or even “correct” - merely that it addresses and assesses the performance criteria outlined in the competency.
- Five Heights competencies on training.gov.au
 - CPPCL03036 Clean at heights
 - UETDRRF05 perform rescue from switchyard structures at heights
 - PUASES013 Undertake storm and water damage operations performed at heights
 - RIIWHS204E Work Safely at Heights
 - CPCCCM2012 Work safely at heights

Isn't there a training standard in AS/NZS 1891.4?

- ASNZS 1891.4 Appendices "F"?
 - outlines levels of training;
 - provides sample content/syllabus;
 - Interpreted differently across states and territories and NZ having their own basic training framework;
 - doesn't describe/prescribe how the training should be delivered;
 - is an informative appendices in a non-enforceable standard.
 - not even a "recommended practice"

United States OSHA 1926 subpart M

- 1994 US government enacted legislation for fall protection within the construction industry, the 6' rule;
- outlined the knowledge requirement of a “competent person”;
- would not outline the training requirement to achieve that knowledge;
- created a training industry but left it to the marketplace to determine value and success.

United States OSHA 1926 subpart M

- 1994 US government enacted legislation for fall protection within the construction industry, the 6' rule;
- outlined the knowledge requirement of a “competent person”;
- would not outline the training requirement to achieve that knowledge;
- created a training industry but left it to the marketplace to determine value and success.

Oil Sands Safety Association, Alberta Canada

- With an annual and sometimes bi-annual shutdown, the mines would see a massive influx of maintenance workers for a 2 – 6 week period;
- originally, each mine would provide their own induction and safety training creating a massive overlap and repetition of knowledge;
- regional mines formed the Oil Sands Safety Association setting a training standard and mandating that any workers coming onto any Oil Sands site must have the OSSA's training;
- Audited and licensed training courses that met their standard criteria, including content, delivery method and timing.

Singapore – WHS overseen by the Ministry of Manpower

- Falls are top contributor to workplace deaths – more than 1/3rd total
- Adopted Regulations based broadly on Safe Work Australia principles and Codes of Practice
- Established a country-wide Standard for Fall Protection training that all companies and workers had to abide by or face significant penalties
- Audited and licensed training courses and training centres within Singapore that met their standard criteria, including content, delivery method and timing
- Have a highly transient work force in the construction sector

Singapore – Fatalities results – last 5 years

Number of Workplace Fatal Injuries

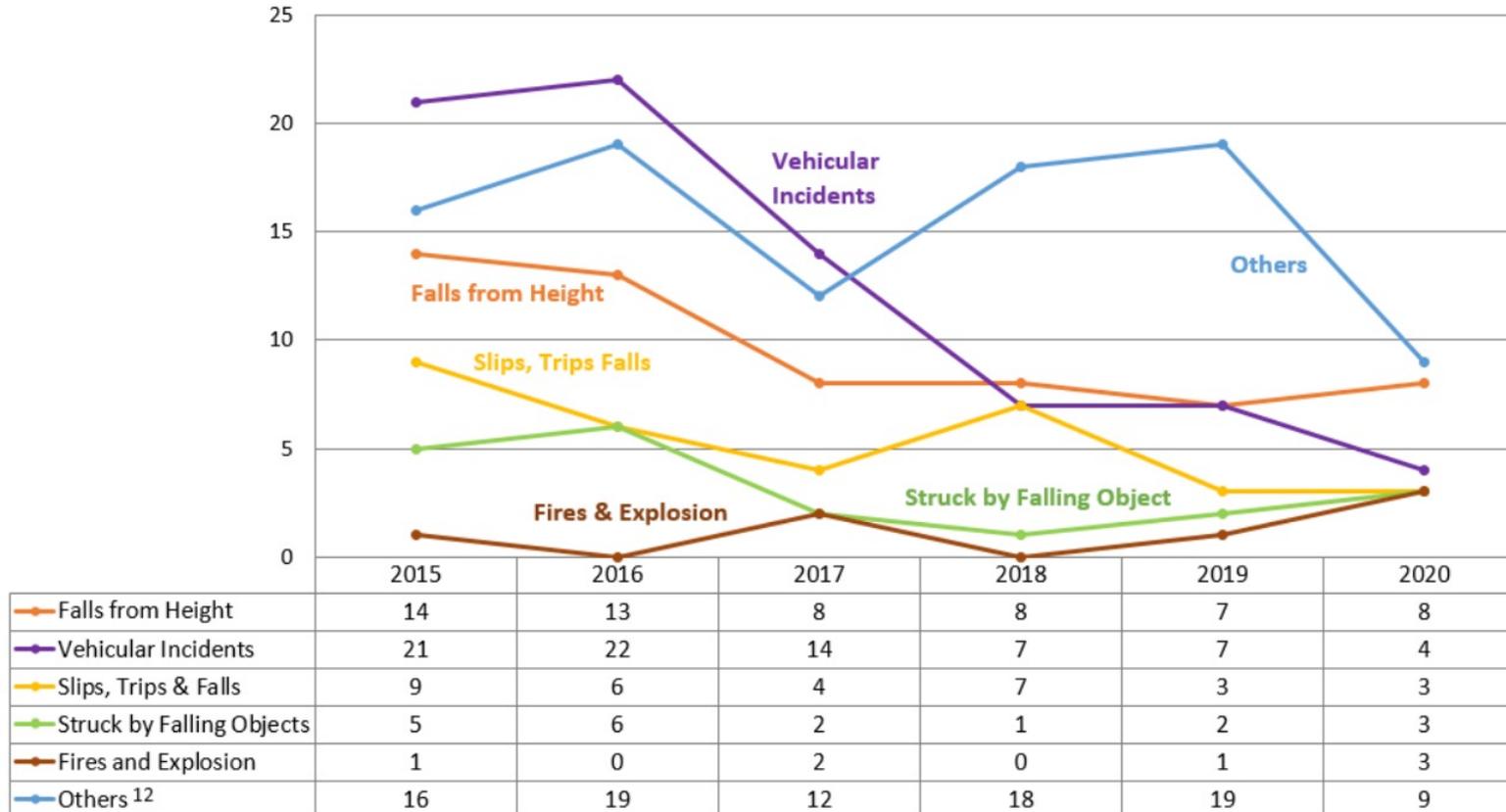


Figure 4: Number of workplace fatal injuries by cause of injury, 2015-2020

SOURCE: WORKPLACE SAFETY & HEALTH REPORT, 2020

Singapore – significant decline in construction where most fatalities occur

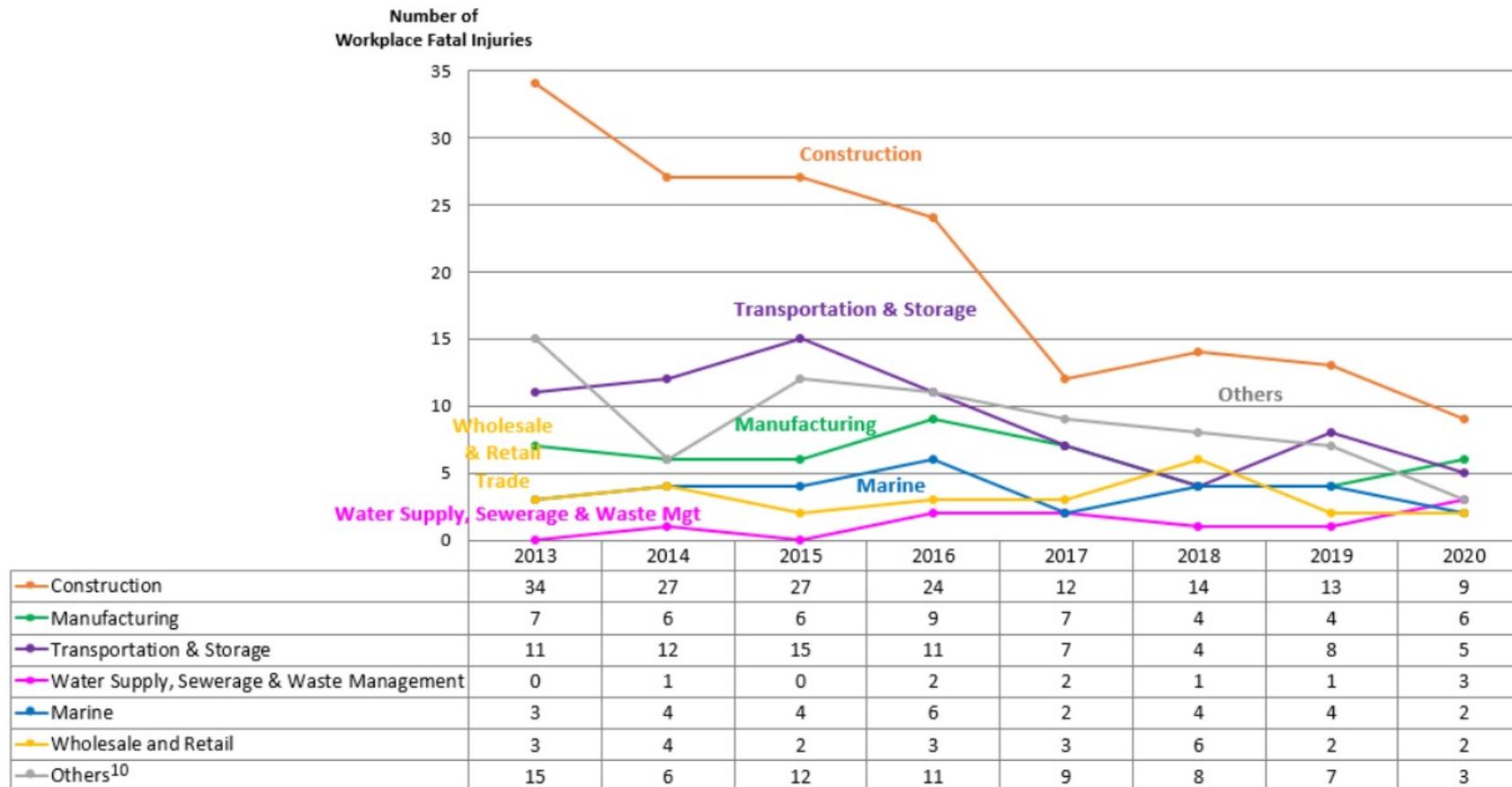


Figure 3: Number of workplace fatal Injuries by industry, 2013-2020

SOURCE: WORKPLACE SAFETY & HEALTH REPORT, 2020

Singapore – Fatalities declining – last 5 years

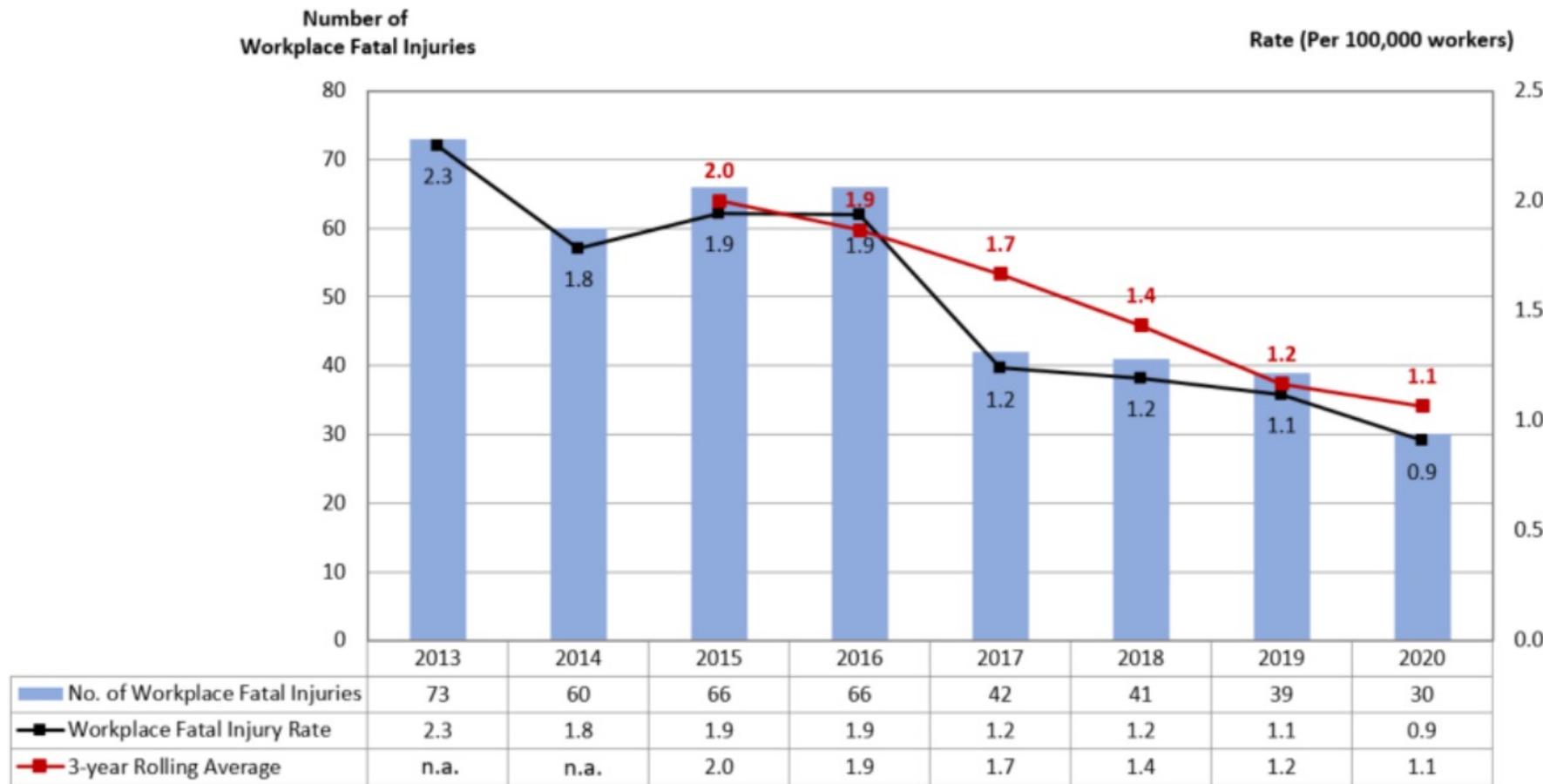


Figure 2: Number and rate of workplace fatal injuries, 2013-2020

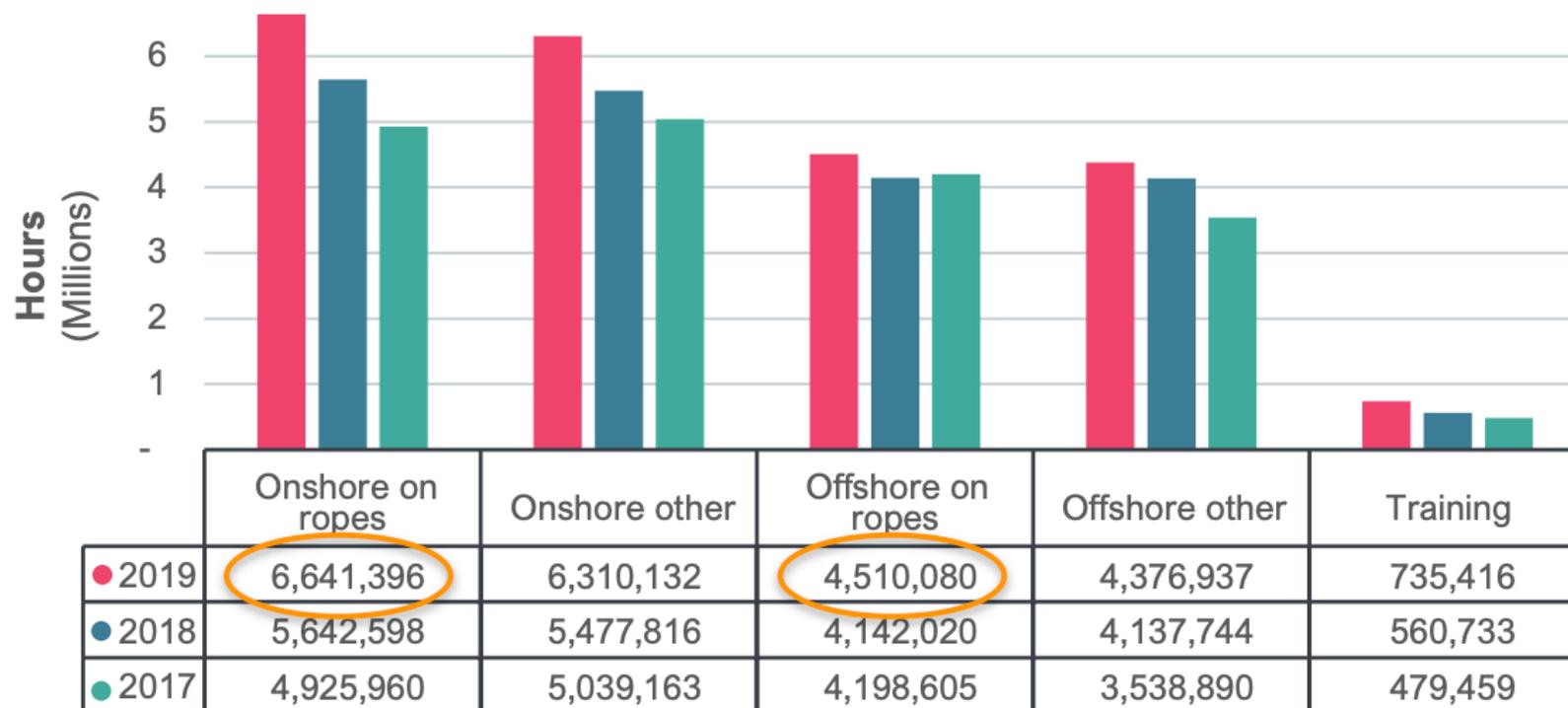
SOURCE: WORKPLACE SAFETY & HEALTH REPORT, 2020

International Rope Access Trade Association (IRATA)

- Addressing a need for high risk technical operators to access and work in difficult situations IRATA developed a system of training and work methodology that could move easily from one industry to the next;
- Course structure, content, delivery and assessment are set and consistent regardless of who the training company is or their industry specialisation;
- IRATA maintains the certification and auditing of members and training organisations.
- Site/project owners specify IRATA certification as a pre-requisite for contracts because they know they receive a consistent and qualified skillset for their jobs.

IRATA - over 11M hours globally on ropes in 2019, with another 11M off ropes

Figure 4 | Distribution of Work Hours by Location



IRATA Statistics

Fatalities happen, but extremely rarely

Injury frequency rate extremely low, especially considering the risk exposure

| Reportable | 2019 | 2018 | 2017 |
|--------------------------|------|------|------|
| Fatal | 1 | 0 | 3 |
| Major | 2 | 1 | 1 |
| Serious (over 7 days) | 7 | 4 | 9 |

| Location | All Reports | All near misses | All injuries* | Injuries per million hours |
|---------------|-------------|-----------------|---------------|----------------------------|
| Onshore | 154 | 121 | 33 | 2.55 |
| Offshore | 53 | 24 | 29 | 3.15 |
| Training | 39 | 28 | 11 | 14.96 |
| Total/Average | 246 | 173 | 73 | 3.23 |

Global Examples that Worked

Accident rate extremely small due to high quality management and training system.

Appendix I • Accident Rates for 'On Rope' Working 1989 - 2019

| Year | No. of Members | Work hours on ropes | No. 'not reportable (less than 7 days injuries) | Reportable all accidents (fatal, major, over 7 days injuries) | Reportable all accident rate (per 100,000 FTE) ^{***} | Rate for all accidents ^{****} |
|------|----------------|---------------------|---|---|---|--|
| 1989 | 9 | 267,504 | 8 | 0 | 0 | 6000 |
| 1990 | 12 | 327,645 | 7 | 0 | 0 | 4260 |
| 1991 | 16 | 457,928 | 17 | 0 | 0 | 7420 |

| | | | | | | |
|--------------|-----|--------------------|------------|------------|----|-----|
| 2019 | 516 | 11,151,476 | 36 | 4 | 72 | 718 |
| TOTAL | | 107,781,083 | 556 | 101 | | |

Based on 2,000 hours per person per annum

** Col 5 divided by col 3 (x 2000 x 100,000)

* Units for Accident Rate (AR) number per 100,000 workers

*** Col 4 + 5 divided by col 3 then x 2000 x 100,000

Global Examples that Worked

3 fatalities in 2017 skew the comparative results however the overall result is clear.

Table 5 ; Accident Rates v UK HSE 2018/19 Data

| Industry | Fatalities | Major Injury | Over 7 days injuries | Total (excludes fatalities) |
|----------------------------------|------------|--------------|----------------------|-----------------------------|
| Agriculture, forestry, fisheries | 9.2 | 205 | 302 | 507 |
| Manufacturing | 0.92 | 106 | 362 | 468 |
| Construction | 1.3 | 128 | 239 | 366 |
| All industries | 0.45 | 65 | 189 | 254 |
| IRATA | 10* | 18 | 62 | 80 |

(All figures, except fatalities, in rounded numbers of injuries per 100,000 employees)

*5-year average

<http://www.hse.gov.uk/statistics/tbles/index.htm> (e.g. See RIDHIST and RIDIND - 2018/19p – p is provisional)

Table 7 ; Accident Rates v USA BLS 2018 Data

| US private industry sector | Fatalities | Non fatal injuries and illnesses with days away from work (private industry) |
|----------------------------------|------------|--|
| Agriculture, forestry, fisheries | 23.4 | 1,701 |
| Manufacturing | 2.2 | 939 |
| Construction | 9.5 | 1,,154 |
| All private industry | 3.7 | 897 |
| IRATA | 10* | 117 |

*5-year average

<https://www.bls.gov/news.release/pdf/cfoi.pdf>

https://www.bls.gov/iif/oshwc/osh/case/cd_r75_2018.htm (e.g. Injuries/illness Table R5)



The Need For Standardised Training

- As an independent association with members from a wide range of industries, W.A.H.A. is raising the prospect that the following is possible to establish:
 - A designated qualification system including training requirements and experience;
 - Training Standards for each level of qualification detailing
 - content;
 - minimum time spent on theory;
 - required practical exercises;
 - training prop/structure minimum requirements;
 - Management system to record and oversee qualified workers.
 - Accreditation, auditing and management of Training Delivery Partners.
- The WAHA board and members have agreed to investigate the opportunity to pursue such an objective under the following guidelines:



- Conduct a market study identifying support for a training standard and heights qualification system (this forum)
- If there is a broad ranging industry commitment to change and pursuing this objective, move forward towards:
 - Formalising qualification structure and required training;
 - Develop milestones for delivery;
 - Begin course and system development;
 - Maintain contact with industry to ensure mutual needs are being met.



**Working
at Height
Association**

Reaching new levels in safety

Thank You.