

SERIOUS INJURY AND FATALITY PREVENTION - CAN THEY BE PREVENTED?



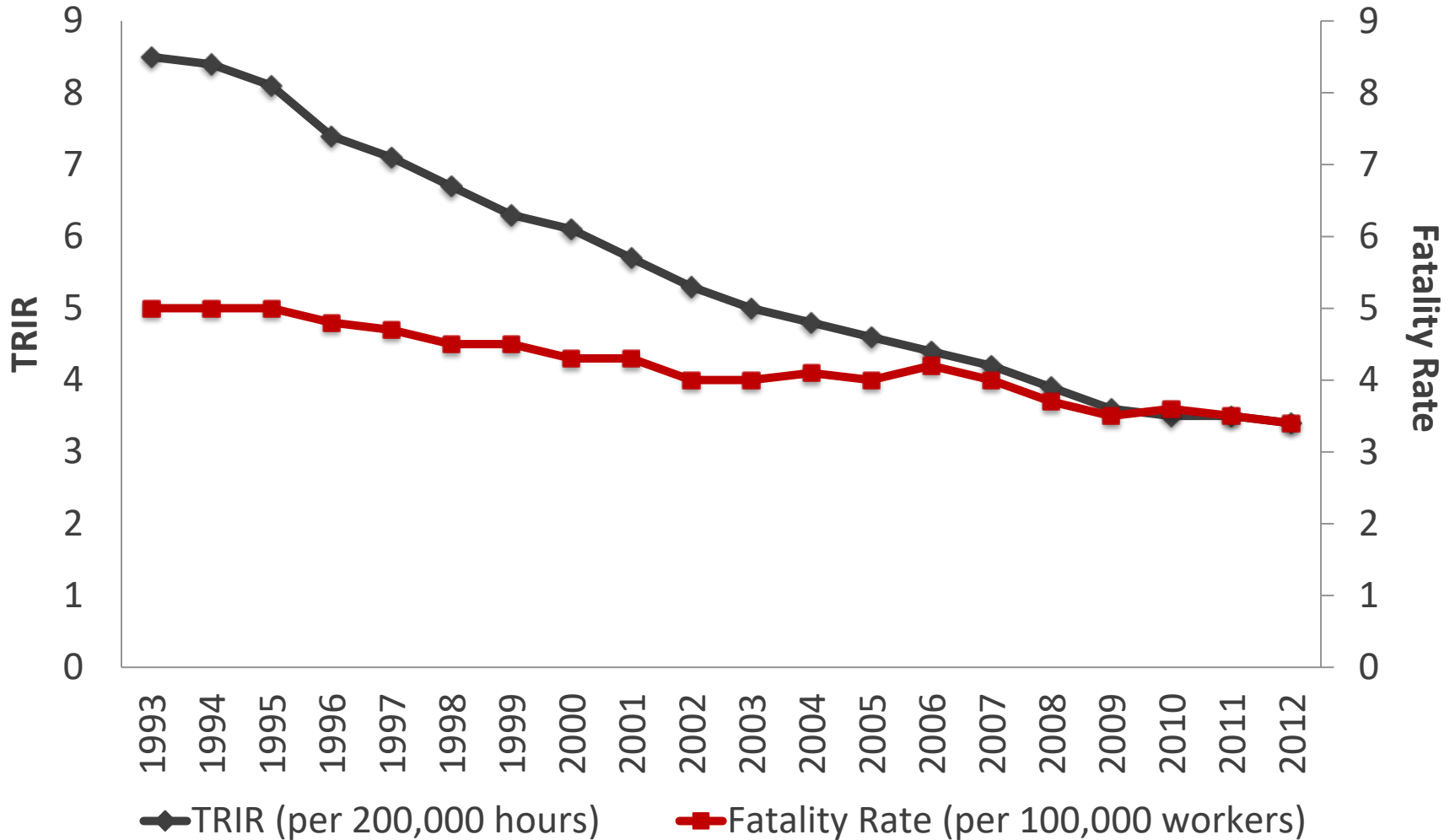
(David Christopher Musgrave)
DEKRA Insight.

© 2016 DEKRA Insight. All rights reserved. TRADE SECRET – INTERNAL USE ONLY. All trademarks are owned by DEKRA Insight, reg. U.S. Pat. & Tm. Off.; Reg. OHIM and other countries as listed on our website.

Overview

- Despite declining injury rates, severe incidents continue to occur in the workplace.
- Traditional safety efforts often fail to address serious injuries and fatalities because they're not designed to do so.
- In this session, we will discuss ways to identify where a serious injury or fatality may occur and how to prevent them from happening.

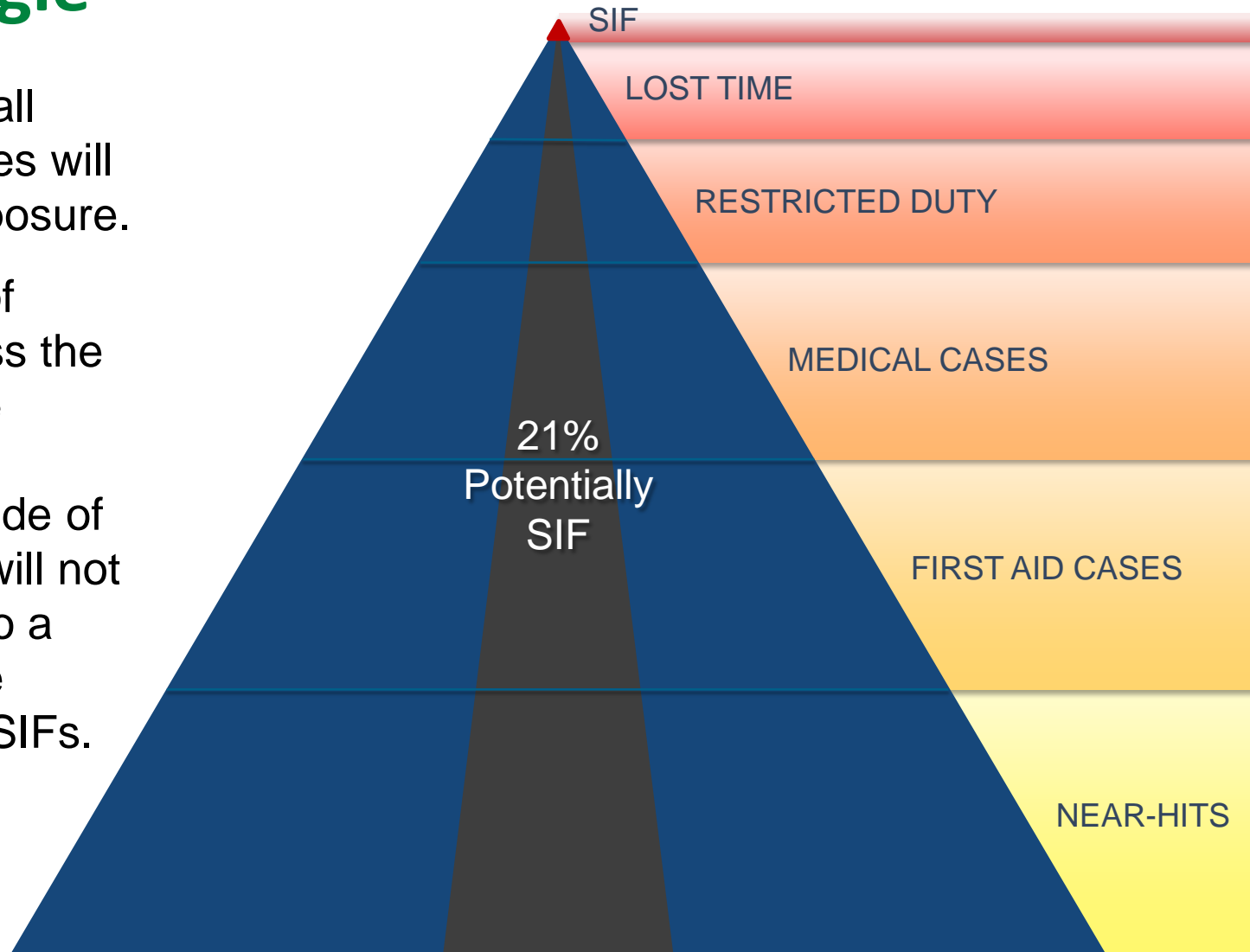
U.S.A. Incident & Fatality Trends



SIF Triangle

A sub-set of all reported cases will have SIF exposure.

A reduction of injuries across the bottom of the triangle and working outside of SIF triangle will not correspond to a proportionate reduction of SIFs.



Precursors

SIF Precursor: A high-risk situation in which management controls are either absent, ineffective, or not complied with, and which will result in a serious or fatal injury if allowed to continue.

Our Research

- A BST study of 55 SIF/SIF-Potential cases has confirmed that the SIF precursors, pre-conditions, and exposures that contributed to the occurrence of these incidents would be discoverable through discussions, interviews, and/or observations in 87% of the cases.
 - Example: Work at Height – scaffold, tied off, harness / lanyard

BBS Observation

vs.

SIF Interview

4.0 Procedures	Safe	At Risk
4.1 Lock Out/Tag Out		
4.2 Confined Space Entry		
4.3 Hot Work		
4.4 Working at Height	X	
4.5 Communication of Hazards		

4.4 Protection from Falls >= 4 ft.	Protected	Exposed
1. 5000 lb rated anchor point		X
2. Harness inspected & good condition	X	
3. PFAS set to prevent contact	X	
4. Body stays within rails (no leaning)	X	
5. Scaffold erected by qualified person		X

Considerations for SIF Planning and Execution

- SIF potentials – the combination of actual serious injuries and fatalities with less serious injuries that have SIF potential
- Engage employees at all levels, use data analysis to understand sources of precursors, and create sustainable mitigation processes
- Data from significant operational upsets, design flaws, catastrophic fires etc. should inform the strategy

One Piece of the Puzzle: Defining SIF-specific Protection Checklists

Sources:

- Life Saving Rules
- Life Saving Processes
- Permitted Procedures
- Incidents
- BBS Data
- Near Hit Reports

SIF Protection Verification Checklist				
Category 4.4: Protection from exposure to falling into moving machinery or from height \geq 4ft (e.g., ladders, platforms, docks)?				
The following behaviors and conditions are critical to preventing falls into moving machinery or from height \geq 4ft. Absence of these behaviors and conditions lead to incidents that may be severe, life altering or life threatening.				
INSTRUCTIONS: For each behavior or condition, mark Protected (P), Exposed (E), or N/O (Not Observed).				
#	SIF Protection Measure	P	E	N/O
1	Fall Protection Plan / Risk Assessment / JHA / JSA Posted	P	E	N/O
2	Correct use of PFAS (includes all items below)			
	5000 lb rated anchor	P	E	N/O
	Lanyard /anchor systems set to prevent contact	P	E	N/O
	PFAS inspection current / in good condition	P	E	N/O
	Body harness worn correctly	P	E	N/O
3	6" Rule used	P	E	N/O
4	OSHA approved barricades (handrail and toe board) or car top handrail system	P	E	N/O
5	Ladders used are approved and designed for use, inspected, safe working condition	P	E	N/O
6	Any floor and wall openings (over 12" x 12" x 4') are covered	P	E	N/O
7	Employee uses 3 point contact when ascending or descending	P	E	N/O
8	Body stays within rails (no leaning or reaching)	P	E	N/O
9	Machine guarding in place	P	E	N/O
10	Scaffold erected, inspected and approved by competent and qualified person	P	E	N/O
Totals:				

SIF Interview/Observation Process

System Elements

Assess and Plan

- BBS system
- SIF Exposure Assessment
- Id qualified Observers
- Id SIF Exposure Team
- Identify goals and objectives

Educate and Communicate

- Review assessment findings
- Develop SIF Protection Checklists
- Plan implementation

Implementation

- Teach qualified observers to conduct interviews
- Coach interviewers
- Define tracking and sustain

Review and Sustain

- SIF prevention systems
- Results
- Report out

Objectives

Enhance BBS system to detect and uncover SIF exposures

Develop Observers to be SIF Interviewers

Improve SIF prevention and mitigation systems

Outcomes

SIF exposure reduction

Improved relationships

System improvements that impact SIF exposure

Framework for solving problems collaboratively

Measures

Culture

Pause work

LSSR Verification

SIF exposures mitigated

Interviewer engagement

Management System Integrity

QUESTIONS / COMMENTS