



Transitioning from Lagging to Leading Indicators: How a Near Miss Program is Changing Safety Culture

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Who We Are and What We Do

- WuXi is a CDMO – Contract Development and Manufacturing Organization
- GMP facility
- Manufacture products for clients to treat patients
- Perform biosafety testing for biotherapeutics and vaccines

Our Vision

To significantly contribute to the **growth** of Advanced Therapies by **accelerating** and **transforming development** and **manufacturing** through our **enabling platforms** and technologies to the benefit of patients worldwide.

Our Commitment to Safety

Reflected in our EHS Policy, signed by and supported by our Senior Leadership.

Introduction

Developing a culture of safety in the workplace often requires a shift in mindset and attitude.

- Behavior modification strategies providing education, tools, repetition and positive reinforcement are crucial
- It is a step-wise process, requiring time and patience from all involved

Introduction

- Requires measurable observation
 - Observations should be indicators of a potential future problem, not reactionary toward an accident or injury
- A change in safety behavior is ideally reflected as a change in the number of accidents/injuries
- A Near Miss program was developed to facilitate safety awareness in order to reduce accidents/injuries and increase employee safety

Key Terminology

Leading Indicator – observation of a condition or behavior that could result in an accident/injury if not corrected/modified

Lagging Indicator – an accident/injury due to an unsafe condition or behavior

Total Recordable Incident Rate or TRIR – a measure of workplace safety, incorporating the number of accidents/injuries falling under the guidelines and the total number of hours worked by employees

Key Terminology

Industry Standard TRIR – the measure of workplace safety, normalized by the type of business conducted and number of employees

Recordable Accident/Injury – an incident in which an employee is hurt or exposed to chemical, biological or radiological material, and meets published standards with regard to treatment or lost work

Near Miss – observation of an unsafe condition or behavior; a type of Leading Indicator

The Problem

- Approximately 80 – 95% of accidents/injuries in the workplace are preventable – caused by unsafe behaviors, not unsafe conditions
- Unsafe behaviors often occur because of time constraints (rushing), improper or insufficient training, or not knowing/realizing a behavior is unsafe
- Correction of these behaviors may be framed in a negative manner
- How can personnel be encouraged to choose safer behavior?

The Approach – Facilitate Awareness

- Develop/implement Near Miss program
 - Utilize program to track types of unsafe conditions /behaviors
 - Coach near miss submitter
 - Address immediately
 - Involve department with ownership / submit Work Order
 - Share information
 - Discuss potential impact and resolution with colleagues
 - Depersonalize near misses – no blame

History of Annual TRIR at WuXi

- WuXi is a rapidly growing company, and in small companies, even one recordable injury/illness has a large impact on the TRIR.
- Prior to implementation of a Near Miss Program, the TRIR was at or slightly above the Industry Standard TRIR.
- Following program implementation mid-year 2017, the TRIR dropped substantially below the industry standard TRIR.
- Is this reduction replicable? Has employee awareness facilitated a reduction in recordable injuries/illness?

The Case Study

The Year: 2018

Industry Standard TRIR: 1.5

Company Goal: 1.2 (20% lower than Industry Standard TRIR)

Strategy: Utilize near miss program to facilitate safe behavior awareness

Provide positive feedback:

- EHS interaction with submitter to validate understanding of a near miss and how to mitigate.
- Periodic gift card drawings, with an entry for each near miss submitted
- Site-wide lunch for meeting near miss reporting goal

The Case Study

The Data:

Hundreds of near misses submitted in 11 categories

EHS focused more time on high frequency and high risk incident follow-up

- Programs developed to address higher risk concerns

Category	% of Near Misses
Biological	0.0%
Chemical	7.9%
Electrical	2.2%
Fire, Life Safety	20.9%
Housekeeping	1.0%
Mechanical Issues	1.7%
Physical	32.2%
Procedural	14.7%
Sharps	5.8%
Spills	9.6%
Other	4.1%

The Case Study

The Outcome:

TRIR Industry Standard: 1.5

TRIR Site Goal: 1.2

TRIR for 2018: 0.38

Final TRIR for 2018 was 67% lower than the goal
and 75% lower than the Industry Standard

The Case Study

The Conclusion:

Training personnel to identify, report and correct leading indicators in the form of unsafe conditions and behaviors appears to have resulted in a substantial reduction in lagging indicators – work-related accidents and injuries.

Establishing a positive, “no blame” environment may have contributed to the large number of reported observations.

Continued Efforts

Personnel continue to submit near misses and have taken responsibility for ensuring corrective actions are taken. The company's TRIR to-date continues to be substantially lower than the industry standard for its size and industry.

The site has just introduced a Behavior-Based Safety Program, an umbrella for all the programs serving to facilitate personnel in making safer choices. It is leadership-driven, interactive, and observational. The program relies on identifying both safe and unsafe behaviors and working to resolve the unsafe behaviors.



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Thank you for your time!

“Providing positive reinforcement to making safe behavior a habit”

-Pam Vu