

Preparing WCI Data To Work *for* You

From Compliance Records to Prevention Intelligence
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Overview

- Two Systems, One Blind Spot
- Compliance Systems and Their Limits
- The Safety Manager's Dilemma
- What Understanding Actually Requires
- Risk Recognition and Assessment Tools
- Risk Mitigation Tools
- The WCI Data Opportunity

Two Systems, One Blind Spot



Two Systems, One Blind Spot

The Systems We Have

- OSHA 300 Log: records what crosses the recordability threshold
- WCI Data: records what becomes a compensable claim
- What they are
 - Mandated
 - Familiar
 - Architected for compliance, not comprehension
- What they are not
 - Architected for comprehension
 - Central tension: recording an injury $\neq$ understanding one

Two Systems, One Blind Spot

Falling Through Both Nets

What	How
Near misses	Highest analytical value; hazard present, outcome still preventable
Denied claims	An injury occurred; compensability silent on workplace fault
Non-recordable injuries	First aid cases, the long tail below the OSHA threshold
Non-compensable medical-only cases	Treated, closed, invisible to WCI analysis
Unreported incidents	Dark matter; every safety manager knows it exists and cannot measure it
Property damage events	Same causal chain as an injury, different outcome that day
Behavioral and environmental precursors	Conditions that precede the event

Two Systems, One Blind Spot

Falling Through Both Nets

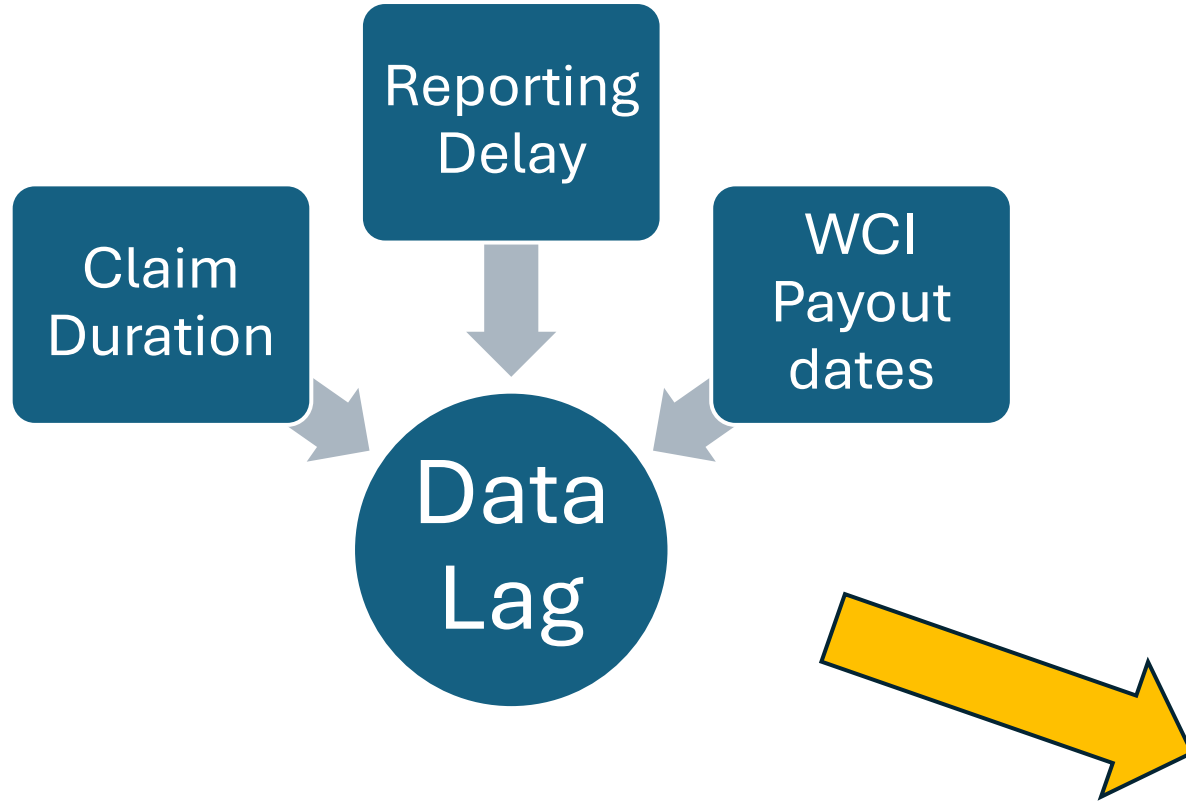
Both systems are designed to count what happened.

Neither is designed to help prevent recurrence.



Two Systems, One Blind Spot

The Timeliness Problem — Lagging Indicators



A Dual-Audience Frame

Safety Managers

- Recognize which system you're using and what it was built for
- Stop asking compliance outputs to do something they weren't designed to do

WCI (DWC)

- The system you administer is being used — or not used — in ways its designers didn't anticipate

There is a better way...

Useful WCI data is closer than it seems

Compliance Systems And Their Limits

Designed to Record, Not to Learn

Safety Managers

- The category error: treating compliance outputs as analytical inputs
- The lessons-learned gap: past experience not reaching the current workplace
- Recognize the design boundary before trying to cross it

WCI (DWC)

- The 300 Log and WCI data do what they are designed to do
- What happens at the edge of that design?
- Field practitioners are signaling where the gaps are

The Safety Manager's Dilemma

Four choices against one fixed constraint

Fixed Constraint: The OSHA 300 Log

		Collect/Track WCI Data	
		No	Yes
Collect/Track Injury Data	Yes	Wisdom & Understanding Without Compliance	Compliance with Wisdom
	No	(smh)	Compliance without Wisdom or Understanding

RECORDING MEANS YOU
CAN PROVE IT HAPPENED

UNDERSTANDING MEANS
YOU COULD HAVE PREDICTED IT



What Understanding Actually Requires

Data Elements Carrying Analytical Weight

- Mechanism of injury — how, not just what
- Task context — what was being done, not just where
- Contributing factors — conditions, not just events
- Near misses — the signal before the loss
- Sequence of events — the story, not just the outcome
- The narrative problem: the most useful information is often in free-text fields — or never captured

What Understanding Actually Requires

Safety Managers

- Ask of every field in every injury record:
 - Could I use this to prevent the next one?
- If the answer is no, the record is complete but not useful

WCI (DWC)

- The data elements that matter most for prevention are often not the ones WCI forms prioritize
- A field audit of what gets captured vs. what gets used analytically would be revealing

Risk Recognition and Assessment Tools

Traditional Tools and Their Limits

- Job Hazard Analysis (JHA)
 - Prospective
 - Task-based
 - Works well when applied consistently
- Incident investigation
 - Near miss and injury
 - Retrospective
 - Quality depends on depth of analysis
- Trend analysis is only as good as the data being trended
- All amplify understanding
- None can create data that was never collected

Risk Recognition and Assessment Tools

Machine Learning and Large Language Models

- LLMs can process narrative text at scale — what changes when you can analyze thousands of incident descriptions
- Pattern recognition across unstructured records: surfacing contributing factors structured fields miss
- Accessible applications: you don't need a data science team
- Key limit: these tools amplify understanding; they cannot substitute for data that was never captured
- Match the tool to the question — LLMs are not a substitute for good taxonomy

Risk Recognition and Assessment Tools

Privacy and the Analytical Record

Safety Managers

- Worker injury data is sensitive: HIPAA adjacency, state privacy law, institutional exposure
- De-identification strategies: what you can strip without losing analytical value
- LLM use raises new questions: what are you feeding the model, and where does it go?
- Privacy frameworks should enable careful use, not prohibit all use

WCI (DWC)

- In a position to model de-identification standards for the field
- Guidance here would reduce both:
 - Privacy risk and
 - Paralysis that keeps safety managers from using data at all

Risk Recognition and Assessment Tools

The Vocabulary of Evasion (“other”)

Safety Managers

- These words are where understanding goes to die
- In a compliance context, they close the record; in an analytical context, they create a void
- "Misc. strain" or "other — upper extremity" erases mechanism, task, posture, and contributing factors
- Pattern recognition — human or machine — cannot work with a category designed to absorb what didn't fit
- The discipline of specificity: training recorders to resist the shortcut

WCI (DWC)

- How often these terms appear in WCI records?
- Is their frequency a data quality metric?
- If a significant share of records fall into catch-all categories, does the coding taxonomy need redesign?
- Does specificity matter?

Risk Mitigation Tools

Closing the Analytical Loop

Safety Managers

- From recognized risk to acted-upon risk
 - Measurement without mitigation is just activity
 - Mitigation without measurement is frenzy
- Connect data outputs to systems we know
 - Haddon's Energy Transfer Model
 - Hierarchy of Controls
- Track intervention effectiveness — turn mitigation into its own data stream
- A discipline of specificity that benefits injury records benefits intervention records

WCI (DWC)

- Outcome tracking
 - Did the employer's corrective actions reduce recurrence?
 - Largely invisible in current WCI data
- Even a lightweight mechanism for capturing this would be a significant analytical advance

The WCI Data Opportunity

WCI Data is Closer than OSHA 300

- WCI data is richer in narrative and context than the 300 Log allows
- Specific expansions that would make it materially better:
 - Mechanism and task context fields
 - Contributing factor taxonomy
 - Near-miss linkage
 - Intervention and outcome tracking

The WCI Data Opportunity

Reserves as an Early Severity Signal

- Every open WCI claim carries a reserve — an estimate of ultimate cost
- A high reserve signals anticipated severity: extended lost time, surgery, permanent impairment, litigation
- Reserves are post-loss, by definition, but earlier than most other severity data
- One of the least lagging indicators in the WCI system

The WCI Data Opportunity

Reserves as an Early Severity Signal

- WCI practitioners think of reserves in actuarial terms; safety managers rarely engage with them as analytical inputs — that's the gap worth closing
- Reserve-weighted data: a department with two high-reserve claims looks very different from five low-reserve claims (the
- Caveat: reserves reflect carrier judgment, vary by adjuster and jurisdiction — use as a directional signal, not a precise measurement

The WCI Data Opportunity

Direct Asks & Challenges

Safety Managers

- Don't wait to act until WCI changes
- Document these elements in your own supplemental records now
- Use a format that could eventually map to an expanded WCI structure
- Recognize reserve figures from your carrier, TPA, or RMIS

WCI (DWC)

- Incremental expansions, not radical changes
- They would transform WCI data from a compliance process into a prevention instrument
- Reserve data exists in the WCI system but is not typically surfaced for safety analysis — aggregate reserve-weighted metrics are a low-barrier, high-value access question
- Safety managers are your constituency and implementation partners

Conclusion



comes time to step up and...
nizations cut and run like so many thieves in the night.”²⁰ All too often, when confronted with the news that the institution, or someone within it, caused harm, those with power in that institution choose to deny it, dismiss it, or otherwise refuse accountability. They worry about bad PR rather than caring for the needs of those who have been hurt.

This is a gross violation of the trust that people invest in, and that has been cultivated by, these institutions. An organization’s response to harm caused while a person was in its employ or care—whether a workplace, hospital, university, house of worship, school or any other space—has a lasting impact on how easily or quickly victims heal from that harm and whether it causes them additional pain or even lasting trauma. The psychologist Jennifer Freyd’s research has found

The Practical and Institutional Charge

Safety Managers

- Stop treating compliance outputs as analytical inputs
- Build toward understanding:
 - Mechanism
 - Context
 - Contributing factors
 - Specificity
- Use the tools available — and demand the data quality those tools require

WCI (DWC)

- Administer a data system that could drive prevention outcomes at scale
- Will that become an explicit goal?
- Safety managers want this to work and are ready to partner on it

The Closing Ask — To Both Audiences

- The gap between record-keeping and understanding is not a technical problem
 - It is a priority problem
 - Let's decide together that prevention is the priority
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- Questions and Conversation