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FEDERAL TRANSIT ADMINISTRATION

Employee Safety Reporting Subcommittee

TRACS Subcommittee Presentation

September 9 - 10, 2019

U.S. Department of Transportation
Federal Transit Administration

Agenda

- Introduction of Subcommittee Members

- Subcommittee Accomplishments

- Literature Review

  - The Preferred Five

  - Key Takeaways

  - Overall Summary

- Information Gaps

- Next Steps

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Subcommittee Accomplishments

June

- Established Monthly Telecon Schedule

    - June 5/July 3/Aug 7

- Reviewed Roles and Responsibilities

- Discussed Additional Resources

- Overview of Dropbox

- Divided articles for review into 4 categories

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Subcommittee Accomplishments

July

- Literature Review Assignments

- Discussed how to organize the literature review presentation to the full TRACS committee and the process to be used to circulate draft information for subcommittee input to the final presentation document

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Subcommittee Accomplishments

August

- Members provided an article recap for each document reviewed. Recommendations were made on whether to present the document to the full TRACS committee

- Brainstormed suggestions for breakout sessions during the in-person meeting

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Literature Review - Recaps

The Preferred Five

Member	Category	Title
Eric	General/Reporting Structure	Develop a Reporting Structure for Close Calls
James	General/Reporting Structure	Report to Congress: Confidential Close Call Reporting Systems
Victor	Data Analysis Methodology	A Handbook of Incidents and Accident Reporting
James	SMS	Trust, Public-Private Partnerships, and Transportation Safety: Applicability of the Aviation Model for Rail Transportation
Brian S	Lessons Learned	Confidential Close Call Reporting System (C3RS) Lessons Learned Evaluation – Final Report

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Literature Review - Key Takeaways

Brian Sherlock

- **Confidential Close Call Reporting System (C3RS) Lessons Learned Evaluation – Final Report**

    - **Action Plan**: Helps to Establish Safety Reporting Strategies

    - **Countermeasure Type**: Organizational & Procedural

    - **Effect Mechanisms**: Numerical measurements, Surveys, Pilot Programs, Procedures

    - **Key Takeaways**: A culture of trust, shared goals and honesty must be paired with the right foundational elements in legal protections, resources and feedback mechanisms, for C^{3}RS to succeed. Also, the potential benefits of getting it right are proven.

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Literature Review - Key Takeaways

Eric Muntan

- **Develop a Reporting Structure for Close Calls**

    - **Action Plan**: Helps to Establish Safety Reporting Strategies

    - **Countermeasure Type**: Organizational and Procedural

    - **Effect Mechanisms**: Procedures

    - **Key Takeaways**

        - The earlier culture of quality assessment (QA) seemed to create an environment of "pointing fingers" and accusations of those involved in a situation under review. The transition to continuous quality improvement (CQI) altered the focus to systems, rather than individuals, that seek opportunities for improvement.

        - Create a culture in which these occurrences are reported so they can be analyzed through systematic efforts to reduce the likelihood that such events will be replicated in the future.

        - Safety Culture, Improve Reporting by Establishing Trust, Eliminate Fear of Punishment, What Do Close Calls Reveal? And Reporting System

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Literature Review - Key Takeaways

Victor Wiley

- **A Handbook of Incidents and Accident Reporting**

  - **Action Plan**: Helps to Expand Safety Reporting Strategies

  - **Countermeasure Type**: Technology-related, Analytics, Organizational, & Procedural

  - **Effect Mechanisms**: Numerical Measurements

  - **Key Takeaways**: Reporting biases, blame, analytical bias, poor investigatory and analytical procedures, inadequate risk assessments, causation and the problems of counterfactual reasoning, classification problems, unrealistic expectations, reliance on reminders and quick fixes, flawed systemic views of failure

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Literature Review - Key Takeaways

James Hickey

- **Report to Congress: Confidential Close Call Reporting Systems**

  - **Action Plan**: Helps to Expand Safety Reporting Strategies

  - **Countermeasure Type**: Technology-related, Analytics, Organizational, & Procedural

  - **Key Takeaways**: Employee safety reporting systems, when utilized, produce volumes of actionable safety data that can be used to identify and mitigate safety risks. The higher the level of participation, the greater the impact on safety. Opportunities to leverage technology to analyze safety data can amplify the effect by identifying safety risks that may not be apparent when data is examined by a human. Particularly, if participation is significant, the volume of safety data to be analyzed would potentially be overwhelming.

Literature Review - Key Takeaways

James Hickey

- **Trust, Public-Private Partnerships, and Transportation Safety: Applicability of the Aviation Model for Rail Transportation**

    - **Countermeasure Type**: Technology-related, Analytics, Organizational, & Procedural

    - **Effect Mechanism**: Pilot Programs & Procedures

    - **Key Takeaways**: "The success of an SMS program hinges on trust." This statement in the paper refers mostly to trust between the FAA as regulatory agency and the airlines as the regulated entities; however, it could be applied by extension to trust between employees and management. The analogous regulator in transit would be the SSOA. There is an opportunity for SSOAs to become involved in employee safety reporting programs as the third party, and they should be engaged in this process.

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Literature Review - Overall Summary

Key Takeaways

- Employee safety reporting systems, when utilized, produce actionable safety data that can be used to identify and mitigate safety risks. Opportunities to leverage technology to analyze safety data can amplify the effect by identifying safety risks that may not be apparent when data is examined by a human.

- Create a culture in which these occurrences are reported so they can be analyzed through systematic efforts to reduce the likelihood that such events will be replicated.

- A culture of trust, shared goals and honesty must be paired with the right foundational elements in legal protections, resources and feedback mechanisms, for C³RS to succeed.

- Reporting biases, analytical bias, poor investigatory and analytical procedures, inadequate risk assessments, causation and the problems of counterfactual reasoning, classification problems, unrealistic expectations, reliance on reminders and quick fixes, flawed systemic views of failure must be considered in data mining.

- There is an opportunity for SSOAs to become involved in employee safety reporting programs as the third party, and they should be engaged in this process.

Information Gaps

- Standardized Terminology (a common language to aid in data mining)

- Trend Analysis (how to get an immediate response)

- Psychology (How to deal with the information)

- Current or emerging technology available in the transit industry for ESR

  - No information readily available

  - What technology is desired/wanted

- How is the transit industry consistently reporting safety concerns

  - What are the results/recommendation of the TCRP study that CUTR has been charged to complete

- Ongoing work at the FTA regarding the role of ESR in SMS policies, practices, and strategies

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Next Steps

- **Reach out to CUTR and Volpe** to get information on the TCRP studies   and set up possible presentations and/or demonstrations during the January TRACS committee meeting.

- **Reach out to fellow transit agencies** that are using technology for safety reporting to get insight into how they work and whether they are successful. Determine feasibility and practicality of these technology systems for small and large-scale rail transit systems.

- **Reach out to State Safety Oversight agencies** to see if there are any additional technologies that they are exploring use of at their systems for Employee Safety Reporting and get additional information on those systems, if any.

- **Reach out to technology vendors** who support and/or design the technologies surrounding employee safety reporting.

- **Coordinate with the FTA staff** on its Employee Safety Reporting work utilizing SMS.

Discussion