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Title: Safety Culture Metrics

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Safety culture has been identified as an important causal factor in a number of major disasters (e.g., Deepwater Horizon). In order to maintain the high standards of safety in the Canadian petrochemical industry, there is a need to provide managers and regulators with evidence based information on safety culture. They need to understand the concept, how to measure it and how to improve. No evidence-based documentation on measuring safety culture is presently available to managers and professionals, thus the current study seeks to fill this important gap. An extensive literature reviewed was conducted to identify indicators of safety culture. Questionnaires and surveys measuring safety culture in offshore petrochemical industries were systematically reviewed. The metrics were first examined with a deductive approach, relying on peer-reviewed published reports of reliability, validity, and dimensionality. The second step was an inductive approach; subject matter experts sorted the individual items across a variety of metrics into factors to assess content validity. Current models and dimensions of safety culture are presented, along with a discussion of criteria with which to evaluate new and future metrics. This research has been funded by Encana.