# TECHNICAL BRIEF FOR ANSI/ASSP Z16.1-2022

## An Overview of the Voluntary Consensus Standard: Safety and Health Metrics and Performance Measures


AMERICAN SOCIETY OF
SAFETY PROFESSIONALS

STANDARDS

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# INTRODUCTION

On Feb. 23, 2022, the American National Standards Institute (ANSI) announced the approval of the Z16.1 safety standard titled:

## ANSI/ASSP Z16.1-2022, SAFETY AND HEALTH METRICS AND PERFORMANCE MEASURES

This standard defines requirements and expectations for organizations to establish effective measurement systems that assess safety and health performance, reduce risks, identify gaps in safety and health management systems, and drive needed improvements.

It applies to all organizations and provides flexibility based on their size, type of management system and level of organizational risk. The standard can supplement requirements from government agencies, non-government organizations and other groups such as rating agencies that may have their own private or public reporting requirements.

**"Relying solely on lagging metrics does not improve workplace safety. We need a complete, systematic method to influence what happens while understanding how and why it happens. This standard's balanced approach measures actions that drive improvement. It's a major development that can help businesses thrive, especially in today's challenging environment."**

- Alexi Carli, M.S., CSP, chair of the Z16 committee

# ABOUT THE Z16.1 **STANDARD**

## Purpose of the Standard

This standard helps organizations establish or improve safety and health program measurement, with special emphasis on risk management as a key means to reduce the likelihood of incidents. The standard also provides the means to track and demonstrate the impact that safety and health efforts have on the organization's business. It utilizes a balanced approach to understand and assess safety and health efforts using leading, lagging, and impact metrics.

Establishing an effective measurement system supports organizational safety and health governance, accountability, management, operational effectiveness, and continual improvement. This new view of safety acknowledges that only measuring incident rates is not an effective measure of safety and health stability, performance, and resilience. The approach in this standard helps achieve goals, with checks and balances utilizing leading, lagging, and impact metrics. Without this balance, continual improvement can be challenging.

Metrics must be meaningful, informative, and drive change. The Z16.1 standard outlines a process that encourages integration with organizational management systems using a model to facilitate continual improvement.

## Using the Standard

This standard applies to organizations of all sizes. An organization that chooses to conform to this standard is expected to meet these requirements. Conformance with this standard requires using a balanced set of metrics that addresses at least one risk management and one safety and health management system opportunity. A balanced set includes leading metrics with identified relationships to lagging and impact metrics to highlight how safety and health contributes to efficient business operations. Additional improvement initiatives can use a combination of metrics.

## How the Standard was Developed

This standard was developed by the standards committee on Safety and Health Metrics and Performance Measures, Z16. The Z16 committee was re-established in 2017 in recognition of the need for standard guidance around safety and health metrics.

The earlier Z16 committee developed five standards, which were withdrawn after the Occupational Safety and Health Administration (OSHA) and the Bureau of Labor Statistics (BLS) assumed leadership of occupational safety and health recordkeeping activity in the early 1970s.

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# **Z16.1:** WHAT'S INCLUDED

4. Component Metric Types in the Balanced Set
    - 4.1 Lagging Metrics
    - 4.2 Leading Metrics
    - 4.3 Impact Metrics

5. Metric Use and Communication
    - 5.1 Internal Use
    - 5.2 External Use
    - 5.3 Internal and External Communication

6. Evaluating Metric Effectiveness
    - 6.1 Evaluate and Monitor
    - 6.2 Cross-Functional Evaluation Support
    - 6.3 Identify Gaps and Document Corrective Actions
    - 6.4 Evaluation Results and Continuous Improvement

Appendices

# SAFETY AND HEALTH METRICS **RESOURCES**

## Safety and Health Metrics Resources

ASSP Article Using the Z16.1 Standard to Improve Safety Metrics and Performance Measures
ASSP Article Leading with Safety and Health Metrics
ASSP Article How to Implement and Evaluate Leading Indicators
ASSP Article Safety News You Need: Safety and Health Metrics

ASSP Podcast Episode 76: How the Z16 Standard Can Help You Improve Metrics and Performance Measures
ASSP Podcast Episode 16: Leading and Lagging Indicators

**Learn more about the ANSI/ASSP Z16.1 Safety and Health Metrics standard:**

ASSP Safety and Health Metrics website

Purchase the ANSI/ASSP Z16.1-2022 standard

## Risk Resources

ASSP Article 4 Ways to Take Risk Management to the Next Level

ASSP Podcast Episode 60: Tools and Techniques for Improving Risk Management
ASSP Podcast Episode 53: The Importance of Risk Management in Safety

## Safety Management Systems Resources

ASSP Article How to Select the Best Safety Management System
ASSP Article How Worker Engagement Can Help Improve Your Safety Management System

ASSP Podcast Episode 54: Systems Thinking and Safety Management

## Standards Development Information

Links and information related to American National Standards:

Essential Requirements Used by ANSI

The links below explain how voluntary national consensus standards are used in regulatory settings.

Voluntary consensus standards can transform your safety program from a compliance-driven cost center into a corporate sustainability initiative that can save lives and boost profits

ASSP Podcast Episode 3: How Government Agencies Use Industry Consensus Standards | Lauren Bauerschmidt, ASSP standards development

ASSP Podcast Episode 1: Industry Consensus Standards | Tim Fisher, ASSP standards and technical services

**ANSI/ASSP standards promote recognized best practices that prevent worker injuries, illnesses and fatalities**

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