

The Evolution of Differential Monitoring With the Risk Assessment and Key Indicator Methodologies

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The use of differential monitoring by states and Canadian Provinces has evolved very interestingly over the past decade into two parallel approaches which help to inform other interested jurisdictions as they consider a differential monitoring approach.

Differential monitoring is a more targeted or abbreviated form of monitoring facilities or programs based upon “what is reviewed/depth of the review” and “how often/frequent do we review”. Two specific methodologies have been used by states to design and implement a differential monitoring approach: risk assessment and key indicators.

It was originally conceived that risk assessment and key indicator methodologies would be used in tandem and not used separately. Over the past decade, a real dichotomy has developed in which risk assessment has developed very independently of key indicators and risk assessment has become the predominant methodology used, while the key indicator methodology has lagged behind in development and implementation.

In this separate development and implementation, risk assessment has driven the “how frequent” visits in a differential monitoring approach while key indicators has driven “what is reviewed” when it comes to rules/regulations/standards.

The other development with both methodologies are the data matrices developed to analyze the data and to make decisions about frequency and depth of reviews. For risk assessment, the standard matrix used is a 3 x 3 matrix similar to the one presented below.

Risk Assessment with Probability along the vertical axis and Risk along the horizontal axis

A	B	C
D	E	F
G	H	I

In the above 3 x 3 Risk Assessment Matrix, (A) indicates a very high risk

rule/regulation/standard with a high likelihood that it will occur, while (I) indicates a very low or no risk rule/regulation/standard with a low likelihood that it will occur. (B) through (H) indicate various degrees of risk and probability based upon their position within the Matrix.

The decision making relationship of more frequent visits to the facility or program is made on the following algorithm:

If $I > E + F + H > B + C + D + G > A$, then more frequent reviews are completed

Just as Risk Assessment utilizes a 3 x 3 Matrix, Key Indicators utilizes a 2 x 2 Matrix in order to analyze the data and make decisions about what is reviewed. Below is an example of a 2 x 2 Matrix that has been used.

Key Indicator with Compliance/Non-Compliance listed vertically and High vs Low Grouping listed horizontally

A	B
C	D

In the above 2 x 2 Key Indicator Matrix, (A) indicates a rule/regulation/standard that is in compliance and in the high compliant group, while (D) indicates a rule/regulation/standard that is out of compliance and in the low compliant group. (B) and (C) indicate false positives and negatives.

The decision making relationship of more rules to be reviewed is made on the following algorithm:

If $A + D > B + C$, then a more comprehensive review is completed

Given the interest in utilizing differential monitoring for doing monitoring review, having this decade's long review of how the risk assessment and key indicator methodologies have evolved is an important consideration.

Is it still possible to combine the risk assessment and key indicator methodologies? It is by combining the 3 x 3 and 2 x 2 Matrices above where the focus of utilizing the Key Indicator methodology is (I) cell of the 3 x 3 Matrix. It is only here that the Key Indicator methodology can be used when combined with the Risk Assessment methodology.

Key Indicator and Risk Assessment Methodologies Used in Tandem

A	B	C
D	E	F
G	H	Only Use Key Indicators here

By utilizing the two methodologies in tandem, both frequency of reviews and what is reviewed are dealt with at the same time which makes the differential monitoring approach more effective and efficient.

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