

**Session IV**

**Temporal Methodologies**  
**and Data Sources**

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# Signal Detection Factors

The definition of the signal

- Is it well defined?
- Can it be adequately represented by data?
- Is there a clear threshold to evaluate against?

# Signal Detection Factors

## The nature of the data used

- Were they acquired for the specific purpose?
- If not, are there implicit biases associated for specific signal detection activities?
- Can 'reporting and/or recording' anomalies be readily distinguished from 'important' unusual patterns?
- How 'noisy' are the data?

# Signal Detection Factors

Development of signal thresholds;  
(i.e. expectation of what will happen next)

- Based on historical occurrences?
- Are historical patterns stable?
- Chaotic effects?
- Events of interest rare... common?
- Historical cycles or trends?

# Evaluative Criteria

- Flexibility
- Sensitivity
- Predictive Value Positive
- Specificity
- Predictive Value Negative
- Timeliness
- Feasibility

What are the major  
unaddressed  
challenges?