LEADING INDICATORS WILL NOT PREDICT THE FUTURE

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DISCLAIMER

This is not an approved presentation and represents only my ideas and suggestions. DOE or MSA do not necessarily endorse or support any of the included material.

Credit: Much of the material referenced and ideas in presentation are based on work done by Steve Prevette, SRNS

EFCOG UPDATE

- Various presentations and discussions have been conducted on leading indicators since 2009.
- EFCOG has stated objective of establishing Leading Indicator Processes
- October 2010 - EFCOG issued draft Guidance Document "Development and Use of Leading Indicators"

The purpose of this guidance is to describe an approach for developing leading indicators that is broadly applicable across sites and helps managers to more effectively and efficiently manage their operations.

WHY DEVELOP LEADING INDICATORS?

- Grass root barrier in overall system – PART OF STORY
- Identify and fix problems before
  - ✓people get hurt or killed
  - ✓The environment is compromised
  - ✓Critical assets are lost or damaged
  - ✓Organization goals are not achieved
  - ✓Mission milestones are missed
  - ✓Costs proliferate
  - ✓Profit/Revenue disappears

DIFFERENT APPROACHES FROM GUIDE

- All focus on “People”, “Process/organization” or “Equipment” maybe external influences
- Leading Indicators may also be lagging indicators in other context
- General Characteristics
  - ✓Predictive of and able to influence future performance
  - ✓Demonstrate a cause-and-effect relationship with a particular outcome: “knobs” that we can turn
  - ✓Can’t exist in isolation – decision makers need to use them in order to influence an outcome
  - ✓Often attached to process elements

USE PROCESSES ALREADY IN PLACE

- Years of experience with lagging, dash board and other metrics.
- ORPs already tracks threshold based events – need to look at non-reportable -no never mind events
- Generally not worth doing anything about on an individual basis but collectively may provide indications of the condition of the organization, people and processes

DON’T TRY TO PREDICT THE FUTURE!!

- Leading indicators should have cause and effect relationship to lagging indicators
- Looking at trend and not the event
- Use existing systems to trend and evaluate significance.
- Change if they don’t work for you!

WE SHOULD TRY AND INFLUENCE THE FUTURE!

- Challenges to Leading Indicator process
  - ✓ Drowning in data, thirsting for knowledge
  - ✓ Identifying and understanding the data that's important
  - ✓ Getting people to report it, accurately
  - ✓ Analyzing it for meaningful trends
  - ✓ Organizations are nonlinear, dynamic systems
    - ➢ No direct If…then logic
  - ✓ Using performance measures as a management tool, NOT just a reporting tool

Keys

- Causation Correlation
- Cost/Difficulty in Gathering
- Implementation Time
- Acceptance by Organization

Suggested RP Leading Indicators

- Health of Organization:
  - Track number of procedure/work package revisions –
    - maybe we should start with just RWP revisions –
    - need to make sure it is not a black mark
  - Cycle time for procedure/package revisions
  - Number of late/missed scheduled surveillances
  - Number of late RW, RCT, other requalification's
  - Number of open RCT / professional staff positions not filled with qualified individuals.
  - The number of job/work packages reviewed by a Rad Engineer/Professional Radiological Technical Staff person out of the total work packages generated for a facility. Demonstrates 'Involvement'

More Suggestions

- People
  - ✓ How many RWPs/Work Packages are reviewed by a single person vs. being passed on to a formal ALARA Committee that later need rework. This could be looked at in terms of the re-visiting necessary due to inadequate job/hazard identification and ALARA reviews that were done initially.
  - ✓ The number of jobs put off or shut down due to inadequate radon coverage availability.
    - ✓ unanticipated emerging scope/hazards
    - ✓ Not scheduled/insufficiently scheduled
  - ✓ Personnel trained and qualified as a % of staff on board. This could affect coverage available, number of make-up classes needed, etc.
  - ✓ Number of non-routine bioassays/dose evaluations

MORE SUGGESTIONS

- **Equipment:**
  - ✓ Number of out of service instruments per unit time
  - ✓ Job Delays due to failed or unavailable equipment

DISCUSSION

What’s Next???