NIST Safety Update

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Gaithersburg, MD

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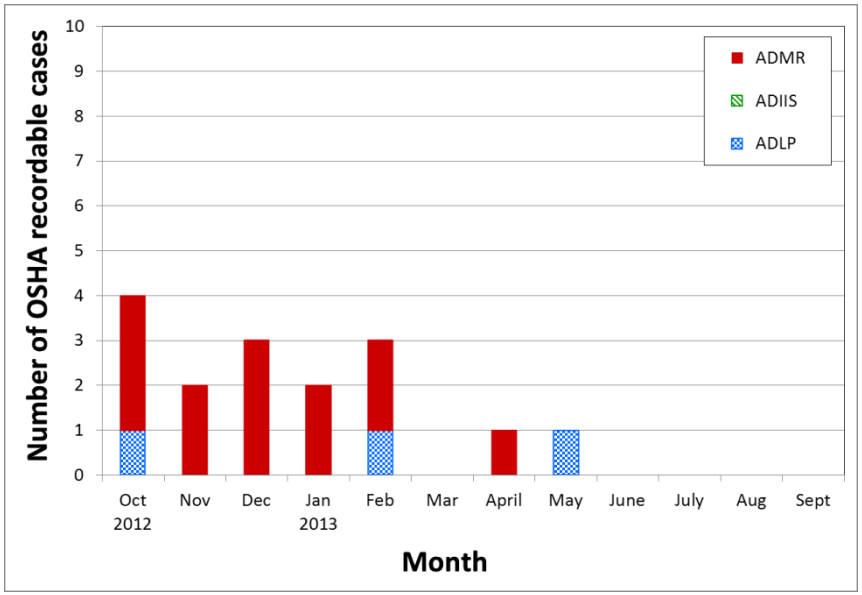
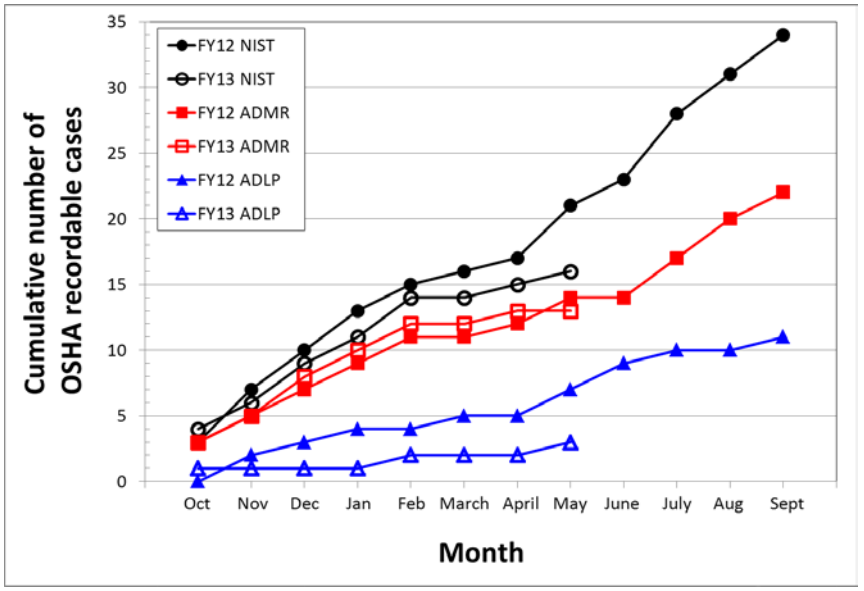
Agenda

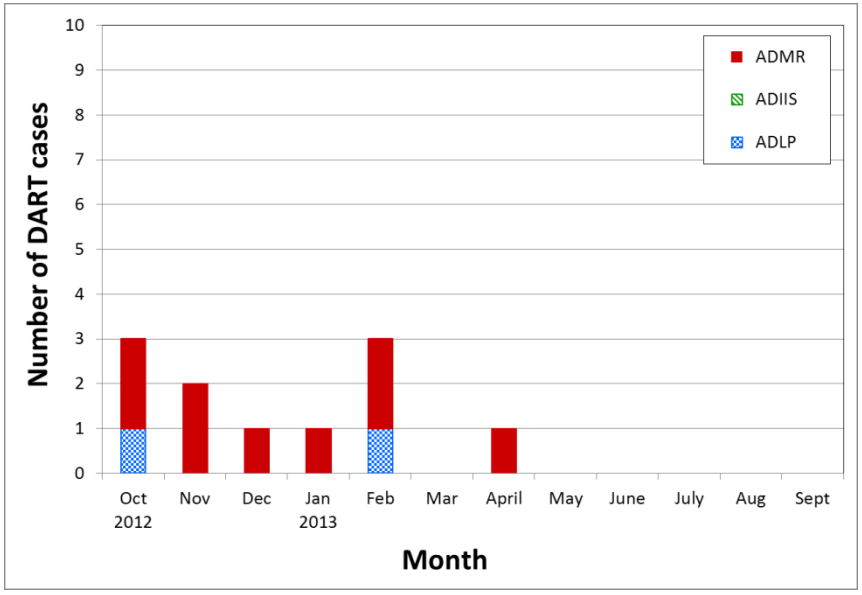
- NIST Safety Metrics
- Top-Priority IRIS Issues
- OU Safety Goals
- Shared Standard of Safety Performance
- Discussion

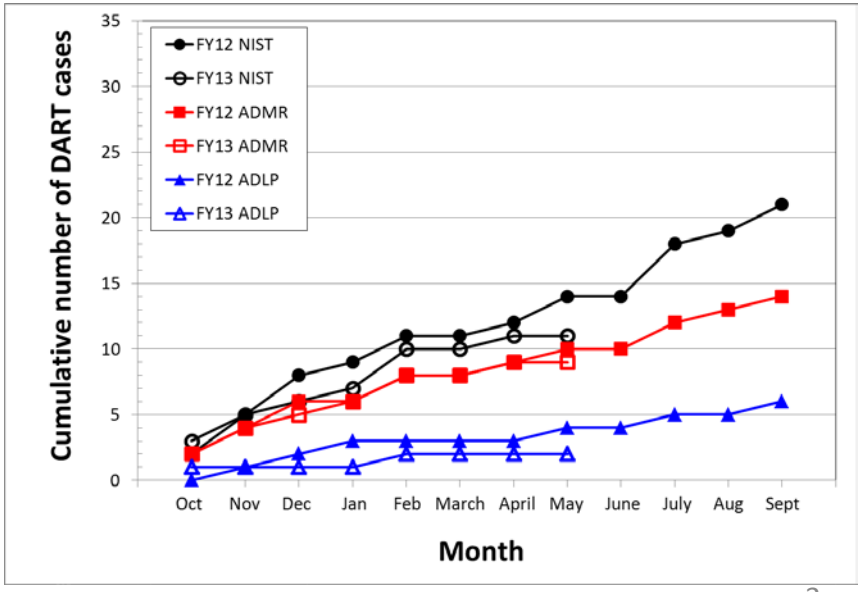
FY13 OSHA Recordable and DART Cases

Data shown is through May 31, 2013









FY13 Total Injury Cases and OSHA Recordable Cases

Data shown is through May 31, 2013

OU	Total FY13 injury cases	Total FY13 injury cases involving employees	New injury cases reported over the past month	New injury cases reported over the past month involving employees	Total FY13 known OSHA recordables	Total FY13 known OSHA recordables involving employees	New, known OSHA recordables reported over the past month †	New, known OSHA recordables reported over the past month involving employees †
00 - DO	1	1	0	0	0	0	0	0
13 - MR	3	3	1	1	1	1	0	0
15 - OSHE	1	1	0	0	0	0	0	0
16 - OFRM	5	5	3	3	1	1	0	0
17 - OWM	0	0	0	0	0	0	0	0
18 - OISM	1	0	0	0	0	0	0	0
19 - OFPM	19	19	2	2	11	11	2	2
40 - IIS	0	0	0	0	0	0	0	0
45 - BPEP	1	1	1	1	0	0	0	0
47 - TIP	0	0	0	0	0	0	0	0
48 - HMEPP	0	0	0	0	0	0	0	0
60 - LP	0	0	0	0	0	0	0	0
61 - NCNR	4	3	0	0	1	1	1	1
62 - CNST	1	1	0	0	0	0	0	0
63 - MML	6	4	1	1	0	0	0	0
68 - PML	4	3	0	0	1	1	0	0
73 - EL	1	1	0	0	0	0	0	0
77 - ITL	2	2	0	0	1	1	0	0
Totals	49	44	8	8	16	16	3	3

† These new cases may be one of the following: (1) a new injury case reported over the past month that was immediately identified as an OSHA recordable or (2) a previously reported injury case that now meets the definition of an OSHA recordable.

Top-Priority IRIS Issues

- Event – what led to the injury
- Part of body – what body part/system was injured
- Nature of injury – what happened to that body part/system
- Source of injury – what "object" caused the injury

- 75% of all OSHA recordables due to these types of events
- Take actions to reduce the numbers of incidents in these categories across NIST
- Track and provide regular updates on progress

Data shown is FY12 and FY13-Q1

Event that led to injury	Number of "injury" incidents reported in IRIS for this type of event	Number of "injury" incidents reported in IRIS for this type of event which are OSHA recordables	% of "injury" incidents reported in IRIS for this type of event which are OSHA recordables	% of all OSHA recordables which are due to this type of event	Event code	General nature of injury as a result of the event
Slips, trips, and falls	23	9	39%	26%	4XXX	Fractures, sprains, cuts, bruises
Struck by	19	6	32%	18%	62XX	Contusions, lacerations, bruises
Struck against	11	4	36%	12%	63XX	Contusions, lacerations, bruises
Overexertion (pushing/pulling/turning)	6	4	67%	12%	71XX	Strains, sprains
Overexertion (bending/stepping/twisting)	8	3	38%	9%	73XX	Strains, sprains
Insect bite/sting	5	3	60%	9%	13XX	Reaction
Caught in or compressed	2	1	50%	3%	64X	Fractures, sprains, bruises
Chemical exposure	2	1	50%	3%	5544	Chemical burn, respiratory symptoms
Bacteria exposure	1	1	100%	3%	55	Unknown
Electrical shock	1	1	100%	3%	51XX	Electrical shock
Repetitive motion	1	1	100%	3%	72X	Sprain
Rubbed against	9	0	0%	0%	66X	Lacerations, bruises
Contact with	2	0	0%	0%	69	Abrasions, bruises
Thermal burn	2	0	0%	0%	533	Thermal burn
Cryogenic burn	2	0	0%	0%	534	Cryogenic burn
Needle stick	1	0	0%	0%	61	Puncture
Nanoparticle exposure	1	0	0%	0%	5548	Unknown
Pedestrian vehicular accident	1	0	0%	0%	24xx	Fracture
	97	34	35%			

Incident-Reduction Efforts

- Objective: Reduce the occurrence of the most common types of incidents that result in OSHA recordables
  - Slips, trips, and falls
  - Struck by / struck against
  - Overexertion

- Strategies
  - Create a culture of vigilance
  - Practice safe behaviors
  - Eliminate or mitigate workplace hazards
    - Integrate operational controls into the safety management system

- Tactics
  - Educate staff
  - Increase staff awareness
  - Engage staff
    - Identify and engineer out, eliminate, mitigate, or report hazards
  - Leverage other initiatives

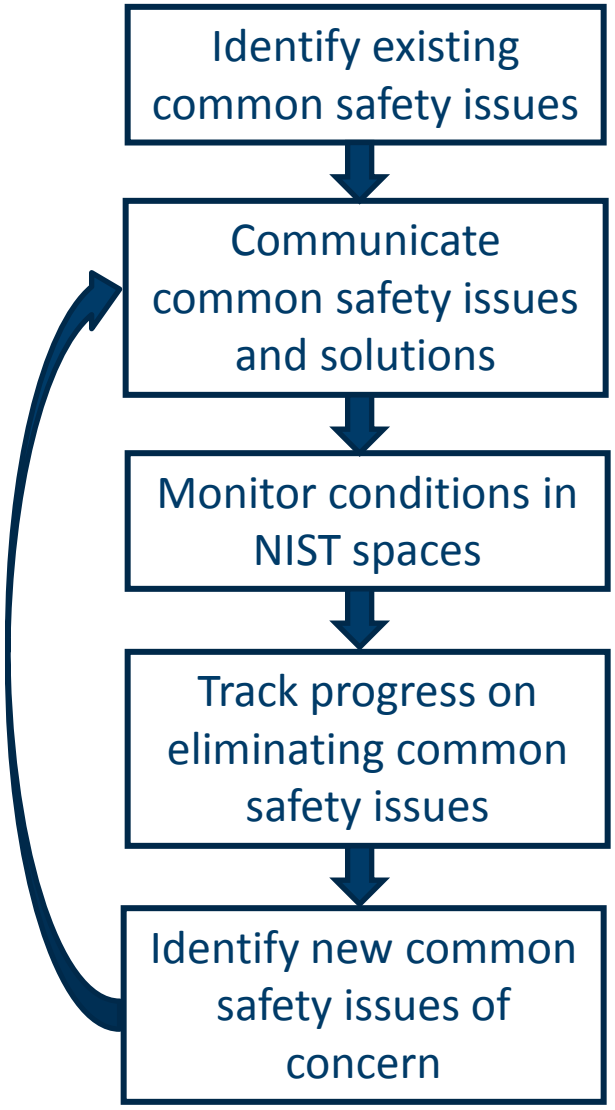
OU Safety Goals

Objective for each OU:

- Identify a specific area of need for improvement or attention that touches on the behaviors and attitudes of a wide variety of staff
- Include in OU Director's FY 2013 performance plan

- Improve housekeeping (NCNR)
- Reduce the occurrence of slips trips, and falls (CNST)
- Improve chemical safety (legacy chemicals, proper labeling, satellite accumulation areas) (MML)
- Improve general housekeeping and egress in the labs (PML)
- Improve the effectiveness and efficiency of the hazard-review process (EL)
- Improve ergonomics (ITL)
- Eliminate slips and minimize slip hazards (BPEP)
- Address the findings and recommendations of MR special review (OSHE)
- Improve housekeeping and ergonomics (OFRM)
- Improve housekeeping (OWM)
- Address the findings and recommendations of MR special review (OISM)
- Improve job-hazard-analysis process (OFPM)

Shared Standard of Safety Performance – Concept



Key Principles

- The "Shared Standard" is owned by Leadership.
- Designed to be flexible to meet the needs of different operations.
- Designed to be integrated into the planned Workplace Inspection Program.
- Performance-based.

Monitor conditions in NIST spaces

- Active senior leadership presence
  - Periodic, focused walkthroughs
  - Integration with Management Observations
  - Integration into routine management activities
  - One or more of the above, or alternatives

Categories :

- **Housekeeping, e.g.,**
  - Blocked panels & emergency equipment
  - Tripping hazards
- **General Room Conditions, e.g.,**
  - Fire barriers
  - Lighting
  - Equipment certifications
- **Chemicals and Wastes, e.g.,**
  - Labeling
  - Containment
- **Electrical Safety, e.g.,**
  - Extension cords
  - Surge protectors
- **Work Practices, e.g.,**
  - Ergonomic stressors
  - PPE usage

Discussion

VCAT Observations – February 2013

- A culture change toward safety is well underway at NIST. It is moving from the “design-build” phase to one of continual improvement.
- While NIST has made substantial progress in developing a positive safety culture, the NIST recordable incident data do not yet demonstrate a clear downward trend.
- The underlying driver of the incidents appears to be high frequency, lower consequence events (rather than low frequency, higher consequence events).
  - This observation may point to a need for an approach to prevention and education activities within the safety system that emphasizes the prevention of more routine incidents such as slips, trips, and falls; body parts struck by or against objects; and ergonomics, including various types of overexertion.

VCAT Recommendations – February 2013

- NIST's safety goal should be zero accidents. The VCAT encourages continued recognition of and reward for safety improvement.
- The VCAT recommends continued "grand rounds" audits of individual laboratory rooms led by senior, trained NIST executives.
- The VCAT recommends that NIST set a firm target for improvement in each OSHA recordable statistic.
- The VCAT urges the NIST Director to distribute and discuss IRIS statistics each reporting period. Based upon these reports, NIST leadership should identify top priority IRIS issues and action plans to reduce occurrence. Progress will be reviewed as a standing agenda item at the beginning of each VCAT meeting.
- The VCAT recommends that NIST concentrate its investigation time and reports on OSHA recordable incidents.
- The VCAT strongly urges increased "transparency" on all safety metrics, including easily accessible identification of the exact stage at which any non-closed IRIS cases are at any time.