Making the new staff safe:
The Importance of Training New Users

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Simply said:

- The goal of the presentation is to encourage laser safety programs to take a hard look at the training of new staff through On the Job Training (OJT).

Consider this

- The Travelers Companies, Inc., one of the country's largest workers compensation insurers, published its 2025 Injury Impact Report.
- It compared workers compensation data from the five years leading up to the COVID-19 pandemic with the next five years.
- The analysis of more than 2.6 million claims submitted during that time found that while the number of workplace injuries overall continues to decline.....

One of the Report's findings

- **The report found that employees in their first year on the job accounted for approximately 36% of injuries and 34% of overall claim costs during the last five years.**

Does this finding reflect the laser user community?

- I do not have a definitive answer
- I do not think many laser incidents in University/Research settings wind up with a Workers Comp claim, but I am uncertain
- But in building a safety culture it is clear how people start off is extremely important

Two interesting observations

1. “Safety polices describe how work should happen, but human behaviors reflect how work actually happens under pressure”
    1. Dan Scungio
2. As well as awareness that Paperwork does not equal Protection

- To me these statements all support how On the Job Training is there to put new hires on the right path with work and safety expectations

- So, lets look at some good practices to follow and challenges that should reduce incidents

Typical New Employee Orientation

- For most new hires new employee orientation is a blizzard of PowerPoint or computer screen time on a large arrange of topics

- Then there comes an orientation on what work they are expected to do. Which can include how to operate equipment

Training for Compliance or Competency?

- So much staff training is for compliance reasons. Just checking off that the information was presented
  - So, one can say YES, they received laser safety training
  - Los Alamos Experience 2004
  - 98+% training compliance

- **On the Job Training's goal is competency**
- Do they have the skills and knowledge to do the work?
- Have they demonstrated safety practices to protect themselves, others and equipment?
- If not demonstrated the person must not be allowed to work unsupervised

Only Z136.8 (Safe Use of Lasers in Research Development or Testing Environment) requires documented on-the-job training.

- The concept of OJT is not new
- It applies to the research lab, biotech facilities and industrial settings, everywhere
- What makes Z136.8 different is, it requires documentation of the activity
  - Z136.8 contains a sample form for OJT
- Sign off by both trainer and trainee
- Even if your program is Z136.1 centered you can choose to follow the OJT guidance in Z136.8

Prior to OJT
Situational Awareness

- For sport fans the term situational awareness is common
- Here is a spin on that:

- Prior to starting ask the new person:
  - **What hazards do they see?**
  - **Do they have any personal RISK concerns?**

- Once OJT is completed the question should be repeated and see if there are any different answers
- As well as do they express how to mitigate them?

On the Job Training core items

1. The chosen Trainer needs to recognize their responsibility
    1. The use of multiple trainers is acceptable
2. There cannot _be a set time period to accomplish OJT
3. The Trainer must see value in what they are doing
4. The experience of the trainee can affect the approach of the trainer and how much time it takes
5. **Need to feel the actions or success of the trainee will reflect on the job evaluation of the trainer**
6. Must encourage questions from trainee
7. Perform follow up observation post OJT
8. Review any “Hidden” risks (unblocked reflective sources)
    1. Proper use of viewing devices, etc

Outside the box thought

- If you have a Nonbeam hazard associated with your project
- What about inviting a subject matter expert to explain risk and good techniques to the new hire
- A special one on one
- Yes, it takes more time, but the value could be extremely useful

Recognition and encouragement

- Whether it is a Senior Post Doc, Supervisor, Senior Scientist or Lab Lead or Manager taking an interest in the new staff members' progress can not only break down barriers but enhance safety.
- People like to be recognized as the preverbal pat on the back goes a long way in making new staff feel like they are part of the team.
- While some lab or group staffing are only 2-4, that does not mean that peer recognition is unnecessary or of no value.

Lab Manager March 2026

- In the March 2026 issue an article by Michelle Gaulin reported on a study of 64 Universities Fire & Explosions found unsafe human actions were the most frequent contributor
- For individuals failures traced back to the following
  - Low safety awareness
  - Insufficient training programs
  - Weak safety culture
- Organizational Level
  - Absence of procedures
  - Consistent oversight
- Everything above can be applied to Laser Safety Programs or Individuals. But OJT can address all these items.

Trainer Value to Institution

- I have not come across an Annual Review that gave credit or mentioned Mentorship
- None with acknowledgment of the importance of giving the OJT
- On the contrary
- While investigating a incident in 2009, I asked a PI how he choose the individual who trained the injured person.
- The Answer **,” I felt his time was the least valuable”**

- **Is there any surprise that an incident occurred**

Take advantage of OJT time

- One way is to have a checklist with institutional safety items.
- What do I mean?
  - Emergency exit routes,
  - Emergency meeting location,
  - Location of E-stops,
  - Where is the fire extinguisher,
  - Chemical shower,
  - Auto Defibrillator,

- Just to name a few that are usually overlooked.

Encourage questions

- Let’s acknowledge that many new staff are afraid to ask questions that they consider will show them in a negativity light
- Which means the trainer needs to present an environment where questions even the silly ones are welcome.
- They might have a suggestion or question that opens a new pathway.
- I have certainly come across situations where this type of questions has shined daylight onto blind spots in an operation.
- Even explaining why we do things a certain way can show problems where a work around exists rather than taking the time to correct a flaw or problem. As well as a lack of documentation of the work around

Hands on Alignment Class

- Some research institutions that have set up “Alignment Classes or Exercises for new hires.
- While this may give a supervisor a way of evaluating a new staff members skills
- It does not replace or equivalent to on-the-Job Training.
- Just like a CE mark is not equivalent to a CDRH Certification filing.

What about experienced staff?

- A question that comes up is what about the new hire who is an experienced user
- It is for that experience they might have been hired
- It is important they buy into the existing safety culture
- Their experience might reduce OJT time and bring new ideas, but…
- It is imperative they work within good safety habits, and it becomes peer and supervisor responsibility to ensure this.
- “I have always done it this way” is not an excuse or permission for unsafe practices or short cuts.

Getting near the end

- **We all like jokes and puns the Cornea the better**

I hope you will consider the case for OJT

- Remember Travelers found a third of incidents happen to new staff within their first year
- With this in mind we need to do our best to get new staff members on the right safety path
- While all Photonics workers get some type of job orientation
- A formal On the Job Training program or approach will yield a great deal of value

Time for questions and comments

- NOTICE
- Oct 1,2029 I will retire from laser safety, apart from special projects that might be dangled before me, Laser Safety in Fiji?

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