

# Medical Laser Audits

Jonathan S. Jozokos MHP-LSO  
Beth Israel Deaconess Medical Center  
Boston, MA

# Laser Safety Program

Audits should be based on all areas of your program

- Policies and Procedures
- Equipment
- Training
- Records
- Patient Safety

# Policies & Procedures

- Policies should to be based on Standards and approved by committee or workgroup.
- Policies and Procedures should have input from all areas of patient care.
- Procedures need to be checked as to what is happening in practice.

# Equipment Audits

- More than just the Laser
  - Air filters and smoke handlers
  - Safety Masks
  - Optical Safety
  - Windows and Operating Rooms
  - Surgical Equipment can be reflective
- Beam Delivery Systems
- Lasers need to be checked for pedal/firing controls.
- OR Access during procedures.

# Equipment Audits

- Preventative Maintenance issues and records
  - Issue Handled in-house or by outside vendor?
  - Records of maintenance work and parts kept by engineering?

# Equipment Audits

Who calibrates the Laser Output Energy and how is that recorded and documented.

If there is no record of something being done, then it has not been done. If you have proof, you don't have to guess.

# Training Audits

- Who provides the training?
  - Local Expert
  - Manufacturer
  - Division Chief
- Records of Training
  - Credentialing Office
  - Continuing Medical Education Department
- Basic Safety Training for All persons in the Nominal Hazard Zone
  - Performed by LSO and records kept by LSO and Area Managers.

# Safety Records

- Audits need to be done periodically for them to remain effective as a safety tool.
- Records should be reported to the Laser Safety Committee for review.



# Patient Safety

- Airway Fires
  - Using proper equipment can minimize the risks.
  - Many times they are fatal due to serious burns to the tracheal/bronchial tree.
  - Have fire response equipment on hand for every procedure.



Figure 2. Demonstration of rocket-like flames shooting from a tracheal tube caused by laser ignition of the tube with 100% oxygen flowing. Image provided courtesy of ECRI Institute.

# Medical Laser Audits

- Team approach for different areas of expertise.
- Great tool to set and maintain high standards of Safety for users and Patients.