Patient Safety Advisory

Veterans Health Administration Warning System
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Item: Electro-magnetic Interference (EMI) from the use of two-way hand held radios/ walkie-talkies in close proximity to medical devices.

Specific Incident: A VA medical center reported that oxygen concentrators in the nursing home unit alarmed and sometimes shut down, requiring a reset when two-way radios were keyed to transmit from approximately 10 feet away. Although the medical center has a policy in place to address radio interference, it was not diligently enforced.

Background:

1. Hand-held radios are one of the most common causes of radiated Electromagnetic Interference (EMI) in healthcare facilities. As more electronics and wireless devices are used in hospitals, EMI risks continue to increase.

2. Several factors influence EMI risk including:

- device design
- distance between devices
- signal strength
- other interference sources

Of all these, distance and transmitter management are the most controllable and effective.

Suggestions:

1. **Check** to see if you have current policy addressing EMI risks including recommendations for areas where wireless communication devices are restricted. For two-way radios, 20 feet from medical equipment is a **minimum** recommended distance (*ECRI Health Devices* 2003 Mar; 32(3):118-21).

2. **Refer** to your EMI policy and modify to improve if necessary.

3. **Train** radio users (generally Engineering, Safety and Police personnel) to maintain appropriate distances from medical equipment when using radios.

Source: VA Center for Engineering, Occupational Safety and Health (CEOSH) and VA National Center for Patient Safety (NCPS)

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