
Radiation Therapy Errors Tops ECRI's Top 10 List of Hazardous Technologies



The ECRI Institute, a federal patient safety organisation has published its annual list of the top 10 health technology hazards for 2011. The list, published in ECRI Institute's Health Devices journal (November 2010), has been compiled to be a tool for healthcare facilities to use to prioritise their patient safety effort and offers information about how these hazards occur, with recommendations for prevention and a comprehensive resource list for more in-depth information. The list, which has been published for the fifth year, presents the potential sources of danger that according to ECRI warrant the greatest attention to increase awareness and stimulate action within healthcare facilities to formulate programs that succeed in minimizing the dangers and preventing risks for the coming year.

This year, radiation therapy errors have been named as the number one hazard. Radiation therapy is used in about half of all cancer treatments. High doses of radiation and complex treatment protocols mean errors can be deadly, as evidenced by the tragic tales covered in a New York Times series that ran earlier this year.

The increasing complexity of the treatments leave plenty of room for human error - reports estimate that up to 60 percent of all mistakes are due to people, and not the technology. One example cited by ECRI is treating a patient with a plan actually belonging to someone else with a similar sounding name. However, software is also often to blame. ECRI said a database search revealed 40 reports of software-related errors from summer 2009 to summer 2010. Overall, more than 3,000 patients have been affected by radiotherapy adverse events over the past three decades, according to a 2008 World Health Organization literature review. Of these, about 1 percent have died from overdose toxicity. Still, the published error rate remains low, which according to ECRI is because the consequences of an overdose are not always immediately apparent so it's possible the true error rate is underreported.

The list is updated annually based upon the prevalence and severity of incidents reported to the institute by healthcare facilities nationwide; information found in the institute's medical device problem reporting databases; and the judgment, analysis and expertise of the organisation's multidisciplinary staff. Although there are always new risks emerging, many of the items on this year's list are well-recognised hazards with numerous reported incidents over the years.

The top ten hazards are:

1. Radiation overdose and other dose errors during radiation therapy
2. Alarm hazards
3. Cross-contamination from flexible endoscopes
4. The high radiation dose of CT scans
5. Data loss, system incompatibilities, and other health IT complications
6. Luer misconnections
7. Oversedation during use of PCA infusion pumps
8. Needlesticks and other sharps injuries
9. Surgical fires
10. Defibrillator failures in emergency resuscitation attempts

