EHR CONFUSION LEADS TO DEATH

No tetanus shot given because of confusing EHR entry

A woman seen at an Illinois emergency room for a puncture wound from a gardening tool had an unknown tetanus status. Upon receipt of a threatening puncture wound, a tetanus booster should be given if it has been more than five years since an immunization has been given. In this case, the electronic health record (EHR) choice selected was “unknown/last 5 years”. The physician treating the woman appeared to consider that her shots were up-to-date and did not order a booster. The woman died of tetanus.

"Designed and applied inappropriately, health IT can add an additional layer of complexity to the already complex delivery of health care, which can lead to unintended adverse consequences."

- From Health IT and Patient Safety: Building Safer Systems for Better Care by the Institute of Medicine

This confusion illustrates the issues being seen during the increased use of electronic health records. In their report Health IT and Patient Safety: Building Safer Systems for Better Care by the Institute of Medicine, they state, "designed and applied inappropriately, health IT can add an additional layer of complexity to the already complex delivery of health care, which can lead to unintended adverse consequences."

A review by a medical malpractice insurer showed that EHR issues were involved in only 1% of lawsuits concluded from 2007 to 2013 but that percentage had doubled from 2013 to early 2014, and more are expected with the increased adoption of EHRs. This is disappointing news for an incentive program for the use of EHRs, which hoped they would make hospitals safer. Data on whether or not that has occurred is mixed.

Because of their concerns, the Institute of Medicine has recommended the creation of an information technology (IT) safety center to investigate EHR risks. So far the proposal has not been funded by Congress. Others think that a government-supported fund to compensate victims, similar to that used for vaccine injuries, may be necessary.

The Office of the National Coordinator for Health Information Technology has released a guide on identifying and addressing unsafe conditions associated with health IT. It calls for providers, EHR developers and policymakers to ensure health IT is used to improve patient care and protect patient safety.

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**Problem**

**What**

Problem(s)

- Death from tetanus, no immunization, electronic health record (EHR) confusion

**When**

Date

- Different, unusual, unique

**Where**

Facility, site

- Illinois hospital

Unit, area, equipment

- Emergency room

Task being performed

- Patient seeking treatment for garden fork puncture

**Impact to the Goals**

- **Patient Safety**
  - Patient death
- **Employee Safety**
  - N/A
- **Environmental**
  - N/A
- **Compliance**
  - Malpractice case
- **Patient Services**
  - Patient did not receive recommended immunization

**Frequency**

EHR issues involved in 1% of lawsuits from 2007 to 2013, and doubled from 2013 to 2014

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**Analysis**

**Basic Level Cause Map** - Start with simple Why questions.

- **Patient Safety Goal Impacted**
  - Patient death

- **Patient did not receive needed immunization**

**Basic Cause-and-Effect**

The patient died from tetanus; she was not given a tetanus shot because her immunization status was selected as "unknown/last 5 years.”

**Evidence:**

- Patient infected with tetanus
- Patient stabbed with garden fork

**More Detailed Cause Map** - Add detail as information becomes available.

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**Solutions**

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