What are medical errors?

A “medical error” is either an inaccurate or incomplete diagnosis, or a medical treatment that causes serious harm to the patient. Medical errors can occur anywhere in the health care system: Hospitals, clinics, outpatient surgery centers, doctors' offices, nursing homes, pharmacies, or patients' homes. These errors can involve medicines, surgery, diagnosis, equipment and lab reports. When an injury is caused by poor medical care rather than by the underlying disease or condition of the patient, it is known as an “adverse event”.

What are the consequences of medical errors?

Medical errors are one of the nation's leading causes of death and injury. A 1999 report from the Institute of Medicine estimates that medical errors cause 44,000 to 98,000 unnecessary deaths and 1,000,000 excess injuries each year in the US.[1] A 2009 follow-up study by the Hearst Corporation found virtually no improvement in the numbers from the Institute of Medicine’s previous study. More people die annually from medical errors than fatal car crashes.[2] According to the FDA, “Medication errors cause at least one death every day and injure approximately 1.3 million people annually in the United States”.

The Connecticut Department of Public Health recorded 1,637 adverse events in Connecticut hospitals between 2004 and 2011. 10.5% of those patients died. The most common errors were falls (40%), perforations during procedures (20%), pressure ulcers (18%), and leaving objects in patients after surgery (6.4%). [4]

Medical errors also carry a high financial cost. It is estimated that medical errors cost the nation $37.6 billion each year.[1]

What causes medical errors?

Medical errors are more common with inexperienced physicians, new procedures, extremes of patient age, complex care and in urgent care settings.[4] Poor communication, improper documentation, illegible handwriting, inadequate nurse-to-patient ratios, and similarly named medications contribute to the problem. Patients may also contribute significantly to medical errors. Falls, for example, are often due to patients' own misjudgments.

Sleep deprivation has also been cited as a contributing factor in medical errors. One study found that being awake for over 24 hours caused medical interns to double or triple the number of preventable medical errors, including those which resulted in injury or death[5].

How can medical errors be prevented?

Government agencies, purchasers of care, and providers must work together to make the health care system safer for patients and the public. A study found that 70 percent of adverse events are preventable.[6]

Possible solutions include:

1) Use of information technology, such as hand-held bedside computers, to eliminate reliance on handwriting for ordering medications and other treatment needs. Computerized prescribing systems lower the probability that a physician will make errors by providing accurate information on the drug, on the patient and on possible drug interactions and allergy reactions.[7]

2) Avoidance of similar-sounding and look-alike names and packages of medication.

3) Standardization of treatment policies and protocols to avoid confusion and reliance on memory, which is known to be fallible and responsible for many errors.

4) Following simple checklists to improve health care safety.[8]

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Resources:

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[4] Adverse Event Reporting, Department of Public Health, October 2011, http://www.ct.gov/dph/lib/dph/hisr/hcqsar/healthcare/pdf/adverseeventreport2011.pdf

[5] Barger LK, Ayas NT, Cade BE, Cronin JW, Rosner B, et al. (2006) Impact of Extended-Duration Shifts on Medical Errors, Adverse Events, and Attentional Failures. PLoS Med 3(12): e487 doi:10.1371/journal.pmed.0030487

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