MEDICAL ERRORS IN THE HOSPITAL SETTING

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Learning Objectives

1. Define Medical Errors
   Can you define Medical Error?

2. Present the impact of medical errors
   Are you aware of the impact of Medical Errors?

3. Present different types of medical errors
   Are you familiar with errors of omission/commission?

4. List three steps to reduce medication errors in the hospital
   Can you identify three steps to reduce Medical errors?

5. Discuss the health consumers role in the reduction of medical errors
Medical Error

- A medical error is defined as, “failure to complete a planned action as intended or the use of a wrong plan to achieve an aim” (Institute of Medicine, 2000)
- Usually described as human errors
Medical Error/Background

- Variation in healthcare training and experience, fatigue, depression and burn out
- Diverse patients, unfamiliar setting, time pressures
- Failure to acknowledge the prevalence and seriousness of medical errors.

Medical Complexity

- Complicated technologies (electronic health record)
- Powerful drugs
- Intensive care, prolonged hospital length of stay
Medical Error

• Type of treatment the patient receives
  – Studies have shown that patients receiving high risk procedures in the intensive care setting are more at risk than those receiving low risk procedures in an outpatient setting

• The risk Increases
  – With complexity of treatment
  – Use of internal devices which breach normal defenses

Agency for Healthcare Research and Quality (2008)
Types Of Errors

Commission

- Errors of commission are defined as medical errors resulting in an inappropriate increased risk of iatrogenic adverse events from receiving too little, too much, or hazardous treatment (Price et al, 2011)

  - For example, prescribing an antibiotic that the patient is known to be allergic to
Types Of Errors

Omission

- Errors of omission are defined as an, “increased risk of disease related adverse events resulting from decisions not being made and actions not being taken such as inadequate treatment or no treatment, or a test not being performed or the result not acted on” (Price et al, 2011)

  - For example, forgetting to order a cholesterol panel on a patient with diabetes.
Types Of Errors

Near Miss

- Near-misses are situations where an error is just avoided (Price et al, 2011)

  - For example, a nurse is about to administer an antibiotic into a patient, but just before she opens the tubing she notices that it is the antibiotic for the patient in the next room
An estimated 98,000 hospital patients are killed yearly, according to the Institute of Medicine (IOM), as a direct result of medical malpractice:

- Use of unsanitary/contaminated surgical instruments
- Incorrect incision
- Organ puncture or perforation
- Surgery on wrong organ, site, or side. Occur 4000 times/year
- Delayed surgery
- Prolonged surgery
- Foreign objects left inside the body. 39 times per week

(Knudson, 2013)
Scenario

- 17 year-old dies two weeks after receiving the heart and lungs of a patient whose blood type did not match hers
  - Doctors failed to check the compatibility before surgery began

- After a second rare transplant operation to attempt to rectify the error, the patient suffered brain damage and complications that subsequently hastened her life
  - Hospital blamed human error for the death, along with a lack of safeguards to ensure compatible transplant
2,211 recorded anesthesia related deaths in the United States (US) between 1999-2005
- 46.6% attributed to overdose
- 42.5% to adverse effects of anesthetics in therapeutic use
- 3.6% to complications during pregnancy, labor, and puerperium
- The highest death rates were found in persons aged 85 years and older

(Institute of safe medication, 2008)
Scenario

• Woman dies after receiving the wrong type of anesthetic during a routine procedure

• Hospital having financial difficulties, and had hired temporary staff to fill positions

• Miscommunication between temporary staff and the full-time staff resulted in the wrong anesthetic being used, which led to the persons death.
  – Hospital was focused on cutting costs that they neglected to consider patient safety as their first priority

(Margolin, 2013)
In 2006 the Institute of Medicine (IOM) found that medication errors are among the most common medical mistakes, harming 1.5 million people each year.

- 400,000 preventable drug-related injuries
- 800,000 in long-term care setting
- 530,000 among Medicare recipients
- Conservative numbers

In 2000 costs for extra medical care approximated $887 million

Figures do not account for lost wages and productivity
16 year old dies while giving birth
Epidural anesthetic was mistaken for prescribed dose of penicillin
Nurse took medication from the medication room administered it Intravenous (IV) even though the container carried a **WARNING** that it was not for IV use.
Nurse charged with criminal neglect
Maximum prison sentence of six years in prison

(Frew, 2006)
200,000 Americans die from preventable medical errors including facility-acquired conditions.

In 2008, medical errors cost the United States $19.5 billion. About 87 percent or $17 billion were directly associated with additional medical cost, including: ancillary services, prescription drug services, and inpatient and outpatient care, according to a study sponsored by the Society for Actuaries.

Additional costs of $1.4 billion were attributed to increased mortality rates with $1.1 billion or 10 million days of lost productivity from missed work based on short-term disability claims.

Estimated that the economic impact is much higher, perhaps nearly $1 trillion annually when quality-adjusted life years (QALYs) are applied to those that die.
Human Error

Airlines expect 1-2 jets to crash daily
(1000 deaths expected weekly)

Why do doctors and nurses kill more people than airplane pilots?

- Airline pilots are required to have time off to sleep, do everything in duplicate and follow protocols.
Hospital Setting

- Medical errors in the hospital setting account for 44000 to 98000 deaths annually
- Potential underestimate or overestimate
- Medical errors are especially prevalent

Kohn et al. 1999
TO ERR IS HUMAN: BUILDING A SAFER HEALTH SYSTEM (1999)

Challenge
- Reduce medical errors by 50% in five years

The Call to action
- Non punitive error reporting systems
- Legislation for peer review protections
- Performance standards for safety assurance
- Visible commitments to safety improvement attention to medication safety
A Decade Later.....

• In 2010 a government analysis found that 134,000 Medicare beneficiaries were suffering adverse events every month, many of which were, “clearly preventable”.

• A study conducted in a North Carolina Hospital: reported that in 25% of all admissions, the care provided harmed patients (New England Journal of Medicine, 2010).

• A study published in Health Affairs 2011: Revealed that the standard methods hospitals use to detect medical errors failed over 90% of the time.
IOM Report 2001: Crossing The Quality Chasm

• Safety is a key dimension of quality
  – Must have a systems approach to safety and improvement
  – Simply trying harder will **NOT** work
  – Stepwise correction of problems in the system is the key to success
  – Overcome the culture of blame and shame: Human error is to be expected
System Failure

Hospital Environment

- Poor communication, unclear lines of authority of physician, nurses, and other providers
- Disconnected reporting system within the hospital: Lack of coordination
- Look alike sound alike medications
- Assumptions
- Reliance on automated system to prevent error
  - Regardless of gadgets and latest technology, it’s ultimately the vigilance and skill of the caretaker that matters most (Avram, 2013).
Steps To Reduce Medical Errors

• Speak up!
  – Culture must endorse rather than penalize medical personnel for voicing their safety concerns.
  – Strong institutional backing from the highest level of leadership to ensure that people voicing their concerns are not met with intolerance.
  – Washington – President Obamas administration wants consumers to report medical mistakes and unsafe practices by doctors, hospitals, pharmacists and others who provide treatment.

Steps To Reduce Medical Errors

• Checklists
  – Such as the World Health Organization (WHO) surgical checklist
  – Designed to prevent wrong procedures and wrong-site and wrong patient surgeries by verifying critical information as part of the OR team dialogue immediately before surgery
  – Checklists are associated with an improved patient safety culture in the OR; the results are more OR personnel feeling more comfortable speaking up.
Steps To Reduce Medical Errors

• Compliance with Evidenced Based Practices
  ▪ Simply ensure optimal patient safety outcomes
    ▪ Closing the Gap
      ▪ Management must be in touch with front line providers
      ▪ When quality goes down…. mistakes go up
      ▪ Transparency can close the gap. Serve as an internal management tool to encourage staff to adhere to higher standards.
Quality Health Care...... Is

- Safe
- Effective
- Patient-centered
- Timely
- Efficient
- Equitable
The US health care system is the most costly in the world, accounting for 17% of the gross domestic product with estimates that percentage will grow to nearly 20% by 2020.

- Improve the patient experience of care (including quality and satisfaction);
- Improve the health of populations; and
- Reduce the per capita cost of health care
Conclusion

- Medical errors are a major problem in health care.
- Typically the problem is a system problem and not necessarily the result of one individual.
- The system needs to be fixed and organizations should/must continue working to improve the system.
- Nonetheless, each individual health care provider needs to be aware of common errors and be aware of steps to prevent them.


Clickers

Please pass your clickers to your right for collection..

Thank you