UNIT NO. 5

MEDICAL ERRORS AND PATIENT SAFETY

Prof Ng Han Seong

ABSTRACT

The identification and reduction/prevention of medical error has become an important issue and major priority for all health care providers. Most patients receive high quality care, but unfortunately, some will receive care that harm them or be potentially harmful. Most of the work and report on this subject comes from hospitals, much less from the primary care. Nonetheless, understanding the nature and frequency of medical error in primary care is equally important.

DEFINITIONS

There is a wide variety of definitions as well as methods used to identify the nature and frequency of medical error in primary care. Incident reporting and systematic identification obtained from Family Physicians and medico-legal databases are some of the methods used in obtaining data, and they often reveal differing aspects of medical errors.

The Institute of Medicine (IOM) defined medical error as 'failure of a planned action to be completed as intended or the use of a wrong plan to achieve an aim'.

Another useful definition provided by Bruce Bagley, a past president of the American Academy of Family Physicians – 'A medical error is anything that happened in my office that shouldn't have happened and that I absolutely do not want it to happen again'.

A more direct definition is an 'act or omission resulting in a less than optimal or potentially adverse outcome for the patient'[1].

IMPORTANCE OF MEDICAL ERRORS

IOM published its report 'To err is human: Building a better health system' in 1999. Preventable adverse events are a leading cause of death in the United States. In this report, it is estimated that between 44,000 to 98,000 deaths were related to medical errors annually. Deaths due to preventable adverse events exceed deaths attributable to motor vehicle accidents, breast cancer or AIDS. It called for improvements in the handling of medical errors for its reduction. This report focused exclusively on patients in the hospital setting.

Primary care was largely left out due to insufficient data. Nonetheless, we should learn from this report, and to examine our care processes and take steps to reduce medical errors and adverse outcomes in our practices.

NG HAN SEONG, Chairman, Division of Medicine & Senior Consultant, Singapore General Hospital

MEDICAL ERRORS AND THEIR CAUSES

Medical errors can be broadly divided into 2 types –
1. Active failure
2. Latent conditions

Active failures take the form of 'slips' (pouring salt instead of sugar in one's coffee), 'lapses' (failure of memory) and 'mistakes' (wrong reasoning leading to wrong choices, knowledge).

Latent conditions include poor maintenance (equipments) or management practices (long waiting time for appointments, delays). Here we are set to fail because of our environment.

There are other reports classifying medical errors to 'Knowledge and Skill errors' and 'Process errors'.

From studies reported, medical errors rate in primary care differs in a wide range. It ranges from 5 to 80 per 100,000 consultations. In both the Harvard study and the Australian study, 8-9% of adverse events occurred in a doctor's office, 2-3% at home, and 1-2% in nursing home[2].

Based on a study of 330 errors contributed by 50 family physicians over 1 year[3] medical errors can be grouped into the following categories:
1. Communication problems (24%)
2. Discontinuity of care (20%)
3. Lab results/reports (19%)
4. Missing notes/charts (13%)
5. Clinical mistakes (knowledge and skills) (8%)
6. Precribing errors (dosage, choice, allergy, interaction) (8%)
7. Others (8%).

In this study, it is interesting to note that prescribing and clinical judgement accounted for 16% of the errors. Twenty percent of errors resulted in delayed care. There were 10 hospitalisations and 1 death. One can also conclude that majority of medical errors in family practice were the result of latent conditions rather that active failure.

LEARNING FROM MEDICAL ERRORS

Since no human is infallible, errors are bound to happen. In today's practice, healthcare is really about a continuum of care, and it is important not to draw the line too sharply between primary care and hospital care with regards to patient safety and medical errors. Patient safety issues and measures to reduce medical errors start in primary care as patients shuttle back and forth between family physicians, specialists, hospitals, clinics, labs and so on in their journey for diagnosis, treatment, and follow up. We must not miss the learning opportunities that are offered by medical error detection and its findings.

MEASURES TO ENSURE PATIENT SAFETY

A comprehensive approach must be taken in any medical error reduction effort. We must examine/acknowledge our own behaviour, limitation (knowledge and skill), team dynamics, operational and office processes and policies.

How can we reduce medical errors? The following measures may be considered:

1. Learn and adopt safety practices of organization such as airlines, food industry, nuclear power plants whose margin of error is very small, and where errors may be catastrophic.

2. Establish a patient safety culture. This is an important starting point. A 'no blame' culture is to be adopted to encourage comprehensive reporting of events, incidences and errors. This will allow documentation and analysis (root cause analysis) of errors. The results can then be shared among healthcare workers during inservice meetings. Solutions and preventive measures can be made, and outcomes measured to document improvement and achievement of targets.

3. Prevent errors by:
   - having checklists and flow charts to reduce reliance on memory
   - having electronic medical records for improved information access
   - having electronic prescription to avoid repeat prescription, drug interaction and drug allergy
   - having trained and competent staff and teamwork
   - having regular CME to keep up to date and increase knowledge/skill
   - practising the principles of evidence-based medicine
   - building redundancy – double check prescriptions, patient's identity, etc
   - getting patient involved in their care, engage patient in their care and education.

4. Anticipate – look out for weak links in the system. Anticipate error before it occurs.

CONCLUSION

Reducing and responding to medical errors are important components of quality health care. While most of the experience had been gained from the hospital care environment, there is now an increased focus on safety in primary care, as it is the portal of entry for patients into the complex journey of present health care system. There is a need to develop and share a common definition for medical errors in primary care to allow us to examine the prevalence and plan/design studies on medical errors.

REFERENCES
1. Baylis F. Errors in medicine: nurturing truthfulness. J Clin Ethics 1997;8(4):336-40.
2. Saul N Weingart et al. Epidemiology of medical error. BMJ 2000;320: 774-6.
3. Dovey S. Identifying treats to patient safety in family practice. AAFP poster, June 2000.
4. Medical Errors and Patient Safety : A curriculum guide for teaching medical students and family practice residents. Joseph L Halbach & Laurie Sullivan. Department of Family Medicine, New York Medical College. Sep 2003.

LEARNING POINTS

o There is more than one definition of a medical error. A direct one is by Baylis: A medical error is an 'act or omission resulting in a less than optimal or potentially adverse outcome for the patient'.

o Although the focus of the IOM Report on "To Err is Human" is in-patient, we should learn from this report, examine our care processes and take steps to reduce medical errors and adverse outcomes in our practices.

o In a study of 330 patients, the majority of medical errors in family practice were the result of latent conditions rather than active failure.

o We can reduce medical errors by attention to: learning and adopting safety practices of organisations; establishing a patient safety culture; preventing errors by a broad based approach; and looking out for weak links in the system to anticipate error before it occurs.