



Quality and Safety in Indian Hospitals

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“Incredible India” is a land of contrasts. This is nowhere more evident than in health care today. On the one hand we boast of brilliant doctors who practice state of the art medicine using the latest technology. On the other we have in our hospitals and nursing homes ayahbais, ward boys, and servants who barely understand the rudiments of hygiene and sanitation. Between these extremes is a crucial nursing corps who only after many years has gained respect as a profession. All three come together as a team to provide health care in our hospitals.

If health care workers are of varying quality so too are the institutions in which they work. Government hospitals are characterized by chronic overcrowding, underfunding, and facilities perpetually stretched to the limit.¹ They are the victims of an economy which spends less than 2% of its GDP on health. They turn out bright young doctors and look after a workload of patients with a spectrum of diseases far broader than found in the private sector; yet are at times the unfair target of criticism during healthcare crises. Their circumstances seldom allow quality and safety to appear on their radar.

Today two thirds of the population seek the private sector for their health needs. Private hospitals and private teaching colleges have mushroomed in the past 30 years. This perhaps is in response to the demands of students for a medical education, and of a public seeking more personal and patient friendly treatment at the time of sickness. Indian business also sees a profit from investing in health care.² Recently medical tourism has been a spur for select institutions to strive for the highest international standards.³ Quality and safety are suddenly catapulted into prominence.

CAN WE MEASURE QUALITY?

Before we can measure Quality we have to define it. Many definitions exist, but a practical and implementable one is “a degree of correspondence between goals set and goals achieved in relation to patient care, without excessive use of financial resources”.⁴

What are the tools we use to deliver quality medical care?

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1. *Protocols* : These lay down the steps to be followed in managing a given medical condition, in undertaking a medical procedure, or in performing a laboratory test. They are the distillate of knowledge of experts in the particular fields.
2. *Evidence based medicine* : This depends upon the results of randomized clinical trials, systematic reviews and metaanalyses to establish that one form of treatment is superior to another.
3. *Treatment guidelines* : They are documents produced by a panel of experts or learned societies. Where ever possible they are evidence based and state the level of evidence in support of a specific treatment. They cover treatment in different age groups, in the presence of organ dysfunction, co-morbid diseases, in pregnancy etc, which may not be found in standard textbooks. They are dynamic documents subject to change with new developments. They refer to best management in the part of the world in which they are written. It is therefore heartening to see Indian guidelines in the last two years published in JAPI.
4. *Rapid health delivery* : Rapid response to a medical emergency is a test of quality. Thus we may use as a measure a) door to needle time for initiation of thrombolysis in a patient of acute myocardial infarction, b) time taken to start drug treatment in a case of cerebral malaria or c) antibiotics in a case of sepsis syndrome. In the same way the turn around time of stat laboratory tests such as Troponin T in a case of acute chest pain helps define quality.

Yet all of this will not suffice. There can be no quality without ‘Safety’.⁵

WHAT IS OUR LEVEL OF SAFETY

Doctors have always been expected to practice medicine in a responsible and safe manner. However human error is inevitable at times especially in complex medical systems such as acute hospital care.

In 1999 the Institute of Medicine (IOM) published its report ‘to err is human’ which suggested that as many as 98,000 patients in the United States die each year as a direct result of medical errors.⁶ This shocked both the country and its politicians. The United States spends over 14% of its GDP on health care and is home to many of the finest medical institutions in the world. What was wrong? It drew attention to the following :

- a. Errors are maximal in severely sick patients requiring complex treatment in intensive care units.
- b. Medication errors are frequent and secondary to transcribing errors, failure to observe correct dose adjustment in renal and hepatic disease, and wrong dilution of concentrated drugs for intravenous injection.
- c. Errors will happen in medicine because the system is flawed. We expect perfect performance from junior doctors who are often sleep deprived, over worked, and have multiple tasks to attend to.⁷

Introspection followed the release of the report. In 2000 the Joint Commission International (JCI) a branch of Joint Commission on Accreditation of Healthcare Organisations (JCAHO) prioritised certain Patient Safety Goals (Table).⁸ These appear elementary and yet identify pitfalls encountered in hospital practice today.

The nature of Errors was further examined.⁹ Concepts were broadened. We need to be proactive. Prevention is better than cure. We need a system for reporting errors and lapses of discipline even when no adverse event has occurred.¹⁰ Errors should be expanded to include failure to counsel patients with risk factors regarding future harm. Errors should include failure to give treatment of proven benefit such as pneumococcal and influenza vaccine to the elderly with chronic lung disease.¹¹ Indian hospitals would do well to learn from others experience and incorporate these concepts into our healthcare practice.

WHEN THINGS GO WRONG

When things go wrong news spreads fast, and the search to find who is at fault is on. This can all too easily develop into a witch hunt, with the blame game shifting culpability from one person to another. The setting for this may vary from a departmental investigation, a peer review meeting, or a morbidity and mortality conference. Which ever one it is, it represents a retroactive response to an untoward incident. By reviewing and dissecting out the full sequence of events that led to the incident one uses a process of Root Cause Analysis¹² to identify how the error occurred and who or what could be responsible. The process can be effective but it leaves casualties in its wake. People feel threatened, become

Table : International patient safety goals

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- Identify patients correctly
 - Improve effective communication among providers
 - Improve the safety of high alert medications
 - Eliminate wrong site, wrong patient, wrong procedure surgery
 - Time out to verify check list before starting a procedure
 - Mark the precise site for surgery
 - Reduce the risk of healthcare – acquired infections with hand hygiene
 - Reduce the risk of patient harm from falls
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From Joint Commission International 2000⁸

defensive, and are unlikely to voluntarily report errors, or adverse events in the future.

By and large errors occur because of bad systems and not bad people.¹³ ‘Examine the systems’ should be the motto as is the practice in industry and in the aviation sector. Be proactive and try to define the weak points in the system and take appropriate steps. For example an outbreak of postoperative infections occurred soon after the introduction of the laparoscope at our institution 16 years ago. It was not realized at the time that it required a dedicated person to clean the laparoscope of all organic matter before it could be sent for sterilization. The system was at fault. There was no question of negligence on the part of theatre staff, but patients suffered from our lack of foresight.¹⁴

In search of solutions

Earlier in this article our definition of quality explicitly stated ‘without excessive use of financial resources’. In the same vein the quality and safety measures listed below are implementable by any institution, government or private, having the necessary commitment.

- *Ensure the patient’s identity.* At times of blood collection, blood transfusion, laboratory investigation, and surgery, correct identity is crucial. A wrist band should be worn by the patient stating his name and hospital number. Identity on the basis of bed number or name in case file is insufficient. Mistakes are not common but can be devastating when they occur.¹⁵⁻¹⁶
- *Use evidence based medicine to save lives :* Five years after the 1999 report of the Institute of Medicine, the save 100,000 Lives Campaign¹⁷ was initiated to add momentum to the quality and safety campaign in healthcare. Common clinical situations were identified where simple clinical interventions including drug therapy were known to be effective. Among these were a) acute myocardial infarction b) central line infections c) surgical site infections d) ventilator associated pneumonia. The challenge here was not intellectual, but one of determination to implement what was already known for the benefit of each and every patient.
- *Better communication between healthcare workers :* Since a single stay in hospital may involve interaction with ten or more caregivers, errors may occur during changes in nursing shifts and when daytime junior doctors transfer care to emergency doctors at night. Proper documentation of unstable patients’ status in case files including DNR orders can avoid distress and futile resuscitation efforts in the event of a cardiac arrest. Nurses should also follow a protocol for receiving verbal laboratory reports and other information over the telephone to avoid error.¹⁸
- *Safer delivery of health care :* Multitasking is inbred

into the daily life of doctors and nurses with the distraction of pagers, casualty calls, and emergencies superimposed upon patient work and meetings. Checklists and bundles should be followed for common clinical conditions for delivering daily care to patients especially in ICUs to ensure no component of care has been missed.¹⁹

- *Hand hygiene to prevent nosocomial infection* : These infections cost lives and increase morbidity and health care costs.²⁰

Finally we must recognize that today medicine is increasingly technology driven. New technologies create new methods for producing errors and constant vigilance is required to track these. One powerful tool that can be used is anonymous incident reporting by doctors nurses and technicians working in high risk areas.²¹ Lapses of discipline, errors or incidents are noted and dropped into a 'ballot box'. The head of department opens the box at intervals and uses the reports to generate a discussion on how practices can be improved. Free dialogue is encouraged and no one need feel threatened.

When all the above measures are part of daily practice we can say the seed for a culture of safety in an institution is sown.

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