Research and publications

Orthopaedic surgeon should always stay on the current by learning what is new and by keeping his standard high. This can only be achieved by reading, writing and by performing research projects, research is the life blood of our wonderful specialty. We are currently witnessing profound and far-reaching progress in the technology and biosciences with breakthroughs in human genetic, organ transplantation and the highly sophisticated means for internal fixation. We should go hand in hand with the recent advances, which should be harnessed and guided for the welfare and happiness of mankind and not to be left to go astray for decremental uses. At this juncture it suffices to state that biomedical area which has intimate relations to human life and well being, should receive careful analysis under the broad teaching of medicine and religion in order to ascertain their legality. The cost of each study should be weighed against the anticipated benefits to be derived from it. It is not only appropriate but also an obligation of clinicians who develop new interventions or diagnostic assessments to perform proper clinical research to objectively demonstrate the efficacy and safety of any new procedure. The World Medical Association developed specific guidelines for performing a research with several basic principles.

Among these are:

- Health and well-being of human subject must be the first consideration.
- Patients and families must be fully informed of all risks as well as benefits of research and so indicated in a proper informed consent.
- The protocol must be scientifically based.
- There must be no other way to obtain the information except through use of human subject. Results must be reported accurately.
- Statements should not just accept because they are said or written by an authority. We have to be aware of those authors who have a special financial interest in the product under review.
- Continuous education which is the heart and soul of orthopaedic surgery is very vital for the physician, the patient and the public. It is absolutely essential for our practice and economic well-being. The products of orthopaedic research are truly golden eggs and we should forever nourish and cherish these magnanimous geese.
- Good reasons for performing a study and for publishing its results are to provide information to improve patient care and to record data from a well known study in an accurate fashion, so that the present and future generations of readers will be able to build up upon solid research. Regrettably many
articles were written to serve the author rather than improve the standard of patient care or to add solid scientific basis for the orthopaedic dictionary. Scientific research to establish original work is always mandatory to improve the methods of diagnosis and treatment, but this freedom should not entail harm to the patient or even to the experimental animals, all patients should be adequately informed about all aspects of a study. Protocol of methodology should be prepared, studied and adopted by experienced and scientific bodies in the light of honest practice that should serve humanity. Ethical behavior also comes into place when writing and submitting a manuscript for publications. The best possible information should be provided to the journal readers, author or authors should strive for perfection during writing or revising the manuscript, details about the problem studied, its relevance, the appropriateness of the methodology, the inclusion and exclusion criteria, the uniformity of the group selected, the comparability of the study and control group, conclusions and recommendations should always be supported by the data. It is always better not to sacrifice excellence and good scientific methodology in a desire to please vested interests. When there is multiple authorship of manuscript Cowell stated that: It is to be clearly understood that each individual who is listed as an author has participated in the design of the experiment, normally has contributed to the collection of data, has participated in the writing of the manuscript and assume full responsibilities for the content of the manuscript. Anyone can copy but not everyone can innovate. Hasty publications in prominent medical journals appear to provide data used by the author to recommend treatment; hasty publications can scare the public, generate enormous costs for the health care system and produce unwanted resupercussions affecting all segments of society. Cowell suggested that the author should ensure that time and resources are not wasted on project that has no hope of proving or discovering the hypothesis. The Peer-Review System of a journal is one of the process by which the editor can strive to ensure that the information provided to the reader will be as accurate as possible. Scientific and ethical adherence to the standard by the author would I believe help to make our publications more meaningful, instructive and very useful too. Editorial Boards are increasingly worried by fraudulent practices which are often difficult to detect. There are reports of falsified data and illustrations. Intellectual honesty is of paramount importance and finally it is unethical to submit the same papers simultaneously to more than one journal.

Sanctity of human life
Human life is sacred; no physician has the right to take life away except upon indications clearly specified in medical practice. Physician shall not take away life even when motivated by mercy. Mercy killing for painful, hopeless illnesses is refuted. This also applies to killing to obviate the miseries of deformities. We should do our utmost best to deal with incurable patient by moral support, alleviation of suffering and anxiety. The patient has the right to know his disease and we have to acquire appropriate ways of answering the patient's questions. We should thoroughly study the psychological acumen of our patient and tailor our explanations to each particular situation that do not increase sufferings and anxiety.
Responsibility and liability
Orthopaedic practice is allowed to those who are duly qualified by recognized institutions. The advances in this field made it mandatory to practice within boundaries of certain specialties or subspecialties. We must honor the responsibilities and trust which the patient or his family and the society place upon our shoulders. The fulfillment of this responsibility can not be fully achieved without continuous and diligent efforts to improve and upgrade our knowledge and skill and we should put the maximum capacity for the welfare of our patients, who so ever try to treat people without the required standard knowledge and experience becomes liable. The physician is bound to his patients by the general principles applying to all kinds of contract. He however does not guarantee the outcome of his services because this goes beyond his capabilities. 

Operative interference
It may seem obvious that surgery should be offered only when it is in the patient's best interest; it is necessary therefore for the surgeon to have complete understanding of the patient's past history and social history to understand their life style and occupational requirements before recommending surgery. Surgery performed in general for saving life, the protection of health or its recovery, for pain control or for correction of congenital and acquired deformity, prophylactic internal fixation may be needed on some occasions, but certainly there is no place for surgery because of financial affairs. The patients should be informed regarding the studies that were to be done on their blood, any invasion of privacy however small without informed consents would be inappropriate. One of the most important Causes of patient's dissatisfaction following surgery is failure to receive sufficient information about surgery and its risk; this should be considered as part of the informed consent. The patient must understand clearly the operative procedures, the possible complications and the future outcome; the surgeon needs to observe his response after his full understanding of the situation. There is always a remote risk that the patient could be worse. He should be informed, in general terms, the risk of not being improved by surgery. So he is not allowed to sign the informed consent unless he is well informed about the operation. McCormack proved by his study that the majority of patients questioned were unsure of the meaning of simple terms such as fracture reduction or internal fixation and he concluded that many patients willingly consent to procedures that they do not fully understand.

Human errors which are not defensible are responsible for a lot of patient suffering, the surgeon can mistake, the laterality, and the exact site and he is supposed to make an adequate preoperative localisation and investigation. In U.S.A. within 10 years (1985-1995) 225 claims regarding wrong site surgery were related to orthopaedic procedures. This is certainly an avoidable mistake the surgeon is never blameless; doing avoidable mistakes is certainly unethical behavior. We have to seriously consider the operation site. The patient and his family will react badly to this mistake. We should avoid unreasonable delay and unnecessary haste, the competent surgeon should be capable of performing sufficient surgery in the ideal time, and he must avoid
unnecessary dissection and damage to
the structures close to his field.
The inexperienced surgeon should seek
a second opinion before embarking on
major surgery; there is no substitute for
the experience and experience is often
painful.
The wounded soldiers in the Second
World War used to say that they had
been wounded twice: once by the enemy
and then by the inexperienced surgeon\(^\text{17}\). To avoid complications sometimes we
need to understand the folly of our
patients. Infection is a real disaster in
orthopaedic practice, for that reason the
surgeon should guard against it, because
he is never blameless if infection
occurs.

To complete the integrated system we
have to consider seriously the
postoperative care and evaluation of the
results; some colleagues unfortunately
are not willing to face their own
complications at the same time they are
eager to search for the others
complications, Surgery is never without
complications, so we have to be ready
always to accept and handle our bad
results exactly in the same way when we
become proud and pleased with the
good results. The patients and his family
all together hurt by the bad result and
we grieve with them. Evaluation of the
results should have a comprehensive
basis. Subjective judgment are usually
inadequate, evaluation should be carried
by unrelated observer\(^\text{18}\).

**Emergency and life threatening situation**

In emergency and life threatening
situation we should not abandon a
difficult patient in need of emergent
care, irrespective of his religion, colour
or financial status. The patient's status
should not be exaggerated in his face so
that the personal gain may be increased,
or an elective situation changed to an
emergency one.

One thing should not be done under any
condition and that is squeezing the
patient in the corner. It should also not
be forgotten that almost all the
procedures we use in our daily work
may under certain circumstance, cause
emergency situations.

We should not alarm our patient, for
example, by raising our eyebrows on the
unexpected discovery of serious disease
or by thinking loud. Careless use of
words has frequently caused collapse of
patient and relatives.

"Watch your world" is a good maxim
for doctor faced with an emergency, for
his word is a therapeutic instrument no
less powerful to avert and no less
dangerous to produce an emergency
than a surgeon scalpe\(^\text{19}\).

**Negligence**

Since a charge of negligence may afflict
the surgeon's attention to his patient, he
tries his best to avoid it by sticking to
the standard rules. In law, negligence is
judged by the standard of prudence of
an ordinary reasonable man, but a
person who undertakes something
requiring a special knowledge or skill is
negligent if by reason of his not
possessing that knowledge or skill, he
bumbles, although lie does his best. The
negligence does not consist in the lack
of skill but in undertaking the work
without skill\(^\text{19}\).

Extraordinary skill, however, is not
required of any one and erroneous
judgment in a difficult case does not
constitute negligence. In some cases a
patient may by his own negligence
contribute to his injury or disease.
Establishing contributing negligence
weakens the patient's claim against the
treating surgeon, provided that the
patient was well advised. To avoid the
charge of negligence the court should be
provided with ample evidence that the
surgery did every thing that an ordinary and reasonable skillful orthopaedic surgeon would be expected to do, improper investigations means negligence in the eyes of law. The lack of information is not an excuse for making mistakes. In rare instance there will be a conflict between the ethically appropriate act and law, however, for more often ethical behavior is consistent with law. Misunderstanding of the law may lead to inappropriate ethical behavior. The satisfaction of being able to relieve pain and restore function, the intellectual challenge of solving problems, and the variety of human issue we confront in daily clinical practice will remain the essence of doctoring.

Suggestions
1. Medicine is field known by majority of public as a great profession, so we have to maintain this feeling by sticking to the standard rules of professional ethic. Bad ethical behavior probably worse than bad treatment in the eyes of law and patients.
2. Medical ethics must be taught in the training program in orthopaedic surgery, regular education program is also very useful for the qualified surgeon.

References and further reading
20. Eisenberg, C. It is still a Privilege to be a doctor New England Journal of Medicine, 314 (17). 113 -114, 1986.