

Research in Medicine

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The accumulation of experience at a personal level does not automatically translate into knowledge because personal experience can be biased. Even if knowledge is generated in this way, with only a few exceptions, the progress in knowledge is limited. The acquisition of medical knowledge is facilitated by the recent developments in information technology which encourage exchange of experience and skills between individuals and medical centers. The storage and filing of medical information are facilitated by the improved computerized search systems.

Research in Medicine can be divided into basic and clinical research. The main aim of conducting clinical research is to generate a solution to a clinical problem. Thus the elements in a good clinical research are to identify an important clinical problem, to propose a solution, to formulate a testable hypothesis, set up an experiment to refute (or to support) the hypothesis, analyze the data and to come up with a solution to solve the original problem.

We need basic research in medicine because clinical research may not be able to solve many of the clinical problems. Basic research can be used to simplify and to clarify a clinical problem under a controlled condition. Also basic research can be used to test and to develop new approaches and new knowledge which cannot be done on human for ethical reasons. Thus we need a “bridge tender” to channel knowledge from basic research to patient’s bedside and back again. This bridge tender can be a clinician or a basic scientist.

There are many good examples of conducting research in Medicine by bringing the results of laboratory research into clinical use, and the solution of a clinical problem by using basic research. This lecture uses an example for the development of laparoscopic sutureless repair of perforated peptic ulcer to illustrate these points.