

Research in clinical laboratory

Babak Pourakbari, Ph.D

Associate Professor
Tehran University of Medical sciences

Why is research in laboratory medicine Important?

- To provide answers to practical problems
- To provide a service to society (and patients in the case of medical research)
- To do some creative work and challenge yourself
- To attain respectability with peers in your profession
- To comply with educational curricula, directives and requirements
- To gain a research degree along with its consequential benefits
- To improve future employment prospects

medical research the benefits are aimed at improving the health of individual patients and the overall wellbeing of society.

Medical research can be classified into two main categories:

- Primary research (basic, clinical, and epidemiological)
- Secondary research (meta-analysis and review).

Conducting research



Aims of clinical research

- Understanding normal physiology and the pathophysiology of disease
- Understanding the impact of genetic and external factors on human health
- Keeping populations and patients well for longer
- Diagnosing and managing disease in populations and patients
- Designing and evaluating new therapeutic interventions
- Health economics

IMPORTANCE TO PATIENTS

- High quality results delivered and reported in a timely manner
- Adoption of patient centered care and a move towards personalized medicine
- Compliance with local, national and international clinical guidelines
- Improved patient safety that can facilitate improved clinical outcomes

IMPORTANCE TO USERS OF THE SERVICE

- The introduction of new biomarker tests
- More rapid turnaround time for results
- Improved reporting of results, including calculated or estimated parameters
- Innovation in the availability of testing, including point of care testing

IMPORTANCE TO COMMISSIONERS OF HEALTHCARE SERVICES

- Services will be up to date and targeted to meet clinical need
- Services will be of high quality in pre-analytical, analytical and post-analytical phases
- There is a willingness to embrace new findings and methods of service delivery
- There is an appreciation of the need for improving clinical and cost effectiveness

IMPORTANCE TO THE INTERNATIONAL COMMUNITY

- Increases the global body of knowledge
- Reduces duplication of effort
- Facilitates value for financial investment
- Encourages international collaboration between research groups with similar interests

IMPORTANCE TO THE PROFESSION

- Increase knowledge and understanding of pathophysiology
- Emphasise the role of Laboratory Medicine in diagnostic and/or therapeutic algorithms
- Facilitate the implementation of evidence based clinical guidelines
- Shorten the patient pathway with benefits to both clinical and cost effectiveness

IMPORTANCE TO THE INDIVIDUAL RESEARCHER

- Greater understanding of the contribution of laboratory medicine to healthcare
- Development of a reputation as an informed and valued source of collaboration
- Generation of a research portfolio that improves future employability
- Appreciation of personal strengths and weaknesses in a competitive research environment

زندگی صحنه ی یکتای هنرمندی ماست
هر کسی نغمه ی خود خواند و از صحنه رود
صحنه پیوسته به جاست
خرم آن نغمه که مردم بسپارند به یاد

.....

(ژاله اصفهانی)