American Journal of
Experimental and Clinical Research

Am J Exp Clin Res 2025;12(1):517-520

Reviewr Article

Medical research centers and public health: Review

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Abstract. It is well known that medical research should be able to make intense contributions regarding the care of patients, in addition to our understanding of the disease, the surgical process, and its outcome, and pharmacotherapy strategy. This study aimed to review medical research centers and public health. Based on the topic of study, the specific question was searched on the electronic databases of journals found on the Web of Science, Scopus, and PubMed. Medical research centers should move ahead toward the best pharmacotherapy outcomes for illnesses and diseases affecting millions of people worldwide. Based on new technology and highly expert researchers, the medical research centers could play an important role in enhancing our understanding to improve public health. Its primary aim should be based on the expansion of scientific knowledge in medicine, pharmacology, and other associated areas. As a result, the efficacy and side effects of drugs, cancer treatment, precision medicine, the development of vaccines, and other related areas should be the main goals of medical research. To control the occurrence of disease, campaigns for smoking cessation, obesity supervision, drug adverse effects, and communicable diseases, these centers play an important role in identifying, analyzing, studying, and mentioning the associated risk factors. As the medical research centers play an important role in advancing public health, the construction of medical research centers should be conducted with the patient and health system demands in mind. To make informed funding decisions, policymakers need to rely on research data.

Keywords: Research, centers, medical, pharmacotherapy, surgery, internal, outcome.

Introduction

Medical research health research or biomedical research denotes the course of expanding precise approaches to yield information about human diseases, the deterrence and handling of illness, and the upgrade of health. Health research comprises an extensive variety of fields such as; chemistry, biology, toxicology, and pharmacology to emerge new remedies or therapeutic dealings or refining the claim of those already available. Preclinical research and clinical research are two arms of medical research. According to the definition by the World Health Organization (WHO), people, societies, and actions whose main aim is to encourage, reinstate, or preserve well-being could be involved in the health system. To improve health activities hard work was needed to impact contributing factors associated with health [1, 2, 3]. By the way, health system investigation can usually be considered as describing the incidence of illness; classifying individuals with or at augmented danger of sickness comprising problem-solving and predictive studies, and clarifying the incidence of disease containing etiologic and effectiveness reconsiderations. To construct medical research centers based on evidence, including design, implementation, and instituting, a medical research center and its' associated professors should evaluate patients and disease problems for research purposes [4, 5, 6, 7, 8]. As a considerable part of the university's attempt is concerned with the upgrading of research, this study aimed to evaluate medical research centers in Isfahan, Iran.

Materials and Methods

Isfahan University of Medical Sciences was established in 1946. Isfahan University of Medical Sciences runs undergraduate, graduate, and postgraduate agendas in 10 faculties and 75 main departments. The student body consists of about 10,013 students from all 31 provinces of Iran and some foreign countries and 1,043 faculties' professors. Funding for Isfahan University of Medical Sciences is provided by the government (via the Ministry of Health and Medical Education) and through some private investments. Research is ongoing regarding the development of novel therapeutics and diagnostic artificial intelligence and information technology in medicine, regenerative medicine and cell therapy, big data to knowledge, precision medicine, medical robotics, and others. The information related to the medical research centers were collected from the official site of Isfahan University of Medical Sciences; https:// research.mui.ac.ir/ [9-22]. Based on the topic of the study, the specific question was searched on the electronic

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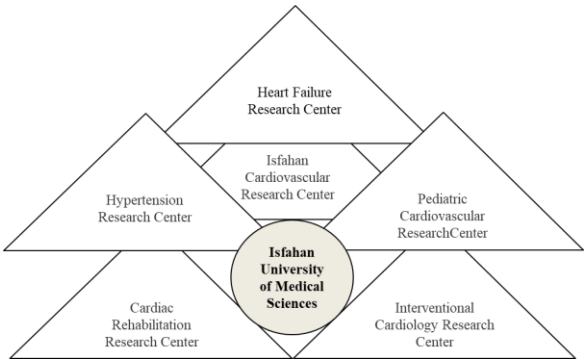

Figure 1: Research Centers Associated With Heart Care (n=6).

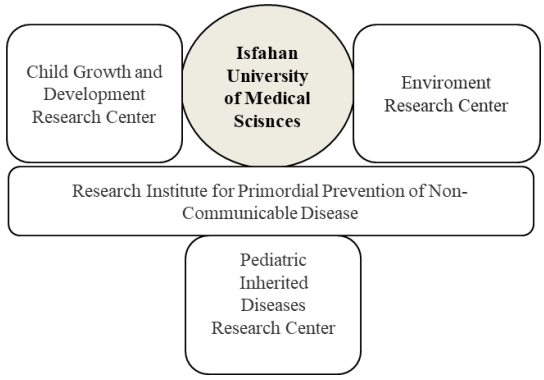

Figure 2: Research Centers Associated With Child Care (n=3).

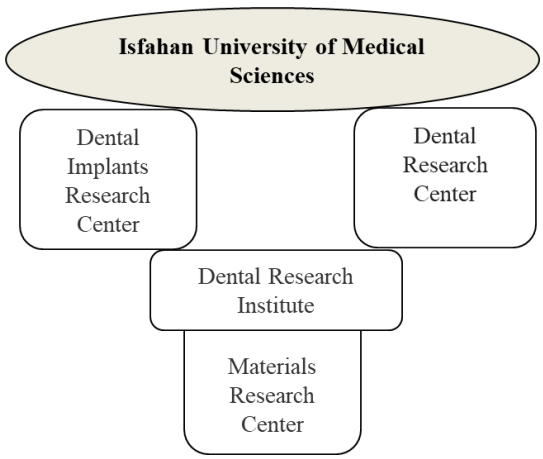

Figure 3: Research Centers Associated With Dental Care (n=3).

databases of journals found on the Web of Science, Scopus, and Pubmed.

Results

In the field of medical research, the type of work that is characteristically documented for professional improvement resolutions and favored by investigators is the one available in a paper subsequent peer review–often mentioned as the form of greatest [23, 24]. Isfahan University of Medical Sciences includes; 39 tertiary care hospitals and 10 faculties. Figures 1-7 show the existing research centers associated with the Isfahan University of Medical Sciences. Approximately there are 49 research centers as shown in Figures 1-7. Isfahan province covers approximately 107,027 km2 and is located in the center of Iran, a country in Southwest Asia. The latest population census associated with the year 2023, reported that there are 5,349,818 people in Isfahan Province. Figure 1 shows that for the diseases associated with heart, Isfahan University of Medical Sciences and the Ministry of Health have budget responsibility against six research centers; 1) Heart Failure, 2) Pediatric Cardiovascular, 3) Hypertension, 4) Intervention, 5) Rehabilitation, 6) Cardiovascular Research Center (Cardiovascular Research Institute). In the field of child care, 3 research centers were designed; 1) Child Growth and Development Research Center, 2) Environment Research Center, and 3) Pediatric Inherited Disease research centers (Figure 2). For dental and drug care, research centers (n; 3; Figure 3 and 3; Figure 4) were designed. Other separate research centers can be found at ttps://research.mui.ac.ir/ get a budget for research from the Isfahan University of Medical Sciences and the Ministry of Health (Figures 5, 6, and 7).

Discussion

The significant problems associated with disease and drugs result in substantial costs posed to the healthcare system worldwide [23-25]. Starting a clinical trial arrangement is one of the most stimulating, yet important, steps when developing a successful research program. The study reported that the medical national costs associated with cancer research were formerly predicted to upsurge 27% between 2010 and 2020, from $124.6 billion to $157.8 billion (in 2010 dollars) [26]. In Isfahan, Iran the period prevalence associated with cancers was reported a value of 611.5/100,000 persons, confirmed a 21.8 increase in incidence from 2011 to 2015. Isfahan province covers approximately 107,027 km2 and is located in the center of Iran, a country in Southwest Asia [27], [28]. Associated with medical research centers and developing a new center, healthcare authorities should consider budgeting from both broad and narrow perspectives. A research budget should be developed based on disease prevalence for each research proposal however the research itself necessitates a budget that achieves the unintended costs required. At present time in Isfahan Medical Research Centers, the sum devoted to proposals and the mechanisms by which the funds are used differ. Actions and programs that sometimes do not have a pre-established research proposal make this determination by calculating among research budgets and costs that are not directly related to the current health problems in Isfahan medical research centers. It is imperative to remain truthful when considering the amount of money needed for both direct and indirect costs and to plan exactly before starting a new clinical research proposal. The well-educated researcher in addition to the physician and non-physician staff is vital to the total achievement of the research center program [29].

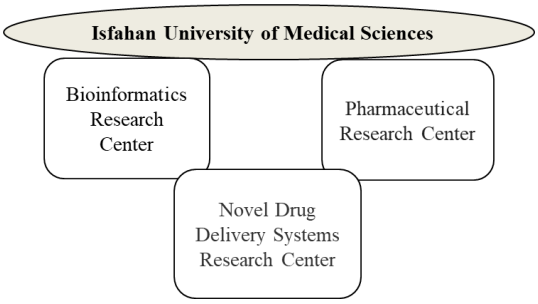

Figure 4: Research Centers Associated With Drug Care (n=3).

Figure 5: Individual Research Centers.

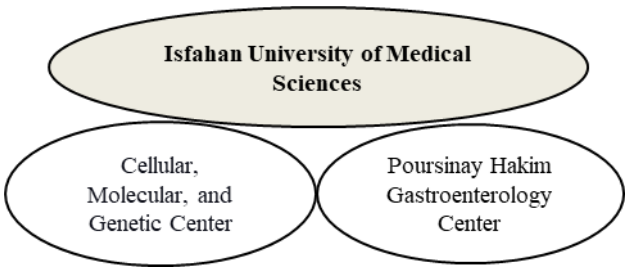

Figure 6: Private Research Centers.

Figure 7 The Center for Developing Interdisciplinary Research of Islamic Teaching Center and Health Sciences.

Conclusion

Medical investigation development has been at least partly due to the health scientific growth, training, and obtainability of health manpower and improvement of general well-being rank worldwide and in Iran. Conducting clinical research on a particular population of patients presents experiments that trainee or student investigators may not have confronted while training at academic institutions. For the tasks associated with research responsibility and assuring that all deadlines are met, clinical associate researchers should be responsible. Study success depends deeply on this person because they are accountable for everything from conference proposal deadlines and studying inclusion/exclusion criteria to collecting data and serving as the main source of interaction with patients on study, which can substantially influence participant enrollment and retention.

Conflict of interest

The author declares no conflict of interest, financial or otherwise.

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