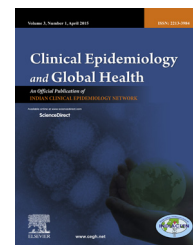


Available online at www.sciencedirect.com

ScienceDirect

journal homepage: www.elsevier.com/locate/cegh

Information and Commentary

Clinical epidemiology in developing countries: Current situation and suggestions for the Indian context



Rajamohan K. Pillai*

Professor & HOD Paediatrics, Dr. S.M. C.S.I. Medical College, Karakonam, Kerala, India

ARTICLE INFO

Article history:

Received 4 July 2016

Accepted 22 August 2016

Available online 5 September 2016

Keywords:

Clinical epidemiology

Evidence based medicine

Clinical epidemiology units

INCLLEN

India-CLEN

ABSTRACT

Background: In India, epidemiological services are well developed and epidemiology teaching is very much part of curriculum from undergraduate to doctorate level of studies. In spite of all the initiatives to sensitize physicians towards clinical epidemiology (CE), this academic discipline is still not popular as it should be. The development of CE teaching and the present situation along with way forward are discussed in this article.

Objectives: This review article is aimed to describe the evolution of CE in India and critically look into the concept and scope of CE and evidence-based medicine (EBM) in the Indian setting.

Methods: This paper is a review of the status of 'clinical epidemiology – popularization' in India and the scope for further progress towards this direction.

Results: The development of CE has taken a new pace after the introduction of EBM. Both CE and EBM are propagated by INCLLEN-trained faculty mostly among medical students and teachers. The paper also looks into the linkages between public health epidemiology and CE in the context of involvement of clinical epidemiologists in public health programs.

Conclusions: After discussing the directions for future, the paper proposes the inception of CE unit at each medical college and also the objectives and structure of such a unit. The article concludes emphasizing the need of public health orientation of CE, the importance of promotion of epidemiology in developing countries through capacity building, and allocation of dedicated funds towards popularization of CE. There is also an urgent need for replication and scale-up of clinical epidemiology unit (CEU) model to other medical colleges.

© 2016 INDIACLEN. Published by Elsevier, a division of RELX India, Pvt. Ltd. All rights reserved.

* Tel.: +91 9447241692.

E-mail address: drrajamohanank@gmail.com<http://dx.doi.org/10.1016/j.cegh.2016.08.007>

2213-3984/© 2016 INDIACLEN. Published by Elsevier, a division of RELX India, Pvt. Ltd. All rights reserved.

1. Introduction

Clinical epidemiology (CE) has now gained a well-established footing in academic institutions, especially in the developed countries. After this strong footing, the discipline is still in the growing phase and needs lot of academic and infrastructure support in the form of capacity building for further popularization. This article is aimed to describe the evolution of CE in India and critically look into the concept and scope of CE and evidence-based medicine (EBM) in the Indian setting. A discussion on the development of teaching and training part of CE services in India, current status, and the way forward are the objectives of this paper. The paper is primarily targeted to physicians and administrators who are in key positions to provide clinical and public health services and thus influence health policy in the country.

1.1. Epidemiology in medicine or CE

In the context of the established network of 'epidemiology teaching learning centers', CE is slowly becoming popular in the schools of medicine in India also.^{1,2} Originally, epidemiology was evolved as a fundamental science of public health. When the importance of application of principles of epidemiology in the bedside setting for improving clinical outcomes was recognized, the branch of CE was slowly accepted. During the course of evolution of organized health care, the dichotomy of public health and clinical medicine was inevitable and discussions on this dichotomy still continue. This schism, as it was coined by White, can be considered as one of the causes of low popularity of CE among clinicians.³ Clinical practitioners are always concerned with the immediate benefits for their patients and may not use epidemiological principles in their daily practice unless it is convincingly useful for immediate patient benefits. With the evolution of the branch of CE, having tools like diagnostic test evaluation, prognostic prediction, clinical trials, and meta-analysis, CE is becoming more and more popular among clinicians. This may be the main reason for popularity of epidemiology among clinicians rather than a mere attitude of altruism towards scientific practice of medicine. The altruistic concept of practice of medicine as it was discussed needs a deeper understanding of public health.⁴ The criticisms about use of epidemiology by clinicians were discussed in detail by Whelton.⁵

2. Public health and CE

After discussing on the popularity of epidemiology in clinical medicine, let us discuss on the applications of epidemiology in public health. In the public health context, application of epidemiological principles is more for prevention than for treatment. In India, integrating prevention to routine functioning of health services was mostly through implementation of public health programs undertaken as a Governmental responsibility.⁶ Public health programs in India are supported by epidemiological database and monitoring and the periodic

evaluation is also done based on epidemiological principles. During the implementation of at least some of these programs, private sector which has the vast majority of practicing clinicians in the country, was not taken into full confidence. Of late, this strategy in India was changed and the tuberculosis control program is a typical example of effective public-private partnership.⁷ This private-public dichotomy is perhaps more crucial than the so-called 'public health - clinical schism' in practice and popularization of CE in India.

3. INCLEN and CE in India

Popularization of CE formally started in the developing countries with the origin of International Clinical Epidemiology Network in 1980s.⁸ This new network was evolved around academic institutions in order to enlighten clinicians on the need to understand and look critically at available interventions and to popularize rational approach to treatment which is effective, efficient, and acceptable to the patients. The overall purpose was to develop patient-oriented researchers and clinician-investigators who can undertake research with good quality. The INCLEN-trained fellows after coming back to India started an identical network called IndiaCLEN (Indian Clinical Epidemiology Network). Though trained to excel as clinicians and propagate CE, many of the INCLEN-trained fellows later on took interest in public health research which also led to better partnerships among academic community medicine departments, program managers, and other researchers. The so-called schism between public health epidemiology and CE was thus converged in a more harmonious manner in India. Clinical orientation of medical research is emphasized by researchers and this is relevant to India also.⁹ A sizable part of clinical research is supported by the drug industry which has limitations in getting the clinicians in public sector to collaborate with them. The Governmental machinery was also demanding the services from this new group of academic experts, specialized in CE and they positively responded to this demand which turned to be fruitful. In addition to their commitment to the original mission of INCLEN to popularize CE, the INCLEN fellows in the country continued to involve in public health activities at the national as well as state level situations. The three branches of analytic domains, namely CE, clinical economics, and health social sciences, continued to flourish, supporting all these research activities in the country. Attempts to apply epidemiologic approach to bedside medicine have gained an accelerated momentum when EBM movement was started and in India also, CE became the major support science for EBM practice. This new facelift in popularization of CE by equipping medical schools with departments of CE and EBM has many challenges which are applicable in the Indian context also.^{10,11} The most important challenge observed is lack of sufficient funding as it is in any other case. Frequent transfer of the trained epidemiologists to distant institutions where CEUs were not in existence, lack of administrative delegations to epidemiologic work, overburdening the trained epidemiologists with other routines like conduct of examinations and running OPDs or call duties in clinical settings, not replacing the key

Download English Version:

<https://daneshyari.com/en/article/5671439>

Download Persian Version:

<https://daneshyari.com/article/5671439>

[Daneshyari.com](https://daneshyari.com)