

Clinical Medicine Meets Modern Epidemiology – And Both Profit

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Clinical medicine and public health, with epidemiology as its basic science, began together. Great physicians throughout history, such as Osler and Virchow, thought of health and disease from both the individual and population perspectives. But the two disciplines drifted apart in the past century, with different graduate education, research grants, journals, career paths, and ways of serving society. This separation caused lost opportunities for both research and the public's health.

In recent years, the separation between clinical medicine and epidemiology has diminished. Many clinicians have sought postgraduate training in epidemiology as the best possible preparation for careers in clinical research and have then pursued careers in academic medicine. Sackett has called epidemiology a basic science for clinical medicine. Many textbooks of clinical epidemiology are available and are used in courses for medical students and graduate physicians. Epidemiologists are influential on panels that judge grant applications and peer reviewers of clinical research papers. Many North American academicians have joint appointments in both schools of medicine and schools of public health. The world's most prestigious journals, such as *The New England Journal of Medicine*, *Lancet*, and *JAMA*, publish articles based on epidemiologic methods and written by teams that include both clinicians and epidemiologists. The Rockefeller established a global program, the International Clinical Epidemiology Network (INCLIN), to train faculty in developing world medical schools in the population perspective and modern epidemiologic research methods, to prepare them for leadership in evidence-based and cost-effective care. In these and other ways, clinical medicine and epidemiology are now making common cause.

The results for clinical medicine are stronger research methods leading to a stronger evidence base for clinical decisions, clinicians who see patients as members of clinical populations, and better acceptance of prevention as a normal component of patient care. For epidemiology, this change has infused the discipline with physicians who are engaged in solving real-world problems at a time when epidemiology had drifted away from its roots as a basic science for public health and prevention. Clinicians contribute to epidemiologic research by being well grounded in the real meaning of many of the clinical and biologic variables that are involved in confounding, effect modification, and outcomes in epidemiologic research.

While this transition is far advanced in some parts of the world, in others the old fashioned separation still exists, limiting both disciplines. Only when both disciplines interact, learning from each other, will both profit fully.

References

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