Family Practice Forum

On Epidemiology in Family Practice

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Dr. William N. Pickles of Aysgarth, Wensleydale, England, spoke to my medical school class at Temple University in April 1948. At that time he was visiting Philadelphia as a guest of Dr. Waldo E. Nelson, our professor of pediatrics. Dr. Pickles spoke on his favorite topic, "Epidemiology in Country Practice," and I recall the colored slide tabulations of various diseases—influenza, measles, chicken pox, and others, compiled from his "shoe leather sorties" in rural Yorkshire. By careful observation Pickles first described epidemic pleurodynia in Britain, and by studying the slow but steady spread of infectious hepatitis from village to village, he was able to define its incubation period.

Will Pickles and his wife, Gerty, compiled epidemiological data in the bucolic, sparsely settled countryside where he practiced from 1919 to 1964. His book, *Epidemiology in Country Practice*, now a minor classic, appeared in 1939.[1] It contained the essence of meticulous observations on infectious diseases systematically recorded over the previous decade. In subsequent years its author published several additional reports stemming from his family practice experience.

Formation of the Royal College of General Practitioners in 1953 was largely responsible for a revitalization of family medicine in Great Britain. Dr. Pickles was elected its first president and served effectively in that office for three years. His biographer, Dr. John Pemberton, has written: "Apart from his original contributions to medical knowledge, Will's great service has been to demonstrate to general practitioners throughout the world that it is possible for the GP to make original and valuable observations on disease providing he has the patience and industry."[2]

Dr. John Fry, a family physician at Beckenham, Kent, is among those who have continued the tradition established by Pickles and others of his generation. Fry's professional mentor, Dr. John A. Ryle, who was professor of social medicine at Oxford University, wrote a landmark volume entitled, *The Natural History of Disease* (1936). In it Ryle stated, "There is no disease of which a fuller or additional description does not remain to be written; there is no symptom as yet adequately explored."[3] Stimulated by this dictum, Fry compiled a summary of frequently met illnesses from the initial five years of his suburban London practice. This was published in the *British Medical Journal* in 1957 as "a study in simple epidemiology."

Emphasizing proper planning, record keeping, and scrutiny of collected data, Fry's article called for a marriage of general practice and epidemiology. He noted: "The scope of research in general practice has become apparent with the advantages of close doctor-patient relationships, of the knowledge of patients' personal, family, and social backgrounds, and of a close and intimate follow-up that may extend for the lifetime of patient and/or doctor."[4] Interesting and profitable information, he said, would come from such research. This prophecy came to pass in subsequent studies conducted under the auspices of the Royal College of General Practitioners, most notably the associations between tobacco smoking and illness and

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the risk of vascular complications in women taking contraceptive pills.

John Fry later distilled 15 years of observations into his 1966 book, *Profiles of Disease: A Study in the Natural History of Common Diseases*. He and his partner, Dr. J. B. Dillane, reviewed various aspects of English epidemiology—from anemia to urinary infections—in the 24 chapters of this work. Fry concluded:

> With the unselected and unbiased material that forms the basis of general practice these findings may contribute a little to our knowledge of the natural history of disease in man and of the natural history of man in disease. . . . Only if we understand and appreciate the true patterns . . . of disease can we expect to treat our patients in a rational and satisfactory manner.[5]

In 1974, John Fry expanded his "profiles" book by presenting ten more years' experience and wisdom. This volume, *Common Diseases: Their Nature, Incidence, and Care*, contained additional graphic summaries, charts, and tables concerning such disorders. These included arthritis, asthma, bronchitis, coronary heart disease, depression, hypertension, migraine, peptic ulcer, and others. The 25-year summary was dedicated "to the patients who suffer so much from the common diseases" and "to the primary physicians, the family physicians, the general practitioners and their associates in all lands who have the tasks of coping with and managing these conditions." Fry asserted, "It is to be hoped that this book will confirm the essential and important place of the primary physician in all (health care) systems and the need to support him with research and studies in the common problems and diseases that he encounters."[6] And the doctor-writer noted that he hoped to keep active in family practice so that a 50-year summary might be collated!

The role of epidemiology in family practice on this side of the Atlantic is better known through proximity. The creation of the American Academy of Family Physicians in 1947 brought together kindred physicians from every state. A gradual trend upward of their declining number was noticeable by 1969, the year in which the American Board of Family Practice was incorporated. The Society of Teachers of Family Medicine, established in 1967, promotes epidemiology as a basic discipline in both undergraduate and postgraduate (residency) instruction. Recent textbooks and journals have incorporated much material about epidemiology in family medicine.[7] Increased interest and basic investigations are now apparent at various levels of performance. Dr. John P. Fox, in the 1970 textbook *Epidemiology: Man and Disease*, wrote: "Epidemiology is a discipline which has evolved relatively specialized methods for investigating disease causation and bringing to bear, according to needs of the moment, specific knowledge and special skills from many other sciences. With some justice, epidemiology has been called a method rather than an independent science."[8]

A concise definition of the discipline is given by Drs. Donald R. Peterson and David B. Thomas, colleagues of Dr. Fox at the University of Washington, in their *Fundamentals of Epidemiology* published in 1978: "Epidemiology is the study of the distribution, determinants, and deterrents of disease in human populations." They add, "The basic elements or fundamentals of epidemiology therefore include those concepts and principles which pertain to the composition of disease rates, the processes of acquiring their components, the interpretation of results obtained with such instruments, and the uses to which they can be put."[9] In this context the family physician is in a key position to gather and evaluate information regarding individuals and groups over considerable periods of time. To quote John Fry again, "All diseases have a beginning, a middle, and an end, and we need to know these stages better in order to become better physicians."[10]

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WORLD ORGANIZATION OF NATIONAL COLLEGES, ACADEMIES AND ACADEMIC ASSOCIATIONS OF GENERAL PRACTITIONERS/FAMILY PHYSICIANS

Around the World

Hungary

The spring congress of the SIMG (Societas Internationalis Medicinae Generalis) will be held in Budapest, Hungary, on June 4-6, 1981. The main topics of presentation and discussion will be:

1. Neuroses and Depression in General Practice
2. Heart Disease in General Practice—acute care of myocardial infarction, rehabilitation of chronic heart disease
3. Polypharmacy and Iatrogenic Disease in General Practice.

For details write:

Office for Conference Organization
MOTESZ
Budapest
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1361 Hungary

New Zealand

The First Acupuncture Course for Western Doctors. Dr. J.W.G. Gibb reports in the *New Zealand Family Physician* on a course sponsored by WHO and the Bureau of Health of the People's Republic of China given at the Nanking College of Traditional Medicine.

Courses have been held for foreign physicians since 1972, mostly for doctors from third-world countries.

Dr. Gibbs's article describes the course in detail and discusses current research into the effects of acupuncture and moxibustion.

Reference

Gibb JWG: Report on first acupuncture course for western doctors. *NZ Fam Physician* 6:19-24, 1979

USA

The eighth annual meeting of the North American Primary Care Research Group (NAPCRG) was held in Lancaster, Pennsylvania, in April 1980. The main themes of the conference were:

1. Clinical Decision Making
2. The Epidemiological Approach to Family Medicine.

Approximately 90 papers were presented; in general the standards were higher than ever, al-

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though there was great variability in the quality of the presentations, in keeping with the NAPCRG principle of encouraging the participation of inexperienced primary care researchers.

The main address was given by Arthur Elstein, the author of two books on clinical reasoning. NAPCRG currently has a working group on clinical decision making that became active in 1979. The influence of this group was demonstrated by several presentations on this subject. Another working group is developing plans for establishing a sentinel practice system, much on the lines of the Dutch College of General Practitioners. Abstracts of the conference are available from:

Dr. Herbert Tindall
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PO Box 3555
Lancaster, Pennsylvania 17603 USA

Announcement of Awards for Residents Research, NAPCRG, April 1980, at Lancaster, Pennsylvania

First Prize:
Dr. P.H. Steward
—Ottawa Civic Hospital
Canada
"Impact of Simple Family Physician Intervention on Smoking Cessation"

Second Prize:
Dr. Robert G. Doe
—Lancaster General
Lancaster, Pennsylvania
"Comparison of Injected and Oral Polio Vaccine for Booster Immunization During the 1979 Polio Outbreak in Lancaster County"

Third Prize:
Dr. Richard W. Sloan
—Lancaster General
Lancaster, Pennsylvania
"Diagnostic Radiology: Yield by Specialty"

Honorable Mention:
Dr. Thomas McKnight and Dr. John L. Allhiser
—Cedar Rapids Family Practice
Cedar Rapids, Iowa
"Lymphadenopathy in Family Practice"

Call for Papers

Next year's meeting will take place at Lake Tahoe, hosted by the University of California at Davis, Department of Family Practice. Abstract deadline is November 15, 1980. Send abstracts to: Dr. James Crutcher, University of California, Davis, CA 95616.

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Family Medicine Associates
24th and M Avenue
Anacortes, WA 98221

Venezuela

The thirty-third Assembly of the World Medical Association was held in Caracas, Venezuela, October 21-27. The Scientific Session of this Assembly was devoted to the topic, "The General/Family Doctor in the World."

The Scientific Session opened with an address by Dr. Donald I. Rice, executive director of the College of Family Physicians in Canada. Dr. Rice discussed "A National Strategy to Promote General/Family Medicine." On the following day Dr. Julio Ceitlin, Program Director of the Pan American Federation of Associations of Medical Schools, addressed the session on "A Program for the General/Family Doctor in the Americas," and Dr. Stuart Carne of the Royal College of General Practitioners in Great Britain discussed "The Role of the General/Family Doctor in the Health Care System." These presentations were followed by a panel discussion involving individuals from Mexico, Germany, United States, Great Britain, and Canada. Topics included National Policies on Medical Care, Private Practice, Productivity of the Family Doctor, Associations of General and Family Doctors, and finally the Education of the Public. Dr. Carlos Varela Rueda of Mexico discussed "The Relationship between Practice and Training of the General/Family Physician." This session was followed by a panel involving discussions of predoctoral, postgraduate, and continuing education in Family Practice. Presentations were also made by individuals from Mexico, Ghana, Canada, Belgium, and Japan.

I found the Scientific Session informative from two perspectives. It was interesting to hear individuals from other countries describe their health care systems and the problems related to health manpower and organization; cost was a principal concern of all. From another perspective it was encouraging to find that the problems we are facing in the United States with regard to the training of family physicians are being confronted in one way or another by most countries of the world. As I remarked to my faculty on my return, I sometimes feel that our attachment to the family physician is often romantic and idealistic; but this conference confirmed the fact that the general or family physician is a pragmatic reality, much needed by the people of the world. The concept of the generalist serving as the physician of first contact and as the gateway to the more expensive segments of health care is recognized worldwide and is in various stages of development and implementation.

The meeting was stimulating not only because of the presentations themselves but also because of the opportunity to informally discuss concepts of Family Medicine with individuals from several areas of the world. Twenty-eight countries were represented at the conference. The Pan American Conference will be held in November 1980 in Panama City and should be an exciting meeting relating to so many of the same issues.

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WONCA Ninth World Conference on Family Medicine

This meeting is to be held in association with the American Academy of Family Physicians (AAFP) Annual Convention and Scientific Assembly. The AAFP will be hosts to the WONCA delegates in New Orleans, Louisiana, October 6-9, 1980.

Selected portions of the program will feature joint presentations and the WONCA and AAFP planning committees are offering 13 simultaneous educational activities. A full program of social events has been arranged.

The theme, "A World of Caring," will include presentations of international concern: substance abuse, population control, nutrition, aging, sexuality, and hypertension.

WONCA plenary sessions will address three main subjects:

1. The Core Content of Family Medicine
2. Preventative Medicine
3. Continuing Medical Education.

Workshops will be held in three languages.

The WONCA Research Committee will hold three scientific sessions, October 6, 7, and 8. The papers presented at these sessions have been selected after review from over 100 submissions from many countries.

There will be opportunities for posting research papers, so delegates are encouraged to bring their articles and/or abstracts with them even if these were not accepted by the reviewers.

There will be a closed session for the Executive Research Committee and for those corresponding members who wish to attend, on October 5th.

Registration is through:
Director of Planning
1980 WONCA/AAFP
1760 West 92nd St.
Kansas City, Missouri 64114 USA

WONCA-WHO: A Working Relationship

March 20, 1980, marked the beginning of a two-year trial period of collaboration between the World Health Organization and WONCA. The trial period is a prerequisite to subsequent admission of WONCA as a "non-governmental organization" to membership of WHO. Dr. Alphonso Meja, Division of Health Manpower Development, WHO, is the technical liaison officer for the collaboration.

The main elements of the joint work program which have been agreed upon between the two organizations are:

1. Mutual assistance in support of planning, programming, and implementation of country programmes in basic, graduate, and continuing education for general practitioners/family physicians and their supervisors;

2. Joint activities in setting of standards of general/family practice through education and research, and development of criteria to assess the relevance of such standards to primary health care;

3. Joint planning of publications on scientific and technical matters aiming at improving communication and understanding among general practitioners/family physicians worldwide;

4. Collection of information in support of vocational, basic, graduate, and continuing education as well as in support of the international classification of problems related to general/family medical practice with emphasis on primary health care;

5. Systematic publicizing of information on relevant WHO policies and programmes in any future WONCA publication;

6. Joint planning, programming, and implementation of health services research on relevant topics;

7. Preparation for World Health Day when dealing with issues of mutual concern; and,

8. Joint fund raising for extrabudgetary activities in areas of common interest.

(It has been pointed out to WHO that WONCA would not be able to underwrite any fund raising, but it could give its support as appropriate to such appeals.)

The main orientation of the current WHO programme is towards primary health care and health for all by the year 2000.

WONCA Standing Committees

A recommendation has been made by the WONCA Executive Committee to have the following standing committees:

1. Bibliography
2. Classification
3. Continuing Medical Education
4. Education: Undergraduate/Graduate/Vocational
5. Practice Management

(combining Preventative Medicine and Emergency Care)

6. Publications
7. Research

The aims of the WONCA Research Committee are:

- To promote the exchange, between all countries, of information relevant to research in general practice/family medicine.
- To initiate appropriate research projects.
- To advise, encourage, and cooperate with others undertaking research projects.
- To publish information regarding research projects.
- To serve as a means of collecting information relevant to general practice/family medicine research.

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European General Practice Research Workshop

The Ninth Meeting of the European General Practice Research Workshop was held in Oslo, Norway, in November 1979. Areas of discussion and debate were:

Pathways to Diagnosis. Dr. Robin Hull (England).

In an international study of sore throat, medical teachers and practitioners compare their management of sore throat against the standards of care that they themselves had previously set. Five hundred forty-two (542) cases have been reported.

Preliminary results show that there are real differences between actual management and predicted or advocated behavior. These differences are unrelated to nationality. Practicing physicians choose diagnostic pathways that are pragmatic and effective but differ from the norms set by medical teachers. This produces a "paranoia factor" in the practitioner.

The study illustrates the need for general practitioners to teach primary care and set standards of care.

Long-Term Care Study. Dr. Sturm (Germany).

It was proposed to undertake an international study comparing the care of the chronic patient in several countries. The items used could be:

1. Diagnostic problems leading to chronic care
2. Is continued care based on drug therapy
3. Home care
4. Frequency of clinical examination and investigation
5. Support given by the general practitioner
6. Number of ancillary staff involved.

Risk Behaviour and Ischemic Heart Disease (IHD). Drs. Patterson (Scotland) and Krakau (Sweden).

This study is being undertaken on practices in Edinburgh and Stockholm. The objective is to compare and contrast IHD risk factors and assess health education. Males between ages 35 and 54 years will be compared using the following factors: (1) occupation, (2) high blood pressure, (3) angina

pectoris, (4) diabetes, (5) family history, (6) smoking, (7) alcohol, (8) excess weight, (9) exercise, and (10) stress.

The study will last for five years.

Vaccination Schedules. Dr. Paul Grob (England).

Dr. Grob is interested in comparing vaccination schedules in different countries. He would like to compare the incidence of certain infectious diseases and relate them to vaccination schedules.

Anyone interested in contacting any of the EGPRW researchers should contact:

Dr. G. Dorrenboom
Maarkade 81
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Research on Medical Problem Solving: Notes on the State-of-the-Art

The process of medical problem solving has received much research attention in recent years. At least three factors are responsible for the growth of this activity. First, it is widely acknowledged that efficient and effective problem solving is the cornerstone of clinical medicine.[1] Secondly, given the importance of problem solving for medical practice, evidence that would illuminate the process is expected to be useful for both practicing physicians and for improved methods of clinical education. Thirdly, despite the importance of medical problem solving, solid research evidence that could guide the design of clinical and educational programs aimed at sharpening this skill is in short supply.

Medical problem solving has been defined in several ways by the behavioral and medical scientists who study the process. The most popular definition encompasses the diagnostic reasoning of physicians, particularly as it involves the collection and interpretation of clinical data toward the goal of reaching diagnostic judgments and decisions.[2] While the potential yield from such research appears to be great, some of its results have been questioned.[3] An alternative approach views problem solving in the context of therapeutic decisions and patient management.[4] Work is now underway from these and other perspectives. Integrative essays[5,6] have summarized present findings and help to chart the course of future research.

Results from studies of problem solving in medicine and from research on judgment and decision making in other fields lead to an abbreviated list of tentative generalizations.

- The human problem solving capacity is limited and is subject to numerous potential sources of error. This is particularly true when judgments or decisions are made from a complex information base, when the information is of marginal quality, and when uncertainty exists about the exact nature of the "problem."[7,8] Such circumstances are common in clinical medicine.
- Despite these traps, man tends to place far more confidence in his judgments than they often deserve.[9]
- The weight of evidence suggests that diagnostic accuracy is case specific.[2] Diagnostic skill does not appear to be generic, even among experienced physicians. Instead, correct diagnosis seems to depend upon the particular content of individual clinical cases.
- Medical problem solving is influenced by psychological and social factors, involving both the patient and the physician, in addition to biomedical variables.[10]

The primary conclusion that may be drawn from this brief review is of small comfort to medical practitioners. Simply, we know more about potential pitfalls in medical problem solving than about specific ways to enhance the skill. In addition, researchers have grown to appreciate what physicians have reported for many years. Namely, medical problem solving is highly complex, involves much uncertainty, and is very difficult to evaluate, much less to teach.

The state-of-the-art regarding research on medical problem solving thus presents both obstacles and a challenge. While they are numerous, the obstacles mentioned earlier should only encourage further study of this important component of clinical medicine. The challenge, of course, is to learn more about problem solving to serve the highly practical goal of increasing physicians' clinical capacities.

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Research Resources

Books and Reports

Primary Health Care in Europe. Leo A. Kaprio. Euro Reports and Studies No. 14; 40 pages (ISBN 92 9020 153 3); Regional Office for Europe (WHO) Copenhagen, 1979.

Continuous Morbidity Registration Sentinel Stations. The Netherlands, 1978. Published by the Foundation of the Netherlands Institute for General Practice, Ministry of Public Health and Environment, Chief Medical Office of Health.

Aging. Geraldine M. Emerson (ed). Benchmark Papers in Human Physiology, Vol. II. Stroudsburg, PA, Dowden, Hutchinson and Ross, 1977, $28.00. An historical research review of aging, including accounts of longevity, rejuvenation, research, and 20th century research in gerontology.

Measurement of Levels of Health, published by WHO. Distribution and Sales, WHO, 1211 Geneva 27. Switzerland.

The Periodic Health Examination. Report of a Task Force to the Conference of Deputy Ministers of Health. Canadian Medical Association Journal: Obtainable from Dr. R. G. Prefontaine. Health Services Directorate, Health Services and Promotion Branch, Department of National Health and Welfare. Leaune Mance Building, Ottawa, Ontario K1A 1B4. This report transforms the annual check-up into health promotion packages designed for specific target groups in the population.

Articles and Studies

The relationship of symptoms and blood pressure in a population sample. Kottke TE, Tuomilehto J, Puska P, Salone JT. *International Journal of Epidemiology* 8:355-359, 1979. An interesting study of 1,926 individuals with hypertension demonstrating that none of the 13 symptoms studied was significantly related to the systolic or diastolic blood pressure.

International programs in blood pressure control. Litvak J, Boffi H, Pisa Z, Strasser T. *Bulletin of the Pan American Health Organization* 13:354-364, 1979. A review of a WHO project to study and assess hypertension control in 25 countries.

The elderly. WHO Chronicle 33(5), 1979. The April 1979 issue of *World Health*, the illustrated journal of the World Health Organization devoted to the elderly, with contributions from several countries.

Centralized morbidity coding: The International Classification of Health Problems in Primary Care. Anderson JE. *International Journal of Epidemiology* 8:257-263, 1979. This paper discusses difficulties in coding and interpretation using the ICHPPC classification scheme.

Continuous epidemiologic study using a national network of general practices covering one percent of the Dutch population. Topics selected for study in 1978 were: influenza, measles, mononucleosis, cervical smear, vasectomy, female sterilization, abortus provocatus, morning-after pill, hay fever, suspected myocardial infarction.