Sound and Fury in Perspective: Comments on the Primary Care Backlash

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It has recently become clear that a burgeoning but misleading literature on primary care is erupting on the pages of the nation's most prestigious medical journals,[1-3] apparently as the result of a siege mentality among leaders in the field of internal medicine. Increasingly frenzied arguments are being launched in an effort to level the family practice physicians who have dared to challenge the weathered fortress of subspecialty medicine.

It is the family physician who is the real target of these broadsides, despite the fact that "primary care" is the named enemy. Training programs in primary care internal medicine and primary care pediatrics do exist, but their growth has been so stunted that they are virtual straw men in the warfare now being waged.

Regrettably, the rhetoric accumulating in the journals may obscure some of the best arguments in favor of preferential public support for primary care and family practice in the years to come. Three issues in particular need wider recognition in the period of calm consideration that one hopes may lie beyond the present cacophony:

1. Ambulatory care is a specialty. Regardless of whether one speaks of family practice, of primary care in internal medicine, or of primary care in pediatrics, it seems axiomatic that (a) special training for ambulatory care is required, and (b) physicians who do ambulatory care must be motivated to do it well.

Hence, the recent obfuscation contending that there is a "hidden system of primary care" provided by subspecialists[1] is, at the very least, misguided. Despite an inquiry that spanned three years, Aiken et al evidently failed to consider the extent to which (a) the specialists were truly happy about doing primary care, (b) the patients were truly happy about having only a specialist to look after their ambulatory care needs, and (c) something approximating enlightened primary care took place.

2. The quality of education for primary care practice needs to be improved in this country. Increased formal training in ambulatory gynecology, behavioral science, minor surgery, and otolaryngology as well as psychiatry and preventive medicine is needed for all primary care residents. The inpatient oriented training for general internists and pediatricians that has predominated in

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the past has prepared residents for a world that does not exist.

Unfortunately, so powerful have the subspecialty interests become that many departments of internal medicine and pediatrics in the United States are unable to develop a consensus for engendering increased emphasis on ambulatory care. Thus, vestiges of the excessive specialization of the past now hinder much needed adjustments to the realities of the present.

3. The current fusillade of recidivistic argumentation ignores the real reasons that physicians enter their chosen specialty careers. Those electing subspecialties such as cardiology do not do so with any desire or intent to do primary care. It should be a self-evident truth that primary care should be provided by people who want to do it. Patient receptivity, and even the therapeutic alliance itself, follow directly from the motivational agenda of the physician.

Thus, for example, a depressed patient receiving primary care from a busy cardiologist who glances frequently at his watch can hardly be expected either to ventilate deep personal concerns or to get an adequate evaluation. Furthermore, one wonders whether a patient with pruritis or marital problems would fare any better. Primary care, like cardiology or any other specialty, should be done in the main by committed, well-trained experts who derive personal pleasure and satisfaction from their work.

Judging from the popular support that has been given to family practice during the last ten years, the public seems to know this already. It is important that organized medicine and the federal government be equally well informed, even when the truth may run counter to proprietary interests that seek to perpetuate an era whose time has passed.

References

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2. Girard RA, Mendenhall RC, Tarbor AR, et al: A national study of internal medicine and its specialties: Part 1: An overview of the practice of internal medicine. Ann Intern Med 90:965, 1979

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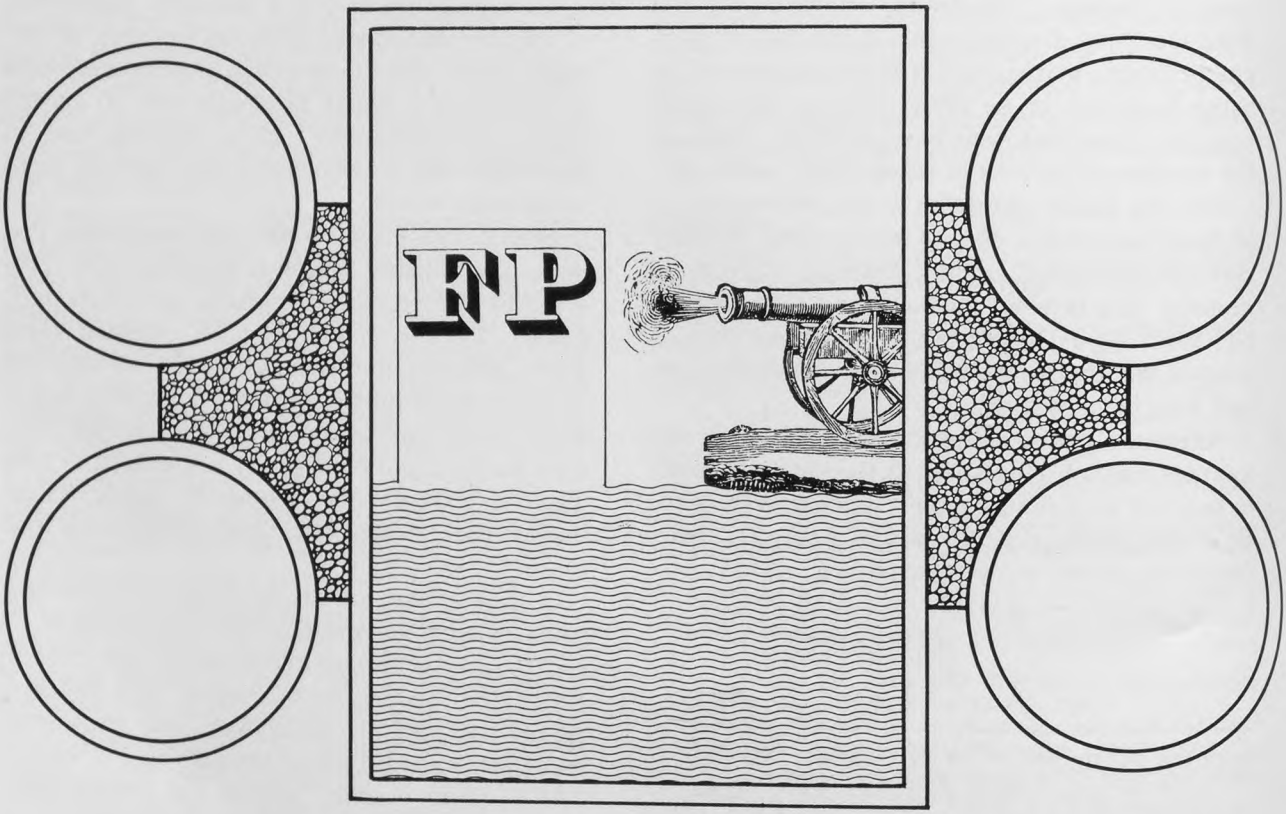

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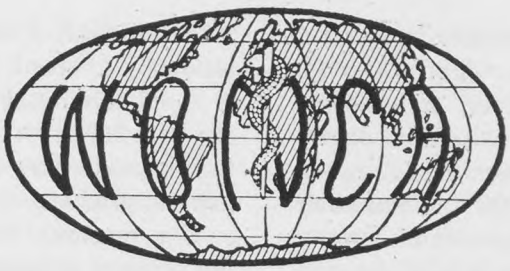

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WORLD ORGANIZATION OF NATIONAL COLLEGES, ACADEMIES AND ACADEMIC ASSOCIATIONS OF GENERAL PRACTITIONERS/FAMILY PHYSICIANS

Around the World

Australia

The Royal Australian College of General Practitioners has an active Research Committee and a list of recently completed projects and ongoing projects may be of interest to members in other countries.

The number of published articles in the last few years is too great to list here, but copies of the lists are available from our office at 43 Lower Fort Street, Sydney, New South Wales, Australia. We hope to produce another Research Digest to give complete listing since the last one in 1972.

Recently Completed and Published Projects

1. Trends in general practice in Australia 1960-1975
2. General Practitioners in three Regions of New South Wales
3. A survey of the Health Status and needs of the Aged population of the inner city and Near Eastern suburbs of Sydney
4. Survey into on-site radiology services in General Practice
5. An environmental Impact Statement
6. Workload in Rural Practice
7. Hypertension Intervention Programme

Completed—Not Yet Published Projects

1. First Year of Life Study
2. The Role of Nurses in Primary Care
3. Sources of Information and Prescribing for General Practitioners
4. Coronary Risk Factors
5. Methods of Family Planning

Ongoing Projects

1. General Manpower studies
2. Varicose ulcer trial
3. Disturbed elderly patient—management of emergencies
4. Vasectomy followup
5. A variety of drug trials
6. Bell's Palsy
7. Management of bereavement in general practice

From the WONCA Standing Committee on Research; Research Newsletter edited by Dr. Peter Curtis, MRCP, MRCGP, D Obst, Department of Family Medicine, UNC School of Medicine, 711 Clinical Sciences Building 229H, Chapel Hill, North Carolina 27514.

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8. Emergencies in general practice (part of a WONCA project)

I hope these lists are of interest and anyone interested in similar projects is invited to contact me so individual research workers can compare activities. Would it be possible for the Research Committees (or at least some representatives) to meet more often than the 2-3 year WONCA meetings? Could it be tied in with some other meetings? Perhaps you could let Neville Anderson or me know what ideas you have.

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France

Research Unit in General Practice (GRMG)

This research unit is associated with the Société Francaise Médecine Générale and consists of nine general practitioners, an economist, a psychoanalyst, and three sociologists.

The unit is based on the philosophy that general practice comprises a specific field and is investigating this premise using three different approaches, all of which have some interface with "hospital medicine."

The aims of the unit are:

1. To identify the effects of psychoanalysis and the Balint movement on the therapeutic behavior of physicians, particularly in relation to the self-realization that the biomedical model provides only partial answers to medical care in general practice. This project was initiated by psychoanalytic specialists.

2. To review the role of the drug industry in the field of general practice, particularly in the area of communication, ie, changing the target of drug communication from specialists to generalists. This project was initiated by the drug industry.

3. To preview and explain the conditions which have persuaded a university medical school to accept the principle of a special field of knowledge and expertise in general practice and create a specific educational program (the General Practice College) at Bobigny. This relationship was established through pressure by general practitioners who had both a strong union background and a tendency to speak out publicly.

A subcommittee of the research unit is studying the British Health system, particularly with regard to the autonomy and advanced organization of general practice.

The research unit is looking at morbidity and the practice of medicine in a multidisciplinary way since health factors include social, psychological, and genetic components. The variety of the members of the research team will prevent closed medical thinking which tends to justify and reinforce its own value.

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Hungary

The Hungarian journal of general practice is entitled *Medicus Universalis* and is published every two months. English summaries of the articles occur on the last page of each issue.

There also exists a Scientific Society of general practitioners, known as MOATE (Budapest, XIII, Visegradi U. 47/c, Hungary). The society provides financial aid, advisory support for individual projects and workshop activities. Topics that have been investigated include psychosocial problems, chronic bronchitis, prescribing habits, and genetics in general practice.

Current Projects

1. Development of Balint workshops, presentations on psychosomatic disease, and the publication by the Society of a book on psychosomatic disorders.

2. Study of magnesium deficiency. This is a collaborative project involving the measurement of magnesium levels in water and food. A correlation is being attempted with the so-called diseases of modern society: premature labor, lactation problems, hypertension, increased susceptibility to minor illness and even the learning capacities of graduating students. The study has used a control

population and the results have been recently published by the Society.

3. Evaluation of the genetics of diabetes
4. A study on social effects on illness
5. Clinical drug trials undertaken at the request of the pharmaceutical industry—particularly for medications used in general practice

The next meeting of the Scientific Society will be an international one held in conjunction with the SIMG on May 28-30, 1981. The topics will include: Drug interactions; heart disease; neuroses and depression. All our colleagues are heartily invited to attend.

Marianne Szatmari–Correspondent

Israel

1. Research Committee of the Israel Association of Family Medicine

A questionnaire was completed and distributed among all family physicians in the country who are interested in participating in research. This questionnaire which will be punched out for computer utilization, includes information on the physician background, description of his practice and other relevant data. The next step includes a study on the utilization of antibiotics among various practices in Israel. This will be evaluated later according to the report of the basic characterization questionnaire.

2. Department of Family Medicine, Hebrew University Hadassah Medical School, Jerusalem (Head-Professor Y. Yodfat)

1. A study on the quality of medical care in rural family health Center (Shimshon) was carried out in collaboration with the Department of Community Medicine. The aspects that were evaluated included the utilization and satisfaction from the nurses and the physicians and the rate of hospitalization. The study compares results from the Shimshon Family Health Center with a control population living in similar conditions and composed of the same ethnic groups.

2. Two studies are carried out among the Druzes who live in the Golan Heights. The first is a study on the pathogenesis of endemic goiter which is very common among the females living in one city. The second study is a survey on the prevalence of hypertension and other risk factors among the Druzes. Both studies are carried out by two of our graduates who volunteered to work as family practitioners in this area for two years.

Publications

1. Yodfat Y, and Silvian I: A prospective study of acute respiratory tract infection among children in a kibbutz. J Infect Dis 31:521, 1978

2. Yodfat Y, Fidel J, and Eliakim M: Prevalence of duodenal ulcer in a fufal community in Israel. J Chron Dis 31:521, 1978

3. Yodfat Y, Fidel J, Cohen C, and Eliakim M: Chronic bronchitis and bronchial asthma in a rural community in Israel: relation to socioenvironmental factors. Isr J Med Sci 15:573, 1979

The main research support in family medicine in Israel is provided by the Chief Scientific Office, Ministry of Health.

3. Research Activities of Department of Family Medicine, Tel Aviv University Medical School

The following individual research studies are being carried out by members of the department:

1. Screening and follow-up of hypertension in a practice.
2. Clinical manifestations of arteriosclerotic heart disease in a practice.
3. Comparative study of outcome of treatment of cerebrovascular accident in hospital and at home.
4. Social aspects of multiple sclerosis.
5. Prevalence of mental retardation and associated factors in a Yemenite community.
6. Psychological parameters of women of Eastern origin lacking formal education.
7. Prevalence of impotence in a population.
8. Family aspects of duodenal ulcer.

9. Clinical characteristics of Lebanese Jews in a practice.

10. Long-term follow-up of selected families.

Yair Yodfat, MD–Correspondent

Malaysia

The publication by the College of General Practitioners of Malaysia of "Specialization in Primary Health Care" occurred in 1979. This book deals with the training of new general practitioners. The initial chapter of the book deals with the current status of health care in Malaysia, the concept of specialization in primary care, and the educational objectives of the College.

The book contains a valuable and brief discussion of the specialty of primary care and details of the diplomate examination that will be taken by future general practitioners.

Specialization in Primary Health Care can be ordered from the College of General Practitioners of Malaysia, Room 1, 5th Floor, MMA House, 124, Jalan Pahang, Kuala Lumpur, Malaysia. Price: US $5.00, plus $2.00 postage.

Secretariat of College of General Practitioners of Malaysia–Correspondent

New Zealand

1. The CoMedCa (Community Medical Care) Survey is well underway in the Waikato. Ninety-one percent of all general practitioners in the area have agreed to take part in this study designed to demonstrate the importance of establishing a National information system for General Practice. Dr. Ian Scott and Ms. Lynne Gilmore, of the Community Health Department at Auckland University will be able to produce definitive results in 1980 but meantime have some interesting preliminary results:

"The most common reasons given for patients attending their doctor is for symptoms relating to the respiratory system (15 percent) and this is followed in second place by musculo-skeletal symptoms (10 percent). Not surprising therefore is the fact that the most common diagnoses come within those listed under diseases of the respiratory system (19 percent), although the second ranking of injuries (11 percent) doesn't quite reflect the second most common reason given for going to the doctor.

The most common therapeutic response by doctors is, of course, the writing out of a prescription. For the 2,484 patients seen during the first three months, 1,590 received a prescription, ie, only 64 percent of patients received a prescription. On average each of these patients received 1.7 items. The most frequently prescribed class of drugs was systemic antibiotics (22 percent) followed by analgesics (8 percent) and then by cough and cold preparations (6 percent). Psycholeptics, the category which includes Valium, Librium, etc, accounted for just over 4 percent of all prescriptions.

For fourteen percent of patients there was no therapeutic service provided, and 7 percent of patients received counselling. The use of physical medicine techniques accounted for only 2 percent of all therapeutic responses, while 5 percent of patients received a certificate.

Eleven percent of patients were not known to the doctor prior to the consultation and 50 percent were presenting for the first time with that particular episode of illness. Only 8 percent were presenting with an illness of less than 24 hours duration, while 32 percent had been subject to their complaint for longer than one month. A surprising 15 percent of all consultations were for problems which qualified for Accident Compensation.

Follow-up of patients was deemed unnecessary in 22 percent of cases, 38 percent were asked to return at a specified time and 29 percent to return as necessary. Telephone follow-up was indicated in only 3 percent of instances which seems surprising given the rural component to the survey area. Referrals to hospital outpatient clinics and to physiotherapists each accounted for 2 percent of the arrangements made for disposition of the patient."

2. Dr. Roach and Dr. Murphy from Morrinsville in the Waikato are looking at the effectiveness of penicillin in the management of leptospirosis and Dr. B.R.M. Frost is studying prescribing patterns in general practice.

3. In Otago, Dr. Peter Snow is examining the relationship between maternal toxoplasmosis, miscarriage and fetal death. Dr. Ian St. George continues to look at aspects of patient education and compliance. Dr. Peter Anyon and the mem-

bers of the Wellington Research Group have been awarded a grant for study in Sleep Disturbance and have appointed a research secretary funded by the Medical Research Council.

4. In Canterbury a strong research committee of the Canterbury Faculty of the Royal New Zealand College of General Practitioners is responsible for implementing the Canterbury Primary Health Care Research Programme. This aims to provide an information base for Primary Health Care, by examining the state of general practice and the prescribing and consumption of pharmaceuticals. Funding was received from the New Zealand Medical Research Council late in 1977 for 3 projects—*A Survey of General Practice, A Survey of General Practitioners Clinical Case Loads,* and *A Survey of Pharmaceuticals Prescribed by General Practitioners*. Later it is hoped to extend the study to two related projects—*A Survey of the Behaviour of Consumers of Prescribed Pharmaceuticals,* and *An Evaluation of the Efficacy of a Particular Drug or Class of Drug*. A research officer has been appointed for a two-year period.

5. Research in General Practice is funded in a variety of ways. The Royal New Zealand College of General Practitioners has an Education and Research Fund which can be drawn on by members. Most cities have research societies or clubs from which funding is sought. Most importantly the NZ Medical Research Council has decided to emphasize research in Community Medicine and this represents a distinct shift in policy for them.

References to Research in General Practice in the New Zealand Literature

1. Rasanathanm: Dysuria in General Practice. NZ Med J 89.628.54, 1979

2. Pettitt GA: Adjunctive trance and family therapy for terminal cancer. NZ Med J 89.67.18, 1979

3. Smith CA, Hill PDH: Grieving responses: A comparison after home or hospital care. NZ Med J 88.624.393, 1978

4. Carmichael LP, Carmichael J: General practitioners and professional satisfaction. NZ Med J 88.624.395, 1978

5. Downey PG, Werry JS: Psychiatric care in general practice. NZ Med J 87.611.305, 1978

6. Crofts HG: Flucloxacillin in the treatment of skin and upper respiratory tract infections. NZ Med J 87.611.308, 1978

7. Phillip E: A one-man city practice of primary contact. NZ Med J 87.605.99, 1978

8. St. George IM: Child immunisation and the introduction of a recall system. NZ Fam Physician 6.2.22, 1979

9. St George IM: Compliance with follow-up advice after acute illness in a private allergy practice in Auckland. NZ Fam Physician 5.5.17, 1979

10. Chun NJA: The provocative-neutralising technique in a private allergy practice in Auckland. NZ Fam Physician 5.5.5, 1979

Ian St. George, RNZCGP–Correspondent
WONCA Liaison Officer

United Kingdom

Clinical Audit in General Practice

The audit of clinical care in general practice is in its infancy, but its importance is being increasingly recognized in the United Kingdom where many groups of general practitioners are now looking at standards of care.

The process of audit may be considered in five stages:

1. Setting standards and drawing up a protocol for the doctor to follow. This is the hardest and yet most rewarding stage of an audit. The doctor will review current literature and discuss the clinical "tracer" condition selected with his colleagues and with specialists. It is important that the standards selected are appropriate for the local circumstances and each doctor's protocol will differ in some respects from those of his colleagues.

2. Data Collection. A method of routine data collection must be devised with minimal disruption of the daily routine. Simple encounter forms, daily ledgers and carbon copies of prescriptions issued are some of the ways of collecting data.

3. Analysis of the data collected. Simple analyses may be made on the data by the doctor himself, or more sophisticated statistical analyses may be performed if technical assistance is available.

4. Evaluation of the data. The analysis is evaluated and conclusions drawn as to the performance of the doctor in the clinical care delivered in the tracer conditions selected.

5. Finally a feedback loop is an essential requirement where the doctor amends his original protocol in the light of his findings. It is then best if the whole process is repeated at intervals both to ensure continuation of standards and to modify behaviour in the light of new knowledge.

Audit may be performed at four levels:

1. Self-audit where the doctor sets his own standards and evaluates his findings on his own.
2. Self-audit where the standards have been set by a peer-group but the doctor does not divulge his performance to the group.
3. Peer-group audit where standards are set together and the findings discussed amongst the group of doctors, all of whom are auditing themselves.
4. External audit where the findings are evaluated by an outside doctor who has not himself been participating in the audit.

Most doctors will wish to start at the first level and as confidence is gained move up to the peer-group situation where friendly criticism and support from colleagues can stimulate the doctors. It is hoped that the fourth stage is never forced upon us, but perhaps it is up to all of us to start some auditing so that we can show our patients that we are concerned with the standard of care which they receive.

Example of Clinical Audit

Outline of programme to be followed:

1.1. Condition for study:
Low back pain
2. Definition:
Any pain in the back below the level of T12 thought to be of musculo-skeletal origin
3. Initial management plan:
Clinical findings
Routine investigations
Outline of management
4. Review of literature
5. Drawing up initial protocol

2.1. Data collection method used:
Note made on a sheet of paper of all patients presenting with this condition over a four-week period. Data then extracted by reference to the medical record
3. Analysis of data:
On each patient collect the following information:
Age and sex
Previous listing of back pain
Presenting findings
Investigations performed
Diagnosis made
Treatment given
Referrals to specialists
Time off work
Number of repeat consultations
4. Evaluation:
1. Discover which pattern of doctor behaviour resulted in the speediest recovery of the patient
2. Assess the accuracy of the initial diagnosis by the final outcome
3. Discover gaps in the doctor's knowledge
5. Review the initial protocol and amend accordingly

This example is presented as a bare skeleton on which to hang the meat of the actual audit. To start with any audit, however simple, is better than none at all, and sophisticated techniques are not necessary to answer very important questions about the way in which a general practitioner intervenes in his patient's illnesses. Audit can, and should, become part of the doctor's daily routine with a regular review of topics being undertaken on a routine basis.

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USA

The North American Primary Care Research Group will hold its eighth annual conference from April 16-19, 1980, in Lancaster, Pennsylvania.

There will be two major themes: (1) The epidemiological approach to Family Medicine, (2) Clinical decision making. Theme speakers will be Jack Medalie, Department of Family Medicine, Case Western Reserve University, and Arthur Elstein, Director, Office of Medical Education, Research and Development, Michigan State University.

Abstracts or enquiries should be submitted to

Tom Wiegert, College of Medicine, University of Kentucky Medical Center, MN140, Lexington, Kentucky, 40506, USA, by December 1, 1979.

Maurice Wood, MD–Correspondent

European General Practitioners Research Workshop

Conference held on 7/8th September in London—*The Science of Research*

Forty-five doctors from eight European countries attended this conference.

Major presentations included: "Statistical Reasoning," Bjorn Anderson; "Scientific Bases for Clinical Decisions," Robin Knill-Jones; "The Controlled (therapeutic) Trial," Henrik Wulff.

The areas of interest presented and discussed were:

Definition and sources of variation
Bias
Diagnostic probability
The null hypothesis
Sources of error in scientific methods
The process of developing a clinically controlled trial
The concept of disease

G. Dorrenboom–Correspondent

Ninth World Conference of WONCA, October 4-9, 1980

New Orleans, Louisiana, USA

Call for Papers

This will be a joint conference with the American Academy of Family Physicians, which is holding its annual scientific assembly at the same time.

The Research Committee of WONCA has requested time and space sufficient to allow the presentation of 30 original papers. The committee is seeking papers on original work carried out in the community, office, or hospital fields of family/general practice. Initial review and acceptance will be based on an abstract submitted to the WONCA Research Committee, Box 251, MCV Station, Richmond, VA, 23298, USA, to be received by February 1, 1980. An abstract form can be obtained from the same address.

At the conference the WONCA Research Committee should have available detailed summaries of research activities occurring in various member countries.

Research Resources

Books

A Change of Air: Climate and Health. W.A.R. Thomson, A & C Black, England. £5.95. An interesting book on the effects of climate on health, including a wealth of esoteric data.

Traditional Medicine: Implications for Ethno-Medicine, Ethno-Pharmacy, Maternal and Child Health, Mental Health and Public Health. Ira E. Harrison and Sheila Cosminsky, Garland Publishing, New York and London, 1976, $22.00. An annotated bibliography of Africa, Latin America, and the Caribbean. A useful source document.

Scientific Foundations of Family Medicine. J. Fry, E. Gambrill, and R. Smith, William Heinemann, London, 1978, £30, 671 pages. This is a large book authored by 10 general practitioners and 81 specialists. It has a traditional approach to the core of knowledge in General Practice. In spite of the multiple authorship it is a useful and effective resource.

Oxmis Problem Codes for Primary Medical Care. John Perry (ed), Oxford Oxmis Publications, 1978. An alphabetical list of rubrics used to describe problems handled by General Practitioners. The listing is cross referenced with the International Classification of Diseases, the code of the Royal College of General Practitioners, and the International Classification of Health Problems in Primary Care (ICHPPC).

The list was developed from the work of active general practitioners in the Oxford Community Health Project, England.

Articles

Health care—a view from Europe. Lazarus M, Gleason HP, *New England Journal of Medicine,* 301:730-731, 1979. This paper is a summarization of the Salzburg Seminar, *Health Care–Allocating Resources in Urban Societies.*

Teaching English for specific purposes. Magda Kourilova, *British Medical Journal,* 2:431-433, 1979. This paper discusses the use of English for

library and scientific purposes by non-English speaking people, and the development of a reading program to aid understanding between scientific communities.

The Denominator Problem

The denominator problem is a term describing the difficulties of estimating a practice population when no regulated registration process exists. The practice population is viewed as the number of people cared for or at risk by a primary care practice. This population number is the essential denominator of the fraction:

$$\frac{\text{number of items}}{\text{persons at risk}} = \text{rate.}$$

This fraction is used in the epidemiological assessment of incidence and prevalence of problems in general practice, and in the utilization of procedures and drugs. Only by knowing the denominator can comparisons be made between general practice in different countries or between one care delivery system and another.

The accuracy of the denominator is obviously important. In Holland and Great Britain, for example, all patients are officially registered with a doctor and one might expect the denominator to be well defined. However there are factors which complicate this figure, such as the inclusion of "dead" or "phantom" registrations of people who have died or have moved to another part of the country.

In Denmark, patients can select whether or not to be registered and persons below 16 years of age are not allowed to register at all—a complicated situation. Other countries, including the USA, have no registration process at all, so that the estimate of the population at risk is purely guesswork.

Kilpatrick has shown that episodes of illness follow a geometric distribution—the negative binomial distribution (NBD) derived mainly from the proneness and linear contagion hypotheses.[1] The NBD probability model has been used since the 1920s as a model for sickness and accident statistics, though its application to the field of general practice has been recent. Kilpatrick's findings are that the number of people presenting with one medical contact in a year multiplied by 0.6 equals the number of persons with two contacts, and the number with two contacts multiplied by 0.6 equals the number with three contacts and so on, within certain limitations. The number with no contacts follows the same geometric formula so that the population at risk (ie, those that visited the doctor and those that did not) can be determined. This statistical mechanism has been validated to a large degree by studies using registered populations in Britain. Kilpatrick has also shown that the NBD fits the frequencies of problem contacts for 269,832 patients registered for the whole year of the Second National Morbidity Survey in the United States.

The universal applicability of the NBD to practices in Denmark, Ireland, Canada, and the USA is now being investigated by Kilpatrick and his associates. This work will be of tremendous value in increasing the significance of research in General Practice in many parts of the world.

Adapted from communications from J. Kilpatrick, Richmond, Virginia, USA, and P. Krogh-Jensen, Denmark

References

1. Kilpatrick SJ: An empirical study of the distribution of episodes of illness recorded in the 1970-71 Morbidity Survey. J Royal Stat Soc 26(1):26-33, 1977

Addendum

With the support of the Rockefeller Foundation, I recently held a small workshop on the denominator problem. This group would like to collaborate with others working in the same area. If you have records you consider useful to the solution of the denominator problem or are developing alternative methods for its solution, please contact me:

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