SASPREN — a new development in family practice research in South Africa

J. Volmink

Research in the family practice setting can make unique contributions to our understanding of health, illness and disease at the level of the individual patient as well as the population. In November 1990 a family practice research network (SASPREN) was established in South Africa. The network consists of sentinel practitioners who have volunteered to provide information on patients seen in their practices. This article describes the development of the network, focusing particularly on its accomplishments in the first 3 years. It is hoped that SASPREN will help overcome some of the obstacles to research encountered by family doctors and ultimately improve the care of patients in the community.

The international recognition of family medicine as a distinct discipline is a relatively new development. University departments, academies or colleges of family/general practice have until recently focused mainly on the establishment of graduate and undergraduate educational programmes. Consequently, little attention has been given to research. WONCA, the World Organisation of Family Doctors, recently identified research as an area that needs prioritisation to ensure the future development of family medicine. A similar view was expressed in an editorial in the British Journal of General Practice.

The scope of family practice research

Research in the family practice setting offers unique opportunities for advancement of medical and public health knowledge and thus the promotion of better health care. A few of these deserve special mention.

Firstly, family practitioners are well placed to contribute to the understanding of common conditions such as headaches, fatigue, hypertension, anxiety, depression, respiratory infections, allergies, low backache and other musculoskeletal syndromes. These conditions are major contributors to disability and loss of economic productivity in society.

Secondly, by providing continuous care to the individual patient in the context of his/her family and community, the family doctor acquires a knowledge of the patient unmatched by that of other health care providers. Useful research on the impact of psychological, economic, social and cultural factors on health and disease is therefore possible. There is currently a need for more research on the influence of these factors on help-seeking behaviour, illness presentation, the process of care and clinical outcomes.

Thirdly, family practice stresses the importance of the doctor's awareness of self and the impact of his/her values, attitudes and approaches on the healing process. The doctor-patient relationship is consequently an important aspect of family practice research.

Finally, clinical methods, procedures and therapies developed at the secondary and tertiary levels are not always feasible or appropriate in primary care. For this reason the development and evaluation of diagnostic, preventive and curative strategies at the primary care level are valid goals of family practice research.

A major advantage of research in the primary care setting is that morbidity is more representative of the community than that which is managed in hospitals. Furthermore, information is more easily and economically obtained than in household surveys. Another important advantage is that both individual and community approaches to the study of health problems are possible. These approaches are well illustrated by two examples from England. James Mackenzie, a general practitioner in Burnley at the turn of the century, is remembered for his seminal contributions to the understanding of cardiac arrhythmias and angina pectoris. His meticulous clinical observations of individual patients over long periods of time laid the foundations of modern cardiology. William Pickles, on the other hand, used population-based methods to study the spread of infectious diseases among patients in his country practice in Wensleydale. His work serves as an outstanding example of what can be achieved through the application of basic epidemiology in family practice.

Family practice research networks

Obstacles to research in family practice are well known. Among these are the relative isolation of many practitioners from the mainstream of academia and a deficiency of research skills. In recent years an innovative strategy has been devised to overcome some of these difficulties. This involves the linking of research-orientated doctors into a network of sentinel practitioners dedicated to conducting research. Such networks are usually co-ordinated by a university department or other academic base. The Weekly Returns Service of the Royal College of General Practitioners in the UK and the Continuous Morbidity Registration Sentinel Stations of the Netherlands, both formed in the 1960s, are the oldest of the existing sentinel networks. Both are government-funded and have made valuable epidemiological contributions over the years. During the last decade, similar networks have mushroomed in Western Europe as well as the USA, Canada and...
Australia, some of which collaborate regionally and internationally. Examples of such collaborative ventures are the Eurosentinel Project in European Community member countries, the Ambulatory Sentinel Practice Network of North America (ASPEN) and the International Primary Care Network. While the original networks were mostly concerned with disease surveillance there has more recently been a greater tendency to undertake in-depth studies of specific issues relevant to primary care.

The South African Sentinel Practitioner Research Network (SASPREN)

SASPREN was conceived as a joint venture of the South African Academy of Family Practice/Primary Care and the South African Medical Research Council. A comprehensive report of its organisation, objectives, policies and methods has been published. Up until February 1993, the project was funded by a grant from the Henry J. Kaiser Family Foundation, California.

The objectives of the network are: (i) to monitor trends in acute and chronic illness seen in primary care; (ii) to investigate the role of psychosocial factors in illness and disease; (iii) to examine aspects of medical practice, e.g. the use of drugs, tests and procedures; (iv) to promote cost-effective management of medical problems in the community; and (v) to establish a databank for undergraduate and postgraduate training of primary care providers.

During the first 3 years of its existence SASPREN was managed by a Steering Committee, originally formed in November 1990. This committee consisted of representatives from the Academy, the MRC and university departments of family medicine. Some of the doctors who participated in data collection (sentinel practitioners) also served on the Steering Committee. The management structure of the network is currently being reviewed. It seems likely that SASPREN will become formally affiliated to the Academy in the near future and that the Department of Family Medicine of the University of Stellenbosch will assume responsibility for co-ordination of research activities.

At the time of writing, a total of 42 sentinel practitioners form part of the network. Almost all of these are private practitioners who were recruited from the membership list of the Academy. They are distributed throughout the country and render their services on a voluntary basis. Efforts are under way to include more generalist doctors from the public sector and from rural areas.

SASPREN serves as an infrastructure for ongoing research in family practice. All studies that are in keeping with network guidelines and are able to attract adequate funding are considered. Each study has a clearly identified principal investigator who oversees the design, development and implementation of the study. Sentinel practitioners collect the required data on specially designed forms and forward these to the central office in reply-paid envelopes on a weekly basis.

Achievements to date

As part of the pilot phase of the project a primary care survey was conducted in the Western Cape during 1991. Thirty-one practitioners participated in the study, providing information on a sample of 2 700 patient encounters (consultations). The objectives of the survey were to determine who consults the family practitioner, the reasons given for the consultation, the spectrum of morbidity identified and the nature of medical care provided. (The first report on this study appears on page 239 of this issue.)

In March 1993, SASPREN launched a 1-year-long surveillance project that aimed to provide data on the incidence and age/sex distribution of the following health problems: home accidents, depression, acute myocardial infarction, hypertension, asthma, gastro-enteritis, tuberculosis, sexually transmitted disease, measles, wife-battering and suicide. As community-based morbidity statistics are not readily available in South Africa, this country-wide study will help to fill an existing gap. It expects to provide information on the variation in the rates of some key conditions by age, sex, geographical area and season.

In tandem with the surveillance project, a more detailed study on domestic violence against women is being conducted. SASPREN is currently examining this problem in order to determine: (i) how frequently it is encountered in primary care; (ii) risk factors for battering; (iii) the nature of injuries inflicted and how best to improve the management of battered women in the community. Data collection for this study was completed in September 1993, after which a similar in-depth study of depressive disorder immediately commenced. The depression study aims to describe the criteria for diagnosing the condition in family practice, as well as the treatment given by family practitioners. Data from the wife-battering and depression studies will be used to fulfill thesis requirements for masters degrees in clinical psychology and family practice, respectively.

The way forward

The establishment of SASPREN is an encouraging development. As the first of its kind in Africa, it could serve as a model for the development of similar networks elsewhere in the region. Its potential to make a substantial contribution to the collection of much-needed morbidity data should not be underestimated. In this regard, extension of the network into the public sector is vital. By undertaking ongoing research, it should improve the standard of family practice and facilitate the growth and development of family medicine. Finally, it holds potential benefits for the broader health care industry; e.g. it could serve as a vehicle for post-marketing drug surveillance.

The willingness of family doctors to participate in a sentinel research network has now been established. The methods employed by SASPREN have also been tested and found to be feasible. The only remaining constraint is financial. In continental Europe and the UK, similar networks are largely supported via grants from the government, while the American networks tend to be privately funded. It is hoped that SASPREN's potential will be recognised and that it will receive the moral and financial support it deserves.
The SAsPREN primary care survey: who consults the family doctor?

J. Volmink, J. Laubscher, S. Furman

Objective. To describe selected characteristics of patients consulting general/family practitioners in the Western Cape.

Design. A cross-sectional survey design was employed in which doctors completed a structured questionnaire during or immediately after each consultation.

Setting. Data were collected by family practitioners in private practice who were affiliated to the South African Sentinel Practitioner Research Network (SAsPREN).

Participants. All patients who had a face-to-face encounter with the doctor at his/her surgery. A total of 2 473 such encounters was included.

Main outcome measures. Age, sex, race, method of payment and smoking status.

Results. Females outnumbered males in all race groups except blacks, where they comprised 48% of patients. Most patients were under the age of 14 years (23.3%) or between 25 and 44 years (33.3%). However, after the demography of the catchment population was taken into account, the highest utilisation of general practitioner services was found to be at extremes of age. This utilisation pattern was demonstrated in both sexes and all races. In relation to their distribution in the population, whites and Indians are over-represented in private practice while blacks and coloureds are under-represented. The bulk of patients (67%) pay for general practitioner services via some form of insurance (medical aid or benefit fund), but significant differences exist across race groups. In the case of blacks and Indians, the majority (72% and 64% respectively) of consultations are funded ‘out of pocket’. An alarmingly high smoking prevalence was found in black and coloured men. In all race/sex groups smoking rates peak between 25 and 44 years. In this age group, 68.6% of black men and 73.3% of coloured men were current smokers.

Conclusions. This study provides essential information on patients seen in family practice. Access to family doctor services in the Western Cape should be improved for blacks and coloureds. There is an urgent need for smoking cessation interventions in the region.


Epidemiological surveys conducted in primary care settings provide useful data for the planning of appropriate health services as well as for the training of present and future health care providers. The collective experience of primary care physicians in the public and private sectors with regard to illness in the community is considerable. This resource should be mobilised in the interest of improving the health of the population.

In most industrialised countries, volunteer general/family practitioners are involved in the ongoing collection of morbidity statistics on a regional or national basis. To date, this has not been the case in South Africa. The South African Sentinel Practitioner Research Network (SAsPREN) attempts to redress this situation. It is a network of research-minded family doctors, distributed across the country, who voluntarily provide data on patients seen during the course of their work. Serial studies are conducted, each project with an identified principal researcher. In-depth investigations of topics pertinent to family practice are undertaken in addition to surveillance of conditions selected on the basis of their public health importance. More detailed information on SAsPREN is available elsewhere.

During 1991 SAsPREN conducted a survey that aimed to describe various aspects of primary care in the Western Cape. In particular, the study sought to determine who consults the general practitioner, the spectrum of morbidity encountered and the nature of medical care offered. This is the first paper reporting on the survey. It focuses on selected characteristics (age, sex, race, method of payment and smoking status) of patients seen by family doctors in private practice. Generalisability of research findings is an issue which arises in all studies involving sentinel health care providers or sites. This theoretical limitation is considered briefly.

Centre for Epidemiological Research in Southern Africa, Medical Research Council, Tygerberg, W. Cape
J. Volmink, B.SC., M.B., O.H., D.C.H., M.P.H.
J. Laubscher, B.COM.
S. Furman, M.B., O.H., M.F.G.R.