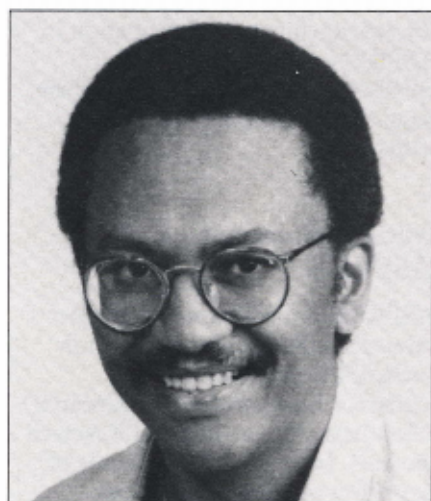


The South African Sentinel Practitioner Research Network: Organization, Objectives, Policies and Methods

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Curriculum vitae

Dr Volmink was born in 1957 and has lived and studied mostly in the Cape: obtained a BSc at UCT in 1977 and an MBChB in 1982. After internship at Groote Schuur and some time as medical officer at the Emkhuzweni Rural Health Centre in Swaziland he also gained experience at the Red Cross Children's Hospital and Lentegeur Hospital. He obtained a Masters degree in Public Health from Harvard University in 1988. Jimmy is currently part time researcher at the Centre for Epidemiological Research in Southern Africa (MRC) and Family Practitioner in private practice in Colorado near Cape Town. He is active in a number of professional organizations and member of the Council of the Academy of Family Practice/Primary Care where he serves on the Research Committee. He is married to Blossom and they have 2 children.

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Summary

The establishment of the South African Sentinel Practitioner Research Network (SASPREN) is an exciting development within primary care research in this country. SASPREN is a network of general practitioners who have volunteered to conduct ongoing research in their practices. Such networks have mushroomed in a number of countries within the last decade. They potentially have a key role in promoting the understanding of illness seen in primary care and in improving the quality of care of such conditions. Secondly, by making possible the surveillance of certain conditions, they are able to make an important public health contribution. Thirdly, they provide much needed primary care data useful for undergraduate and post-graduate medical training. Finally, good quality information emerging from sentinel research networks have begun to challenge conventional wisdom regarding the management of certain medical problems. This trend is likely to enhance the stature of the discipline of family medicine within the medical community. This paper aims to provide the reader with an overview of the basic organisation, policies and methods of SASPREN.

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KEYWORDS:

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Introduction

Hospital-derived health data are not useful for planning primary health care at the community level as only a small fraction of illnesses prevalent in the community ever reach the hospital.¹ Thus, if effective and efficient health services are to be delivered at the primary level it is of utmost importance that appropriate knowledge about the nature, magnitude and severity of health problems in the community be obtained. Such knowledge is generally lacking due to factors such as the prevailing bias in favour of hospital-based medicine on the one hand, and the cost of conducting community surveys on the other. The need for improvement in the quantity and quality of community-based health data is thus widely recognised.

Primary care practitioners are ideally placed to provide relevant information on health problems in the general population. For this reason innovative methods of data gathering involving networks of sentinel general practitioners have in recent years gained popularity. These networks were pioneered in England and the Netherlands in the 1960s and have proliferated during the last decade. Today primary care research networks operate successfully in several countries, including the USA, Canada and a number of European countries.²⁻⁴

The Australian Sentinel Practice Research Network (ASPREN) is the latest of such networks to be established. It consists of a national sample of general practitioners and started data collection in January 1991.⁵

In addition to operating within countries, networks also collaborate

... SASPREN

regionally and internationally. Examples of such ventures are the Eurosentinel project in European Community member countries⁶, the Ambulatory Sentinel Practice Network (ASPN) of North America² and the International Primary Care Network.⁴

Thus far, GP Sentinel Networks have been largely confined to first world countries. This is unfortunate as the

Similar networks have mushroomed in many countries within the last decade

need for community-based morbidity data is even greater elsewhere. While encouraging initiatives are presently underway in developing countries, at the time of writing no GP research networks exist in Africa.

The purpose of this paper is to report on the establishment of the South African Sentinel Practitioner Research Network (SASPREN). Its basic organisation, objectives, policies and methods will be presented. Thereafter, advantages and limitations of network-based research will be considered.

The South African Sentinel Practitioner Research Network

The South African Sentinel Practitioner Network (SASPREN) is essentially a "laboratory" for the study of populations under the care of general practitioners. It is a network of GPs who have volunteered to serve as look-out-posts ("sentinels") for selected conditions on which they will regularly report.

To date 30 GPs in the Western Cape have agreed to participate in the first phase of the project. It is anticipated that by February 1992 the network will have extended to the rest of the country.

Benefits of Participation

Practitioners who participate in sentinel networks generally have an interest in research. They have a desire to contribute to new knowledge in primary care. As a participant in SASPREN, a GP will be able to conduct and influence primary care research, at times becoming study principal investigator. The rewards include: the satisfaction of being part of a national network of innovative, research and improvement-orientated practices, the professional stimulation resulting from collaboration with colleagues and sharing of research knowledge and skills, enhancement of personal public image through

acknowledgement of participation in SASPREN and a key role in contributing to the promotion of the image of the discipline of family medicine.

Basic Organisation of SASPREN

SASPREN is a collaborative project between the SA Academy of Family Practice/Primary Care and the Centre for Epidemiological Research in Southern Africa (Medical Research Council). Individual components of the project are described below:

The Steering Committee

A project steering committee was formed in November 1990. It comprises representatives from the Academy, Medical Research Council, University Departments/Units of Family Medicine, other academics and GPs in practice.

Table 1: Objectives of SASPREN

1. To provide information regarding primary care.
2. To fill the gap in community-based morbidity data.
3. To enhance knowledge of conditions not reaching the hospital.
4. To serve as an early warning system for infectious diseases.
5. To study trends in chronic disease incidence.
6. To provide information to GPs about the epidemiological status of their patients and region.
7. To undertake post-marketing drug surveillance eg drug utilization, reactions etc.
8. To improve the quality of care of patients seen by GPs.
9. To provide a source of data for student teaching and GP vocational training.
10. To enhance appreciation for work done by GPs.

... SASPREN

Table 2: SASPREN Policy

I. Criteria for selection of studies

The Steering Committee has established the following guidelines for the selection of studies:

1. Relevance to patients or providers of primary care.
2. Must not be too time-consuming or disruptive for participating practitioners.
3. Must be important enough to attract support/funding.
4. Should not be more easily dealt with by another approach.
5. Must promote research in primary care.
6. Must build on existing knowledge and address knowledge deficiencies.
7. Preferably, should include psychological, social and biomedical aspects.
8. Must have potential impact on public policy and/or medical care.

II. Confidentiality

1. Patient anonymity and confidentiality of data on individual patients must be ensured at all times.
2. Patients will be identified by a code linked to a specific patient by a "key" held only by the Sentinel practitioner.

III. Feedback

1. Regular communication with practitioners is considered vital.
2. Practitioners will receive ongoing feedback regarding their performance and relevant data relating to studies.
3. Feedback from sentinel practitioners will receive careful attention in order to eliminate any difficulties they may experience.

The steering committee has the following functions: (i) decides on SASPREN objectives (Table 1) (ii) decides on SASPREN policy, including ethical guidelines (Table 2), (iii) assists in the recruitment and supervision of sentinel practitioners, (iv) assists with the selection of topics for study, (v) establishes criteria and standards for participating practices, questions

selected for study and reports of results obtained, and (vi) seeks funding for the network.

Sentinel Practitioners

The ultimate value of the network will largely be determined by the dedication and quality of work done by sentinel practitioners. For this reason SASPREN has opted for a

volunteer rather than random sample of GPs. In addition, in order to ensure relevance of data to primary care, only primary care providers are eligible to become sentinel practitioners. Both private and public sector providers may participate. Those who participate must commit themselves to: accurately record relevant data, report data weekly using standardized procedures, provide an age - sex distribution of their patients when necessary, co-operate with other network participants and comply with policies of the network.

Principal Investigator

Each study will have a principal investigator who will initiate and supervise the project. While anyone can become a principal investigator (even hospital-based academics!),

A key role in promoting better understanding of illness and patient care

sentinel practitioners are particularly encouraged to do so as they are best placed to suggest studies that are relevant to primary care needs.

The tasks of the principal investigator include: reviewing relevant literature, developing of research questions and definitions, writing of the protocol, overseeing piloting, revising the protocol, supervising data collection for the main study and writing up the study results. Practitioners who feel that they lack the skills required for the abovementioned tasks will be supported by experienced researchers

... SASPREN

from the network, the steering committee or the Medical Research Council so that no one will feel excluded from assuming the role of principal researcher.

Network staff

A network coordinator and secretary will undertake administrative functions within SASPREN. This involves: implementation of network

It may sometimes be necessary to settle for less completeness in the data collection - yet make a substantial contribution

policy, communication with sentinels, calling of network meetings, technical support to principal investigators, assisting with data collection and clerical duties.

Funding

The issue of funding is of cardinal importance not only to the establishment of the network but also to its continued existence and function. We are greatly indebted to the Kaiser Family Foundation (USA) for its financial support to date. This has been made possible through a contract between the Foundation and the Medical Research Council. As the contract terminates at the end of February 1993 funding beyond this time is still uncertain.

Procedure for conducting a study

In this section we briefly consider the steps involved in carrying out a SASPREN-based study.

All suggestions for studies will be considered by the steering committee. However, only those studies which fulfil SASPREN criteria (Table 2), and attract adequate funding will eventually be undertaken by the network. Furthermore, while more than one study can be undertaken simultaneously, limits will have to be imposed to prevent participating practitioners becoming overburdened.

Every study will have a clearly identified principal investigator. The principal investigator will oversee the design, development and implementation of the study. Sentinel practitioners will collect relevant information on a specially designed research questionnaire. Completed questionnaires will be mailed to the Medical Research Council in a free post envelope every week. At the Medical Research Council, questionnaires will be checked for completeness, legibility and compliance with instructions. Deficiencies will be corrected by communication with sentinel

The success of the network depends on the interest and dedication of volunteer practitioners.

practitioners. Data analysis will then be undertaken using resources provided by the Medical Research Council. Final reports for publication will have to be approved by the steering committee and must acknowledge participants and funding source(s).

A Brief Critique of network-based research

As with all research methods network-based research has certain advantages and limitations.

Several advantages of SASPREN methodology can be identified: (i) involvement of the primary care provider in selecting the research question ensures that answers will be relevant to practice (ii) by means of surveillance of key conditions affecting the community, GPs will be able to contribute to the monitoring

Only a small fraction of illnesses in the community ever reach the hospital

of health status and health care planning, (iii) by using multiple providers the impact on the data of conditions or care unique to any one practitioner will be minimized, (iv) the opportunity to study illness and health interventions across a range of social and environmental conditions, (v) because of the number of data collection points, required study sample size should be achieved with relative ease, (vi) data collection should be relatively stable, reliable and accurate and information timely, and (vii) because networks build up skills, resources and experience over time, the set up costs of studies is reduced as more and more studies are done.

SASPREN methods will also have certain limitations. As no financial incentives are involved the success of the network will depend on the interest and the degree of dedication

... SASPREN

of volunteer practitioners. In order to ensure good reliability of data, speed and reduced cost it may be necessary to settle for less completeness in data collection than would otherwise have been the case.

A further limitation relates to the range of study designs possible within the framework of SASPREN eg randomization would be difficult to accomplish. Unlike the UK and other countries where registration of patients with a particular GP is formalised, patients in South Africa can, and often do move from doctor to doctor. It would therefore be difficult to estimate the population-at-risk for a particular sentinel practitioner or practice. Hence evaluation of population-based incidence and prevalence rates will be problematic.

Finally, possible sources of bias should be mentioned. GPs who volunteer to participate may be different from other GPs eg they may be younger and have a research interest. As a result they may attract a different spectrum of patients. Network doctors may also be more inclined to keep abreast of medical progress leading to a "competent physician" effect on the data. Results obtained from study patients may therefore, in some instances not be generalizable to all patients seen in primary care. A further source of bias could result from an uneven geographical distribution of sentinel practitioners or under-reporting eg when the doctor is away on holiday.

Conclusion

The South African Sentinel Practitioner Research Network has the potential to make a substantial contribution to strengthening

primary care research in this country. However, its success will depend on the level of cooperation and commitment of participants in the network as well as the availability of funds to sustain its existence. The authors of this paper would welcome any intellectual or practical input from any source that will assist in the development of the project. Should any individuals wish to participate in the network as sentinel practitioners, or have ideas for studies, it would be appreciated if they would write to either of the authors at the addresses provided.

Acknowledgement

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