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Towards Evidence-Based General Practice in Rural and Remote Australia: An Overview of Key Issues and a Model for Practice

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ABSTRACT

There is an extensive global move towards evidence-based practice intended to increase the quality and effectiveness of health care. However there are barriers and issues when rural general practitioners attempt to incorporate evidence-based medicine in their practice.

Key issues affecting the uptake of evidence-based medicine by rural general practitioners include the gaps in the scientific evidence relevant to general practice, time limitations, and the cost of Internet access, geographical isolation from centres of evidence-based practice and limited training opportunities. General practitioners consultations may involve multiple, ill-defined problems and the patients' views about their treatment may conflict with an evidence-based treatment approach.

Rural general practitioners may require additional supports to access information from research through Internet based resources, accessible summaries of evidence or clinical practice guidelines. In addition a model to assist rural general practitioners use evidence-based medicine is suggested. This model may enable the clinical decision making process to integrate clinical experience, patient preferences and an understanding of the rural context of practice with the best available evidence, to in turn produce best practice.

Introduction

The critical role of evidence-based practice has been endorsed in Australia through a variety of health care policies and strategies to increase research capacity and to promote the application of evidence-based medicine in clinical practice in order to improve the quality and reduce the cost of care[1]. There is an imperative to apply evidence-based medicine in general practice and in rural general practice where consumers often have limited choice of health care services and there are fewer resources[2].

An action research project to educate and support rural GPs in the use of evidence-based medicine commenced in rural/remote South Australia in 2000. A literature review of evidence-based practice and rural general practice resulted in the development of a conceptual model for evidence-based practice for rural GPs. This model acted as foundation for the project. A survey of GPs to obtain their views on evidence-based practice, barriers to it and solutions to increase the uptake followed the literature review. The final phase of the project was an education strategy for rural GPs about evidence-based practice. This paper focuses on the key issues identified in the literature that may affect the uptake of evidence-based medicine in rural general practice and describes the conceptual model, developed from the literature that may assist GPs in implementing evidence-based practice.

What Is Evidence-Based Medicine?

There is a clear consensus in the literature that evidence-based medicine can be defined as the 'conscientious, explicit and judicious use of the best available evidence in making decisions about the care of individual patients'[3]. It is important to dwell briefly on the components of this definition as it allows us to reflect on what evidence-based medicine is, and is not. Firstly, the activity should be conscientious, meaning that that it needs to done with care and with structure; it is not a haphazard activity. Second, it is explicit, being precise and clearly expressed, leaving nothing to implication. Thirdly, evidence-based medicine is judicious, literally 'based upon good judgement'.

The detractors of evidence-based medicine often claim that it is 'medicine by numbers' or 'cook book medicine', simply a set of rules of what to do and when. However, the definition given above indicates this is not so as judgement, involving making critical distinctions and achieving a balanced viewpoint, must be applied.

Next, the definition talks about using the 'best available evidence'. Best evidence is, in principle, undoubtedly derived from properly conducted randomised controlled trials. But, when such evidence is not available, as is often the case in general practice - then evidence derived from other study types should be considered. This is done noting the levels of evidence and their sources, and hence influencing the strength of recommendations that flow from them.

Evidence and General Practice

Is evidence a constraint or an opportunity in general practice? Should all recommendations given to patients however simple, be supported by high quality evidence from properly conducted randomised trials?[4] There is broad acceptance among general practitioners that there is value in an evidence-based approach to medicine and that clinical practice guidelines are useful in some settings[5-9]. However there is a gap between holding such positive views and consistently using an evidence-based approach in clinical practice. Barriers to using evidence in general practice have been identified as shown in the list below[6,8-10].

Barriers to the use of evidence in general practice

The following barriers have been identified:

- insufficient evidence to guide primary care clinical practice[4,11]

- randomised trials provide important evidence but the study subjects may not be representative of those managed in the primary care setting. For example, trials may exclude patients with multiple illnesses[4] and those of particular clinical significance such as rural populations[3]
- there is a paucity of evidence on the effectiveness of the predominant biopsychosocial model of care used in general practice compared with the more medical model of hospital practice
- consultations in general practice are typically complex and involve multiple ill defined problems making the application of an evidence approach difficult[8,10,12,13].
- patients may favour an approach that conflicts with the evidence-based approach and geranal practitioners must take into account[14].
- using evidence from clinical trials to make a clinical decision about an individual patient is complex[15]. General practitioners are aware of simply applying an "average result" from a randomised trial of hundreds of patients to the specific patient in their practice is not necessarily simple.

Evidence and rural general practice

Is rural general practice really any different from urban practice and if rural general practice is different, are any of these differences sufficient to affect the application of evidence in the rural setting?

A comparison of general practice activity in metropolitan and rural Australia shows some clear differences particularly in the provision of obstetrics and procedural services[16]. In view of these differences rural GPs may require a broader range of clinical skills. However differences in other activities are less apparent now than they were a decade ago and the major differences between urban and rural general practice are found in small rural and remote areas[16].

There are other factors that make rural general practice distinctive. Rural and remote GPs are generally geographically isolated from each other and from academic settings. They may practice from several locations and accessing continuing medical events may be difficult[2].

While the barriers identified above apply in urban and rural locations it is proposed that rural and remote general practitioners may experience additional barriers to delivering best practice to their patients and communities.

Rural GPs require a broad base of evidence because of the complexity and range of their work and it is often more difficult to access this information in rural areas. Unreliable and costly Internet access is still a factor and working from several locations may mean that the evidence is not always at hand. In rural areas, because of the isolation from centres of evidence-based practice it may be difficult to build a culture that supports this practice. In addition rural GPs must consider factors such as the distance the patient must travel to the surgery, the patient's lifestyle, and the availability of services.

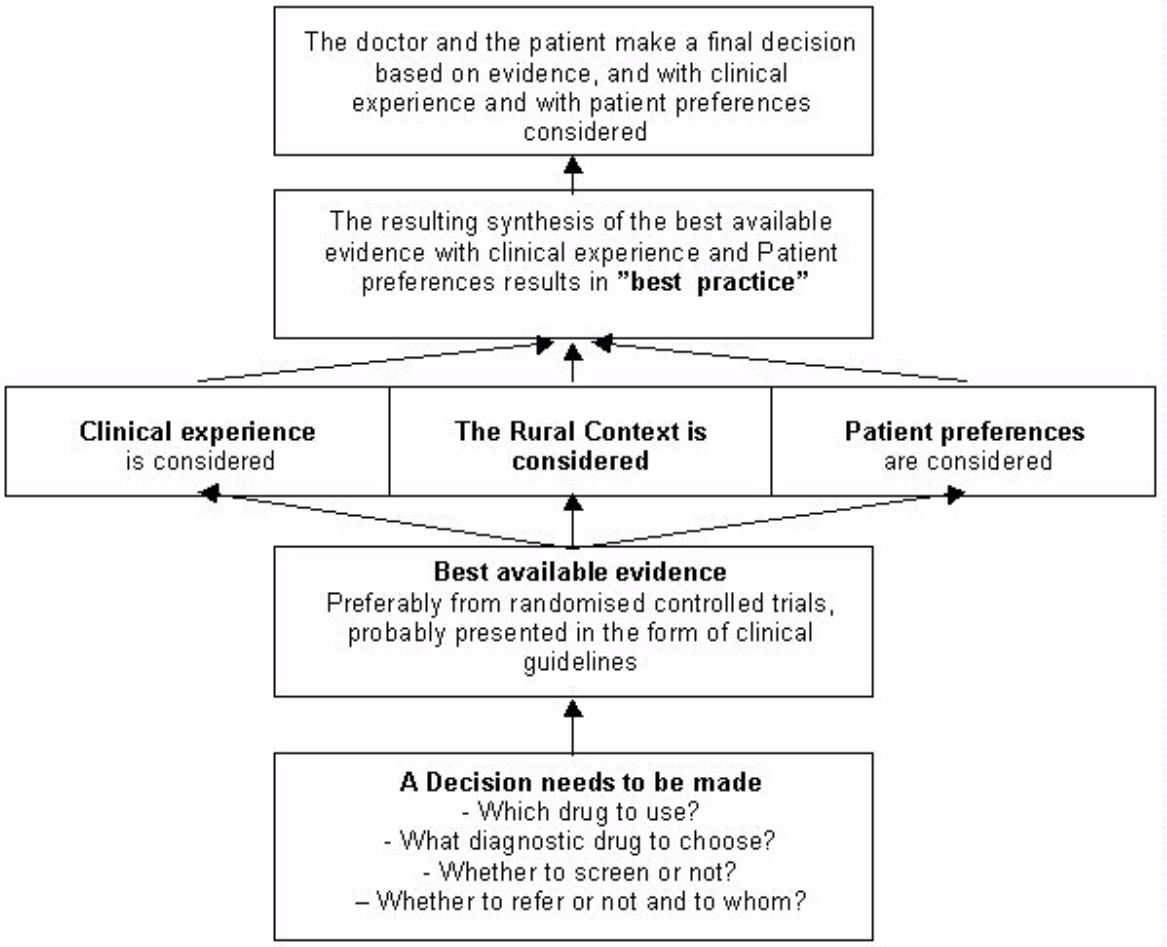
A Way Forward In Rural General Practice?

Consumers living in rural and remote areas have a limited choice of practitioners and deserve access to the best available health care delivered by competent practitioners. Barriers to the extensive use of evidence-based medicine in rural and remote areas must be overcome (Box 1).

A model for evidence-based rural general practice

While the barriers mentioned above may influence the application of evidence the paradigm of evidence-based practice itself may be perceived in such a way that it in itself produces a barrier. The foundation of the best available evidence is always the basis of evidence-based practice. However rural general practitioners may find it helpful to have explicit recognition of the importance of integrating clinical experience, patient needs and preferences and factors about the rural context, with the foundation of the best evidence.

Box 1: A suggested model for evidence based practice in rural general practice



Therefore a model has been developed that suggests best practice occurs when there is a fusion of knowledge derived from the best available evidence, clinical experience, and knowledge of the patient's lifestyle and preferences. All this is considered in the rural context.

In addition there are other factors that must be attended to if there is to be an increase in the uptake of evidence-based practice.

An environment supporting best practice

There must be an environment that supports and maintains best practice. This environment may be developed through credible opinion leaders practicing and promoting evidence-based practice in rural and remote areas[1]. Structural issues such as management systems supporting evidence-based practice must be addressed and practitioners must be able to quickly access evidence[1]. Currently 75% of general practitioners in large rural centres and 67.5% in small rural centres use computers in their practices[16]. An important skill for GPs to learn then is where to look for evidence that is easily accessible, relevant, and in a summarised form.

Readiness to change

In rural and remote locations, it was shown that a lack of clinical leadership, inadequate information technology and a lack of management expertise have hindered change[1]. There is also the time honoured and accepted way of doing things.

However some communities and their practitioners may be ready for - and even demand change. An example of this is in North Queensland where the drive for change came from an Aboriginal community's level of concern at the prevalence of type 2 diabetes[1]. Perhaps one way of ensuring greater use of evidence-based medicine is to work with rural communities to ensure that there is a growing demand for it.

Conclusion

To ensure equity in the delivery of health care to rural Australia the uptake of evidence-based practice must be increased. This uptake requires implementation strategies that acknowledge the differences between metropolitan and country general practice and the real barriers faced by rural GPs.

Some barriers facing rural GPs are specific to their location, and include geographic isolation from a culture of evidence-based practice and time constraints. Barriers that are shared with metropolitan practitioners include gaps in available evidence, the complexity of consultations, and the role of technology. Rural general practitioners may be more likely to change their practice if they understand that best practice is actually a fusion of evidence-based medicine, clinical experience and patient preferences in the rural context and may be assisted by using the model described.

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