



# Approaching the future of general practice

## *How systems thinking might help*



**Joachim Sturmberg**, MBBS, DipObstRACOG, MFM, PhD, FRACGP, is Associate Professor of General Practice, Monash University, Melbourne, Victoria, and Conjoint Associate Professor of General Practice, Newcastle University, New South Wales.

General practice in Australia is facing an uncertain future leaving many general practitioners to wonder if it is still worthwhile to stay in practice. At the 2003 Royal Australian College of General Practitioners (RACGP) Convention Forum, GPs identified retention of the workforce to be of primary importance to their profession. This article argues that understanding and finding solutions to the complexities inherent in the workforce issue requires a systems approach; simple linear approaches to 'fixing' a particular aspect are dangerous and invariably will lead to unforeseen – usually detrimental – consequences.

At the 2003 RACGP Convention Forum, general practitioners initially explored the current state of the profession before identifying potential strategies to solve its most pressing concerns. Problems identified can be grouped under three broad domains:

- personal issues – workload, lifestyle, remuneration, career satisfaction
- professional issues – standards, education, accreditation, collegiality, practice management, and
- global/political issues – image and status of general practice in the health care system and litigation.

All were seen as causing an immediate threat to the retention and recruitment of general practitioners. Would implementation of each solution in isolation lead to the desired outcome? Past experience would suggest not; not because any one of the solutions is wrong, but rather because a solution seen in isolation is likely to have unintended consequences. This article proposes a different strategy to understanding and approaching the problems facing general practice in Australia. System

approaches acknowledge the complexity and highlight the interdependence of the many variables defining a problem. Thus, there is no one correct solution to a systems problem, rather system approaches emphasise the importance of identifying the potential interactions one solution may have in a complex environment.

### **An introduction to systems**

Systems approaches have been used since the 1960s in most sciences and industry, but only recently have they entered the medical domain.<sup>1-6</sup> A system is defined as an organised assembly of components that share a special relationship with each other – in this case *retention of GPs* (note: system variables are highlighted in italics). The interactions of the components of a system give it a unique behaviour, with each component contributing to as well as being affected by it. In particular no component has an independent effect on the system. Within a system, groups of components may form subsystems with their own unique properties. Boundaries separate the system from an external environment,

however, the system will receive inputs from its external environment as well as providing output to it.<sup>7</sup>

'Complex' – from the Latin word *complexus* – means 'entwined' or 'twisted together', and the Oxford Dictionary adds that something is complex if it is 'made of (usually several) closely connected parts'.<sup>8</sup> The more parts and the more connections that are entwined within a system, the more complex it will be and the more difficult to analyse.

Despite these difficulties, system approaches provide important contextual knowledge about the full array of interactions and inferences of the phenomena under study – in this case what contributes to the *retention of GPs*. Some of the tools used in describing a system are system maps and influence diagrams which describe the broad outline of a system and its interactions. For each part of the system, variables are identified and those influencing each other are linked generating multiple cause diagrams (*Figure 1*).

Multiple cause diagrams are powerful tools. They visualise the interconnections between

the variables of the system and it readily becomes evident which factors exert pressure on a variable of interest. Invariably one will identify causal feedback loops within the system, thus helping to understand the dynamics of the system, eg. self-perpetuating strategies. In particular a multiple cause diagram helps to show how well something apparently far removed from a variable of interest suddenly becomes the most important factor to determine the behaviour of the variable of concern (eg. Michael Gorbachev placed less importance on the 'absolute control' of the population, which became the ultimate factor in the fall of the Berlin Wall).

### Value and limitations of a systems approach

Like other methodologies, the design of a complex system has limitations. There is a subjective element involved in the designer's choice of which variables to include in the system, and the reliability of the model does depend on the degree of independence between variables included and excluded. Hence, it is impossible to build a complete model of a system such as the *retention system for general practice*, and readers pointing out other dimensions only reinforce the complex nature of the problem.

### Problems and solutions in a systems model

At the RACGP forum, *retention* emerged as the central problem for general practice; hence it is placed in the centre of the multiple cause diagram. Factors that contribute to the variable *retention* are placed around it, with arrows indicating if a variable contributes to or is influenced by another one. This process is repeated with every newly identified variable before placing boundaries around those variables that belong closely together. The process invariably provides a rather complex picture; in this case at least two dissimilar

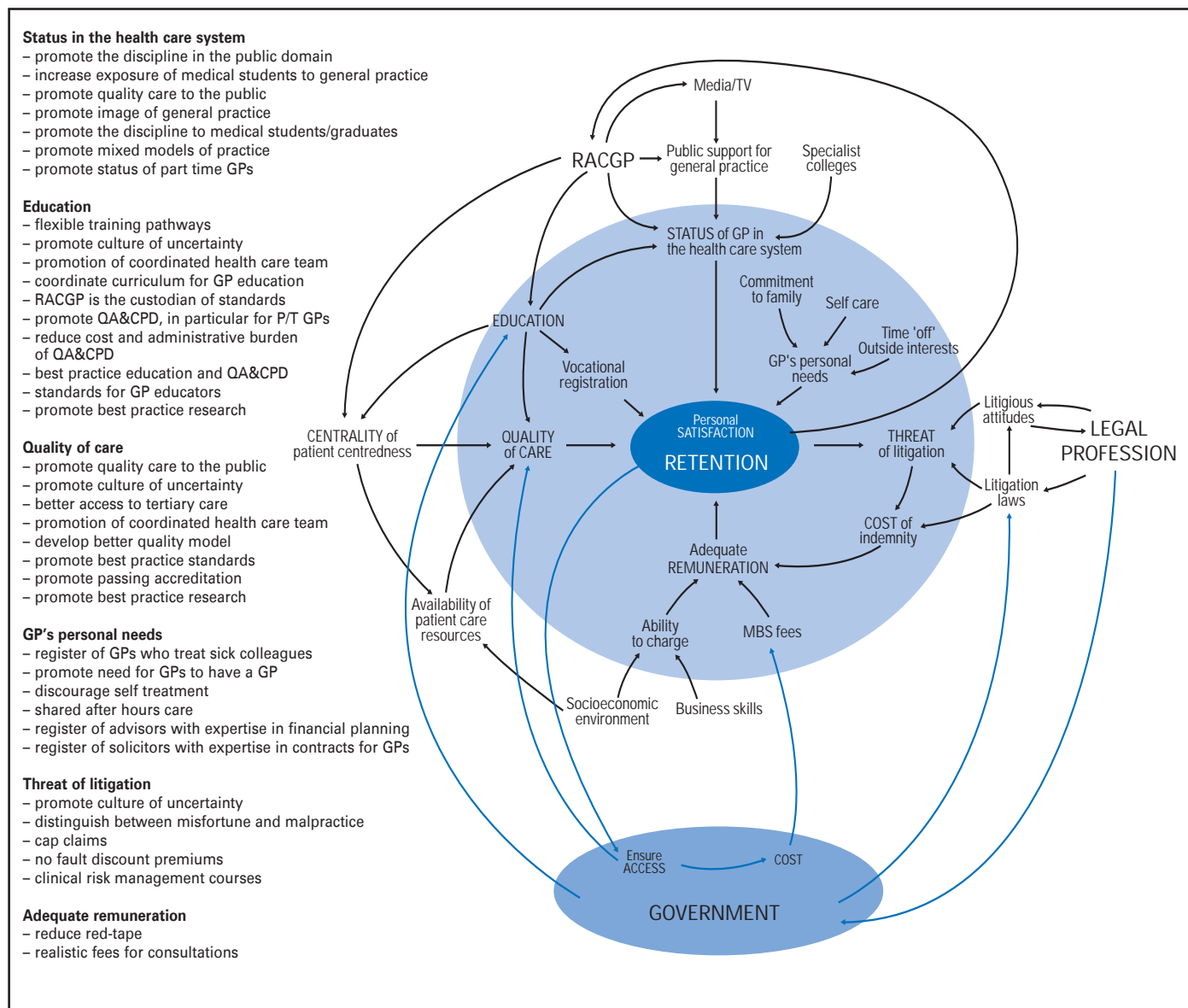


Figure 1. Finding solutions to GP retention

systems interact through a shared variable – *retention of GPs*.

However, a multiple cause diagram tells a story: in this case that *retention* of GPs is dependent on six main variables – the GP's *status in the health care system*, *GP's personal needs*, *threat of litigation*, *adequate remuneration*, being able to provide *quality care*, and *education*. And each of these variables in turn is influenced by a number of other variables.

The study of the multiple cause diagram also tells us – that besides the profession itself – a number of other players determine the behaviour of the *retention* variable. The government is obviously a major player whose main interest is to *ensure access* to general practice services at the lowest *cost* possible. *Quality of care* is not of prime interest, but it is related to patients having access to necessary care. The legal profession, on the other hand, benefits from a high level of *litigious attitudes* in the community and requires current *litigation laws* to stay in place.

The multiple cause diagram also identifies areas of conflicting interest – for the profession it is about *retention* based on personal satisfaction resulting from juggling *personal needs*, being *recognised within the system*, *education*, *quality care*, *adequate remuneration* and an *assurance not to be sued*.

## System dynamics

Thus, *retention* becomes a balancing act for four groups – the RACGP, our patients, the government, and the legal profession. Dynamics in a system are indicated by feedback loops, ie. change in variable A causes a change in variable B which causes a change in variable C... and variable C finally causes another change in variable A.

## Not all is up to the profession

The multiple cause diagram suggests that the RACGP can promote *retention* by influencing the *status of the GP in the health care system*, and through *education* to promote *quality of care*, as well as *patient centredness* as the basic tenet of primary health care. However, *education* is now also substantially controlled by the government raising the potential for interference with acceptable minimal perfor-

mance standards in an aim to increase workforce numbers. An unforeseen consequence of this move may be a significant drop in quality of care leading to an unacceptably high level of patient complaints and litigation.

To a large extent the government controls *remuneration*, but is in a bind since squeezing GPs too hard will ultimately impose on *access* to care. The government, through controlling *litigation laws*, can decrease the *threat* and the *cost* of litigation, but this will cause conflict with the legal profession.

*Quality of care* is clearly a professional imperative, however, the government may not be as much concerned with this issue as long as patients have acceptable *access* to care. Only if *access* to primary care becomes a significant problem may *quality of care* suffer sufficiently to also become a problem for the government.

## The missing variable – patient concerns

Having developed the system on the basis of discussions at the RACGP forum, it appears an important variable may have been missed – the *patient*. Patients – in the view of forum members – appear to have no direct impact on *retention* of GPs, however, neglecting their potential impact may be a major mistake. The patient may well be seen as a distant thus unimportant variable in the retention system, but as is known in system dynamics, it is often a distant variable that has the greatest impact on the system's behaviour – the unforeseen consequences. Understanding how patient attitudes, expectations and aspirations about their medical care (eg. website access to diagnostic and treatment options) affect GPs may be crucial for the *retention* of GPs.

## Conclusion

System approaches do not provide the one correct solution to a problem; rather system approaches highlight the potential interactions one solution may have in a complex environment. Building a multiple cause diagram provides a better understanding of these difficulties and forces reflection on strategies and their likely consequences. The 'correct answer'

is seen after the event, ie. did the change achieved by implementing a particular strategy match the expected/desired outcome?

The proposed system shows that the profession, through the RACGP, is in a strong position to promote core values of medical care. It shares an interest in education with the government, and can negotiate on behalf of patients for good access to primary care; and on behalf of its members for more realistic fees and legal security. However, the influence of the patient on retention should not be forgotten.

Using a systems approach to solving the retention problem allows all members to be involved constructively in the process, hence readers are encouraged to look for and share strategies they feel are more likely to achieve the goal, or to advocate to abandon those they perceive to be counterproductive.

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AFP

## Correspondence

Email: [jp.sturmborg@bigpond.com](mailto:jp.sturmborg@bigpond.com)