

PS1.265

The health system as a complex adaptive system. Findings from literature review

Joachim Sturmberg

The Newcastle University, Wamberal, NSW, Australia

Corresponding author: Associate Prof Joachim Sturmberg, The Newcastle University, General Practice, Wamberal, NSW, Australia. E-mail: jp.sturmberg@gmail.com

Background & Aim: Understanding complex adaptive systems and their behaviour has to become a required skill to solve the many problems facing GPs and the broader health system. As the Institute of Medicine pointed out: Health care is complex because of the great number of interconnections within and among small care systems... Health care systems are adaptive because unlike mechanical systems they are composed of individuals - patients and clinicians who have the capacity to learn and change as a result of experience. Their actions in delivering health care are not always predictable, and tend to change both their local and larger environment (Institute of Medicine, 2001: 63-64). What can general practice learn from the experiences of applying complex adaptive system thinking to clinical care and health system design? **Method:**

- Medline search using the keywords “(complex adaptive system)*” and “(healthcare system)*”, period to end of 2015
- Grey literature from reputable national and international agencies (e.g. WHO, King’s Fund, NIH)

Results: 39 papers met the inclusion criteria. The key findings include:

- A systems understanding views “health” and “health determinants” simultaneously as causes and outcomes
- Seamlessly integrated health systems have well-defined purpose, goals and values statements
- Meaningful changes to healthcare delivery require a whole system perspective
- Before implementing changes to service delivery one needs to carefully consider potential feedback that might contravene desired outcomes
- There are no of the shelf solutions that solve “the same problem” in different environments - every healthcare service is unique in its composition and behaviour.

Conclusions: Achieving more effective and efficient health care services and health systems requires leadership that constantly engages patients, health professionals, financiers and bureaucrats/politicians in the improvement process. History has proven that top-down improvement strategies are inconsistent with achieving these outcomes.