

Reviewer's report

Title: Organizational interventions employing principles of complexity science have improved outcomes for patients with Type II diabetes

Version: 1 Date: 1 March 2007

Reviewer: Sara Melody Rhydderch

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Organizational interventions employing principles of complexity science have improved outcomes for patients with Type II diabetes.

Leykum et al

Thank-you very much for asking me to review the above article. It makes for compelling reading and I enjoyed it very much. I feel that it makes an important contribution to this area of research because it evaluates the impact of organisational interventions using complexity science as a framework. I also think that it very well written in terms of having a clear structure.

However, I do have some suggestions.

Minor revision

The authors may wish to include the following references in their introduction– one is a cochrane review and other a meta analysis – both of which appear directly relevant to the starting point of this study.

1. Griffin S, Kinmonth AL. Diabetes care: the effectiveness of systems for routine surveillance for people with diabetes. Cochrane Database Systematic Review 2000; 2(CD000541).
2. Weingarten SR, J.M. Henning E. Badamgarav K, Knight V, Hasselblad A, Gano, Jr, and JJ Ofman. Interventions used in disease management programmes for patients with chronic illness - which ones work? Meta-analysis of published reports. British Medical Journal 2002; 325:925.

Major concerns

1. I believe the robustness of the results relies heavily on the initial system for categorising studies as having features of complexity science. It is difficult to categorise an intervention as having the characteristics of complexity science with accuracy after the event. I looked at table 1 and thought about the definitions. 'Agents who learn' is defined as essentially covering educational interventions. The definition of 'interconnections' appears to be covering interventions such as team working between professionals themselves and between professionals and their patients. Both of these elements are also considered fundamental to other theories of change such as organisational learning and organisational development. I wonder whether the authors could just have included studies that had at least three characteristics, 'agents who learn', 'interconnections' and one of 'self organising' or 'co-evolution' as these latter two are unique to complexity science.

2. Looking at the studies that were included in table 4, it seemed that most of them were themselves about making organisational changes in a planned way for example 'introducing nurse led clinics' is a planned change and planned change is not really an intervention that sits comfortably within the non-linearity of complexity science. It seems a bit confusing to look for evidence for complexity theory in studies where organisational interventions are introduced in a planned way.

Maybe the limitations section could reflect the above comments?

End

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.