Managing
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Future Pandemics

The Future of Healthcare in the Wake of COVID-19 - Time for a Paradigm Shift

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This paper explores the future of healthcare as we emerge from the COVID-19 pandemic through the lens of complex systems theory and the pillars of integrated care.

☑ Key Points

- COVID-19 has exposed and amplified the inequities in our health and care systems.

- In seeking to address these inequities, we need to recognise that health and care systems are complex adaptive systems.

- Integrated care is an important guiding principle for necessary service redesign.

- This reconceptualisation of health and care requires a combination of expertise across a diverse range of disciplines and fields to create a learning system that can adapt and respond to knowledge from many different areas.

Introduction

I find myself in a particularly reflective frame of mind as I write this piece. Russia has just invaded Ukraine and the world stands on the brink of another world war. Like many others I find myself wondering "*how can this be? Have we learned nothing?*" What has this got to do with the future of healthcare you might be wondering. In my opinion, the parallels are clear. Globally, health systems have been struggling for decades with the dual challenge of emerging demands and system constraints. Despite considerable improvements in people's health and life expectancy in recent years, these improvements have been unequal among and within countries. Globally, more than 400 million people lack access to essential health care (Organization and Bank 2021). The stark reality of these inequities have been exposed and amplified by the COVID-19 pandemic (Marmot and Allen 2020). Whilst many governments are collectively patting themselves on the back for a job well done and removing all restrictions, the question must be asked - how can we have got it (and continue to get it) so wrong? Why do we fail to learn?

Complexity and Healthcare

I believe the answer lies in our failure to recognise and engage with our health and care systems as complex adaptive systems (CAS). According to Johnson (2009), complexity is "the study of phenomena which emerge from a collection of interacting objects". Plsek and Greenhalgh (2001) define a CAS as "a collection of individual agents with freedom to act in ways that are not always totally predictable, and whose actions are interconnected so that one agent's actions changes the context for other agents". Six organising principles have been identified that allow a discernment of complex systems (Preiser 2018); three structure related [(1) Are constituted relationally, (2) Are radically open, (3) Are context dependent] and three process related [(4) Have adaptive capacities, (5) Are dynamic, and (6) Are Emergent].

Complex systems approaches to health and care have been receiving increased attention in recent years as it has been recognised that the traditional reductionist approaches that have predominated healthcare research to this point have yielded only limited insights (Braithwaite et al. 2018;

Foundation 2010; Greenhalgh and Papoutsi 2018; Rusoja et al. 2018; Thompson et al. 2016; Carroll et al. 2021). However, although there has been a lot of interest in viewing the health and care systems as CAS, as Greenhalgh and Papoutsi stated "we embrace the theme of complexity in name only and fail to engage with its underlying logic" (Greenhalgh and Papoutsi 2018).

the complexity of our health and care systems and therefore in order to understand the value of integrated care, there is a pressing requirement to have an additional complexity focus for the study of health and care systems. Indeed integrated care has already been demonstrated as a complex adaptive system in itself (Carroll 2021). This will require novel research methods

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Over the last five years, there has been an exponential growth in the number of publications purporting to engage with complexity science and theory; however on closer inspection most papers fail to demonstrate that engagement and there are very few empirical studies (Carroll et al. - paper in preparation).

Integrated Care

Around the world, many health and care systems are being redesigned and in many, a guiding principle for this redesign is integrated care (Hughes et al. 2020). However, as a concept, integrated care is often misunderstood or is vague. The International Foundation for Integrated Care have sought to address this lack of clarity with the publication of 'Realising the True Value of Integrated Care: Beyond COVID-19' (Lewis and Ehrenberg 2020). They recognised that those health and care systems that came together quickly to 'act as one' and collaborate across disciplines and sectors responded better to the COVID-19 crisis. In this report, they build upon knowledge gained over many years working with and studying integrated care systems around the globe and identify nine pillars as a conceptual framework to support the successful delivery of integrated care. These nine pillars are:

1. Shared values and vision
2. Population health and local context
3. People as partners in care
4. Resilient communities and new alliances
5. Workforce capacity and capability
6. System wide governance and leadership
7. Digital solutions
8. Aligned payment systems
9. Transparency of progress, results, and impact

No one of these pillars takes priority over the other and all must be considered as a dynamic interactive whole.

However, these pillars do not take into sufficient consideration

that will facilitate as Greenhalgh states '*rich theorising, generative learning, and pragmatic adaptation to changing contexts*' (Greenhalgh and Papoutsi 2018).

To accomplish a health service that delivers what people want demands an understanding of what people want. In Ireland, Irish people came together in a participatory project to co-create a definition and generic descriptors for person-centred coordinated care. The report and methodology are published elsewhere (Phelan et al. 2021; Phelan et al. 2017). The definition generated from service users' narratives is as follows: "*Person-centred coordinated care provides me with access to and continuity in the services I need when and where I need them. It is underpinned by a complete assessment of my life and my world combined with the information and support I need. It respects my choices, building care around me and those involved in my care*".

Although a short paragraph, it clearly demonstrates what people expect from health and care services. If any of us consider our own context and self-assess our current services against this definition, I am sure each of us would find our current services wanting. So, when people ask me "how will we know when we've got there?" I respond, "when our citizens respond to this definition and say yes to each element".

It has been interesting to watch health systems already move away from the term integrated care as if we have accomplished what we set out to do and now it's time to do something new. Terms like 'population health approach' and 'value cased care' are coming into vogue yet when we apply the domains or pillars of integrated care, although there are many examples of good practice for specific diagnostic categories and age cohorts, not all citizens are having the same experience of care.

So, what can be done?

Such complex issues cannot be solved by one faction alone. Health systems are inextricably linked to social and ecological systems, so we need to create a knowledge generating

and sharing, learning system with a participatory approach to probing, exploring and hopefully answering these complex questions. This will require a collaborative union of governments, academics from many different disciplines such as social science, engineering, economics etc., civic society and healthcare professionals all united in a shared curiosity and

contexts' (Greenhalgh and Papoutsi 2018). A move forward is the adoption of Preiser's six organising principles of complex adaptive systems and IFIC's nine pillars and the creation of a learning system. We are all learning and none of us have all the answers, but we can sense and learn together.

A paradigm shift in thinking is required to address the social determinants of health and provide universal access to person-centred coordinated integrated care

passion for improving how we think about, design and implement our health and care systems. This is not new thinking. Gregory Bateson and Margaret Mead and many others have left us many of the necessary foundational principles. It is now up to us to choose to take up the baton and continue their work. I have had the privilege of meeting and working with many great thinkers in this space which fills me with hope and optimism for what lies ahead.

We will require this radical and disruptive thinking if we are to achieve the revolutionary transformation essential if our peoples are to flourish in this fragile world of ours. As we emerge from the pandemic, we urgently require such a societal commitment for change. Most health and social care models remain hospital focused, episodic and cure orientated. A paradigm shift in thinking is required to address the social determinants of health and provide universal access to person-centred coordinated integrated care. This needs to be accompanied by, as Greenhalgh and Papoutsi state, '*rich theorising, generative learning, and pragmatic adaptation to changing*

Conclusion

At a time of such fear and uncertainty, it can be easy to lose hope. But hold fast to hope. We are all connected. We are all in this moment sharing this world together. We are not alone. We are full of vitality, creativity, curiosity, and care. Feel your feet on the ground. Feel the air as it enters and leaves your body. Feel your heart beating in your chest. In this moment, sense your connection to the world and the universe around us. We are surrounded by and infiltrated with positive energy. The dark forces are a minority and will pass. Together, anything is possible.

As the late Donella Meadows said "*We can't control systems or figure them out. But we can dance with them*" (Meadows 2001).

Let's dance together.

Conflict of Interest

None. ■

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