Creating Innovation in Cancer Care Delivery

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Creativity and innovation are words in common use when discussing the challenges facing cancer care delivery. Creativity in cancer care yields almost 3 million hits on Google, while innovation in cancer care yields almost 6 million. For peer-reviewed papers, the figures in Google Scholar are 87,000 and 460,000, respectively. For nurses working on the frontline of cancer care, the challenge is to work through this mass of information to consider how best to approach redesigning the delivery of care to get best outcomes for patients and make best use of the skilled workforce.

The imperatives for innovation and creativity in health care generally and cancer care specifically are many. First, there is the aging of the population with vast numbers of people experiencing chronic disease and placing strain on already stretched services. In the context of cancer, aging is a critical issue because cancer is largely a disease of aging and as the population over 65 grows so too does the incidence of cancer. Second, evidence is growing faster than our capacity to adapt, so we need help to filter and synthesize evidence to pull out that which is relevant to the problem we are trying to address. Third, models of care are changing. Hospitals are increasingly only for those patients with acute care needs with more and more care expected to be delivered in the home and ambulatory setting. This is very much true for cancer treatment, and Asian nurses will see the same kinds of shifts that have occurred in the USA, UK, and Australia, with almost all chemotherapy and radiotherapy delivered in day treatment centers and an increasing proportion of patients having day-only surgery. This challenges how we prepare patients for treatment and increases the emphasis we need to place on preparing the patients and family members for self-management, particularly of treatment side effects, in the home. Fourth, technology has huge potential to shape the models of care that develop, but to date, nurses have been largely passive recipients of technological innovation. To do this nurses need skills in designing and using technology and care systems that are patient centered and enhance rather than impede the delivery of nursing care. Fifth, we face a global health workforce shortage and will be required to redesign how nurses work. Models of care and technological innovation will be at the center of rethinking how we make our workforce support larger numbers of patients with increasingly complex needs.

One model worthy of consideration by nurses seeking to influence practice and support changes to models of care is that developed by Kitson et al.[1] called the Promoting Action on Research Implementation in Health Services (PARIHS

framework). The original model focused on three key factors: the quality and type of evidence available to support the change, the characteristics of the context in which change is to occur, and facilitation or the way in which evidence is introduced. More recently, two additional features were added to the model.[2] Evidence was redefined to include a greater focus on innovation, and a fourth factor, the recipient, was included to give greater focus on those who are affected by or who influence the implementation of research into practice.

In the PARIHS framework, context is central to understanding the features of the environment that will support or impede changes to practice. There are three key components to consider. The first of these is culture. Nurses seeking to implement change need to understand how open the context is to new ideas, how open it is to critique of current practice, and the willingness to engage in care improvement. Second, an understanding of leadership in the environment is important. Knowing who drives the quality of clinical practice, who sets the standards, and how these are made explicit and communicated to staff will give insight into how willing the leaders are to support change. If the leadership culture is very hierarchical, change will be harder than if the culture supports ideas and leadership coming from across the team. The third component is measurement. Change is much easier if there are data available to provide the impetus for change and to use to track if the changes being implemented are creating the desired effect. Measurement ideas include undertaking clinical audits, engaging in benchmarking with other units, and using peer-review processes.

The inclusion of recipients into the revised PARIHS framework centers on identifying who will be affected by the change or who can positively or negatively influence change so that engagement of these people can be included into plans. Central to engagement of recipients is the model factor related to facilitation. When people need to change their practice or behavior, it is essential that they are helped to understand why a change is needed (measurement helps this), what will have to change and support to understand how to make the change to achieve the desired result. Identifying the individual or individuals who will carry out the role of change facilitation is essential as will be making sure facilitators are provided with the time and resources they need to carry out this role. The attitude of the facilitators is also important so they can positively influence change rather than promote resistance. These individuals need influencing skills rather than positional power.

Rogers' theory of innovation[3] is very useful in considering the characteristics of successful facilitators and the considerations they need to keep in mind when planning change implementation. Rogers suggests that communication is most effective when individuals are similar in characteristics such as beliefs, values, education, social status, and profession. He used the term "near-peer" to describe the kind of individual who might be the most effective at communicating and facilitating change in the workplace. This is supported by the evidence that top-down approaches to change are often resisted and that engagement of those affected by the change is more likely to be successful.

In work to implement evidence into practice skills for nursing and allied health staff through a Clinical Research Fellowship Program[4] we identified several other key features of facilitation. These were:
- The need for facilitators to understand the motivation of the individual for the practice change they had identified so that the training program could be adapted to those interests
- Demystifying research and evidence by keeping discussion familiar and relevant and focusing on the power of evidence to drive change
- Supporting participants to see the bigger picture – how their desired change might fit within organizational priorities and agendas
- Supporting the adaptation of interventions from clinical research into the local environment without losing the integrity of the intervention.

Rogers[3] also describes five elements of new behaviors that will influence the willingness of clinicians to adopt change that remains relevant. I have illustrated each of these with an example from change processes I have been involved in from cancer nursing.
1. Relative advantage – do the nurses on your team see that the change being proposed will be better than what is in place now? The more the proposed change is understood as an improvement, the more likely staff will engage in the change process.
    - Wendy Poon, the head-and-neck nurse coordinator at Peter Mac, was able to show that early feeding after gastrostomy insertion led to fewer complications and shorter lengths of stay. She identified the key barriers to early feeding were the operating day of Friday and the lack of dietitian staff on the weekend. Fewer complications and shorter stays were universally seen as having an advantage over the current situation.
2. Compatibility – does the innovation being proposed fit current work practices? The greater the need to adapt routine behaviors and habits, the harder the change will be to achieve. Sometimes, this means taking smaller steps toward a change to gain buy in.

- For Wendy, to improve care of patients receiving gastrostomy, she needed to convince the surgeon to move the operating day to earlier in the week. This took negotiation skills, but the change was entirely compatible with the existing practice. No behavior change was required, just the day in which it occurred.

3. Complexity – how hard is it to learn the new behavior? The more complex the behavior, the more training and support the nurses will need to embed it into their daily behavior.

    - Following a trial of a new approach to the delivery of chemotherapy education, our research team attempted to embed the new intervention into routine practice. The change in chemotherapy education delivery to patients required training of individual nurses, a change to the timing and place for patient education delivery and changes in systems such as bookings for patients to have education separate to the booking for their treatment appointment. The complexity of the intervention made it difficult to implement, and the extra work the change took for the affected nurses meant that the perceived relative advantage for them was very low even though the trial had shown benefits for patients.

4. Trialability – is there an opportunity for the nurses to try the innovation and see if it works. In this approach, the nurses are not committing to change and are given the opportunity to test out the innovation and see how it works.

    - In establishing the role of a smoking cessation nurse, Ingrid Plueckhahn was released from her clinical role to test the acceptability of the role to patients and staff who would be referring to her for smoking cessation support and working out the logistics of the role. The evaluation of the trial then informed the case to the hospital to support the role being introduced. The trial enabled the staff and patients the opportunity to learn how it would work and informed the final model that was recommended.

5. Observability – can the nurses see that improvements have occurred? This is where measurement is critical and can be used to track the outcomes of changes made to the practice environment.

- In Wendy's project on feeding after gastrostomy insertion, she was able to show a reduction in length of stay for patients of 2–5 days, demonstrating considerable benefits for the hospital in terms of cost and for the patient in terms of the potential risks of delayed feeding and the benefits of less time in the hospital. This helped to ensure support for continuing the change from the hospital.

In summary, the need for innovation in health care and nursing practice has never been greater. Paradoxically, nurses often see themselves as having little or no capacity to innovate or change the clinical care they provide. Nurses position on the frontline of patient care means they have an intimate understanding of the problems patients experience and the challenges in delivering high-quality care and yet are rarely able to systematically analyze and consider solutions. Finding the time to undertake this sort of analysis is difficult and requires nurses to work as a team to support this increasingly critical activity. Without the space to lead and innovate, nurses will continue to be the subjects rather than the agents of practice change. Programs such as the Clinical Research Fellowship program show that nurses have the capacity to lead change. The savings arising just from Wendy's innovation would be enough to fund the program each year and to inform a business case for why this kind of investment in nurses is worthwhile. We have the power; we cannot afford to ignore the challenge.

References

1. Kitson A, Harvey G, McCormack B. Enabling the implementation of evidence based practice: A conceptual framework. Qual Health Care 1998;7:149-58.
2. Harvey G, Kitson A. PARIHS revisited: From heuristic to integrated framework for the successful implementation of knowledge into practice. Implement Sci 2016;11:33.
3. Rogers EM. Diffusion of Innovation. 3rd ed. New York: The Free Press; 1983.
4. Milne DJ, Krishnasamy M, Johnston L, Aranda S. Promoting evidence-based care through a clinical research fellowship programme. J Clin Nurs 2007;16:1629-39.