Diffusion of innovation challenge for nurses

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Patient care should be scientific and research based in order to get the positive patient outcomes and the vision for nursing in the twenty-first century is for all nurses to seek out innovations and evidences and apply it in their everyday practice. As health care is evolving constantly, wave after wave of new technologies, insurance models, regulatory changes, information system and institutional arrangements buffet the system and the people in it. It is been observed that nurses believe that their practice should be based on research. Nurses do want to bring innovation in their practice which helps them to provide effective and quality care to their patients. However, despite their knowledge of its importance and value, the majority of nurses do not incorporate research findings into their practice. Because of lack of administrative support and mentorship, nurses lack authority to change practice, inadequate basic research knowledge, incomprehensible statistics, and insufficient time on job to implement change are the significant barriers for nurses' utilization of research in practice and diffusion of innovation. In addition most of the staff nurses are unaware of innovations which are going on around the world. The process of dissemination of innovation in our practice setting is very slow. There is a need to develop some strategies to start up the process of innovation-diffusion. Furthermore future research studies are required to identify the factors affecting diffusion of innovation among nurses.

Introduction

Patient care should be scientific and research based in order to get the positive patient outcomes and the vision for nursing in the twenty-first century is for all nurses to seek out innovations and evidences and apply it in

their everyday practice. As health care is evolving constantly, wave after wave of new technologies, insurance models, regulatory changes, information system and institutional arrangements buffet the system and the people in it. When I started working as a registered nurse I have observed that nurses in general have positive attitudes toward research and believe their practice should be based on research. Nurses do want to bring innovation in their practice which helps them to provide effective and quality care to their patients. However, because of lack of administrative support and mentorship, nurses lack authority to change practice. In addition inadequate basic research knowledge, incomprehensible statistics, and insufficient time on job to implement change are the significant barriers for nurses' utilization of research in practice and diffusion of innovation.

In addition most of the staff nurses are unaware of innovations which are going on world wide, as nurses here in our setting use colleagues as primary source of information or some senior nurses play the role of knowledge agent for the dissemination of research findings. The process of dissemination of innovation in our practice setting is very slow. There is no such facility available for the nurses to easily access the vast amount of research literature, available on-line that influence or improve their clinical practice. Nurses also have feeling that there was not enough time to read and discuss research articles as they are over worked; time is limited and too busy to implement any innovations into their practice. More over people and institutions, for the most part, do not like change; it is painful, difficult, and uncertain.

Description

During the last 50 years, Everett M. Rogers, former professor and chair of the Department of Communications & Journalism at the University of New Mexico, made diffusion of innovations the focus of a lifelong study. Rogers, who died in October last year, developed theories about how new ideas could be disseminated more efficiently and less expensively. According to Rogers (cited by Cain & Mittman, 2002) “ an innovation is an idea, practice or object that is perceived as new by an individual or some other unit of adoption”. One of the recent definitions of innovation comes from Greenhalgh et al. (cited by Anderson, 2005) define innovation as “ a novel set of behaviors, routines and ways of working, which are directed at improving health outcomes, administrative efficiency, cost-effectiveness, or the user experience, and which are implemented by means of planned and coordinated action.” Anderson, (2005) identified four main characteristics of innovation:

- Innovation represents newness.

- It is not the same thing as invention. Invention is about discovery of new ideas or approaches; innovation is about their application.

- It is both a process and an outcome.

- It involves discontinuous change.

Innovation is not a new concept to the nursing profession. Nurses worldwide are engaged in innovative activities on a daily basis; activities motivated by the need to improve care outcomes and reduce costs to the health system.

Many of these developments by nurses have resulted in significant improvements in the health of patients, populations and health systems. In most health systems, nurses are the main professional component of “ front line” staff, providing up to 80% of primary care (Newhouse, Dearbolt, Poe, Pugh, & White, 2005). As such, they are critically positioned to provide the creative and innovative solutions for current and future global health challenges – challenges such as aging populations; HIV/AIDS; tuberculosis; malaria; an increase in non-communicable diseases; poverty; inadequate resources and workforce shortages. The need for innovative solutions has never been greater as health care environments globally struggle to provide equitable, safe and effective health services (Thompson, 2003).

Successful and sustainable innovation in healthcare is important to improve the delivery of services in order to improve health and health care in our communities. It can help to strengthen the health care system’s ongoing ability to attract((Newhouse, Dearbolt, Poe, Pugh, & White, 2005) and retain talented staff (Hinds, Gattuso, & Morrell, 20002), address funding issues ((Thompson, 2003), enhance competitiveness, build organizational reputation and build capacity for organizations as they evolve to meet future needs (Willson, Madary, Brown, Gomez, Martin, & Molina, 2004). Organizations which succeed in effectively sustaining innovations can make a meaningful difference in service delivery and will attract talent (Willson, Madary, Brown, Gomez, Martin, & Molina, 2004). Those who fail to offer staff the opportunity to productively pursue innovation can lose valuable resources and miss opportunities to improve (Hinds, Gattuso, & Morrell, 20002).

However the innovation would not only fulfill the purpose, diffusion of innovative things develops a culture of evidence based and makes our practice research based. According to Rogers (cited by Cain & Mittman, 2002) " diffusion is a process by which an innovation is communicated through certain channels over time among members of a social system". The transfer of knowledge has always been crucial, but in today's managed care environment, with its emphasis on containing cost while maintaining quality, nurses must have access to knowledge and practice innovations, not only to improve costs and quality, but also to improve outcomes (Hinds, Gattuso, & Morrell, 20002). Evidence-based or innovative practitioners adopt a process of lifelong learning that involves continually posing specific questions of direct practical importance to clients, searching objectively and efficiently for the current best evidence relative to each question, and taking appropriate action guided by evidence. (Pravikoff, Tanner, & Pierce, 2005).

Theoretical Framework

Rogers Diffusion of innovation is a behavioral theory that describes the process the users goes through in the adoption or rejection of new ideas, practices, or technology. Main components of this theory are innovation, communication channels, time and social systems. (Fink, Thompson, & Bonnes, 2005). Rogers suggests that there are five perceived attributes of an innovation that affect its uptake and use. These are:

Relative advantage whether an innovation is perceived as better than the idea it replaces;

Compatibility is the degree to which an innovation is perceived as congruous with the values, experiences, and needs of potential adopters

Complexity-whether an innovation is perceived as difficult to understand and use;

Trialability is the degree to which an innovation may be experimentally tested; and

Observability whether the results of an innovation are visible to others. (Rogers, 2003)

Stages of adoption:

Awareness – the individual is exposed to the innovation but lacks complete information about it

Interest – the individual becomes interested in the new idea and seeks additional information about it

Evaluation – individual mentally applies the innovation to his present and anticipated future situation, and then decides whether or not to try it

Trial – the individual makes full use of the innovation

Adoption – the individual decides to continue the full use of the innovation (Rogers, 2003)

Health care is rich in evidence based innovations, yet even such innovations are implemented successfully in one location, but it often disseminated slowly in other parts of world and this often occur in developing countries

where the disseminating the information is at great especially among nurses. There are several barriers which lead to overuse of unhelpful care, under use of effective care and errors in execution.

Factors affecting the diffusion and implementation of innovation

There are several factors that affect the diffusion and implementation of innovation in practice setting

Perception of Innovation

According to Berwick (2003) there are five perceptions or properties that are affecting the rate of diffusion and which Rogers's also mentioned in its theory. First and most powerful factor is the perceived benefit of the change. Individuals are more likely to adopt an innovation if they think it can help them. Second to diffuse rapidly an innovation must be compatible with the values, beliefs, past history and current need of individuals. A third factor affecting the arte of diffusion is the complexity of the proposed innovation. Generally simple innovations spread faster than complicated ones. Two other perceptions predict the spread of an innovation are trialability and observability, change spread faster when they have these five perceived attributes.

Characteristics of the Individuals who may adopt the change

According to Berwick (2003) a second cluster of factors that helps explain the rate of spread of an innovation is associated with the personalities of the individuals among whom spread might occur, i. e. the potential adopters. The fastest adopting group is the innovators themselves and the main

problem comes here that nurses in our country are not playing an active part in research work because of inadequate educational preparation of nurses in research, over work with their routine task, lack of support from managers or supervisors, lack of motivation, interest, confidence and belief in the value of research at a personal level hinder research work for nurses (Hinds, Gattuso, & Morrell, 20002).

The second category who adopts the change are early adopters they are opinion leaders, they do not search widely like the innovators but they do speak with innovators and select the ideas they would like to try out. In our setup we even see the early adopters very few as nurse do not have time to read the research literature or articles which facilitate them to use some innovative research in their practice (Berwick, 2003). Because of scarcity of resources only few nurses usually get the chance to travel and attend the research conferences and seminars and meet the innovators. Most of the staff nurses who are not in any position usually do not go out side the country in any workshop or research conferences which help them to identify different innovations and apply in their practice.

The next third of the distribution are the early majority. They learn mainly from people they know well or from research studies conducted in other parts of the world (Berwick, 2003). The critical evaluation of nursing research and the implementation of findings in to practice require knowledge, and mentoring, but nurses in majority have lack of knowledge of statistical analysis, are not comfortable in critiquing the research and they have lack of familiarity of latest research that influence their clinical practice (Fink, Thompson, & Bonnes, 2005).

The next group is the late majority; they are more conservative and look to the early majority, are skeptical, adopt new ideas just after the average member of a system (Berwick, 2003). The pressure of peers is necessary to motivate adoption. Intervention strategies that help them to overcome barriers are needed to get them to take up the innovation. We are the part of this group as most of the innovations in nursing practice are coming here when the innovation is quite old in other western countries because of slow diffusion process most of the evidence based practice which help in improving the patient quality care are incorporated in our practice very late. Members of final group are called ‘ laggards’ they are traditionalists, last in a social system to adopt an innovation, pays little attention to the opinions of others (Berwick, 2003). No matter we are very positive toward the diffusion of innovation but we need to fast up the process. We should be the innovator or early adopters for the diffusion of innovation in our practice setting.

Contextual factors

According to Berwick (2003) third cluster of influences on the rate of diffusion of innovation has to do with contextual and managerial factors within an organization or social system that encourage and support, or discourage and impede, the actual processes of spread. The culture of our organization is such that it is not encouraging nurses to participate in research activity, there was no support from management, no allotted time by administration and there is lack of organization mentoring for the research work. More over there is a lack of infrastructure support for the nurses to retrieve the research article. To obtain a journal article a nurse had go to library from her busy schedule, retrieve the article from the shelf, and

copy it, but a physician can request a specific article, have a librarian retrieve it and send a copy of it to their offices. In addition nurses have lack of authority and most of the time physician does not buy the nurses idea for the change in practice, which de-motivate the nursing staff to bring any innovations in the organizations.

Conclusion

There are unlimited challenges faced by the nurses to implement the innovations in clinical practice because of slow diffusion of knowledge generated by nurse scientists. But the literature on diffusion offers some rich ideas to promote and spread the change in the health care organization. Diffusion of innovation in any organization has some risks and benefits. The spirit and the motivation of nurses with whom we work and live is the greatest source of energy and motivation for bringing innovation in health care practices for the improvement of health outcomes. To create a future different from its past, health care needs leaders who understand innovation and how it spreads, who respect the diversity in change itself, and who, portrayal on the best of social science for guidance, can nurture innovation in all its rich and many costumes.