The Potential of Communities of Practice to Promote Evidence-Informed Practice Within Nursing Homes

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Health care providers are increasingly seeking new technologies to improve quality and cost effectiveness. In nursing homes, quality involves clinical excellence and creating a culture of care that provides an enriched living experience desired by older people and their families. The concepts of evidence-informed practice and partnerships in caring are thus central to the achievement of the nursing home improvement agenda, in addition to the satisfaction of regulatory requirements. Improvement per se is an imprecise science and the challenge of prioritizing nursing home development strategies is compounded by regulatory imperatives, material and manpower resource issues including workforce stability and commercial competition. Practice development and more recently quality improvement and its rapid derivatives have generated an array of approaches, none of which stand out as superior in terms of their demonstrable impact on practice or patient outcomes. As Berlowitz et al acknowledge, there are few robust studies investigating the impact of quality improvement in nursing homes. With growing international interest in communities of practice (CoPs), it is timely that we explore the potential for CoPs to advance cultural change in nursing homes in order to drive sustainable improvements. This article examines the merits of an empirically derived CoP model for use in care homes and in the strategic expansion of knowledge management and knowledge translation in Scotland.

PROMOTING EVIDENCE-INFORMED CHANGE

The evidence-based medicine movement has fueled the proliferation of protocol-based care (protocols, clinical guidelines, standards and statements) that share the common goal of improving practice while reducing practice variation. Evidence consistently shows, however, that such best practice documentation has only a small effect on clinicians’ activities. There is accumulating evidence that to change professional practice it is necessary to influence a practitioner’s beliefs about the evidence for practice and about the anticipated consequences of their individual actions and team responsibilities. Influencing beliefs about the appropriateness of some evidence-based recommendations for frail nursing home residents is undermined by the paucity of robust studies; a recent estimate suggests that as little as 2% of research on older people is carried out within care homes. Thus, discerning nursing home clinicians often have to work with an incomplete knowledge base, drawing on their tacit practice-based knowledge and the team “mind-lines” or locally mediated collective beliefs about what works in this context. Global aging and increasing demands for long-term care and nursing home provision, make it imperative to locate efficient and effective improvement methods and develop ways to share and learn about best practices.

USE OF CoPs IN HEALTH CARE

Recognizing that health care decision making is influenced strongly by clinicians’ experience and interactions with their clinical colleagues, patients, and local opinion leaders is an important step in understanding the social influences that mediate how practitioners use evidence in practice. Accordingly, this explains the importance of “situated learning” in interventions designed to change professional behaviors. Situated learning is a fundamental construct in social learning theory that underpins CoPs. Interest and confidence in the merits of situated learning has prompted an increasing number of scholars and practitioners to use CoPs to drive applied learning and knowledge generation in a variety of different working environments including health care.

In its simplest form, a CoP is a group of people who share a common concern or area of practice and who deepen their knowledge and expertise in this area by interacting on an ongoing basis. Group maturity is achieved through 4 key processes: identity building, social interaction, knowledge...
sharing, and knowledge creation. Knowledge creation includes developing new ways to perform duties, complete tasks, and to problem solve, all highly relevant to nursing home teams striving to introduce evidence-informed changes to practice. As the CoP matures, it builds its capability for improvement and innovation through sharing knowledge, finding solutions, and developing resources that embody the accumulated group knowledge. CoPs can form organically or can be cultivated and they may have clarity of purpose or their goals might evolve over time. The relationships and methods of working will be influenced by proximity of community members to one another, or opportunity to meet face to face and the availability of and desire to work collaboratively using the Internet.

Li et al completed a systematic review of CoP studies published between 1991 and 2005, identifying 18 primary studies from business and 13 from health care. Their conclusions affirm the belief of previous analysts in the potential of CoPs to improve practice in a number of disciplines. They acknowledge that CoP technologies are relatively new and that there is much still to learn about CoP cultivation and facilitation. They caution that simply calling a group a community of practice, as in many recent publications, is no guarantee that it will behave as such or meet the defining criteria, as shown in Figure 1. Although the absence of effectiveness studies limited Li et al’s review methods to a qualitative interrogation, they concluded that there was sufficient evidence to claim that mature CoPs yield greatest impact in practice. Four of the 31 primary studies reviewed were classified as mature CoPs and one of these was from health care; it is the CoP framework arising from this work that we now explore.

**CALEDONIAN IMPROVEMENT MODEL**

**Research Aim**

The strategic impetus leading to the creation of the Caledonian Improvement Model was the government call for the promotion of best practices in caring for older people and those with long-term conditions. The primary research question asked: *How can best practice in the nursing care of older people be promoted across Scotland?* The project ambition was to find a sustainable improvement approach that would influence and improve care across provider and sector boundaries (National Health Service acute hospitals, long-term care, community and primary care, and independent sector care homes). The underlying assumption was that older people have a right to care informed by the best available evidence irrespective of the care setting. The large scale and limited capital resource demanded a cost-effective and efficient approach that would create the conditions to:

- translate knowledge into evidence-informed practice
- lead to sustained change in care environments
- change professional behavior to improve practices
- achieve demonstrable benefits for older people.

Given the complexity and national scale of the project’s ambition, it was not unexpected that an off-the-shelf solution...
was located for immediate testing. Instead, it was necessary to build a model grounding it in the reality of practice in hospitals, care homes, and other community settings, combined with the views of key stakeholders, namely practitioners and older people. The research design was based on social participatory methods, and the program of research was undertaken by a partnership of practitioners, older people, family carers, policy makers, and academics.20 Over time it became clear that a community of practice was the group formation capable of achieving the greatest demonstrable practice impact. As with all complex health care interventions,21 we embarked on a phase of modelling, testing, and refinement to delineate how to create and facilitate productive CoPs charged with promoting evidence-informed improvements and driving cultural change; feasibility trials are being progressed.17,22

Design and Methods

The modeling phase completed between 2000 and 2008 involved proof of concept testing, piloting, refinement, and impact evaluations. Mixed methods were used within a social participatory design combining action research with realistic evaluation.17 Data collection methods included group and individual interviews, analysis of online group working behaviors, compliance with evidence-linked review criteria, and case studies prepared in partnership with older people.

Findings

The preliminary, conceptual development work and subsequent piloting contributed to raising standards of care within 57 National Health Service sites (hospital wards and community sites) and 26 independent sector care homes within Scotland.6

The Caledonian Model defines a Gerontological Community of Practice as a group of practitioners, work colleagues (e.g., care home staff, nursing aides), educators, and older people who collaborate to share expertise and insights, and establish implementation solutions so as to improve practice. To do this, the group establishes a clear sense of identity. This process is enabled through consensus, and learning how to influence others to adopt an explicit set of caring values. These underpin all practice and improvement work carried out. Additional features of this purposefully cultivated CoP are summarized in Figure 1.

Operationally, the Caledonian CoP model includes 3 core elements, which provide the dimensions and mechanisms to support practice improvement: infrastructure and communication mechanisms, knowledge conversion processes, and learning and development processes.

**Infrastructure and Communication Mechanisms**

Infrastructure and communication mechanisms support social interactions and create a flexible collaborative work environment. The original Internet-based site was designed by the inaugural CoP using freely available software and was designed on a building metaphor with easily identifiable “rooms” in which community members could work.23 This initial system was soon replaced by a managed learning environment platform called Blackboard.24 The virtual collaborative environment serves as the communication hub and resource repository. CoP members interact weekly, or more frequently, using synchronous or asynchronous discussion facilities to keep threads of discussion moving. By using password protection in restricted access areas, group members can openly discuss issues, collaborate, learn, report progress, explore development challenges, and share implementation solutions. One of the key lessons learned during the first few project years was the many obstacles and multiple challenges of a technological nature, for example, changes in provider security systems could and frequently did prevent group members from entering the CoP Web site. These problems have now been resolved with the introduction of a state-of-the-art national knowledge management infrastructure for Scotland’s health and social care, in the form of The Knowledge Network (www.knowledge.scot.nhs.uk). The Knowledge Network provides an innovative Internet-based Evidence-Into-Practice-Portal (www.evidenceintopractice.scot.nhs.uk) with an integral Community Builder Toolkit. This facility allows groups to build their own Web sites, uploading their content and re-using The Knowledge Network’s resources, including discussion forums, wikis, blogs, and tagging. So, for example, each nursing home CoP can create its own bespoke site but take advantage of the sophisticated network library feeds available through the national Knowledge Network. Evidence into Practice aims to provide knowledge support for the whole quality improvement cycle. In addition to helping practitioners to find evidence and share and disseminate knowledge, it provides tools and outcome measures so that practitioners measure the improvements they achieve through translating evidence into practice.

**Knowledge Conversion Processes**

Given that the primary research question driving the development of the model was to discover how to promote best practice, we took the pragmatic view that best equated to practice guidance based on the best available evidence, including but not restricted to scientifically derived evidence.25 In the absence of existing care guidance focused specifically on frail older people, we developed a methodology based on critical review and evidence synthesis, which involved a stage of testing all guidance in a practice-based demonstration site to ensure what was recommended could be achieved in all care contexts.25 The crux of the knowledge conversion process, however, is the alignment of the recommended practice with the agreed value base.25,26 Subsequent studies have indicated that where robust protocol-based recommendations exist they can be aligned with an agreed value base to satisfy the requirements of the CoP knowledge conversion process (see values reconciliation later in this article).22

**Learning and Development Processes**

The Community of Practice exists specifically to enable members to pool practice-based knowledge and enrich professional practice. This is achieved through learning mediated by social interaction that is situated in the practitioners’
work context. This produces knowledge for practice and practice change, which is a blend of culture, context, and activity that is embedded in practice.

A facilitator steers the group through the learning and development process, taking a minimum of 6 months to implement an existing evidence-based protocol; 18 to 36 months is necessary when development of a protocol is a required part of the journey. The facilitator acting, in part as a knowledge broker for the CoP, works with the group to equip them with the skills to lead change locally and to acquire the necessary clinical competencies to deliver and sustain safe and effective practice. A major component of the journey focuses on enabling the CoP member to share his or her individual learning and appropriately lead evidence-informed changes in the behavior of his or her non-CoP work colleagues. In other words, learning how to transfer CoP knowledge into practice involves sharing it in motivational ways that make sense to all members of their workplace team. A major component of the work involved the action phase of local development, so although CoP members were working to the same improvement agenda, there was scope for localization of the priorities for action.

Improvement strategies are selected in accordance with the specifics of the area of the practice targeted for change and each CoP agrees on a common strategy with the facilitator. For example, in a previous study focused on preventing low mood and depression, practice in the participating care homes needed radical reform and it was appropriate to use development methods associated with emancipatory practice development. In contrast, in a project focused on oral health in frail older people, a swifter more directive improvement strategy was selected. Sharing progress through stories and progress monitoring using evidence-linked review criteria allows CoP members to make comparisons, learn from one another, and focus on what is working well or “seeing possibilities” rather than worrying about local difficulties that may otherwise become barriers to improvement. Where genuine difficulties are recognized as commonplace, then the facilitator will seek to locate the additional information or expertise that will enable progress, or debate the best way forward toward an implementation solution. The knowledge exchange integral to the learning processes can take different forms; for example, some participants used brief case studies with written or oral contributions from the older people. Others compared treatment plans or collated comments from their colleagues. CoP members either volunteered to lead an online discussion or start a discussion thread to engage others and the CoP requested occasional lectures or “ask the expert” sessions. Demonstrations of techniques performed by expert clinicians could be video recorded to reinforce clinical competencies; for example a speech therapist testing swallowing reflex in a stroke patient, a nurse performing ear irrigation to remove ear wax, a geriatrician assessing cognition and so on. The facilitator acted as curator, storing educational resources for easy retrieval. Each month the facilitator extracted key data from CoP discussions so that learning points could be shared and archived within the resource library. Occasionally content was moderated to correct information or delete inappropriate content.

Social participatory learning approaches by nature place group-based learning strategies in the foreground, nonetheless we found it beneficial to offer one-to-one sessions with the facilitator or a clinical mentor for the detailed interpretation of local audit data and to support the CoP member to achieve responsive action planning.

CONCLUSION AND FUTURE DIRECTIONS

Analysts have consistently identified CoPs as key to developing sustainable collaborative capacity for evidence-informed practice. Given the paucity of clinical studies with samples inclusive of frail nursing home residents and the unique challenges of the care environment, the collaborative ethos of CoPs has much to offer. The seminal work leading to the Caledonian Improvement Model makes an important contribution to knowledge in terms of offering an operational framework on how to cultivate and facilitate CoPs charged with promoting evidence-informed health care practice within nursing homes and beyond. There remains, however, much still to learn about CoPs, and effectiveness studies are an immediate priority.

This caution aside, accumulating evidence suggests that the Scottish CoP framework does sustainably change professional behavior; new ways of working embed through individual and collective responsibilities and actions. The sharing of the CoP know-how and resources with the wider practice community associated with CoP members makes for an efficient knowledge exchange cycle. Importantly the improvements are more likely to endure, as they are a product of changing the way practitioners think and act. Another merit is the capacity of the CoP framework to promote the sharing of best nursing home practices, either within an organization or across a network of organizations. Potential exists to strengthen the strategic influence of CoPs through harnessing knowledge-brokering opportunities, so that the CoP cycle of knowledge generation and application connects to the policy making cycle.

To date, the Caledonian Improvement Model has been tested with 2 distinct membership scenarios, one recruiting members from a geographically dispersed national pool and the other restricting membership to an administrative area, a regional health board in the Scottish context. The advantage of the former is the increased opportunity for greater diversity in learning and mix of experiences and arguably broader range of implementation challenges and solutions such as might occur when rural remote is mixed with urban situations and so on. In terms of responding to global aging and finding innovative solutions to efficiently cascade gerontological practice expertise and resource, it may be possible to
develop an alliance of CoP networks to share and develop best nursing home practice internationally. This opportunity is recognized in the IAGG/WHO position paper.32

REFERENCES