

Leadership in Health Service

Learning and development dimensions of a pan-Canadian primary health care capacity-building project

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Abstract

Purpose – The purpose of this paper is to use a descriptive case study to establish how collaboration, innovation and knowledge-management strategies have scaled-up learning and development in rural, remote and other resource-constrained Canadian delivery settings.

Design/methodology/approach – Intervention design was realized through a one-time, collaborative, national capacity-building project. A project portfolio of 72 sub-projects, initiatives and strategic activities was used to improve access, enhance quality and create capacity for palliative and end-of-life care services. Evaluation was multifaceted, including participatory action research, variance analysis and impact analysis. This has been supplemented by post-intervention critical reflection and integration of relevant literature.

Findings – The purposeful use of collaboration, innovation and knowledge-management strategies have been successfully used to support a rapid scaling-up of learning and development interventions. This has enabled enhanced and new pan-Canadian health delivery capacity implemented at the local service delivery catchment-level.

Research limitations/implications – The intervention is bounded by a Canada-specific socio-cultural/political context. Design variables and antecedent conditions may not be present and/or readily replicated in other nation-state contexts. The findings suggest opportunities for future integrative and applied health services and policy research, including collaborative inquiry that weaves together concepts from adult learning, social science and industrial engineering.

Practical implications – Scaling-up for new capacity is ideally approached as a holistic, multi-faceted process which considers the total assets within delivery systems, service catchments and communities as potentially being engaged and deployed.

Originality/value – The Pallium Integrated Capacity-building Initiative offers model elements useful to others seeking theory-informed practices to rapidly and effectively scale-up learning and development efforts.

Keywords Learning, Primary care, Innovation, Knowledge management, Rural regions, Canada

Paper type Case study

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Introduction

The Canadian Pallium Project works to improve the quality of living and dying in Canada. It does so by helping strengthen Hospice Palliative Care (Ferris *et al.*, 2002) service access, quality and local/delivery system capacity. It achieves this by linking, supporting and enabling collaborators at, and across, local and provincial/territorial jurisdictions within Canada's confederated political governance model. From early 2004 through 2007, several hundred collaborators throughout Canada's 13 provinces and territories engaged in purposeful innovation and shared knowledge-building.

An initiative formally called the Pallium Integrated Capacity Building Initiative (i.e. Pallium Project, Phase II) was the second major initiative since inception in 2001. Pallium Project (Phase II) was supported by a one-time public investment of \$4.3 million Cdn (2.67 million Euro) from the Government of Canada's, Primary Health Care Transition Fund (PHCTF). Phase II was the only national PHCTF intervention with exclusive palliative and end-of-life care scope. The PHCTF investment was leveraged with in-kind contributions from academic, service delivery, government and voluntary-sector partners.

We earlier reported prospectively on Pallium Project (Phase II), including guiding social science and educational theoretical foundations and planned interventions (Aherne and Pereira, 2005). Consistent with a personal commitment to action learning (McGill and Beaty, 1992; Revans, 1998), collaborative inquiry (Kasl and Yorks, 2002; Reason, 1998) and critically-reflective practice (Marsick, 1988; Moon, 1999), this article integrates much of what we have learned in guiding this stakeholder "co-owned," pan-Canadian capacity-building project.

Consistent with the WHO international joint issues' theme of "Towards a scaling-up of training and education for health workers", this article examines the learning and development dimensions of Pallium Project (Phase II). The case study is situated within a Canadian socio-cultural/political context. The idea that resource-constrained health service environments apply only to developing countries is challenged and examined. Reflections on how collaboration, innovation and knowledge-management present as strategies for adoption elsewhere are shared. Adaptable and replicable innovations and outcomes are discussed.

Methodology

Design

A descriptive case study approach (Eisenhardt, 1989; Stake, 1995) was used to examine the principles, theoretical constructs and practices of collaboration, innovation and knowledge-management used in Phase II. The Pallium Project started as part of an applied research program at a research-intensive Canadian university. It has been used purposefully to examine theory and action to discern theoretical elements of an integrated approach for continuing professional development (CPD) (Aherne *et al.*, 2001, 2004).

The ongoing research has been action-oriented and participatory, linked to constructive system change and service quality improvement, and informed by emerging scholarship paradigms (Boyer, 1990). These elements have guided the case work by extending public-funded research universities to engage priority societal needs (Kellogg Commission, 1999; Senate of Canada, 2000). Specifically, Boyer's *Scholarship of Application* and *Scholarship of Integration* (Braxton *et al.*, 2002) are the

paradigmatic lenses through which the theory and action work has occurred. This broader approach to scholarship draws on many disciplines. Model development aims to help policy, delivery system, academic and other leaders engage complexity as inherent in contemporary systems and societies (Glouberman and Zimmerman, 2002; Pascale *et al.*, 2000). To this end multi-disciplinary influences have been comprehensively cited.

Structure

Phase II resulted in a portfolio of 72 subprojects, initiatives and strategic capacity-building activities, led by academic, service delivery and NGO partners (Pallium Project, 2007). The project portfolio was coordinated from a national project office using a “hub and spoke” knowledge network approach (Allee, 2003). Anticipating a 2004 disbandment of the Pallium Project’s incubating academic unit (i.e. university research institute), Phase II was positioned as a research-university “spin off” social enterprise (Bornstein, 2004). It was coordinated from a university research transition facility. Project leadership for subprojects and initiatives was distributed at various academic health and services locales across Canada, based on available expertise, interest, resources, etc.

Evaluation research

An evaluation framework was designed early to assure compliance with Health Canada, PHCTF reporting requirements and project-specific needs. Information was produced to discuss variance, impact (Moon, 2004) and order-removed outcomes (i.e. second, third generation impacts from the original interventions) (Earl *et al.*, 2001) for accountability and oversight (Uhr, 2001). The evaluation framework integrated with the Government of Canada’s program management accountability process and incorporated elements of the World Bank’s LogFrame (Logical Framework) approach (World Bank, 1997). Quantitative and qualitative data was gathered via several means and forms. Disclosure and informed consent took place with participants through active explanation and written consent. Several stakeholder reporting documents, an external evaluation section of the PHCTF compliance final report and a 45 minute, documentary-style video report to stakeholders entitled *The Pursuit of Possibility* (Pallium Project, 2006a,b), were principal evaluation reporting tools.

Limitations

This article’s is delimited to concepts, processes and interventions used to support learning and development in community settings of care. Phase II also incorporated capacity-building intervention types (Lynn *et al.*, 2000; Waddell, 2005) broader than those of learning and development discussed herein. This case study may be limited by the socio-cultural/political context. All elements of discussion may also not be completely replicable in other nation-state or regional contexts (Pawson *et al.*, 2005).

Concept integration, synthesis and hybridization, however, as informed by the social sciences, clinical research, industrial engineering and education literature cited indicate model elements described herein may be adaptable to other local, regional and nation-state contexts. Early dialogues with palliative-care leaders of five nation-states (three developed, two developing) and the continent of Africa (i.e. African Palliative

Care Association) indicate other leaders have self-identified model elements of the project to adopt, adapt and apply in other contexts.

Examining basic assumptions

The joint-issue (Towards a scaling-up of training and education for health workers) commissioning terms suggest resource-constrained settings are a phenomenon of developing countries. This idea has been examined through these lenses in the international hospice and palliative care community (HHSA, 2002). We argue that uncritically accepting this notion may unduly marginalize many industrialized nations' citizens. Persistent population health challenges and inequities within industrialized countries remain (Senate of Canada, 2008a), often presenting as health status deficiencies in rural locales (Senate of Canada, 2008b) as well as other historically marginalized settings (e.g. First Nations reserves, Metis settlements, remote Inuit communities, urban cores, etc.).

A well-documented case can be made about this, especially for Canada, Australia and the USA. Significant disparities exist with causal links to resource-constrained settings. Dynamics are driven by expansive geography, low penetration of skill sets/service resources in rural and remote locales, and historical disparities (e.g. Aboriginal populations) (Browne and Fiske, 2001; Hotson *et al.*, 2004; Jones, 2007; McGrath *et al.*, 2007; Senate of Canada, 2008a, b). Moreover, the emergence of medical tourism, by which developed-nations' citizens secure acute-care medical interventions in developing countries (Horowitz and Rosensweig, 2007; Srivastava, 2006), warrants more critical examination of where, what and how resource-constrained manifests in service delivery.

Discourse about globalization, mobility and health human resource (HHR) policy is seemingly skewed to "brain drain" and warrants brief discussion. We assert today's HHR is emerging as a global health workforce, defined by stocks and flows of intellectual capital which circulate (Bontis *et al.*, 1999; Dauphinee, 2005, 2006; Norcini and Mazmanian, 2005).

We also challenge framing the scaling-up for HHR in resource-constrained settings as approached principally through education and training lenses. A quarter-century of adult learning literature suggests education and training are necessary but predictably insufficient inputs for professional learning, change and responsive service capacity (Baskett and Marsick, 1992; Day and Baskett, 1982; Davis *et al.*, 1995; Haynes *et al.*, 1984).

If an end-goal of HHR development interventions is better access/quality of services and more system capacity (Health Canada, 2007), the complexity of modern systems (Glouberman and Zimmerman, 2002; Pascale *et al.*, 2000) warrants re-thinking approaches and responses. Learning is a process of making meaning in relation to self, others and context/situation (Moon, 1999). Education is input-oriented and only one pathway to support learning, change and capacity (Aherne *et al.*, 2001; Day and Baskett, 1982; Grol, 2002; Moore and Pennington, 2003).

Access and quality are approached operationally. Access has four dimensions:

- (1) facilitating flexible, shared-care models among primary-, secondary- and tertiary levels of service delivery, so the existing primary-care workforce (Jong, 2007) has capacity to manage common pain and symptom management and psycho-social/spiritual concerns;

- (2) creating relational frameworks (Barton, 2004) and supports, enabling relational continuity of service (Gullford *et al.*, 2006; Haggerty *et al.*, 2003) across home, hospital, hospice, long-term care/continuing care and settings of marginalization;
- (3) building capacity for “after hours” service at the community-level (Roberts *et al.*, 2007), acknowledging serious illness and dying is a “24/7” and often geographically-isolated phenomena; and
- (4) purposefully responding to people who have been, or who are at risk of, marginalization (Barton, 2004; Browne and Fiske, 2001; Tang and Browne, 2008).

Quality is conceived multi-dimensionally as the mis-use, under-use and over-use of health delivery system resources (Grol, 2002; Institute of Medicine, 2001). Briefly, in a palliative and end-of-life context, over-use may present as heroic measures which unduly extend life and proliferate pain and suffering. Under-use may present when providers do not adequately recognize and treat pain and symptoms and/or when a broader range of accessible resources who could help ameliorate human suffering are not engaged. Mis-use commonly presents as medication mismanagement resulting in suffering, accelerated death, otherwise preventable hospital admissions or other remedial system resource use.

Capacity-building is conceived as leveraging underutilized assets and resources existing within communities (Kretzmann and McKnight, 1993), to create new value. That is, community assets can often be accessed, linked together in new configurations, and further developed to enable additional systems’ productivity and performance toward collectively-agreed goals. A population health approach in Canada is generally understood as one which seeks to maintain and improve the health status of the entire population and to reduce inequalities in the health status between groups/sub-groups (Hayes and Dunn, 1998; Senate of Canada, 2008a).

The reporting in this article, therefore, assumes resource-constrained delivery settings manifest globally; that HHR is trending as an issue of stocks and flows of intellectual capital embodied within the practitioner, among the collective and throughout systems (Bontis *et al.*, 1999; Health Canada, 2007; Kakabadse *et al.*, 2003; von Krogh *et al.*, 2000); and that framing interventions to enable learning and development which is sensible about where providers live and work is a useful, goal-directed approach. Notwithstanding declared limitations, we assume much of what is discussed herein can be adopted and adapted in other settings as cross-contextual process learning. This includes nation-states where infectious disease (e.g. malaria) and HIV/AIDs are the predominant population health, palliative challenges.

Revisiting the Canadian context

We previously outlined the Canadian socio-cultural/political context for Hospice Palliative Care (Aherne and Pereira, 2005). This included health system governance and delivery. We noted antecedents of “fertile ground” for Phase II, including Canada’s expansive geography, sparse population, policy-level issue recognition (Senate of Canada, 2000), funding and a needs-based rationale for collaborating, coordinating and communicating among stakeholders. This section contains a brief major development

update. It also examines resource-constrained settings in a Canadian context as well as the Phase II interface with primary healthcare reform.

Recent Canadian update

In addition to earlier developments (Aherne and Pereira, 2005), since 2006 Canada's model of Hospice Palliative Care (Ferris *et al.*, 2002) has also been adopted by Canada's national health services accrediting agency, Accreditation Canada (www.cchsa.ca). It now informs palliative and end-of-life service quality benchmarking for third-party, external service accreditation. Staged implementation within cyclic accreditation renewal of health services is now underway nationally.

The Educating Future Physicians in Palliative and End-of-Life Care (EFPPEC) Project (www.efppec.ca) has been implemented. Notable outcomes include local teams at, and a vibrant working network among, local leaders at Canada's seventeen medical schools. Enduring work includes core palliative clinical competencies for medicine and curricular reform aimed at integration of palliation within all Canadian medical school programs. EFPPEC's one-time Health Canada HHR funding expired on March 31, 2008. There has been demonstrated stakeholder interest in renewed public investment for ongoing interprofessional palliative and end-of-life care educational reform (CHPCA, 2008). A federal/provincial/territorial pan-Canadian HHR framework has been renewed with specific program implementation initiatives expected in 2008/2009 (Health Canada, 2007).

In 2006, the Government of Canada announced a five-year, \$260 million Cdn (162 million Euro), Canadian Partnership Against Cancer (CPAC) (www.partnershipagainstcancer.ca). The CPAC is a quasi-public, multi-jurisdictional, multi-stakeholder cancer control response. A core strategy of CPAC's enabling work is called *Rebalancing Focus* (CSCC, 2001; 2006). *Rebalancing Focus* is a broad strategic approach within Canadian cancer control which seeks to balance curative responses with supportive care, including palliative care services. Currently, CPAC continues its formative work. Strategic directions/new investments by CPAC that integrate, leverage and extend earlier Government of Canada and other delivery-system investments in Hospice Palliative Care remain at the principled-discussion stage.

Canadian leaders are also in the formative stages of developing chronic disease prevention and management (CDPM) frameworks (Wagner *et al.*, 2001; Wong *et al.*, 2004). Beyond cancer, cardiovascular disease, respiratory illness, diabetes, neurological and other illnesses are major population health challenges in industrialized nations (Lynn, 2004; Senate of Canada, 2008a; WHO, 2002). Responsive CDPM frameworks require comprehensive, integrated health services and community-based supportive services. By definition of being chronic, these frameworks require Hospice Palliative Care integration to achieve continuity of care through decline leading to death (Gullford *et al.*, 2006; Haggerty *et al.*, 2003).

Hospice Palliative Care as a population-health response

Palliative service development in Canada remains principally focused on the patient and to varying extents the family unit, with growing adoption of person-centred care concepts (Edvardsson *et al.*, 2008; McCarthy, 2006). Since 2000, the Pallium Project has recognized a population health approach (Hayes and Dunn, 1998; Kellehear, 1999; Senate of Canada, 2008a) as a core strategic response for healthy families, longer-term

societal change (Waddell, 2005) and community capacity/resilience (Kellehear and Young, 2007; Kelley, 2007). This orientation anticipates an aging population living longer in difficult, declining health and presenting with more complex needs during the advanced- and terminal-palliative phases (Lynn, 2004; Lynn *et al.*, 2000; Pereira and Associates, 2008).

A population health approach, co-operatively executed by respecting traditional sectoral stakeholder roles and jurisdictional boundaries, has been a guiding project leadership response. The CHPCA model to guide Hospice Palliative Care (Ferris *et al.*, 2002) is based on population health tenants. The approach shows promise in mitigating population health risk (e.g. dignity-maintaining care (Chochinov, 2002), family caregiver health (Fast and Keating, 2001), healthy bereavement, public safety and medically-at-risk driving, etc.) associated with marked increases in chronic progressive illness (Lynn, 2004) and the age of “shameful death” (Kellehear, 2007).

Family health scholars (Ansello and Rosenthal, 2007; Fast and Keating, 2001) and other survey results have indicated prolonged, complex decline and dying processes can negatively impact determinants of health for family. The Health Council of Canada (2008) reported some 26 per cent of Canadian respondents in a 2006 Pollara survey had cared for a family member or close friend with a serious health problem within one year of being surveyed. Of those, 41 per cent indicated they used personal savings to manage and 22% had missed one or more months of work. Only 9 per cent of survey respondents indicated they used the Government of Canada’s (2008a), “Compassionate Care Benefit” program. The changing nature of serious illness and dying has significant population health implications, which interface with the economic fabric of families, communities, regions and potentially nation-states proper (Lee *et al.*, 2007; WHO, 2001).

Two cohorts demographically (Foot, 1998; Kotlikoff and Burns, 2005) and popularly defined as Baby boomers and the Sandwich generation are most impacted. The Sandwich generation refers to persons, often women, who are “sandwiched” between the demands of child-rearing and caring for aging family members. Baby boomers in their capacity as adult children are caring for aging parents and finding pervasive continuity of care (Gullford *et al.*, 2006; Haggerty *et al.*, 2003) and service gaps (Lynn, 2004; Wong *et al.*, 2008). As witnesses to their parents’ experience, the Baby boomer cohort is anticipated to be the most politically active in demanding reforms, process/quality improvements and responsive services for the seriously-ill and dying.

Rural and remote socio-political economy

Canada derives considerable national wealth from rurally-based, primary-industries. These include energy, mineral, agriculture and forestry sectors. Emergent climate change impacts in Canada’s remote Arctic region are also ushering in an age of renewed strategic national interest in asserting sovereignty, which suggests renewed support to traditionally-marginalized citizens (Government of Canada, 2000). Political sensitivities regarding sources of large national wealth generation being juxtaposed against inequitable access and quality of essential public services are becoming more pronounced. Well-articulated demands in rural Canada and other communities for quality services accessible closer to home (Swerissen, 2008), built on robust, well-integrated primary healthcare foundations, are emergent (Hutchison, 2008; Katz, 2008).

A major Senate of Canada (2008b, p. 271) report on rural poverty highlighted rural Canadians experience significant and widening disparities in accessing health and other services. It noted many rural Canadians incur high transportation costs and other expenditures for access to services in amounts disproportionate to those of their urban counterparts:

Not only are there differences between rural and urban Canadians with respect to health status, but there are also major differences in their access to and use of health services. Rural Canadians often have to travel great distances to obtain health services that most urban residents take for granted, a problem that can be traced back in part to the difficulty many rural communities have in attracting, recruiting and retaining doctors, nurses and other health care professionals.

Socio-economic and political sensitivities are becoming further heightened as vehicle fuel costs rapidly escalate and personal carbon footprint impacts garner more attention in political/societal discourse. These factors disproportionately impact rural Canadians who are perennially underserved and must travel considerable distances for essential services.

Canadian HHR pressure points

Rural Canada accounts for some six million residents or 19 per cent of Canada's population. It is locally served by 16 per cent of Canada's primary-care and 2 per cent of specialist physician supply. Between 1996 and 2005 the supply of primary-care physicians serving rural Canada increased by 8.5 per cent. Medical specialists declined by 12.7 per cent during the same ten year period. International medical graduates (IMGs) accounted for some 26.3 per cent of all physicians in rural Canada, indicating a disproportionate representation relative to urban locales. This indicates a heavy reliance on IMGs in rural Canada (Jong, 2007; Pong and Pitblado, 2005, as cited in Senate of Canada, 2008b).

At a macro-level, industrialized nations' reliance on IMGs has been tabled as a significant ethical and capacity concern (Starfield and Fryer, 2007), while others argue the world has entered an age of global professional workforce circulation (Dauphinee, 2005, 2006). At a micro-level, heavy reliance on IMGs in rural Canada has resulted in field reports of relational and service challenges, particularly in aspects of pain, symptom management and patient communication. Similar concerns have been elsewhere reported (Pilotto *et al.*, 2007; Thind *et al.*, 2007).

Viewed through utilization lenses, rural primary-care physicians, registered nurses and particularly licensed practical nurses (LPNs) have been reported as the regulated provider groups holding together health services in rural and remote Canada (Senate of Canada, 2008b). Primary-care physicians in rural Canada are acknowledged as having broader practice scopes than urban counterparts, including emergency/trauma, obstetrics, cancer care and palliative care (Pong and Pitblado, 2005, as cited in Senate of Canada, 2008b). The Canadian Society for Rural Medicine leadership recognizes the challenges of specialist physician sustainability in rural Canada. Its leadership has called for more generalists and more rural physicians with broad and enhanced skills (Jong, 2007). Reliance on IMGs in rural Canada within a global "brain circulation" trend will likely continue (Dauphinee, 2005, 2006).

Similarly, and by necessity, many registered nurses (RNs) engaged in palliative services in rural Canada have practice scope characteristics akin to advanced practice

nurses in urban locales. The LPN role has also evolved out of necessity as a HHR response. Many LPNs are engaged in clinical work considered the domain of “bed-side” RN practice only a generation ago. Most current provider groups received little or no formal education for quality, community-based care of the seriously-ill and dying during pre-service education (Aherne and Pereira, 2005). This is not surprising. The clinical evidence-base and educational resources for modern palliation have only coalesced over the last 15 years (Pereira and Associates, 2008), into a coherent, critical mass enabling the conditions for larger scale capacity-development.

The health services challenge is serious in rural and remote Canada. It is significant from a “security of the person” perspective and has strategic importance to Canada’s primary industries (Lee *et al.*, 2007; WHO, 2001). Many consider the situation to be rapidly devolving to the detriment of rural citizens (Senate of Canada, 2008b). Much of this has been attributed to perennial HHR challenges in rural and remote locales (Health Council of Canada, 2008; Milke, 2008; Senate of Canada, 2008b).

Primary-care provider resource constraints are not completely unique to rural Canada. Citizen direct-access in Canada to regular primary-care physicians has been noted as a concern (Milke, 2008), with some 4.1 million persons (over age of 12) not having access to a regular primary-care physician (Statistics Canada, 2008a). Colleagues in a major suburban and rural area of western Canada report they have been actively recruiting, training and remunerating family-physician “foster docs” for “orphaned patients” needing palliative service support. These “foster docs” provide community-based, palliative services (e.g. pain and symptom management) for clients. Remuneration and practice models to support activity-intensive, primary-care physician services are only now undergoing significant reform and presently only in a few Canadian provinces (Katz, 2008; Swerissen, 2008).

As a political strategy for mitigating public concerns, Canadian government discourse over the last three years has principally focused on a “Wait time guarantee” approach in five specialized areas. Commentators have viewed this as an understandable public confidence measure, but insufficient response to emerging population health challenges (CMAJ, 2006; Jong, 2007). It has also been argued a policy drift has occurred in Canadian health and social policy over the last several decades, resulting in growing misalignment between population needs and policy responses for sustaining a healthy, vibrant population (Mitchell and Hering, 2006).

Primary healthcare policy interface

It has also been argued Canada’s Primary Health Care (PHC) renewal efforts have experienced policy drift from the founding ideals of Alma-Ata (WHO, 1978), to a more narrowly focused, government-as-funder/system-owner driven vision of delivering the right services at the right level by the right provider at the right time (van Soeren *et al.*, 2008). Notwithstanding, the Pallium Project leadership has approached the recent emphasis on primary healthcare renewal in Canada as a strategic opportunity, understanding:

Primary healthcare needs to be thought of as a continuum of interventions from health promotion through to palliative care that are provided in community settings and at home, rather than a service system that is set up in opposition to acute care (Swerissen, 2008, p. 55).

In this vein, Primary Health Care (PHC) renewal as a policy response has opened pathways to systematically extend palliative expertise of urban-based, academic health centres in partnership with community-based colleagues. This has been executed using constructs of university-community engagement, consistent with calls for social accountability of health science institutions (Aherne *et al.*, 2004; Health Canada, 2001). Contrasted with common health economic-based HHR approaches, this model respects service delivery partners as more than inputs into delivery systems. It acknowledges them as “strategic actors” (Rigoli and Dussault, 2003), willing to be engaged towards ends of mutual interest and moral purpose for new and/or transformed capacity within existing systems (Fullan, 2001; Wenger, 1998, 2004).

The Phase II design has been consistent with emerging constructs of PHC (Hutchison, 2008; Swerissen, 2008), focusing on greater integration of jointly-negotiated and developed competencies for shared service performance among primary-, secondary- and tertiary-levels of care. The approach acknowledges suitably prepared, resourced and remunerated generalists from medical, nursing, pharmacy, psychosocial, spiritual care and rehabilitation disciplines as well as other community resources (e.g. voluntary-sector) can successfully address many palliative service needs within locally-negotiated collaborative arrangements and with “back up” access to referral-level services.

Leading from the premise that engaged practitioner-leaders can leverage joint-efforts for new capacity from within existing systems, the Pallium Project has evolved as a network-based, inter-organizational Community of Practice (CoP) (Allee, 2003; Soekijad *et al.*, 2004; Wenger, 1998, 2004). This has manifested as an organizing concept and way of acting co-operatively on a pan-Canadian basis, through purposeful collaboration, innovation and developing/extending of operational-level, service knowledge. It has engaged and mobilized the aspirations, abilities and capabilities of many actors at the academic, clinical service delivery, program management, citizen leadership/voluntary sector and policy-shaping levels in Canada.

Phase II guiding strategies

The Pallium Project leadership approached strategy through Porter’s (1996) lenses, assessing a range of options to deliver a unique mix of value and results to a desired end (i.e. demonstrable improvements in the quality of living and dying), as assessed against the status quo and potential roles/contributions of other players. Three guiding strategies were purposefully adopted to execute Pallium Project (Phase II): collaboration, innovation and knowledge management. In this section we review these strategy concepts, including how they were used to enhance access, quality and capacity.

Collaboration

The Pallium Project emerged as an instrumental response to too few resources, expansive geography and a deep commitment among many palliative academic and local service leaders in Canada’s four western provinces, to work together to improve care of the dying. Canada has a long-tradition and corresponding cultural narrative, especially in the Canadian prairies and the Atlantic coastal regions (Coady, 1939; Corbett, 1957), of using adult education-based, co-operative community development to address priority socio-economic concerns.

The project has used a “3C” approach since inception: coordinating scarce palliative educational personnel and funding; collaborating across palliative academic/referral programs to share concepts and work load in developing learning resources, point-of-care decision-supports and service development materials; and communicating with colleagues to mitigate risk of otherwise unnecessary duplication of educational and capacity-building efforts.

Collaboration has been multi-dimensional. It has occurred across:

- provider groups (e.g. medicine, nursing, pharmacy, social work, spiritual care);
- settings of care (i.e. home, hospital, hospice, long-term/continuing care and settings of marginalization);
- sectors (e.g., academic, health service, governments, NGO/voluntary, industry); and
- multi-disciplinary skill sets (e.g., palliative expertise, project management, communications, publishing, new media, broadcast media, etc.).

Collaboration has been framed to respectfully interface with provincial/territorial and federal government jurisdictions as a pan-Canadian response. It has facilitated cooperative efficiencies (e.g. large front-end, common-use resource development investments), while respecting jurisdictional boundaries in policy, program administration and service delivery.

As the Phase II project commenced in late December 2003, with many new-interested collaborators and broader pan-Canadian scope, a leadership challenge emerged to identify ways to think about, approach and communicate about larger-scale collaboration. Project leadership critically examined Wenger’s (1998, 2004) writings on Communities of Practice (CoP). Alignment was noted between Phase II intent and CoPs as communities of persons sharing similar interests and goals and desiring to work together towards common goal attainment (Wenger, 1998). Explicit knowledge management through collaboration has further evolved in the intervening period (Allee, 2003; Soekijad *et al.*, 2004; von Krogh *et al.*, 2000).

Starting with a champion and opinion-leader base (Doumit *et al.*, 2007) from the Phase I project, stakeholders widely adopted the CoP concept. Many used a cost-benefit rationale of CoPs with their direct supervisors/local authorities to negotiate in-kind (i.e. paid staff time) participation or volunteer contributions of their expertise, time and talents (Berwick, 2003; Rigoli and Dussault, 2003). Collaborative inquiry (Kasl and Yorks, 2002; Reason, 1998;) and concepts of collectivist action for social change (Coady, 1939; Lambie and Thompson, 2000) manifested in the adage “many hands makes light work” (i.e. efficiency, productivity) and “many eyes and minds” makes for better results (i.e. critically-reflective, quality improvement). This collectivist response has been undertaken with a declared moral leadership commitment that collaborators liberally share access to project deliverables for local service capacity (Wenger, 2004).

Canada’s health systems are largely organized as single-payer systems, consistent with provisions of the Canada Health Act. That is, public taxation is the single-largest (but not exclusive) source of health service funding in Canada’s confederated governance model. While there has been some anticipated and perhaps inevitable inter-personal and inter-organizational competition/conflict in a project with pan-Canadian scope and competing disciplinary traditions, stakeholders find it

increasingly difficult to justify public expenditures on what is often perceived as unnecessary duplication of efforts. Notwithstanding, a tightly-resourced, pan-Canadian pool of palliative subject matter expertise, juxtaposed with marked demand to increase system and local community-capacity for better care of the seriously-ill and dying remains a principal strategic driver. Collaborative inquiry and collective action has resulted in an impressive array educational, service and program innovations in a relatively short time (Murray and Blackman, 2006; Pallium Project, 2007).

Over Phase II's project cycle, basic intellectual property management issues have emerged about the practicality of CoPs as vehicles for codifying and distributing teaching-learning and point-of-care decision-making resources (e.g. just-in-time, workplace learning). These issues have emerged as the Pallium Project evolved beyond a CoP-only, where a CoP served as an antecedent pathway for purposeful, collective knowledge management (Janczak, 2004; Soekijad *et al.*, 2004). Collaboration for knowledge management has been facilitated by pursuing several conceptual, process and interventional innovations.

Innovation

A working definition of innovation has been adopted which aligns with that described elsewhere (Farazmand, 2004, p. 8), as:

Innovation refers to novelty in ideas, approaches, methods, processes, structures, behaviors, attitudes, and cultures, as well as in technologies and skills. It also refers to the knowledge base that is used to produce new products and deliver services, to govern and administer societies, and to manage organizations of all types.

This construct of innovation has proven useful. Common discourse assumes the end-goal of innovation is commercial competitiveness or economic advancement (Rogers, 1998). A broader approach acknowledges innovation in various collective human pursuits for social advancement (Coady, 1939; Lambie and Thompson, 2000). An innovation narrative, culture and action orientation helps drive change and accountability (Uhr, 2001) for continuous improvement and service transformation. Within Phase II, innovation has been executed as conceptual, process-oriented and interventional, recognizing specific innovations may not be mutually exclusive to one type.

Conceptual innovations have taken the form of:

- Conceiving the *CHPCA Model to Guide Hospice Palliative Care: Based on National Principles and Norms of Practice* (Ferris *et al.*, 2002) as a foundational guide/touchstone for all Phase II project activity.
- Using a population health/public health approach (Kellehear, 1999, 2005; Senate of Canada, 2008a) in "positioning out" for sustainability as a response to diminished HHR and a spike in the number of Canadians expected to die in the next few decades (Statistics Canada, 2008b).
- Integrating Communities of Practice (CoP) (Wenger, 1998, 2004) and adult learning concepts (Mann, 2004; Merriam, 2001) and transforming them to guide collective knowledge-building and sharing activities as knowledge-developing communities (Allee, 2003; Soekijad *et al.*, 2004).

- Adopting university-community engagement concepts to guide respectful, two-way development processes linked to the social accountability of public institutions (Aherne *et al.*, 2004; Health Canada, 2001; Kellogg Commission, 1999; Lambie and Thompson, 2000; Scholl, 2004).
- Guiding the design/development of health teaching-learning interventions as informed by constructivist traditions (Mann, 2004), which incorporate situated learning (Lave and Wenger, 1991) and other workplace learning traditions (Cervero, 1992, 2003; Coles, 1996; Marsick, 1988; Moore and Pennington, 2003).
- Adopting functional concepts of team that respect professional regulatory boundaries while incorporating normative/descriptive practices of working together to achieve results in smaller Canadian locales (Kelley, 2007).
- Conceiving primary-care providers (e.g. physicians, RNs, LPNs, pharmacists, etc.) as extremely busy generalists who can be engaged/supported as “knowledge workers” (Drucker, 1995; Kakabadse *et al.*, 2003) with enhanced skills (Jong, 2007) and decision-tools to practice safely, effectively, ethically and accountably (Eve *et al.*, 1996; Pereira and Associates, 2008).
- Conceiving critical reflection on practice (Marsick, 1988; Moon, 1999) and codifying tacit/embedded knowledge (von Krogh *et al.*, 2000) from emerging disciplines as central in supporting inter-generational workforce knowledge/skills transfer (e.g. Spiritual Care Development initiative).
- Leveraging a one-time public investment for multiple self-sustaining, learning and development and delivery system quality changes (Berwick, 2003; Bierema, 2003; Lynn *et al.*, 2000; Senate of Canada, 2000).

Process innovations were designed and realized by:

- Pursuing tripartite process pathways to achieve stated access, quality and capacity goals by facilitating: practice-need based learning and development (Aherne *et al.*, 2001; Coles, 1996; Mazmanian, 1980; Moore and Pennington, 2003); service/program development improvement and change (Lynn *et al.*, 2000); and delivery system leadership engagement as a strategic lever for accelerating adoption of innovations (Lockyer, 1992; Rogers, 2003). Note: the latter two process pathways have their own learning and development dimensions. A discussion, however, of their role in Pallium Project (Phase II) is beyond this article’s scope.
- Implementing two-way, interactive participatory processes of collaborative inquiry among academics and primary-care practitioners and across disciplines by jointly-creating flexible-to-use, practice resources (Cavanagh, 2007; Heron and Reason, 1997; Kasl and Yorks, 2002; Reason, 1998).
- Adopting practice-informed needs and competency assessment processes (Aherne *et al.*, 2001; Mazmanian, 1980) as the main pathway to negotiate instructional and decision-support resource content among collaborators.
- Adopting rapid prototyping/concurrent development processes from industrial engineering and product development (Sanchez and Mahoney, 1996) and applying said processes to health science learning resource and decision-support (Berwick, 2003; Grol, 2002; Institute of Medicine, 2001).

- Modifying practice and research peer-review processes into a customized peer-review process for new learning materials and decision-supports (Gopee, 2001). Note: although research peer-review has come under some scrutiny about efficacy (Jefferson *et al.*, 2002), it has been effectively used in Phase II to support content quality-control, facilitate critical discourse among academic health scientists and primary-care end-users/providers. It has also supported broader, pan-Canadian acceptability through peer-vetted/negotiated adoption of standardized resources.
- Adopting object-based learning (Armstrong, 2007; Wiley, 2001) and modularization processes (Baldwin and Clark, 1997; Meyer *et al.*, 2006) in instructional resource design. This has balanced a needs-driven, “first intended-use” (i.e. a purpose-specific application) model of resource development with broader, longer-term opportunities for pan-Canadian use of standardized learning resources. It has helped amortize resource development investments (i.e. of subject matter experts, end-user engagement and funds) over multiple applications. Modularization has supported re-deploying content (Schilling, 2000) by combining various objects for new applications/uses (e.g. video, audio, graphic, text objects). It is also anticipated to facilitate renewing modular content (Kusiak, 2002) of obsolete practice knowledge (Dubin, 1972) and new evidence/tools. Process incorporation of object-based learning and modularization has been driven by productivity/availability of palliative subject matter experts and a leadership commitment to optimize public investments.
- Implementing a pan-Canadian end-user licensing model process, with flexible end-use and materials adaptation terms, for accredited educational institutions, health service delivery organizations and professional associations/regulators colleges. This has enabled broad adoption and flexible use of copyright-held instructional resources. The licensing process innovation balances the open-access ideals of the Creative Commons (www.creativecommons.org) model with medico-legal and other liability/risk management considerations.
- Negotiating an inventory consignment and resource distribution agreement with the Canadian Hospice Palliative Care Association’s, CHPCA Marketplace (www.chpca.net), as a process legacy strategy for pan-Canadian resource availability following conclusion of Phase II. This process innovation created a pan-Canadian single-point of access for Pallium Project resources, reduced the risk of organizational task duplication and contributed new resource volume to enhance CHPCA’s internal operating efficiencies.

Interventional innovations were implemented by:

- Adopting a “project portfolio” approach (Baggett, 1994; Cooper *et al.*, 1998) enabled by high-level strategic directions and deliverables (i.e. conditional grant contract) and negotiated as prospective participation with stakeholder-champions (i.e. Collaborating Stakeholders). The portfolio approach enabled executing and evaluating some 72 strategic capacity-building projects, initiatives and activities throughout Canada in the three year intervention period. The project portfolio approach had accountability

for results negotiated with the major funder (Health Canada), but flexibility in pathways for achieving results. The major funder's commitment to manage accountability (Uhr, 2001) at the level of pre-negotiated grant-level objectives (i.e. accountability for results) enabled needs-responsive and opportunity-based re-purposing of funding to optimize the portfolio. This resulted in considerably more initiatives and outcomes than initially envisioned.

- Using "Action Learning" (Dixon, 1998; McGill and Beaty, 1992; Revans, 1998) and Collaborative Inquiry (Kasl and Yorks, 2002; Reason, 1998) informed methods, to undertake curriculum development, learning resource development and change facilitation for service/program alignment, consistent with the national HPC model (Ferris *et al.*, 2002).
- Strategically engaging local clinical and service opinion leaders (Doumit *et al.*, 2007) as active collaborators and champions (i.e. co-owners) in goal-directed (i.e. access, quality and capacity) change interventions, using the aforementioned Action Learning and Collaborative Inquiry approaches.
- Purposefully using multiple-methods (Lane, 1997) to support workplace learning and change (Baskett and Marsick, 1992; Cervero, 2003; Grol, 2002), including extending academic health outreach engagement (Aherne *et al.*, 2004; Corbett, 1957) in locales where inter-professional cohorts live and work.
- Empowering, orienting and supporting practicing palliative care consultants/subject matter experts as practitioner-facilitator faculty on an "as needed, as available" basis in the scaling-up of weekend outreach education (i.e. 40 three-day, 13 contact hour, standardized clinical foundations courses) and needs-based, customized one-day courses in six provinces/territories over a 24 month period (Pallium Project, 2007).
- Purposefully deploying two and three person inter-professional facilitation teams to deliver the 40 three-day standardized clinical education courses. An important unintended outcome of these teams reported in evaluation data was effective modeling (Sprafkin and Goldstein, 1990) of respectful, collaborative practice (Simms *et al.*, 1984) among facilitators from different disciplines (e.g. medicine, nursing, pharmacy, social work, etc.), as they worked together facilitating courses throughout rural western and northern Canada.
- Leading from a needs-catalyzed design (Barnabe and Kirk, 2002; Hotson *et al.*, 2004), incorporating relational (Barton, 2004), socio-historical (Browne and Fiske, 2001) and empowerment elements, to help non-Aboriginal and Aboriginal persons in rural Canada develop respectful, functional service relationships for continuity (Browne, 2007; Browne and Fiske, 2001; Tang and Browne, 2008), especially across jurisdictionally-defined settings of care (e.g. federal Aboriginal First Nation on-reserve services referred to provincially/territorially-administered acute care hospitals for palliative emergencies).
- Leveraging pre-existing educational interventions (e.g. nationally-accredited Clinical Pastoral Education) as community-based learning laboratories to catalyze, focus, develop, test and refine new curricula, courseware and resources.
- Developing segmented, object-based (i.e. 2-10 minute) instructional video media to enhance instruction, made deployable across multiple-media platforms (e.g.,

DVD, web-based, handheld device) and designed using socio-drama concepts (Gold, 1991; Jones, 2001; Sternberg and Garcia, 2000), to support critically-reflective dialogue (Marsick, 1988; Moon, 1999) about communication.

Conceptual, process and interventional innovations have been a critical success factor in Phase II. Innovation supported scaling-up development by empowering stakeholders to think and act differently about long-standing challenges, including facilitating conceptual space to move beyond the status quo (Grol, 2002; Mann, 2004; Moon, 2004). Purposeful use of innovation also resulted in prudent use of one-time public investments with a commensurate accountability for assuring predictive, enduring project legacies.

Knowledge-management

Early discourse about knowledge-management has been weighted heavily towards information technology utilization (Huysman and de Wit, 2004). Emerging ideas about knowledge-management conceive of it as fundamentally social, involving the identification, leveraging and exchange of knowledge deployed to utilitarian ends (e.g. practice skill development, service improvement, change, etc.) (Allee, 2003; Chiva-Gomez, 2003; Huysman and de Wit, 2004; Soekijad *et al.*, 2004, von Krogh *et al.*, 2000). The latter has guided and informed the Phase II experience.

The drivers for a knowledge-management strategy in Phase II included a commitment to:

- improve respectful, two-way knowledge transfer between palliative academic health leaders and primary-care service delivery leaders/end-users;
- recognize and act on primary-care providers' desire for learning support and tools, accessible in context of the workplace and focused on service improvement; and
- discharge a moral/public accountability to optimize one-time public investments for multiple applications and predictive, enduring legacies.

To this end, a variety of text-based and new media channels have been leveraged for dissemination; a multi-jurisdictional, practitioner-facilitator network was facilitated; and several of the aforementioned process and interventional innovations were pioneered to execute a knowledge-management strategy.

Select learning and development intervention results from the strategies

Leading from these three strategic orientations, Phase II resulted in 72 identifiable sub-projects, initiatives and strategic activities oriented to improving access, quality and capacity. These are inclusively detailed elsewhere (Pallium Project, 2007). Learning and development interventions and results with illustrative value are briefly reported in this section. The discussion supports the assertion, through case study data, that model elements discussed herein may be adopted, adapted and modified to scale-up HHR development in other resource-constrained settings.

Regional weekend course (RWC)

The RWC model has been a retreat-style, small-group (25 person maximum), interprofessional weekend learning experience conducted in rural and suburban

communities. The RWC model redefined classroom-based, professional development experiences for primary-care professionals. It supported constructive practice change by aligning the means by which professionals learn with the ways they are challenged to work (Cervero, 2003; Grol, 2002; Marsick, 1988; Moore and Pennington, 2003; Smith and Schmitz, 2004). The RWCs were also designed to be geographically accessible and responsive to local service delivery contexts (Lave and Wenger, 1991).

Over a 24 month period, 957 primary care physicians, RNs, pharmacists and other practitioners (e.g. LPNs, social workers, etc.) participated in 40 weekend courses held in four western Canadian provinces and the Yukon Territory. Learners completed an intensive (13 contact hours) multi-professional immersion of palliative and end-of-life care essentials for community-based practice. The RWCs were conducted using a Phase II developed "Learning Essential Approaches to Palliative and End-of-Life Care (LEAP)" modularized courseware kit. A pool of some 40 clinicians with Hospice Palliative Care expertise made themselves available to be "as needed, as available" facilitators. The RWCs provided valuable collaborative teaching experiences, network building among rural colleagues, and between rural colleagues and referral-centre consultants serving as RWC faculty.

Evaluation data have demonstrated observable constructive changes in how participants have approached HPC locally. The 40 RWCs also served as a community-learning laboratory. Concepts, content and instructional processes were tested and evaluated in the field with the 957 participant-learners and 40 participant-facilitators, further refining a previous expert peer-reviewed *LEAP* courseware package (i.e. LEAP, V1.0), prior to making it a broadly-accessible, pan-Canadian legacy (i.e. LEAP, V1.1) distributed through the CHPCA Marketplace. We assert this embodies one demonstrable application of legitimate peripheral participation as discussed in the CoP literature (Allee, 2003; Lave and Wenger, 1991; Wenger, 1998, 2004).

Responsive palliative care with Aboriginal people

During 2005, under a programming theme of "Creating communities of caring with Aboriginal clients and families", 310 non-Aboriginal and Aboriginal health care personnel and other community leaders completed seven one-day, customized local continuing education workshops across the Canadian province of Manitoba. These workshops were organized as a collaborative venture of a network of Manitoba's (rural) provincial-administered health service authorities, the provincial hospice palliative care association and the Pallium Project. Each was based on a local issues/needs assessment and customized based on modules from a Pallium Project courseware kit entitled "Responsive hospice palliative care with Aboriginal clients and families".

Model elements from the Manitoba experience were adapted for Canada's most western province of British Columbia, with two additional customized sessions offered in partnership with the provincial cancer care authority and two large rural health service authorities. A pan-Canadian practitioner-facilitator and Aboriginal elder-led, peer-facilitator network was formed in partnership with the Aboriginal Nurses Association of Canada. The model was further customized in March 2006 for training cohorts of Aboriginal social work students at a northern Ontario university.

Participatory evaluation data highlight that for Aboriginal stakeholders, the model enabled a two-way, respectful exchange, in which local Aboriginal leaders were empowered to share Aboriginal philosophical and spiritual traditions (Barton, 2004) in ways that could inform the total vision of society about Hospice Palliative Care (Pallium Project, 2006a,b).

Evaluation data further indicated a relational-approach, focused on understanding and context about the social-historical tradition of colonization (e.g. residential school experiences), was critical foundational learning for future relationship building. The model design pre-dates, but is consistent with, an emergent Government of Canada policy direction to seek reconciliation of past acculturation and institutionalization practices imposed on Aboriginal people (Government of Canada, 2008b).

Spiritual care development

An initiative to establish, document, test and validate Canada's first nationally-accredited HPC spiritual care education was practitioner-champion initiated. A pan-Canadian peer-group of professional Hospice Palliative Care chaplains led the development of an occupationally-based competency map which identified major areas of responsibility and major tasks for HPC spiritual care practice.

Over a two-year period, a 600-page modularized courseware package was finalized, with curricular material codified and tested using the aforementioned learning laboratory. Two cohorts of adult chaplaincy students participated. These students completed a 12 week accredited Clinical Pastoral Education (CPE) program within an urban teaching hospital. Courseware was peer-reviewed, finalized and has been receiving broad pan-Canadian uptake, distributed through the CHPCA Marketplace as the "Developing spiritual care capacity for Hospice Palliative Care: A Canadian curricular resource".

Contemporary HPC spiritual care, as a discipline of palliation, paradoxically embodies the oldest of palliative practices and yet is viewed as a relatively young professional discipline. Canada's most experienced HPC spiritual care practitioner-leaders are approaching ages whereby they can exercise work-related retirement options. These persons have developed their area of practice over a quarter-century. The Phase II spiritual care development initiative was the first structured opportunity these practitioner-leaders had nationally to critically reflect on and codify their practice knowledge base. This model has evolved as one means of codifying a discipline of practice so it can be effectively transferred to new entrants. It also supports retention of early and mid-career practitioners, by having codified experience, insights and practices to help with teaching accountabilities during forthcoming periods of anticipated short staffing.

Monthly CPD audioconference

To support event-based learning opportunities accessible in the workplace, a structured one-hour, pan-Canadian audio-conference CPD event was conducted on the fourth Thursday of every month over a consecutive 19-month period (February 2005-September 2006). Topical themes were chosen from practical community-setting service challenges. Forty minutes of a one-hour session was conducted as a structured interview between a skilled moderator and a guest expert and/or panel. The remaining

20-minute block was a real-time, interactive question and answer session, which also encouraged pan-Canadian sharing of effective local solutions.

Over the first year (evaluation period), some 3,337 instructional contact hours were confirmed by local participants. The sessions continued for an additional six months following the evaluative period for a total of 19 sessions. Simultaneous jurisdictional participation in monthly sessions ranged from six to 12 Canadian provinces/territories. An overview of monthly topics and the verified numbers of participating sites, registered participants and provincial/territorial participation is presented in Table I.

The audio-conference program was designed with administrative and technical processes to transform live event content for digital archival access. Content was audio-post produced and released in a *Conversations on Caring* mentoring/preceptor support audiobook series. It was re-broadcast in 2007 at no cost to end-users, with distribution via a dedicated audio-blog web (www.palliativeinsight.net). The digital audio content was also released as one of Canada's earliest Apple Canada's, iTunes® professional development podcasts (*Hospice Palliative Care Insights*). Using an internally developed process model called "From POTS [plain old telephone service] to Podcast", this knowledge management model purposefully incorporated live, professional development events as one platform for digital learning object content creation. This has facilitated on-demand access by original participants seeking post-event reminder support (Lane, 1997) and new users seeking just-in-time, topical information.

Customized instruction

Practice-informed needs assessment processes, modularized courseware and a robust, committed pool of practitioner-facilitators supported several custom instruction requests (Pallium Project, 2007). This included a two-day customized continuing nursing education course in the remote Nunavut territorial government centre of Iqaluit, for RNs working in 25 of 28 remote Canadian Arctic communities.

Other customized instruction was completed in October 2005 and February 2006 in partnership with a provincial office of Health Canada's, First Nations and Inuit Health (FNIH) service. Sixty-three RNs and LPNs as well as 96 home health aides providing

Audioconference CPD needs-based topic	Local sites	Registered participants	Provinces/territories
Family caregiver support	32	169	06
Spiritual/religious care	50	231	08
Using a <i>Caregiver's Guide</i>	66	180	08
Magnifying hope	70	241	09
Local physicians in team	58	176	09
Hydration – clinical issues	68	217	08
End-of-life care for children	54	158	09
Engaging a family dialogue	85	259	10
Cultural competence	68	147	10
Avoiding burnout	115	430	11
Patient uses complementary and alternative medicine	85	247	11
Bereavement and holidays	80	258	11
Total pain panel	97	405	12

Table I.
Monthly CPD audio
conference participation
(Year 1)

rural and remote health services for “on reserve” First Nations people, were oriented to HPC responsive to the context of their local communities.

Over the intervention period, other customized clinical interventions for primary-care providers were offered, as were two customized spiritual care updates for rural primary-care providers (Pallium Project, 2007). Reported service impact results for customized instruction varied widely. Customized instruction for those serving Aboriginal populations was considered to be highly-valuable. This was especially so in Canada’s Arctic communities, where many of the RNs were working independently and remotely for a territorial home-care program. They had received little, no or outdated prior-training in caring for the seriously-ill and dying. It was similarly reported as valuable for the Health Canada FNIH provincial office, particularly for home health aides, who tend to represent the most stable (i.e. continuous employment) in local communities over time (i.e. service continuity).

Learning resources development

Using the aforementioned innovation and knowledge management strategy, the Phase II project delivered robust learning resources and decision-support tools by integrating the diversity, experience, insights and wisdom of recognized authority sources and skilled practitioners throughout Canada. Over the Phase II project, 14 major new substantive professional development resources were developed. Many of those are available on a licensed-basis through the *CHPCA Marketplace*. A summary of major learning and decision-support resources is as follows:

- Learning essential approaches to palliative and end-of-life care (LEAP) courseware; “Clinical communication in Hospice Palliative Care” reflective video segments.
- Responsive Hospice Palliative Care with Aboriginal clients and families courseware.
- “In our own voices: Aboriginal perspectives in Hospice Palliative Care” video segments.
- *A Caregiver’s Guide: Handbook for the Inuktitut-speaking Family Member*.
- Developing spiritual care capacity for Hospice Palliative Care curricular resource.
- Clinical engagement of the medically-at-risk driver courseware.
- “Difficult conversations” medically-at-risk driving communications instructional video.
- “After the keys are gone” medically-at-risk driving psychosocial impact instructional video.
- *Conversations on Caring* clinical mentor/preceptor CPD audio-book series.
- *CHPCA Home Support Worker Training Kit* (2nd edition).
- *99 Common Questions (and more) About Hospice Palliative* decision-support handbook.
- *The Pallium Palliative Pocketbook* (First Canadian edition) decision-support handbook.
- “Delirium, palliative sedation, hydration & feeding decisions” on-demand teaching rounds.

Historically, there have been many HPC content innovations at the local-level. Many practitioners and local programs/hospices are evidence- and quality-driven, and highly-resourceful. A strategy for scaling-up learning resources focused on identifying outstanding local learning and decision-support for broader pan-Canadian development.

Scaling up from pre-existing credible local resources

One resource re-developed on a pan-Canadian basis is a nursing practice handbook called *99 Common Questions (and More) about Hospice Palliative Care: A nurse's Handbook*. The property belongs to a health service authority. It had two well-received prior editions with provincial and limited multi-jurisdictional distribution. Under a resource re-development arrangement, the Pallium Project worked with the content owners, an editorial committee and a broad-based, interprofessional pan-Canadian peer-review team to redevelop a national edition.

The process resulted in quick scaling-up. It added new value to a well-accepted local resource and incorporated the rigour and scrutiny of pan-Canadian peer-review for quality control and acceptability. The national (3rd) edition is distributed via the CHPCA Marketplace. An inventory consignment arrangement with the handbook's owner has been modelled after the Pallium Project's agreement with the CHPCA Marketplace. Shifting distribution to the CHPCA Marketplace supported overall distribution efficiency, removing the burden of distributing learning resources (transaction processing and fulfillment) from the local authority program office, leaving local health personnel to focus on their program's core activities of local palliative service provision.

Cultural/contextual resource re-development

A second resource redeveloped in partnership with a national service-based NGO, is a family caregiving handbook for end-of-life care. A team (i.e. publisher, editorial coordinator, territorial home care coordinator, two Inuit translators, Inuit visual artist) worked with Inuit elders and knowledge keepers, the Nunavut government's health and social services department, local community health representatives and RNs in Canada's Arctic communities. Two editions of *A Caregiver's Guide: A Handbook for End-of-life Care* were developed in two Inuit dialects. The books are on hand and distributed as needed through the remote Arctic community home-care offices. Both editions are used in Inuit communities of the Nunavut territory. The handbooks focus on empowering family and community-members as caregivers, drawing on locally-negotiated and defined, culturally-relevant content.

Media-rich digital learning object content

Since late 2005, the Pallium Project has acted to use emerging "Web 2.0" concepts (McGee and Begg, 2008). Digital audio and video material has been distributed via common broadband channels, including YouTube® and GoogleVideo®. To be responsive to rural stakeholders with low internet bandwidth, media-rich content continues to be released on CDR and DVD through the CHPCA Marketplace. Recent testing has also been undertaken in five Canadian provinces to assess ready-to-use DVD and web-deployable teaching rounds, based on common case scenarios experienced in community practice. The Pallium Project has also partnered with

the CHPCA and the EFPPEC Project to develop a Palliative Learning Commons (www.peolc-sp.ca) clearinghouse for resources.

Much of the early Web 2.0 work has been strategically-oriented to preparing for the next generation health workforce (Boulos *et al.*, 2006; McGee and Begg, 2008). These are persons deeply-immersed in Web 2.0's media-rich dimensions, including extensive synchronous (i.e. instant messaging, web cam) and asynchronous (e.g. SMS text, web-logs, social networks, wikis, etc.) interactivity as well as use of on-demand media-rich audio/video applications (e.g. MP3s, M4Vs, etc.) for hand-held devices.

Pallium Project interest in Web 2.0 has been strategic at two-levels. One is the knowledge management imperative to support point-of-care, just-in-time decision making. The second recognizes learning resources designed for remedial needs of a current generation of practitioners are prospectively foundational for new practitioners. Early evaluation data suggests engaging Web 2.0 innovation ahead of mainstream health science education can have a positive hidden curriculum effect (Hafferty, 1998) by exposing historically under-represented palliative content (i.e. palliation in curative-oriented health sciences academic cultures) in novel ways.

Discussion

In this section we elaborate on lessons useful to readers seeking to better understand a multi-year journey of action, reflection, learning and collaborative inquiry, including lessons learned to help scale-up HHR development in other contexts.

Leveraging other local in-kind resources (e.g. staff time, resource inputs, etc.) through Phase II is conservatively estimated to have generated some \$2 Cdn of additional partner activity for every \$1 Cdn of PHCTF invested, resulting in estimated project activity of \$13 Cdn million (8.06 million Euro) in capacity-building over a three year period. The resources afforded by the PHCTF for Phase II, as well as deeply-committed collaborators resulted in a large-scale, pan-Canadian laboratory ideal for action testing concepts for enhanced access, quality and capacity amid modern complexity (Pascale *et al.*, 2000).

In September 2006, the Canadian Hospice Palliative Care Association (CHPCA)'s Board of Directors unanimously awarded The Pallium Project the prestigious *Canadian Hospice Palliative Care Leadership Award*. In communicating about the award, the extensive early and enduring contributions that Pallium Project collaborators made to strengthening Hospice Palliative Care (HPC) in Canada were noted in the Board's award comments.

Learning for service improvement and change

Learning and development efforts aimed at service improvement and system-change goals warrant not only rethinking "business as usual", but commitment to innovation, action, testing and refinement. Since Haynes *et al.* (1984), there has been a continuing discourse (e.g. see Mann, 2004) in the health sciences continuing education literature about efficacy of current educational practices (Davis *et al.*, 1995), including the need to re-visit conceptual, methodological and stakeholder foundations about how learning for professional performance might be improved (Aherne *et al.*, 2001; Coles, 1996; Grol, 2002; Mann, 2004; Moon, 1999, 2004; Moore and Pennington, 2003; Smith and Schmitz, 2004).

Experience to-date suggests a greater focus on linking local practitioners as co-learners using the workplace as an in situ base (Grol, 2002; Moore and Pennington, 2003; Smith and Schmitz, 2004). Facilitating critical-reflection and respectful dialogue within the multi-professional retreat format of the Regional Weekend Course, for instance, illustrates learning facilitation which is effective, respectful of multi-professional dynamics and sensible about how practitioners are challenged to work in relation to self and others (Moon, 2004; Simms *et al.*, 1984; Smith and Schmitz, 2004). Local practice impact (Moon, 2004) for the RWCs, however, reportedly varied depending on the geographic draw of learners. That is, where RWC course cohorts were drawn from larger, more geographically-dispersed health regions, the team-building aspects of the courses varied considerably from those who “went back to work together on Monday,” (Cervero, 2003; Pallium Project, 2006a,b; Smith and Schmitz, 2004).

The theoretical foundation of this work has been discussed extensively elsewhere (Aherne *et al.*, 2001). Simply put, if the goal of learning and development is for enhanced competence and performance, then impact (Moon, 2004) ought to be a focal point of learning design and creativity, flexibility and multiple-methods embraced as trusted allies on these journeys down roads less travelled.

A shifting landscape?

A cautionary note is urged about dedicated instructional experiences in what may be a proverbial “canary in the coalmine” for Canadian HHR. Field reports from rural western Canada are signals that it is increasingly difficult to release staff for dedicated, classroom-based staff development due to extreme short-staffing. What few “education days” do exist for many professional staff are claimed by compliance training (e.g. workplace compliance health and safety), certification renewals (e.g. Advanced Cardiac Life Support, Basic Trauma Life Support, etc.) and collective-bargaining contract obligations (e.g. CPR certificate renewals).

Opting for classroom-based, dedicated instruction time is increasingly viewed as a luxury for delivery systems. Specific criterion, such as team-building through shared retreat experiences, may soon be a required justification for resource-constrained settings. That is, classroom instruction for Canadian health personnel appears to be becoming a justified exception, rather the default rule. Other learning facilitation will be on a “as needed, as available” basis in the workplace. We may be entering a golden-age for new interest in workplace learning, but it will predictably be driven by HHR resource constraint expediency more so than the potential to effectively supporting practitioner decision-making in the workplace (Grol, 2002).

Engaging subject-matter-experts (SMEs) in the place of local practice

Outreach education as implemented via the RWC model affirmed and validated interprofessional practice. Evaluative data indicated that engaging in constructive dialogue and respectful exchange of varying disciplinary perspectives among practitioner-facilitators modeled interdisciplinary practice (Sprafkin and Goldstein, 1990). That is, participants shared evaluative information indicating many did not know such interdisciplinary collegiality was possible or permissible, based on their experiences with traditional professional dynamics (Smith and Schmitz, 2004).

Scaling-up efficiencies through object-based learning

There is tremendous leveraging potential and additional value in creating learning and development resources using object-based approaches (Armstrong, 2007; Cavanagh, 2007; Wiley, 2001). The ability to redeploy object-based content is a powerful, but underused practice in supporting learning and development generally, and in health sciences specifically. Part of this has been due to perceived administrative barriers, including a lack of transparent, easy-to-use processes for efficiently finding resources and obtaining permissions.

Other influences include deeply-rooted teaching culture myths about the pride and importance of creating repertoires of individualized teaching materials. In this an interesting paradox presents. That being, while each individual context of practice is singularly unique, there is remarkable convergence about many issues widely experienced by practitioners as common challenges (e.g. pain management, communication, facilitating advance care planning, working as a team, etc). This invites ethical and practical questions about local replication of development efforts for learning resources about common service issues. In resource constrained environments, where development resources and faculty-personnel are at a premium (provided they exist at all), the most appropriate use of scarce HHR resources is arguably directed at local service provision and “load-sharing” development efforts via CoPs.

Phase II has also highlighted that too many potential event-based learning legacies are underutilized and lost. Event-based opportunities ought to be pre-assessed for their value to be captured, codified and extended as digital legacies on an “as needed, as available” (i.e. just-it-time) basis. Historically, educational programming has been conducted on a “just-in-case” or interest-basis. While this is still an essential part of exploring our human condition (i.e. broad discovery of self in relation to others and the world), when scaling-up for anticipated HHR crises, utilitarian tenants suggest learning leaders ought to approach each informational or update event (e.g. grand rounds, case rounds, guest lectures) as a prospective legacy waiting to be transformed into an “as needed” digital learning object.

Costs of media post-production and technical skill requirements have dropped dramatically in the last few years. Audio and video media production for handheld devices (e.g. Apple iPod[®], Microsoft Zune[®]) or personal computers can be done at the local program level (Abreu *et al.*, 2008) or via a collective technical service. Personal media production driven by Web 2.0 has been widely embraced in popular culture, but it’s potential as a disruptive technology to support workplace learning has yet to be realized (Aherne *et al.*, 2001; Christensen and Armstrong, 1998). Scaling-up also suggests greater attention to HHR productivity, including time shifting (i.e. learner chooses when it is convenient to learn) and place shifting (i.e. learner chooses where it is convenient to learn). Object-based learning is well-positioned to support the new reality.

Primary-care providers as knowledge managers

Inquiry-support tools and reminder systems (Lane, 1997), especially in low-volume service environments are a lynchpin for enabling competent, quality service. It is a reasonable operational leadership accountability to assure health service delivery staff have, and are using, current tools at the point-of-care so they may safely, ethically,

effectively and accountably practice. These may take the form of traditional lab-coat style pocketbooks, e-books/electronic algorithms/conversion guides or audio podcasts and video vodcasts, accessible for mobile computing (e.g. personal digital assistant, notebook/tablet computer) and Web 2.0 (Boulos *et al.*, 2006; McGee and Begg, 2008).

Knowledge-building communities

A network model of knowledge creation and sharing, enabled collaboratively and understood as a Community of Practice (CoP) was transformed into a purposeful knowledge-building community. Largely popularized in the organizational development literature of the last 15 years, it has been argued CoPs are among the oldest expressions of knowledge management (Kakabadse *et al.*, 2003).

While many individual collaborators were sponsored, sanctioned or endorsed by direct supervisors and/or organizational leaders, their moral and collective ownership of the Pallium Project is manifested by, and validated through, contribution. "Belonging to the Pallium Project" has been defined by individual commitment, collective contribution and active meaning making in relation to others, rather than via a passive membership or sanctioned organization delegation (i.e. we need someone "at that table").

Structural considerations

The Pallium Project, manifested as a CoP, has not been bounded by a "corporate" organization or ownership structure as recognized in Canadian law. Unlike a co-operative or consortium model, the Pallium Project has administratively existed as a sponsored-project administratively hosted by one partner organization. A CoP migration into a knowledge-building community over the life of this arrangement has introduced some moral, ethical and risk-management issues. These have been of a governance and intellectually property management nature, where properties created and governed by the collective, potentially accrue disproportionate potential risk to one partner (i.e. project sponsor organization). Extensive use of quality-assurance processes, licensing models and national distribution has mitigated medico-legal, liability and quasi-common property management concerns.

Ongoing sustainability is an issue which remains unresolved and tied to future Pallium Project structural options. If a CoP approach is being considered by others as a viable strategic choice for scaling-up knowledge development, we retrospectively suggest a mechanism in applicable law (e.g. foundation, co-operative, consortium, etc.) be considered prior to an initiative commissioning, to assist in governing and sustaining collective properties.

Sustaining community and change

A strategic intent of Phase II was to act as a catalyst for self-sustaining local change. There has been mixed results. There has been broad adoption of legacy learning resources, including use of the LEAP courseware kit to varied degrees in Canada's 17 medical schools and throughout service delivery organizations. There is a steady turnover of Phase II learning and decision-support resources through the *CHPCA Marketplace* and into a range of Canadian health-related settings.

In the absence of a program-delivery coordinating infrastructure, local outreach education outreach programming has largely ceased in western and northern Canada.

Follow-up with facilitator-practitioners and regional palliative care coordinators indicate this is a function of the coordinating and logistics required, and which had formerly been supported by the Pallium Project's Phase II national coordinating office. The exception-to-date is a western Canadian province which has received a two-year, one-time investment of \$500,000 Cdn (311,000 Euro) to implement a HPC provincial capacity-building project, with several aspects modeled after the Phase II project.

One other large Canadian province has several palliative leader-champions affiliated with academic health working through the existing continuing education facilities of their respective universities. The original (2002) Phase II workplan called for establishing provincial/territorial palliative care learning centres in partnership with provincial hospice palliative care associations. Excepting one western Canadian province, all provincial associations presented with less capacity at the outset of Phase II, than when Phase II was planned.

During Phase II a viable contingency was not identified to address the potential for long-term program-support to address this infrastructure gap. A planned partnership is now underway with CHPCA, which since late 2006 has a national conference and events unit within its Ottawa office. More generally, other foundational work of Phase II risks atrophy in the absence of new enterprise resources (e.g. social enterprise innovation). Others have argued this is a broader concern of Canada's primary healthcare reform process-to-date, where additional investments of time, expertise, resources, strategy and execution are required (Katz, 2008) to assure sustaining change has a chance to take root.

Transforming primary palliative service through credible capacity

The evaluative process indicated Phase II significantly raised the profile and credibility of Hospice Palliative Care at the local level, especially in western and northern Canada (Pallium Project, 2006a,b). The potential population health contributions of well-designed palliative services have historically been poorly understood by management and clinical leadership (Kellehear, 1999, 2005; Lynn *et al.*, 2000).

In some locales, well-integrated palliative services are starting to be seen as a potential strategic response to help mitigate wait lists and address system sustainability issues. Prior to the Pallium Project many local palliative service champions were isolated and marginalized. The Pallium Project has helped create a sense that "I am not alone in this work." More persons interested in palliation know each other, their capabilities, interests, innovations, service and program models, including what is working and what isn't (Pallium Project, 2006a,b). What was initially described as a "hub and spoke" model of knowledge networking has evolved over a four year period into a network analogous to a spider web. There is a rich tapestry of collegial linkages and networks operating at many levels and independent of a direct Pallium Project linkage/connection.

Implications for research

Health sciences education through a different set of lenses

We have illustrated extensive discourse in adult learning literature, and specifically the health sciences education literature, about different and multi-faceted means to support professional learning and development for enhanced competence and performance.

The field would benefit from more case studies and other rigorous, defensible contributions that highlight marked improvements in how scaling-up for HHR capacity can work. We hope others can learn from, and build on, the work presented in this case study.

It was noted the Pallium Project has been a pan-Canadian test-bed, in part, to help further understand and refine an integrated approach to continuing professional development (CPD). Building from a foundation of comprehensive core theoretical concepts dating back nearly a quarter of a century (e.g. Day and Baskett, 1982; Fox *et al.*, 1989; Houle, 1980; Nowlen, 1988) this work has been further advanced as illustrated in Figure 1.

A comprehensive discussion of an emerging integrated approach to CPD is beyond this article's scope. Suffice it to say, however, we have a much improved and further

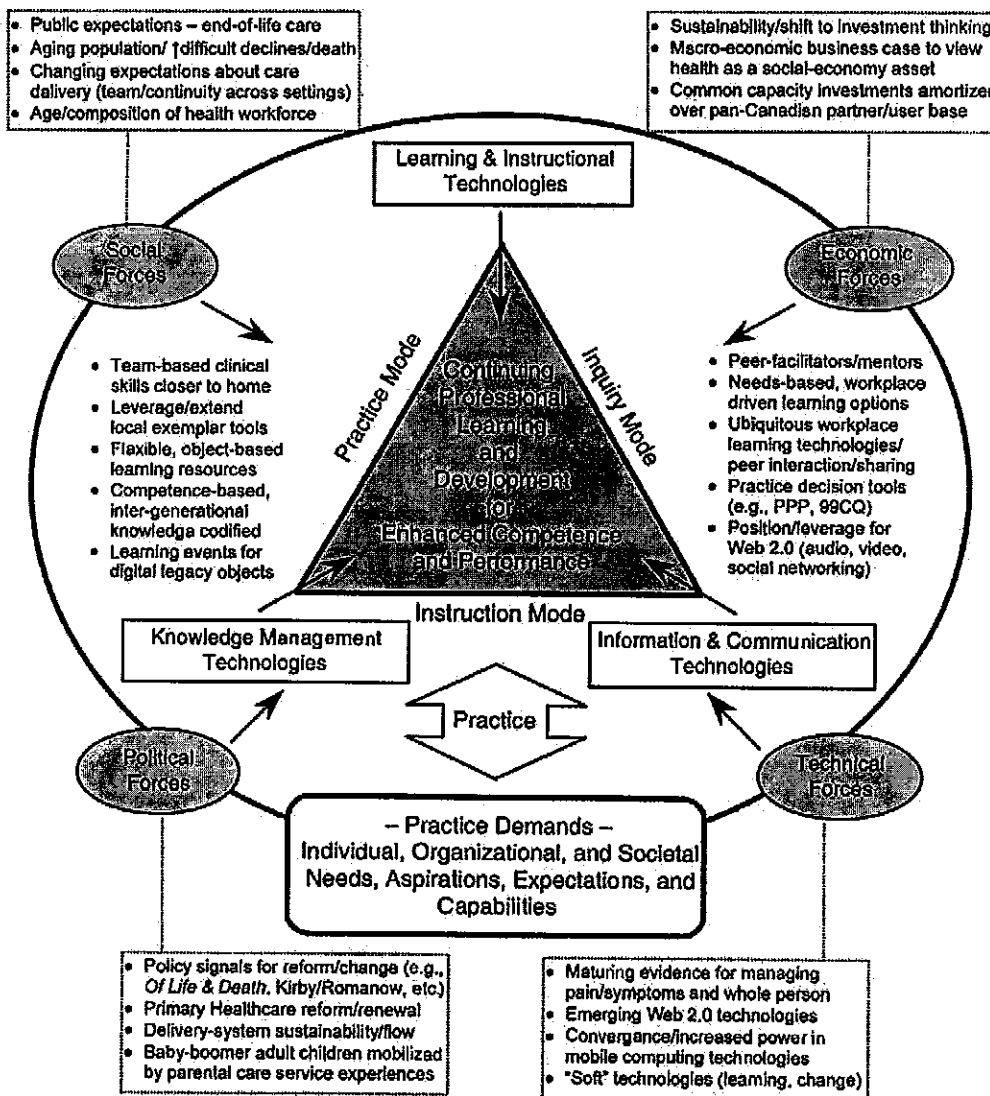


Figure 1. Canadian hospice palliative care (HPC) application mapping of an integrated approach to continuing professional development

validated understanding about how such an integrated approach can work. Houle's (1980) modes of practice, inquiry and instruction have been important organizing pathways for approaching how primary-care providers engage learning for their practice. The integration of context-specific, learning and instructional, knowledge management (KM) and information and communication (ICTs) technologies, as discussed in the case study innovations, have helped inform interventions and areas for further inquiry.

We have verified ways of moving through Nowlen's (1988) Update, Competence and Performance models' approach, by creatively designing learning experiences to address contextual factors that have been historic barriers to local performance (Grol, 2002). We have established it is feasible, possible and necessary to support physician- and other-learners engage structural changes, including redirections and transformations, (Fox *et al.*, 1989) in how they view self and others in relation to improved care of the seriously-ill and dying.

We have also outlined how social, political, economic and technical forces shape options. Phase II has been an important praxis-based opportunity to test this conceptual model, guided by theory and validated through action. Additional research could help improve understanding and refinement of specific elements of this integrated approach to CPD.

Collaboration for change

Collaborative inquiry (Kasl and Yorks, 2002) and action-based methods (McGill and Beaty, 1992, Revans, 1998) have yielded important insights for palliative and end-of-life care, not only for the Pallium Project, but for other larger multi-site interventions. For instance, Lynn *et al.* (2000), used Harvard University's, Institute for Healthcare Improvement (IHI) breakthrough collaborative model in a multi-site action learning project, to learn for quality improvement and service transformation.

In contemplating the Pallium Project's future, considerable emphasis has been placed on action-based and collaborative systematic inquiry. Specifically, collaborative experimental development has been proposed to better understand the use of e-books, on-demand video, audio objects and other tools to support point-of-care decision-making. Service development and innovation has been conceived as management learning through shared action, by participation in multi-centre continuous quality improvement projects.

Others charged with leading HHR change initiatives will find fertile ground for research, innovation and experimental development work in workforce utilization and system sustainability questions. Additional research to understand how health care providers could better approach practice through the lenses of knowledge work and knowledge management would also be valuable.

Implications for policy and practice

Those researching HHR policy options for decision-makers are advised to critically appraise where, when, how and by whom learning takes place in pursuit the system-outcomes desired for their populations. A population health approach is a powerful conceptual pathway for discerning policy options and programmatic choices for health workforce and overall delivery-system capacity.

Globalization, technology, pluralistic societal expectations, rights-based cultures and citizens increasingly empowered to enforce rights via rule-of-law are but a few of the forces driving unprecedented complexity. It has been important throughout Phase II for us to not confuse complexity with complicated (Glouberman and Zimmerman, 2002). Moreover, it has been thoughtful integration and weaving together of many relatively simple, easy to organize singular interventions into coherent packages that appear to have had the most impact (e.g. reflective team instruction, service development, decision-support, access to consultant-level colleagues, etc.).

A long-standing adage in Canada is that communities have problems and governments have programs. This phenomenon manifests commonly in many nation-states' public policy execution. Increasingly, policies for helping scale-up health workforces might be better framed as having accountability parameters for specific population health results and greater flexibility in how policy responses are executed. Many practitioners have previously expressed frustration that the tools and resources they need to be successful have not accrued through traditional continuing education responses. HHR policy responses ought to help enable and engage practitioners, not unduly set them up for failure, nor otherwise entrench them in the status quo.

The global health services policy and academic community is also challenged to more critically discuss concepts about what constitutes resource-constrained settings. There is much that both more industrialized nation-states and other nation-states can learn from each other. Policy researchers and advisors are also challenged to reflect more critically on the concept of global professional/provider skills circulation, rather than framing migration phenomena principally as "brain drain".

Increasingly, professional regulators are being challenged with prior-learning assessment and competency-based tools to assess suitability to license and practice. More policy research emphasis could be placed on making circulation successful based on nation-state standardized recipient acculturation policies and programmatic support. This would likely better support recruitment, retention and circulation for many internationally-trained health care personnel.

Summary

The Pallium Project (Phase II) has demonstrated model elements that could be adapted in other nation-state, regional and local service delivery contexts. The ideas discussed herein have broader applications than palliative services. They could be extended to enable collective capacity across settings of care, disciplines, sectors and other illness/disease concerns (e.g. community cancer care, HIV/AIDS, diabetes, chronic pain, care of the elderly, public health, etc.). Through this descriptive case we have distilled, detailed and shared key concepts, strategies, processes and interventions, so as to demystify the Pallium Project. This has included disclosing and detailing theoretical and design influences of this widely-acknowledged, but oft poorly-understood novel Canadian capacity-building model.

Phase II demonstrated a quick scale-up response for service/system improvement, learning and development and decision-support as part of recent Canadian primary healthcare reform efforts. This scale-up was approached in ways that respected the effective use of busy professionals' time, supported community-building and enabled legacy and access to the results of the collective effort. Collaboration, innovation and

knowledge-management have been essential strategies to rapidly scale-up supports for community-based palliation by stakeholders in this pan-Canadian project.

An emerging health leadership challenge of anticipated HHR shortages will be to look beyond “business as usual”, in order to leverage and unleash new capacity within existing systems. To this end, we may be entering an age where power-relations in leadership for effective change will by necessity become more broadly-distributed within practitioner and other stakeholder communities (e.g. NGOs), as well as across sectors and systems, to rediscover collectivist responses bounded by shared contribution, accountability and access to results. Policy facilitators and service delivery executives will be challenged to help structure the conditions under which collaboration, innovation and capacity can flourish, for the benefit of their populations’ health and well-being.

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