Rural Coordination Centre of BC
Enhancing rural health through education and advocacy
Linking community needs and policy development with the JSC

Clinical Coaching: Literature Review

Research Evaluation and Quality Improvement (REQI) Sector
Rural Coordination Center of BC (RCC*bc*)

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Sector Lead: Dr. Tracey A Parnell

Research Assistants: Anna Sinova & Mark Nash

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Methods

A literature review of peer-reviewed articles was conducted between July 2, 2014 and Sept 30, 2014. The purpose of this review was to define clinical coaching and to identify best practices and recommendations for developing a clinical coaching program. This review is directly relevant to the new programs that will be potentially undertaken by the GP Anaesthesiologists and GP Obstetrics networks. Therefore, outreach visits, use of local opinion leaders, audit and feedback, and peer coaching will be the topics of focus. The review was not restricted to papers in healthcare, considering that clinical coaching is a relatively new concept. We drew from a wide range of fields, such as business, education, and sports, where coaching is a broadly used improvement strategy.

We have searched exclusively in Google Scholar using a combination of the following search words:

- Clinical coaching, coaching best practice, peer coaching, coaching network
- Physicians, medicine, doctors, nurses, teachers, business, healthcare, education

Further, we added the relevant articles found in the reference sections of the included papers.

Introduction

Coaching is different from mentoring in the reflective aspects and in its focus on the job performance. A critical feature of clinical coaching is emphasis on process and content of practice with the goal of identifying the critical incidents for reflection and improvement (Parker et al, 2008). This reflection process develops self- awareness around cognitive and affective aspects of one's professional performance (Heron, 1992). The goal of coaching is to accelerate attainment of successful performance on critical soft and hard skills essential for the job.

Box 1. Developing a Coaching Program

1. Identify practitioners' needs
2. Identify real and potential barriers to change
3. Select an appropriate coach
4. Develop coaching intervention reflective of the needs and barriers
5. Select the duration of intervention
6. Include a "no intervention" group for the duration of the program
7. Define measurable outcomes for practitioners and/or patients
8. Design an evaluation before implementing the program

Coaching in athletics and in business was traditionally viewed as unidirectional, where a coach is usually an expert who has some specific knowledge or skill to impart onto a learner. Within this context, coach is the one in control, dictating the goals and the agenda of the coaching relationship as it progresses (Bowerman and Collins, 1999). In recent years, coaching has become more focused on empowering the individual. Often, professionals set their own goals and the agenda for the coaching sessions and the coach requires excellent coaching skills and in some cases expertise in a specific skill. Within this relationship, the coach's responsibility lies in assisting the coached individual to define their

objectives, expand their horizons, develop a useful plan and commit to action (Bowerman and Collins, 1999). Depending on the needs of the professional, either of these approaches or a combination can be used. Box 1 introduces a quick general overview of a step by step process for developing a coaching intervention program.

In healthcare, coaching is used as a short term or an ongoing intervention usually aimed at improving healthcare practices and patient outcomes. The most common targets of such interventions that showed the highest level of success with healthcare practitioners were focused on patient management, preventative and diagnostic services, prescribing practices, and treatment of specific conditions (Oxman et al, 1995). A multitude of specific clinical interventions were used with different degrees of success; they are summarized in Table 1.

Table 1. Intervention strategies and their effectiveness. Adapted from Oxman et al. (1995).

Intervention studies	Description of intervention	# of Trials (# of controlled trials)	Change in performance
Educational material	Dissemination of educational material	12 (9)	None
Conference	Attending healthcare conference or workshop	17 (3)	None, except when using reinforcing strategies
Outreach visit	Trained expert meets with providers	8 (3)	Moderate
Use of local opinion leaders	Providers nominated by peers (formal or informal interventions)	5 (4)	None to substantial
Patient-mediated intervention	Information collected from patients and provided to the practitioner	10 (4)	Effective for treatment of specific conditions
Audit and feedback	Summary of clinical performance with or without recommendation	31 (21)	None to moderate
Reminder System	Prompts to perform a clinical action	52 (35)	None to moderate
Marketing	Interviewing providers to determine barriers to change and proposing relevant intervention	3 (0)	Unclear
Multifaceted intervention	2 or more of the last 6 described interventions	15 (11)	Small
Local consensus process	Inclusion of providers in determining appropriate intervention	8 (2)	Unclear

Oxman et al (1995) showed that audit and feedback and reminder systems, both of which showed similarly mixed effects ranging from none to moderate, were the most commonly used interventions in a clinical setting. The most effective interventions seemed to be the outreach visits and patient mediated interventions, both of which are more difficult to carry out and are usually more expensive. Oxman et al (1995) believed that the most impactful interventions took into account the reasons for suboptimal performance and identified barriers to change; when an intervention addressed these underlying issues, it was much more likely to be successful (Baker et al, 2010).

Coaching Interventions

Opinion Leaders

Opinion leaders are individuals that are chosen by the community as most credible, likable, and trustworthy. In 1976, Rogers proposed that such individuals can play an important role in shaping the health practitioners behaviors to adopt the best clinical practices. Usually, this position within the healthcare community is not a result of a formal status, rather it is an outcome of maintaining a strong technical competence while being in the center of interpersonal networks. Opinion leaders are thought to be very approachable, knowledgeable and often have more exposure to all forms of external information than their colleagues. Since the 1990s the use of opinion leaders to improve health outcomes increased dramatically in various clinical fields such as surgery, obstetrics, neurology, general medicine, nursing and infection control (Ryan, 2002).

"The most impactful interventions took into account the reasons for suboptimal performance and identified barriers to change"

There are a number of ways opinion leaders can use their influence to disseminate best practices and to bring about behavioral change. Usually simple interventions such as information empowered opinion leader selecting their own approach and informally interacting with the staff or physicians within the hospital seems to work very well (Soumerai, 1998; Stross and Bole, 1980). Some of the popular opinion leader approaches include informal one on one teaching, small group meetings, academic detailing, minifellowships, developing community outreach programs and formal presentations (Flodgren, 2011). There is some indication that this intervention style works best for the community hospital setting, and the influence might be greater in secondary care compared with the primary care context (Ryan, 2002). A potential explanation for this difference might be the lower complexity of social networks in community hospitals and secondary care, which might also be true for rural primary healthcare given the small number of practitioners in rural BC (Grimshaw, 2006). This suggests that for an opinion leader to have the most influence, he or she should be well connected to a large proportion of professionals they are trying to influence. Therefore, smaller settings or tighter professional networks create the best context for this work.

There are several ways to identify opinion leaders within a particular clinical community:

1. An observation method employs an independent observer who identifies an opinion leader among a group of professionals interacting within a work setting. This method is most appropriate when the site is non-distributed and there are a reasonably small number of individuals within the network.
2. The self-designating method asks the members of a professional network to identify themselves as an opinion leader. This method is the simplest, although highly subjective.
3. The informant method relies on asking individuals to nominate a person who has the most influence among their group. With this method individuals are likely to have different criteria for selecting someone as an influencer.
4. The sociometric method uses a questionnaire to ask individuals to rate others within their network on the extent to which they are influential, humanistic and knowledgeable. With this method, the low response rate may skew the results.

Depending on the size of the setting or network, it is typical to feature a team of 2 to 5 opinion leaders, often from multiple disciplines, who deliver a mix of formal and informal interventions (Althabe et al, 2008; Stross et al, 1983). In some programs local opinion leaders are invited to develop the evidence-based guidelines together with the investigators, particularly when these are signed and distributed from the opinion leader's name (Majumdar, 2008). As an example, Lomas (1991) developed a program where opinion leaders delivered formal and informal education sessions, sent out educational materials and hosted a community meeting with experts in the relevant field.

"Smaller settings or tighter professional networks create the best context for using an opinion leader"

A systematic review of 18 randomized control trials compared using an opinion leader versus other interventions demonstrated that opinion leaders tend to improve adherence to an evidence-based practice (Flodgren, 2011). They reported that the most common method of opinion leader selection was the sociometric method. However, reporting limitations in these studies prevented the authors from comparing and ranking the selection methods and intervention types. It seems that one of the largest challenges for this method is indeed reliable and valid identification of opinion leaders.

Outreach Visits

An educational outreach visit is a personal visit by an expert or a coach from outside of the practice setting to professionals in their own setting with the purpose of influencing their performance through information dissemination. A variety of approaches were implemented by outreach coaches, particularly in the sports and business settings, however the most widely used were modeling, supportive critiques of practice, and observations (Shanklin, 2006). When the knowledge from these fields was applied to teachers, it was found that the most effective outreach strategies that a coach can use to improve adherence to best practices were in-class modeling of instruction, facilitating study groups, and leading teacher meetings (Poglinco and Bach, 2004).

In teaching literature, the use of external coaches has shown a lot of promise. A study by Neuman et al (2009) compared professional development practices: a professional development course alone or a

professional development course plus ongoing outreach coaching, to no intervention. Over the intervention year, the coaches held weekly one-on-one demonstration and reflection sessions and encouraged the teachers to implement educational best practices. Coaches were embedded in the teachers' environment and were able to build long-term connections improving trust and respect. The authors found that the knowledge of the desired practices was no different among the 3 groups but only in the group with ongoing coaching significant changes were seen in performance and application of the learned principles to the classroom.

"Coaches were embedded in the practitioners' environment and were able to build long-term connections improving trust and respect"

A review of the teaching literature demonstrated the following best practices for coaches to achieve the most penetrating results for behavioral modification:

- Successful coaches are available within the professionals' own setting and are able to model and demonstrate desirable practices (Poglinco & Bach, 2004).
- Coaches encourage practitioners to pursue continuous professional development rather than temporary ad hoc involvement (Darling-Hammond, 1997; Guiney, 2001; Speck, 2002).
- Effective coaches facilitate reflection on current practices, they observe, listen, and support positive practices; they do not dictate "the right answer" (Guiney, 2001; Harwell-Kee, 1999).
- Coaches are available for a considerable length of time, which helps establish rapport, build trust, and engender mutual respect among practitioners. They assist professionals in setting priorities and developing action plans while respecting the setting, the circumstances and the barriers (Herll & O'Drobinak, 2004).
- Coaches provide descriptive, non-evaluative and non-judgmental feedback based on observable events and engage professionals in collaborative problem solving for improving practice (Gallacher, 1997; Schreiber, 1990).

The outreach coaching programs for the healthcare professionals vary depending on the intent of the programs. Some coaching programs are concerned with psychomotor training (technical skills) and some are more focused on teaching cognitive skills (theory behind the technical activity). Technical skills have to be modeled and modified while the practitioner is performing the actual procedure, when the practice can be evaluated and they can be encouraged to try different approaches. Similarly to sports, goal setting is of outmost importance, where collaborating with the coach on determining the base ability and a plan of action is effective for behavioral change. The goals should be observable, measurable and performance-based. Cognitive skills training follows a similar pattern, but the coach should focus on the decision making process of a practitioner. For both, the coach and the practitioner, it is important to recognize the models of thought guiding clinical actions. The coach's task is to guide the practitioner through personal assessment of theories and beliefs behind the actions, promote critical thinking, model and demonstrate new ideas and their

"The most effective outreach strategies were modeling performance, facilitating study groups, and leading practitioners meetings"

impact, thereby helping practitioners challenge their ideas and build evidence-based frameworks (Grealish, 2000). Cognitive skills training and coaching practitioners to deal with specific issues can be done remotely through the use of videoconferencing. Xavier et al (2007) showed that the videoconferencing group sessions with a coach improved pain management knowledge and effectiveness in psycho-oncology health professionals.

O'Brien et al (2007) reviewed outreach visit programs for healthcare professionals and found that outreach intervention improved healthcare practices compared to other interventions and to no intervention. The chosen research papers were high quality evaluation studies and primarily looked at the downstream patient outcomes when evaluating the success of an intervention. Many reviewed programs focused on targeting inappropriate prescribing or managing a variety of problems encountered in the general practice. The visiting clinicians usually held group meetings or met with healthcare practitioners one-to-one. In one study, one-to-one visits were held with the physicians and group visits were held with the nurses (Loeb et al, 2005). The majority of programs included providing feedback to practitioners, either in person or by mail after the visit. Several trials based their intervention on a marketing framework: barriers to change were assessed by the visiting clinicians and then the content of the visits was tailored to take their findings into account (Finkelstein et al, 2001; Siriwardena et al, 2002; Fretheim et al, 2006). Almost half of the evaluated studies (30) had outreach visits as a component of a larger multifaceted intervention that included several strategies aimed at healthcare professionals.

"The influence on the desired behavior was somewhat higher if the person doing the outreach visit was a peer rather than a non-peer"

Interestingly, for outreach visits, the qualifications of the expert were usually cited in the studies but their influence was not explicitly assessed or stated. In one study, Hombergh et al (1999) showed that the influence on the desired behavior was somewhat higher if the person doing the outreach visit was a peer rather than a non-peer. O'Brien et al (2007) concluded that outreach visit programs have robust small to moderate effects, which are potentially important. It has consistent effects on prescribing practices and somewhat more variable for other types of professional behaviors. They encourage a study follow-up of over a year. One of the drawbacks of this type of intervention might be its costliness; however the benefits might outweigh the costs if the effects are shown to be enduring (Mason et al, 2001; Soumerai et al, 1986).

Peer coaching

Peer coaching is defined as the "developmental relationship [between peers] with the clear purpose of supporting individuals within it to achieve their job objectives" (Holbeche, 1996). The relationship is by definition non hierarchical and must be of voluntary, non-evaluative and mutually beneficial in nature (Parker et al, 2008).

There were several interesting studies in clinical trainees showing that creating a collaborative learning space where peers can reflect on their experiences, share knowledge and coach each other can be beneficial for putting ideas into practice. Ladyshewsky and Gardner (2008) incorporated blogging with discussion into physiotherapy training as a way to build trust, gain knowledge through peer

collaboration and to provide peer support during clinical practice. Their qualitative analysis showed that this can be a promising technique for integrating theory into clinical practice. One study even demonstrated that nursing students were more cognitively competent at surgical dressing change procedure after practicing with their peers than with the clinical instructors (Iwasiw & Goldenberg, 1993). Other benefits of peer based learning in clinical training settings were more positive communication, intercollegial support and greater use of critical thinking skills (Ladyshewsky et al., 2000). A meta-analysis of over 300 studies comparing cooperative to competitive and individual learning environments demonstrated that cooperation promotes higher achievement, greater creativity and problem solving ability, and higher quality of social support during learning (Johnson, 1998).

"Successful coaching teams of peers abstain from technical feedback and rather improve their performance through collaborative planning and problem solving"

In educational setting, coaching is used to train and support teachers through implementing a new teaching model, strategy or curriculum in the classroom. Through a series of observations and studies, Showers and Bruce (1996) showed to their surprise that the most beneficial type of peer coaching results from collaboration rather than technical feedback post-observation. In fact, the opposite – verbal feedback based on observation – tends to result in critical evaluative attitude towards one another and the collaborative atmosphere disintegrates, especially when the peers work closely together. They found that successful coaching teams of peers abstain from technical feedback and rather improve their performance through collaborative planning of curriculum/classes, developing class materials, discussing arising issues and watching each other work. The purpose of observation in such teams is to learn something from their colleagues. This attitude can be directly transferred to peer coaching among rural physicians, where each has their own expertise to contribute and would be able to benefit from collaborative information sharing with other rural physicians.

Similarly, in business literature, collaborative peer groups as means of professional development showed a lot of promise. Virtual communities of practice(VCoP) featuring peers in a particular profession have shown robust results for improving knowledge transfer, information sharing and practical support (Barnett et al, 2012). Most of the VCoP from both business and health fields were based on voluntary participation, self-selection, and featured trained or untrained facilitators. In health fields, the person who started the group normally became the administrator and facilitator with a small group of active participants forming around him or her. Some of these virtual communities also branched out into physical groups (Nagy et al, 2006). These online communities usually started with robust education content and a discussion board, where participants were encouraged to own and develop areas of the site relevant to their interests or expertise. This ensured that the community would grow in direct response to the interests and needs of the community. Such communities can be developed on a large scale, such as major healthcare blogs, or on a smaller scale using existing social media platforms. Given the distributed nature of rural practice, having a virtual

"Given the distributed nature of rural practice, having a Virtual Community to support rural physicians' professional and personal development would be highly encouraged"

community to support rural physicians' professional and personal development would be highly encouraged alongside of any other interventions or programs.

Audit and Feedback Coaching

Outreach visits, opinion leaders and peer coaching programs can all make use of the technique called audit and feedback. This is a unidirectional approach where a coach, who can be a peer or an expert, audits the practice and then provides feedback with the purpose of improving the professional's performance. It is thought that this data would help the professional to see their mistakes and strive towards improvement. In clinical coaching, this approach has been used with nurses and physicians, where an outside expert is invited to review, feedback and monitor improvement on a selected skill or issue. As an example, Johnston et al (2007) evaluated whether one-on-one coaching could improve pain management practices of pediatric nurses. Nurses received 12 coaching sessions, which involved audit with feedback, spaced over 2 to 3 weeks. The results were mixed with more intervention sites showing an increase in knowledge about pain; however this did not translate into greater use of analgesia or non-pharmacological comfort measures. This is not an isolated finding: Cochrane reviews (Jamtvedt et al, 2006; Ivers et al, 2012) of audit and feedback coaching in healthcare professionals demonstrated that the effectiveness in healthcare outcomes vary depending on the intensity of intervention and baseline non-adherence to recommended practice, and generally, when audit and feedback coaching is effective, the effects are small to moderate. The impact tends to be close to moderate when original adherence to proposed measures is low and the intervention is more intensive. Therefore in applying audit and feedback coaching, the baseline measures and barriers to change have to be closely evaluated before applying this intervention, and knowledge gain versus changes to clinical practice outcomes should be evaluated.

The practitioners being coached should also be voluntarily seeking advice and critique on their practice. Imposing this intervention without explicit request from the professionals can lead to greater animosity and less intercollegiate support between the peers, a highly undesirable outcome in rural practice (Showers and Bruce, 1996). Many professionals would likely prefer a more collaborative knowledge and expertise sharing approach without evaluative critique or an opportunity to benefit from information or demonstration from a more experienced physician or an opinion leader.

"The impact tends to be close to moderate when original adherence to proposed measures is low and the intervention is more intensive"

Coaching Best Practices

Not everyone is receptive to and desires to be coached, therefore self-selection into any coaching program would be a must. The practitioner should be actively involved in developing relevant goals and objectives for the coaching relationship and should see a value in engaging a coach, whether it is an outside individual or a peer. If a coaching program is imposed from the outside, as is sometimes the case with audit and feedback, the professionals have to be prepared for the visit: they should be motivated, engaged and ready to receive a visitor for what they view is a beneficial purpose. An ideal candidate for coaching is someone who is motivated to change but needs and wants help to get through the process (Tofade, 2010).

Regardless of the formal status of two individuals involved in coaching, once in a coaching relationship, both individuals should be on equal footing. Specifically, the coached professional must knowingly give permission to the coach to be led and taught in order for a coaching relationship to succeed. Trust is at the heart of coaching, which requires effort, commitment and attention. If the relationship is too short-lived, trust normally does not develop and does not remain between individuals.

Box 2. Coaching tips and techniques

1. Establish a regular meeting time
2. Observe professional in action
3. Be prepared to challenge and to advocate for the practitioner
4. Explore the practitioner's mental models and values
5. Assist with goal setting and consequence thinking
6. Favour asking questions over giving advice
7. Set high expectations for performance and hold them accountable. Scaffold through difficult tasks.
8. Be a role model

Must-haves for Coaches

Some important ingredients of the coaching program as seen from the perspective of the coach consisted of regular dedicated time for coaching, knowledge of the systems where the practitioner is working, and awareness of how change comes about in a coaching relationship. Coaches usually find that the coaching relationship is deeply satisfactory and motivating, particularly when the relationship begins to demonstrate improved patient outcomes or professional successes (Homa et al, 2008).

In a qualitative study by Homa et al (2008), coaches shared the importance of finding the right balance between immediate feedback and letting the coached practitioners come to their own conclusions. Some of them felt that it was valuable to let the coached person spend time on a problem and hold back the desire to step in and "rescue" them: "non-directive coaching allows for the learner to have their own journey." Box 2 presents some of the techniques shared by the coaches in the study. At the conclusion of the coaching relationship, the coaches articulated that they would have desired more training on improvement and coaching skills, time and space for reflection for themselves and the learner and greater support prioritizing and meshing this work with other administrative and clinical responsibilities.

To ensure success of a coaching intervention, the coaches should receive external training in coaching practices, techniques, and the coaching process, preferably as specific as possible to their intended contexts. This would enable coaches to provide the best support to the learners and for coaches themselves to feel adequately prepared for their role, so they can be well positioned to promote change in their learners and to develop as individuals themselves (Lynch & Happel, 2008).

Must-haves for Learners

Homa et al (2008) study found that learners cited many similar expectations from the coaching relationship as the coaches. Particularly, dedicated time, knowledge of how change comes about, clear expectations of the relations and a supportive rather than directive style of coaching were all important. However, further review of the literature revealed that there are significant organizational aspects that also need to be addressed by the implementation committee in order to satisfy and support the learners-professionals and to achieve positive intervention outcomes.

The easiest way to make sure that the true needs of the stakeholders are achieved is to involve the learners in the process of intervention design, content design, implementation and evaluation. This ensures the ownership and investment in the program from the beginning and such an approach tends to result in early acceptance of the intervention and in highly positive outcomes (Moran et al, 2014).

"Adequate resources ensure that not only the program itself is funded but also related aspects, such as potential barriers to program participation, can be appropriately addressed."

In addition, strong organizational leadership, dedication of resources and visibility of the values resulting in the proposed intervention helps shift the organizational culture and becomes a strong force in stimulating a change in professionals' behaviour. This requires a leadership team who have a significant influence as perceived by the learner group. For example, a team of implementation committee, hospital management and change facilitator, significantly contributed to the change in staff's motivation and clinical behaviour in a Kenyan hospital (English et al, 2011).

Adequate resources ensure that not only the program itself is funded but also related aspects, such as potential barriers to program participation, can be appropriately addressed. An 80/20 staffing pilot project in interior BC, where nurses were allowed to dedicate up to 20% of their paid time to continuing professional development (CPD) activities, had dedicated funding to hiring a program coordinator and additional staff to cover the nurses' off time. This program design allowed nurses to be sufficiently supported and to actually take advantage of the new opportunity. This example also highlights why addressing barriers and challenges in advance is essential for budget planning and program design, particularly in rural healthcare where understaffing and time restrictions are significant obstacles (Healey-Ogden, 2012).

Visibility of the program is essential for its success, as it highlights organizational commitment, values and intention to change. An additional important product of a marketing campaign is the increase in awareness of and participation in the intervention program (Lynch & Happel, 2008).

Program Evaluation

Regular feedback and evaluation should be an essential part of a coaching program. Programs that take feedback into consideration and evolve to accommodate the critiques tend to be more sustainable and have more beneficial outcomes for the healthcare staff (Moran et al, 2014).

There are several questions that the implementation committee can think about when developing an evaluation strategy for a coaching intervention, the important steps are summarized in Box 3.

Box 3. Developing Program Evaluation

1. Define measurable outcomes (eg. procedural quality, practitioner confidence, number of procedures implemented post program).
2. Determine how long each outcome will take to appear: this would dictate the length of the study. For example, increase in procedures might take a shorter time than the development of practitioners' confidence or quality.
3. Choose a control group. Before and after design is available but does not eliminate a possibility of external factors with certainty. A "no intervention" or "alternative intervention" control group that includes all aspects of the program except the one evaluated factor (eg. coaching) is a gold standard for evaluation design.
4. Choose a data collection method. This largely depends on the outcome chosen and can range from observation and available data (eg. patient records) to questionnaires and interviews.
5. Select an appropriate sample. This concerns the selection of the intervention group and the control group, where the group assignment should preferably be random and groups should be as similar to each other as possible.
6. Develop blinded procedures during data collection and analysis if possible. For example, staff should not be aware of specific group allocation when collecting and analysing the data.

In addition to the straightforward questions of evaluation design, it is important to consider various potential barriers that learners and coaches might face when intending to take advantage of the program, as mentioned in the previous section. These challenges should be incorporated and addressed as much as possible prior to the program start and a contingency plan should be developed for predictable program risks and issues. Furthermore, ongoing quality monitoring is a good idea to add to the program evaluation. For example, keeping track of received feedback, issues, lessons learned and resulting program changes in an accessible information pool can be used by the implementation team to keep track of the program evolution – important data for ensuring ongoing success of the program.

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