Producing Synergy in Collaborations:
A Successful Hospital Innovation

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ABSTRACT

Patient malnutrition in hospitals is common and impedes recovery. Part of the problem is that hospitals are organised around diagnosis and treatment, not for good nutrition. This paper describes a Norwegian hospital's nutrition innovation that enhanced collaboration across and within the hospital hierarchy. The Bergen Model of Collaborative Functioning was the analysis framework for the study reported here. Success factors included having a clear mission, a sound implementation plan, leader commitment, trust and coordination, committed partners, clear structure, rules and roles, face-to-face communication, celebrating accomplishments underway, and utilising the surrounding context to give the innovation visibility and publicity.

Keywords: Collaboration, partnership, collaborative functioning, innovation, hospital, hierarchy, health promotion, malnutrition, health services.

Introduction

The aim of collaboration is to produce synergy, that is, outcomes that are only possible by working with others. However, effective collaborative functioning is hard to achieve, because various institutions, departments and professionals have different aims, traditions, styles of working and mandates. Overcoming differences to forge productive collaboration is a key challenge to the implementation of innovative health promotion. Little attention has been paid in the literature to the processes through which collaborative functioning leads to synergy, or fails to do so (Corbin and Mittelmark, 2008). The purpose of this study was to use a systems model of collaboration to examine the functioning of a hospital innovation to improve patient nourishment.

Collaboration

Collaboration is a multifaceted concept with many synonyms. One person's 'teamwork' can be another person's 'alliance' or 'collaboration' (Lank, 2006). Kickbusch and Quick (1998: 69) define health promotion partnerships as the bringing together of "a set of factors for the common goal of improving the health of populations based on mutually agreed roles and principles". Wood and Gray (1991: 146) emphasize the independence of the stakeholders:

> Collaboration occurs when a group of autonomous stakeholders of a problem domain engage in an interactive process, using shared rules, norms, and structures, to act or decide on issues related to that domain.

Straus (2002) sees collaboration as problem solving and consensus building. Based on their review of 137 cases on collaborative governance, Ansell and Gash (2007) concluded that sufficient time, trust and interdependence are the core components of successful collaboration. As used in this study, the term collaboration centres on the concept of synergy: partners desiring to work together towards a common aim, to achieve an output beyond the reach of partners' individual efforts.

Collaboration always requires investment, which is justified if the partners realise valued aims that could not have been realised by the partners working in isolation (Kickbusch and Quick, 1998). However, it may also be that one or more partners consider at least part of their investment of time, effort and money to be wasted – resulting in antagony, which is the opposite of synergy (Corbin and Mittelmark, 2008). While some waste is perhaps inevitable ('that meeting was a complete waste of our time!'), when the waste is judged excessive, collaboration may fall in danger of crumbling before aims are achieved. This is among the reasons that many collaborations cease functioning before they have achieved their aims (Huxham and Vangen, 2004).

Knowledge about the processes and factors that facilitate and/or hinder successful collaborative functioning could help partners avoid antagonistic outputs and increase the chance for synergy (Huxham, 2003). However, theoretical conceptualisations, rather than studies of actual practice, dominate the collaboration literature (Iedema, 2007; Brinkerhoff, 2002; Corbin, 2006; Gray, 1989). An important exception is the work of Wandersman, Goodman and Butterfoss (1997), whose research led to the development of an open systems framework for the study of 'synergistic working alliances'. With the framework just mentioned as the starting point, Corbin (2006) developed the Bergen Model of Collaborative Functioning (BMCF); figure 1 depicts a version modified slightly by Corwin (2009).

Figure 1: The Bergen Model of Collaborative Functioning
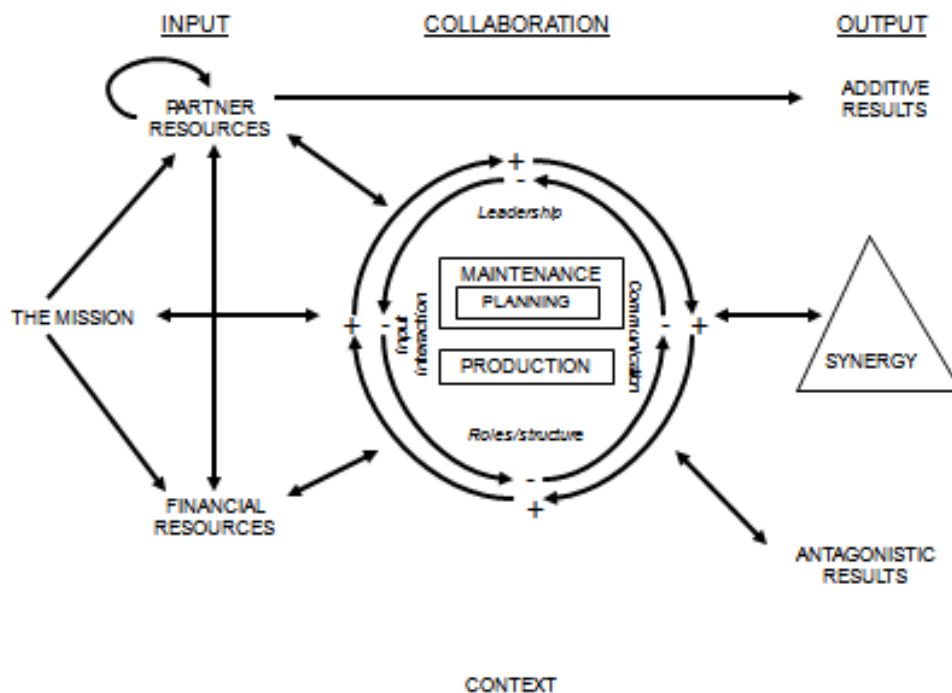
The BMCF is based on inputs (elements entering into the collaboration), the collaboration itself and outputs (collaborative products), and the complex interactions between these. Inputs into the collaboration are the mission itself (the reason for the collaboration), and partner and financial resources. In the process of collaboration, production and maintenance activities occur. Production activities lead

directly to outputs such as mission statements, products, reports, etc. Maintenance activities contribute to a good working milieu, and include attention to planning, good social relations, celebrations of accomplishments, etc. Production and maintenance activities are affected by complex interactions that positively and/or negatively affect collaborative functioning. These cycles are affected by four elements: how inputs interact with each other, roles and structures, leadership, and communication. The arrows in Figure 1 depict the interactive and dynamic nature of collaborative functioning and the role feedback plays. Three different types of outputs are possible, singly or in combination: synergy (2+2=5); additive outputs (2+2=4), or antagonistic results (2+2=3 or 0). Finally, the surrounding context –people, events, processes, actions, expectations and demands outside the collaboration –affects inputs, the collaboration and outputs (Corbin, 2006).

The BMCF has both theoretical and empirical foundations. It takes its departure point from general systems theory and a specification for health promotion collaboration (Wandersman, Goodman and Butterfoss, 1997). The model was constructed to organise, describe and report the findings of an empirical study of a health promotion collaboration (Corbin, 2006). The BMCF has been used purely descriptively to document the functioning of health promotion collaborations (Corbin, Mittelmark and Lie, forthcoming; Corwin, 2009; Dosbayeva, 2010; Endresen, 2008; Kamau, 2010), and more recently as a tool to plan, implement and evaluate collaboration (Corbin, Fisher and Bull, forthcoming; Haugstad, 2011; ALICE RAP, 2011).

The aim of this study was to use the BMCF to study a complex collaboration in a new setting: a regional teaching hospital in Norway that implemented a patient nourishment innovation.

Innovation in the hospital setting

Hospitals are among the most complex types of hierarchical social organisations (Iedema, 2007). Collaboration within and across hospital departments can improve efficiency, effectiveness and the quality of services (Johnson et al., 2003; Loxley, 1996; WHO, 1997), but competition for resources, professional differences and hierarchical management practices hinder innovation (Idema, 2007; Kerusuo, 2007; Loxley, 1996). In a study of hospitals' organisational approaches to health promotion, Johnson and Baum (2001) identified two common approaches and two innovative approaches. The first of the common approaches is to 'do a health promotion project', as a limited, narrow, ad hoc activity that comes and goes relatively quickly and has little if any lasting impact. The second common approach is to delegate health promotion as the responsibility of a specific division, department or staff, resulting in the failure of health promotion to be integrated into the role of the whole organisation. The first of the innovative approaches is to turn the entire hospital into a 'health promotion setting' through activities that concentrate not only on patients but also on their families, staff, organisation and management, and the physical environment. The second innovative approach to hospitals' organization of health promotion is an extension of the first, but also to include the surrounding community.

The Case

The case reported here is a hospital organisational innovation of the first type described above. The common approaches had been tried previously in attempts to improve patient nourishment, with little success. The persistent problem of poor patient nourishment was judged to be of such a high priority that the hospital leadership elected to try again, this time using the innovative 'whole setting' approach.

Patient malnutrition during hospitalisation is a widespread and vexing problem that compromises recovery, causes extended hospital stays and increases the cost of care (Chima et al., 1997; Pennington, 1997; Banks et al., 2010). A study in Swedish hospitals observed that 27 percent of patients had a moderate or high risk of malnutrition (Westergren et al., 2008), and similar findings have been observed in German hospitals (Pirlich et al., 2006). However, estimates of patient malnutrition prevalence can vary

greatly, depending of the ascertainment method (Corish and Kennedy, 2000). In a Spanish study in which several different nutritional scores were compared, malnutrition rates varied from 63 percent to 90 percent (Pablo, Izaga and Alday, 2003).

It is of vexing concern that patient malnutrition is under-recognised by hospitals (ibid), because when it is recognized, it can be treated effectively (McWhirter and Pennington, 1994). Accordingly, the European Society for Clinical Nutrition and Metabolism recommends implementing a nutrition strategy in all hospitals (Kondrup et al., 2003).

A large part of the challenge in reducing malnutrition in hospitalised persons is that responsibility for nutrition is scattered in an uncoordinated way among many sectors and professional groups. Blades (2000) lists the impressive team that must collaborate to promote good nutrition: doctors, nurses, catering managers and staff, dieticians, speech, physical and occupational therapists, pharmacists, administrative leaders and staff, and porters who deliver meals and move patients. Hospital routines are primarily organised around treatment rather than good nutrition, so nutrition-related collaboration involving diverse professionals requires innovations that cross, yet respect hospital hierarchies. However, hospitals' typical organisational models and practices draw from conventional management thinking, which may not favour innovative, cross-departmental collaboration (Kerusuo, 2007).

The above gives the context for the nutrition innovation described and analysed in this paper. The authors of this paper have not been involved in designing or implementing this innovation, they have conducted separate research to examine its collaborative functioning.

The largest teaching hospital in Norway (Haukeland University Hospital) initiated a patient nutrition programme in 2006 that required collaboration within and across the hospital's hierarchical organisation. This was far from the first attempt the hospital had made to deal with malnutrition, without much success. By 2004, the time was ripe for yet another attempt, stimulated by advocacy from patients, their families and some employees. Responding, the hospital's top management decided to establish two inter-professional work groups to assess malnutrition in the hospital and suggest strategies for innovation. One group looked into actions required and feasible structures for implementation, and the second group investigated the organisation of nourishment in the hospital. This was a unique approach, compared with the earlier efforts; the hospital leadership understood that staff from many services would have to collaborate to tackle malnutrition successfully.

A main aim was to screen all patients for malnutrition, and treat those in need. As evidence of commitment at the highest administrative level, a full time coordinator was hired and placed in the hospital's central management. The main innovative element was the establishment of a pilot project in one department (two cancer wards and one medical ward), in which a patient buffet was established and chefs were employed to make meals more tempting, flexible and nourishing. This innovation depended on a high degree of inter-professional and inter-departmental collaboration including the arenas of medical and nursing care, dietetics, porters, catering services, and management, among others.

The pilot project, which is the focus of this study, commenced in August 2005. If successful, such patient buffets would be implemented on wards throughout the entire hospital. The major activity was the creation and operation of an on-site buffet for the three wards, instead of using existing corridor kitchens for standard meal service. The existing system received criticism for its rigid mealtimes and the poor quality of the food. Therefore, chefs who could adjust meals individually and create tempting food, would staff the new buffet. The aim was to tempt and facilitate patients to eat more, and thereby decrease cases of malnutrition. This solution would also ease the nurses' workload.

This pilot project was thus an innovation in a hierarchical setting that cut across sectors, traditions, professional backgrounds, styles of working and so on. All parties would have to make an investment of extra time and effort, to produce the conditions that could significantly improve food service, patient appetite, and balanced nutrition.

The BMCF is a systems model and is therefore applicable as the framework for studying this case.

Methods

This qualitative research project used case study methodology. Data from sixteen interviews (eleven respondents) were utilised. The interviewees were drawn from the top-management, a patient representative, the managers of departments, ward staff, and the staff assigned to manage the innovation. Participants were multidisciplinary and representative of various medical/surgical specialties, nursing, dietetics, food services and administration professions. Two waves of data collection were undertaken; eleven respondents were interviewed once a few months after the innovation commenced (January-February 2006). Ten months later, four interviewees were re-interviewed.

Semi-structured interview guides based on the BMCF were used; however, interviewees were encouraged to speak about any subject of interest to them. The interview guides were modified following each interview to improve their utility. The interviews were conducted by the first author in private sessions, and lasted from 30 minutes to 1¾ hour. Interviews were tape-recorded and transcribed. Documents such as the mission statement, minutes of meetings and surveys were also utilised. Evidence (numbered and thematically coded quotes) was extracted and analysis cut across respondents. Key findings related to the study questions were compiled and categorised. The analysis was ongoing and reflective (Kvale, 1996).

Results

Inputs

Several respondents (a ward manager, a project manager, a top manager, and a patient representative) stated that their commitment to the innovation stemmed from the importance of its mission (to facilitate proper nourishment of patients): "The main motivation has been to give a better offering to the patients, and beyond that you do not need much support to put such a programme into action." Another said: "the important thing from our point of view has been a repetitive request from our patients and our staff that the prior offering, in terms of food, was not good enough."

Significant effort was made to recruit *committed partners* who recognised patients' and the organisation's needs. One manager explained:

In terms of the buffet [on the wards] … we were very concerned to recruit people who we believed in… We need competent people in relation to food, to the profession, but also with great competence in caring – we are actually in a hospital!

Interestingly, some who might have been asked to collaborate at ward-level were not approached (some physicians), reflecting the innovation's appreciation that having committed partners is essential to successful collaboration, and having reluctant partners could create problems:

Unfortunately, some doctors and oncologists still think that to nourish 'too much' can nourish the tumour! They are a bit behind, even though new research indicates something else. They have probably heard about it, but they are still sticking to their guns.

Another commented: "We have just actually implemented it [the buffet] without saying anything to the doctors. We now have a better offering for the patients and have said that to them, and they are saying: "Great! That was a positive thing."

Professional groups and individuals were elected based on their commitment to actively participate in the collaboration. Despite this, doctors, nurses, dieticians and speech pathologists were all involved in diagnosing, treating, and caring for the patients as per usual.

Some *financial resources* were allocated to cover extra costs, reflecting understanding that trying to stretch existing resources to cover new tasks could threaten the innovation: "It was costly, and [the manager] and I said ok, we will take care of those costs to implement the pilot project (…) So the fact is, we are so interested in implementing this that we take care of the costs." One manager explained how finance played a role at department level*:*

Our division has paid some money in order to implement small moves such as in relation to equipment. It is actually quite small amounts when you think about the big picture. And we have also been very smart, I think we have been very smart; we have borrowed a [food] trolley from the state railway (…) so we have been creative, and been out there to talk about it and get people to come along.

Thus, the importance of the mission and its urgency, the availability and recruiting of committed partners, and access to sufficient financial resources were key inputs into this collaboration.

Collaboration

The combination of inputs (the mission, its context, partners and financial resources) and how they interact is referred to as *input interaction*. Several interviewees believed that the hospital's hierarchical context hindered the innovation. One manager explained: "The first time I was present in the nutrition council, I thought I cannot be bothered, I do not want to be here– because it was not inclusive." Another respondent explained how professional battles delayed the implementation:

LC: What do you think are the greatest threats for success in collaboration?

Respondent: … Professional pride and an 'I know best' attitude amongst those involved. It has at least been evident here that there is a 'do not come and tell me' attitude, and it is not acceptable, that there are such people! You need to know who to include in the team, right, and there cannot be anyone who is so powerful that they suppress the others.

Some partners were hindered and de-motivated by the hierarchy, because it was not inclusive and did not facilitate shared governance of the collaboration. Despite that, several respondents pointed to many partners' openness and willingness to work for the Mission:

The staff has been very willing to take new things in and to be positive towards other people approaching their territory. If they had not been willing and refused to budge, it is not certain one would be approached with so much positivism at the buffet.

Several interviewees believed the interactions between committed partners were vital for the innovation:

The personal chemistry between (name) and me is very good. We have the same way of thinking, we are honest, we have no hidden agendas, and we want this to succeed – so we keep at it. I think our personalities matter in this context. If the two of us had not been so charismatic, I believe this would have stagnated.

Thus, good personal chemistry, openness and charisma were key input interactions that facilitated the collaboration.

Financially, several respondents (managers at various levels) found that collaboration between committed partners prevailed over the importance of financial concerns:

I believe they [financial resources] are of subordinate meaning. They aid many collaborations, but that is as far as I will stretch it. Collaboration is grounded on accomplishing something together.

Several interviewees (managers at different levels) highlighted the cautiousness needed when creating new *structures, rules and roles* within and across the hierarchy. One leader explained:

The minute you step on someone's feet– if I do something I am not supposed to do and others are accountable for that, there becomes a lot of confusion and uncertainty in the system. And therefore it is important that as much as possible is clarified in advance. One can wish to make changes, but then in collaboration with the person accountable for that area.

Another leader said:

We do not wish to shove anyone out, we just want to be part of the total picture – but to communicate about food, care and health is a challenge…we do not want to step in and take [over] the care that health professionals are providing today, but we want to take part in influencing it (...) I have been very concerned about people on the ward knowing what we do– knowing us and why we are there – so we have participated in ward meetings with everyone. There are three wards included in this – and they have gotten to know us; they know what we look like and why we are here and that we have a common goal.

Thus, clear structures, rules and roles in the hierarchy facilitated the innovation.

The importance of *planning* the collaboration thoroughly was emphasised by many interviewees: "I received a Mission Statement, which was very specific, so I just got going, there were no more literature searches to be done, or anything like 'how do we do this'? It was a thoroughly completed plan."

Regarding *leadership*, a coordinator was hired to implement the hospital's nutrition programme, including the buffet pilot project. Most interviewees believed the new coordinator position was vital for successful implementation:

We could not have managed without it [the new coordinator position]. No, because if we did not get that position, there would not be anyone who could bear the brunt, and that is absolutely essential.

All respondents believed leaders' commitment to the Mission was vital to inspire partners to collaborate:

[Leader A] is so unique when it comes to completing things and getting people involved, and the same with [Leader B], s/he gets people involved and there are creative solutions, job satisfaction, and people have drive and they like it."

One leader explained the importance of providing partners with trust to implement the innovation:

So, the way I feel, is that most people wanted to do something about it – everyone agreed that we had to do something about this, but there were very few who rolled their sleeves up and said: "I will take this, I will do this". (...) In a way we got authority [to act]but it took time before I realised

I had it. And maybe I have done what I have liked because I noticed that if I were to wait for everyone else, nothing would happen.

Thus, committed leaders and trust in the arrangements for implementation and coordination of the innovation facilitated the collaboration.

In terms of communication, most interviewees believed face-to-face communication was most productive when collaborating in the hierarchy.

In the wards one can see that the various professions are working together, even if they do not do the same task together all the time. They still see each other and talk to each other, and by that at least they have the opportunity to understand each other better and what the other person is doing, and the possibility for collaboration should be better there.

Many respondents appreciated positive communication between committed partners:

Respondent: The communication between the buffet and the registered nurses is very good!
LC: Okay, why is that?

Respondent: Especially two of the people out there, they are motivating powers in the buffet and they are very positive people and the personnel are influenced by that too! The personnel feel that they are so positive, and they think that the nurses are positive, and then you get that really good communication amongst them!

Communicating about the innovation to the 'outside world' resulted in partners receiving much attention and recognition, and one leader explained:

Yes, everyone is talking about this. This is something everyone knows is important (…) and it is obvious that there is something about recognition – if you do not get recognition, you have to go out and get it. And we have done that! There have been reports about us in the newspapers, we have been on the radio, it has been written internally in the hospital and internal publications. (…) We have gotten ourselves recognition and acceptance. We have been smart as well, we have invited people to 'the nutrition days', invited the other hospitals in Health-West, kitchen people... we see possibilities!

Thus, face-to-face communication, positivism and creating recognition were vital communication components for good collaboration. Despite some hindrances due to the hierarchical context, factors that facilitated this innovative collaboration included thorough planning, good interaction between inputs, committed leadership, trust in the methods of implementation, and clear structures, rules and roles in the hierarchy.

Outputs

Despite the hierarchical barriers, all interviewees believed that the innovation was a success. One passionate leader elaborated how *synergistic outputs* were generated:

I think we have collaborated despite the hierarchy the hospital has. Hardly any organisation has a stronger hierarchy than a hospital – and we have managed to collaborate! Everyone has been equally important, and it is important that everyone notice that they are equally important, and that we carry the brunt together.

Another respondent said:

The work environment at the hospital has been greatly affected by this. In [the department], we have reduced sick leave by two per cent in one year– if the project has a part in that, I do not know, that is only guessing. But it is obvious that we have done a good job, gotten much positivism and recognition and have gotten the opportunity to contribute (…) which makes people make a completely different effort!

The department was now willing to sacrifice already too-limited resources to fund the continuation of the innovation:

A year ago, when we started talking about the idea of hiring a chef in the wards and mentioned the idea: "if this turns out to be successful, can we use money from a nursing position to finance such a chef?" –there was no way! It was completely impossible and we just had to go away. But now, the [name of department] is going for it, they are hiring a new chef because they've have such a good experience with that chef and all three nursing unit managers who have experience with having a chef available say that they will fight for this arrangement with tooth and nail! They are willing to sacrifice an entire full-time nursing position in order to keep the chef! That is unique! They have done a complete turnaround –that is such good experience!

Thus, the innovation produced synergistic outputs at various levels, from increased personal recognition to a better work environment. The innovation also produced *antagonism* in that some partners felt some of their time was wasted due to professional battles in the hospital:

So I feel that 'the blinds went down' at the wards when we got out there [and tried to] get them to go along. They were a bit like: "Now they are coming to take our jobs." [...] In this project, from my point of view, we were completely dependent on optimism in order to make it happen. I think this [professional battles] quite simply delayed the project to a certain extent.

Despite some evidence that professional battles in the hierarchical setting delayed the innovation, the collaborative process mainly produced outputs that were in concert with the mission, and contributed to further building the hospital's good reputation.

Discussion

A large hospital in Norway initiated a patient malnutrition innovation that was fundamentally collaborative. The purpose of this paper is to examine its pilot project, utilising the Bergen Model of Collaborative Functioning to help illuminate the factors and processes that led to synergistic and antagonistic outputs.

Two aspects of the Mission were of fundamental importance to this collaboration. First, the Mission of profoundly altering the way in which patients received their nutrition encountered some resistance. The innovation intended to cross (yet respect) the hospital's hierarchical organisation. However, this required a shift from otherwise very precise and separate roles and a strict chain-of-command, which was followed for all other routines. Ultimately, the second important aspect of the mission – its universal appeal to all the partners – overcame the hierarchy-related problems. All of the partners agreed on the need for and utility of the innovation and thus were able to come together despite the obstacles. The above confirms the literature on the unifying effects of sharing a common goal in collaborations (Gray, 1989).

The innovation was very purposeful in its recruitment of partners. The leadership purposively selected partners who showed interest, who seemed able to contribute to the overall success of the innovation, and who related well to one another. Potential partners who resisted aspects of the innovation

were simply not included at first. The partners who were committed to the mission created a warm atmosphere through their shared commitment and positive relations.

The well-researched briefing document containing plans for the innovation included a Mission Statement that was crucial in uniting the partners, as indicated above. Also, as the innovation achieved success, 'victories' were communicated in such a way that not only fuelled the energies of those involved initially, but helped to win over some of the more reluctant persons who had initially been against the innovation. Likewise, the innovation encountered resistance in terms of getting proper funding. However, once the responsible authorities experienced the success of the innovation, and saw the positive impact of their efforts, they agreed to move funding from a nursing position to hire a chef.

Finally, as of this writing, the hospital has expanded the pilot to two other medical services, and the Board of Directors is considering implementation in the entire hospital. The Mission is now commonly agreed at the Hospital Board level, but arranging adequate financing and space for buffets are challenges to be overcome before universal adoption can be realised.

Conclusion

A collaborative approach to accomplishing a mission can help overcome organisational and financial hindrances in a complex organisation with a strong hierarchical management model. Success factors in the collaboration reported here included having a clear mission, a detailed implementation plan, the recruitment of committed partners, creating a clear structure for implementation, agreeing explicit rules and roles, obtaining leader commitment, trust and coordination, engaging in much face-to-face communication, celebrating accomplishments underway, and giving the innovation visibility and publicity.

As to methodology, the BMCF proved to have good utility in the study of this hospital innovation, expanding the numbers and types of contexts in which the BMCF has succeeded as a framework for the analysis of collaboration. Yet, the findings do suggest minor adjustments to the BMCF, to better illuminate the importance of planning and of contextual factors.

Implications

The findings of this research may facilitate improved functioning of current and future innovative collaborations in health care services and health promotion, and the study adds to existing evidence that the BMCF is a useful framework for the analysis of collaborative functioning. Yet to be examined is potential of the BMCF as a framework not just for analysis, but also as a framework for planning and implementation. Could the BMCF in combination with an action research methodology facilitate better collaborative functioning, especially in the form of more synergy and less antagonism? It would be illuminating to use the BMCF as a guide to establish innovations from the beginning.

Acknowledgements

About the Authors

Lise Corwin holds a Master in Health Promotion from the University of Bergen and is a Registered Nurse. She is currently Head of Health Promotion in a large Norwegian NGO in which collaborative innovations are essential. In her former job, she was leading a large Public Sector/NGO partnership for health promotion through a Norwegian county council. She has muchexperience as a lecturer on collaboration. She can be contacted at lise_corwin@hotmail.com.

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