

# Integration and collaboration in public health—a conceptual framework

Runo Axelsson\* and Susanna Bihari Axelsson

*Nordic School of Public Health, P.O. Box 12133, SE-402 42 Göteborg, Sweden*

## SUMMARY

With the increasing differentiation of organisations involved in the pursuit of public health, there is also a growing need for inter-organisational integration. Starting from the concepts of differentiation and integration, this article is attempting a theoretical reconstruction based on published research on inter-organisational integration in public health and related welfare services. Different forms of integration are defined and related to each other in a conceptual framework, which is in itself an integration of different theoretical perspectives. According to this framework, integration in the field of public health requires inter-organisational collaboration across different sectors of the society. Such intersectoral collaboration can be organised mainly in the form of multidisciplinary teams across the boundaries of different organisations and sectors. Such an organisation is fragile and volatile, however, which means that it needs a lot of management support in order to survive. Copyright © 2006 John Wiley & Sons, Ltd.

**KEY WORDS:** differentiation; fragmentation; integration; co-operation; collaboration; multidisciplinary teams

## INTRODUCTION

Integration has become an important issue in the development of the modern welfare society. The different welfare services have become more and more specialised and they are provided by an increasing number of different organisations, not only government agencies but also non-governmental organisations, community groups and private enterprises. With this increasing differentiation, there is at the same time also a growing need for integration of welfare services. Therefore, during the last 25 years, there have been initiatives to integrate services in many different fields of welfare, for example in vocational rehabilitation, care of the elderly, open psychiatric care, and other forms of community care (see e.g. Øvretveit, 1993; Huxham, 1996; Lindqvist and Grape, 1999; van Raak *et al.*, 1999; Secker and Hill, 2001).

The concepts of differentiation and integration were introduced by two organisational researchers, Lawrence and Lorsch (1967). In a theoretical

\* Correspondence to: R. Axelsson, Nordic School of Public Health, P.O. Box 12133, SE-402 42 Göteborg, Sweden. E-mail: Runo@nhv.se

reconstruction they concluded that a great deal of the existing knowledge about organisations could be reduced to these two concepts. According to their "contingency" theory, an organisation has to adapt to what goes on in the world outside. In order to do so, it tends to differentiate into parts, and the functioning of these separate parts has to be integrated if the entire organisation is to be viable. Integration is defined as 'the quality of the state of collaboration that exists among departments that are required to achieve unity of effort by the demands of the environment' (Lawrence and Lorsch, 1967, p. 11).

To integrate the activities of different departments in an organisation is a difficult task for the management of the organisation, but it is even more problematic to integrate the activities of different organisations. According to organisation theory, such inter-organisational relations are often more 'loosely coupled' than intra-organisational relations, since the different organisations may not be part of a common management hierarchy (Weick, 1979). This means that the traditional hierarchical co-ordination has to be replaced by a more or less voluntary co-operation or collaboration between organisations. In the organisational literature, these inter-organisational relations have been described as networks, partnerships, coalitions and strategic alliances of organisations, or as an 'ecology' of organisations (Hannan and Freeman, 1989).

Public health is a field of welfare with a strong inter-organisational character. In 1988, public health was defined by a British government committee as 'the science and art of preventing disease, prolonging life and promoting health through organised community efforts' (Acheson, 1988). More recently, the concept of public health has been broadened to include not only disease prevention and health promotion but also medical care and different forms of rehabilitation. With such a wide range of services, the inter-organisational character of public health has become even more pronounced (see Saltman and Figueras, 1997).

There are many different organisations involved in public health. These are organisations not only from the health sector but also from other sectors of the society. One of the main challenges is to bring all of these organisations from different sectors together in a common pursuit of public health. According to the Ottawa Charter for Health Promotion (1986), there is a great need for 'intersectoral' collaboration in public health. This collaboration has been described in terms of community health partnerships, healthy alliances or 'socio-ecological' approaches to prevention and health promotion (Davies and Macdonald, 1998). At the same time, however, the problematic nature of such inter-organisational integration has often been pointed out (see e.g. Bolland and Wilson, 1994; Mur-Veeman *et al.*, 1999).

In the literature of public health, as well as in the literature on welfare services in general, there seems to be a conceptual confusion related to the problems of inter-organisational integration (Huxham, 1996). There are many different and sometimes contradictory definitions of concepts like co-ordination, co-operation and collaboration (Konrad, 1996; Leutz, 1999; Gröne and Garcia-Barbero, 2002). Moreover, the theoretical connections between these and other related concepts are not always clear (Hvinden, 1994; Hudson *et al.*, 1999). This is typical for a relatively new field of research. However, with an increasing number of empirical studies, there is a growing need for a conceptual framework to guide further empirical research as

well as practical work on the integration of welfare services. The purpose of this article is to develop such a framework focusing on collaboration in public health.

Following Lawrence and Lorsch (1967), this article is attempting a theoretical reconstruction based on published research on inter-organisational integration and collaboration in public health and related welfare services. This means a reconstruction of concepts and relationships to describe and analyse the integration of services across different organisations and different sectors of the society. In order to be useful for researchers as well as practitioners, the concepts should be relatively few and the relationships between them relatively simple. This means admittedly a simplification of reality, but such a simplification may help to better understand the complexities of inter-organisational integration and collaboration in public health.

## DIFFERENTIATION AND FRAGMENTATION

Organisations are abstract phenomena. No one has ever seen an organisation, although it is generally accepted as an objective reality. According to the institutional school of organisation theory, organisations can be regarded as cultural artefacts that are created and re-created through human interaction. Once they are created, however, organisations tend to become 'institutionalised' as their roles and tasks are accepted and legitimised by the wider environment (Powell and DiMaggio, 1991; Scott, 1992).

In order to deal with their roles and tasks, there is a division of labour and responsibilities within organisations. This means a functional differentiation, which usually leads to a structural differentiation of departments and other organisational units (Galbraith, 1977). Thus, the concept of differentiation includes both functional and structural aspects. It also includes differences in attitudes and behaviours among the different functional departments, which may be a consequence of their different roles and tasks. According to Lawrence and Lorsch (1967), differentiation among organisational units refers to differences in orientation as well as in the formal structure. These differences may be found on different organisational levels. On the intra-organisational level, there may be a differentiation of departments and other units within an organisation. On the inter-organisational level, there may be a similar differentiation of organisations within the society or within a sector of the society (see Alter and Hage, 1993; Mintzberg, 1993).

In the inter-organisational field of public health there is a functional differentiation of roles and tasks in connection with disease prevention, health promotion, medical treatment, rehabilitation etc. There is also a structural differentiation of organisations dealing with public health. These are organisations within the health sector, but also from other governmental sectors such as education, social service, environmental protection, employment service etc. There are also voluntary organisations and private companies involved in public health. All of these organisations have different formal structures and they have also different 'organisational cultures' (Bate, 2000). These cultural differences are based on professional attitudes and behaviours, which are related to the different roles and tasks of the organisations.

During the last 15 years, there has been an increasing specialisation and professionalisation of roles and tasks in public health, as in most other fields of welfare (see Abbott, 1988). This means an increasing functional differentiation,

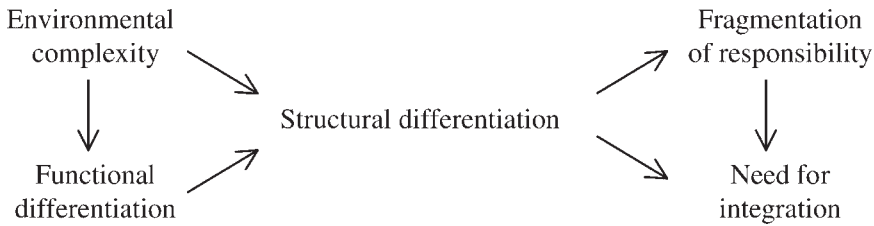


Figure 1. Relationships between differentiation, fragmentation and need for integration

which has also led to an increasing structural differentiation of organisations dealing with public health. According to the contingency theory of organisations, this differentiation may be explained by the complexity of the environment, for example the needs of the patients or clients (cf. Lawrence and Lorsch, 1967). With the increasing differentiation, however, there is also a growing need for integration in the field of public health. Otherwise there will be a fragmentation of responsibilities among the different organisations (Øvretveit, 1993). Fragmentation can be defined as a state of differentiation without the integration that is required to achieve unity of effort.

Fragmentation of responsibilities usually leads to efficiency and quality problems of different kinds. In the literature of public health, these problems are often referred to as 'integration problems' (Davies and Macdonald, 1998). There are a number of such integration problems reported in connection with public health and other welfare services, for example duplications, gaps, inconsistencies or discontinuities in the provision of services (see Bolland and Wilson, 1994; Glendinning, 2003). Moreover, the patients or clients may have to be referred to a number of different organisations in order to receive services (Lindqvist and Grape, 1999). Following contingency theory, problems like these are further strengthening the need for integration. The theoretical relationships are summarised in Figure 1.

Since the Ottawa Charter for Health Promotion, there have been a number of initiatives to improve the integration of the different organisations and sectors involved in public health (WHO, 1997). The main motive behind these initiatives is to avoid the fragmentation of responsibilities through a more 'holistic' approach to public health, which means that the total needs of the patients or clients should be considered in the planning and provision of different services (Evans and Stoddart, 1990). There are also other motives, which are related to the efficiency and quality problems resulting from fragmentation. One motive is to use the existing resources in a more efficient way by exploiting different economies of scale and scope. Another motive is to improve the quality of the services by pooling skills and expertise from the different organisations involved (see Gray, 1989; Ferlie and Pettigrew, 1996).

## DIFFERENT FORMS OF INTEGRATION

Inter-organisational integration can take many different forms. According to institutional economic theory, such integration can be achieved either through the

'visible hand' of a management hierarchy or through the 'invisible hand' of market competition (Williamson, 1975). The management hierarchy means a top-down co-ordination of organisations, while the market competition leads to contractual relations between the organisations. There is also a third option, however, which has been explored in the literature on organisation and management. This is the network mode of integration, which means a more or less voluntary co-operation or collaboration between organisations that are not part of a common hierarchy or market (Powell, 1990; Thompson *et al.*, 1991; Child and Faulkner, 1998).

Since most of the organisations involved in public health are not market oriented and many of them are not part of a common hierarchy, the integration of these organisations is most often done according to the network mode. This means that integration in public health is primarily a question of co-operation and collaboration between different organisations. There are also elements of co-ordination, since some of the organisations may belong to the same government hierarchy, but contracting seems to be more unusual in the field of public health.

The different forms of integration in public health and related welfare services are often pictured along a continuum of inter-organisational relations, extending from a complete autonomy of organisations through intermediate forms of consultation and consolidation to a merger of organisations (Konrad, 1996; Hudson *et al.*, 1999). If the organisations are autonomous, the inter-organisational field is differentiated but not integrated. This means a fragmented field of organisations. On the other hand, if the organisations are merged, they are completely integrated and there is no differentiation. This form of integration may however lead to new forms of differentiation and fragmentation (Leutz, 1999). Co-ordination, co-operation and collaboration are usually placed somewhere in the middle of this continuum, between consultation and consolidation, although there are many different and sometimes even contradictory definitions of these forms of integration.

In order to sort out the relationships between the different forms of integration, a distinction can be made between two main dimensions, vertical and horizontal integration (Hvinden, 1994; Axelsson, 2002). Vertical integration takes place between organisations or organisational units on different levels of a hierarchical structure, while horizontal integration takes place between organisations or units that are on the same hierarchical level or have the same status. The different forms of inter-organisational integration have different emphasis on vertical and horizontal integration.

By combining these dimensions it is possible to construct a simple conceptual scheme of the main forms of integration, which is shown in Figure 2.

According to this scheme, contracting is a form of integration with a low degree of both vertical and horizontal integration. This is almost a lack of integration. Instead, the organisations may be competing on a market, and this competition may lead to some kind of integration through contractual relations (cf. Saltman, 1994).

Co-ordination can be defined as a form of integration with a high degree of vertical integration but a low degree of horizontal integration. This means that integration is achieved mainly through the existence of a common management hierarchy. Decisions on integration are made at the top of the hierarchical structure and

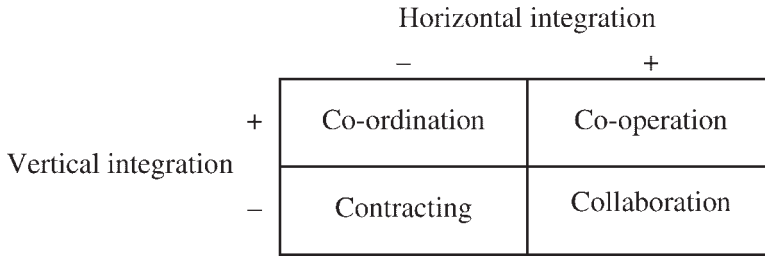


Figure 2. Conceptual scheme of different forms of integration

implemented on lower levels, for example by bureaucratic mechanisms of supervision and control (see Pugh and Hickson, 1976; Meyer, 1985).

Co-operation can be defined as a form of integration with a high degree of both vertical and horizontal integration. This form of integration is usually based on hierarchical management, but combined with voluntary agreements and 'mutual adjustments' between the organisations involved (Mintzberg, 1993). This means that the decisions of the management hierarchy are wide enough to give room also for more informal contacts and communications between the different organisations.

Collaboration, finally, can be defined as a form of integration with a high degree of horizontal integration but a low degree of vertical integration. This means that most integration is accomplished through voluntary agreements and mutual adjustments between the organisations involved. This form of integration is based on a willingness to work together and it may be implemented through intensive contacts and communications between the different organisations (Alter and Hage, 1993).

All of these forms of integration can be effective, depending on the degree of differentiation. According to Lawrence and Lorsch (1967), a low degree of differentiation can be managed through vertical integration, but higher degrees of differentiation require more horizontal integration. This means that co-ordination may be an effective form of integration when there is a low degree of differentiation, while co-operation and collaboration may be more effective when there is a high degree of differentiation.

As mentioned above, inter-organisational integration in public health is primarily a question of co-operation and collaboration. This can be explained by the degree of differentiation in the field of public health. The existence of co-ordination and the proportion of vertical integration in co-operation are also depending on the amount of government involvement. When many other sectors of the society are involved in the pursuit of public health, for example private and voluntary sectors, there is no common hierarchy and the inter-organisational integration is usually accomplished through collaboration, or more exactly through intersectoral collaboration.

## COLLABORATION AND ORGANISATION

Inter-organisational collaboration has been described as a means as well as an end in the literature of public health. It has been described as a means to improve the

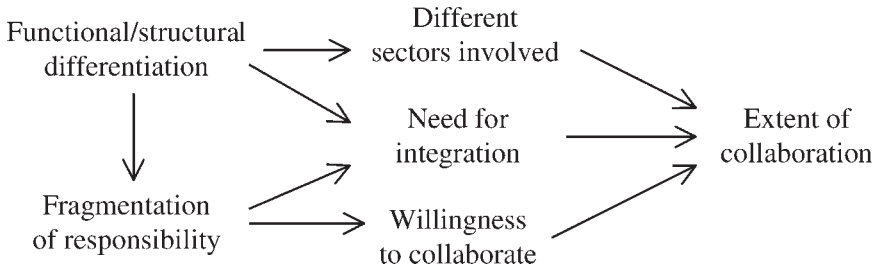


Figure 3. Factors and relationships leading to inter-organisational collaboration

efficiency and the quality of public health by synergistic combinations of resources and expertise from different organisations. It has also been described as a more holistic approach to public health, which is often regarded as an end in itself. According to this view, inter-organisational collaboration allows organisations to constructively explore their differences and find solutions that go beyond their own limited visions of what is possible (Gray, 1989; Huxham, 1996).

Beside the general need for integration in the field of public health, there is a particular need for inter-organisational collaboration as a result of the high degree of differentiation in this field. The extent of such collaboration, however, is also dependent on the involvement of organisations from different sectors and their willingness to collaborate. As mentioned above, inter-organisational collaboration is accomplished mainly through voluntary agreements between organisations. Moreover, both the involvement of different sectors and the willingness to collaborate are related to the differentiation and fragmentation of the inter-organisational field of public health. Building on the theoretical relationships in Figure 1, the different factors and relationships leading to collaboration are summarised in Figure 3.

Inter-organisational collaboration may be organised in different ways, depending mainly on the degree of horizontal integration required. There are a number of organisational arrangements for such integration described in the literature of public health, for example agreements between organisations on clinical guidelines or client pathways (Campbell *et al.*, 1998). There are also examples of inter-agency meetings to exchange information and to plan the treatment of different groups of patients or clients (Jakobsson *et al.*, 2002). Other examples include appointment of case managers, co-location of officials from different agencies, pooling of budgets, and linking of information systems or databases (see van Raak *et al.*, 2003; Hultberg *et al.*, 2003). Most of these organisational arrangements are however used in connection with inter-organisational co-operation rather than collaboration.

Inter-organisational collaboration in public health is often organised in the form of multidisciplinary teams. Such a team can be defined as a small group of people, usually from different professions, who are working together across formal organisational boundaries to provide services to a specific group of patients or clients (Øvretveit, 1993). This means, in effect, an inter-organisational 'matrix structure', where different multidisciplinary teams provide horizontal integration between different organisations, which may belong to different sectors of the society (cf. Galbraith, 1977; Child and Faulkner, 1998). This is a complicated organisational



structure, where the members of the different teams may feel themselves torn between the teams and their respective organisations.

There are different types of multidisciplinary teams, depending on the extent of inter-organisational collaboration (Schofield and Amodeo, 1999). When collaboration is limited, the organisations involved may put together multidisciplinary teams for temporary projects oriented towards different groups of patients or clients. Such teams may be used also in inter-organisational co-operation. When collaboration is more extensive, however, multidisciplinary teams may be established as a more permanent part of the organisations involved. Such teams may have a stable membership, representing different professions and different organisations, or they may have a combination of core members and associate or peripheral members (see Øvretveit, 1993; Huxham, 1996; Baron-Epel *et al.*, 2003; Raak *et al.*, 2003).

The most successful forms of inter-organisational collaboration in public health seems to be those where stable multidisciplinary teams have been established and sustained over a longer period of time (Health Canada, 1999). Such teams can provide a broad range of services, for example cardiac care, including nutrition, exercise, stress management and smoking cessation, along with assistance in maintaining lifestyle changes (Johnson *et al.*, 2003). In these teams, the members know and trust each other, they are working close together and they have similar interests, values and goals. Decision-making in such teams is usually collegial or consensual and there is a common team culture (van Raak *et al.*, 1999; Vangen and Huxham, 2003)

Before reaching this stage of development, however, there is a long and arduous process of team building. Working together with others is never simple, but when collaboration is across organisations the complications are magnified (Huxham, 1996). Therefore, the process of building a multidisciplinary team goes through at least four distinct stages of development (cf. Daft, 1999). First there is a forming stage, when the members of the team are recruited or appointed by their respective organisations. After that comes usually a stage of storming, when there are disagreements and conflicts of interests, values and goals due to the different professional and organisational cultures of the team members. If and when these conflicts are resolved, there is a stage of 'norming', when the members begin to trust each other, formulate shared goals and develop a common team culture. If this stage is successful, the team may reach a stage of performing, when the members are concentrating on accomplishing their goals.

If it is not possible to resolve the disagreements and conflicts among the team members during the storming stage, the multidisciplinary team may have to be dissolved and the team building process will have to start from the beginning again. Likewise, if it is not possible to formulate shared goals in the norming stage, or if the team is not performing well enough, the team building process may have to return to the storming stage. The same may happen if members of the team are replaced or new members are entering the team. The different stages of this process are summarised in Figure 4.

In the inter-organisational matrix structure, the horizontal integration between the different organisations is accomplished through intensive contacts and communication between the members of the multidisciplinary teams, while there is a limited



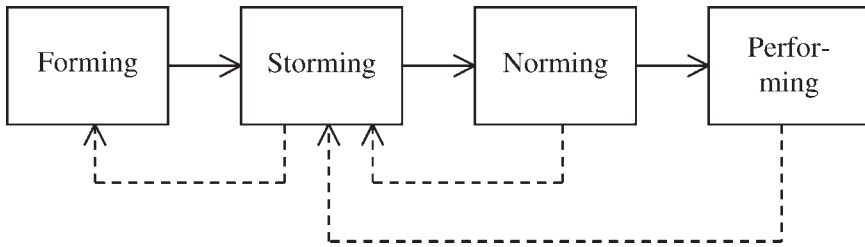


Figure 4. Stages of multidisciplinary team building

amount of vertical integration by the different organisations involved. However, as the teams develop their collaboration and move through the different stages of team building, they tend to become more and more autonomous from their respective organisations. There is a general tendency among 'street-level bureaucrats' to identify more with their clients than with their parent organisations (Lipsky, 1980). They may also involve the clients in their decision-making. This means that the top-down vertical integration may be replaced by a bottom-up vertical integration by empowered patients or clients (see Barnes and Walker, 1996; Leutz, 1999).

#### MANAGEMENT OF COLLABORATION

According to Lawrence and Lorsch (1967), the most important task for the management of an organisation is to achieve a state of differentiation and integration required by the demands of the environment. On the inter-organisational level, the differentiation of organisations may be more or less given, but it is necessary to achieve a state of integration required to deal effectively with this state of differentiation. This means that management on the inter-organisational level is mainly a question of implementing effective forms of integration.

The management of integration is difficult, but the management of collaboration seems to be particularly difficult. In the literature of public health, a number of barriers to inter-organisational integration and collaboration have been described. Most of these are structural barriers related to the existence of different administrative boundaries, different laws, rules and regulations, different budgets and financial streams, and different information systems and databases (van Raak *et al.*, 1999, 2003). There are also barriers that are more related to the existence of different professional and organisational cultures, different values and interests, and differences in the commitment of the individuals and the organisations involved (see e.g. Vangen and Huxham, 2003; Glendinning, 2003).

These barriers to inter-organisational integration and collaboration are reflecting the high degree of differentiation in the field of public health. As mentioned before, the concept of differentiation refers to differences in orientation as well as in the formal structure of organisations (Lawrence and Lorsch, 1967). However, as some researchers have pointed out, it is the differences in values and cultures that are the most difficult barriers to integration. 'Structures can be changed by political fiat, but values change much more slowly' (Godfrey *et al.*, 2003).

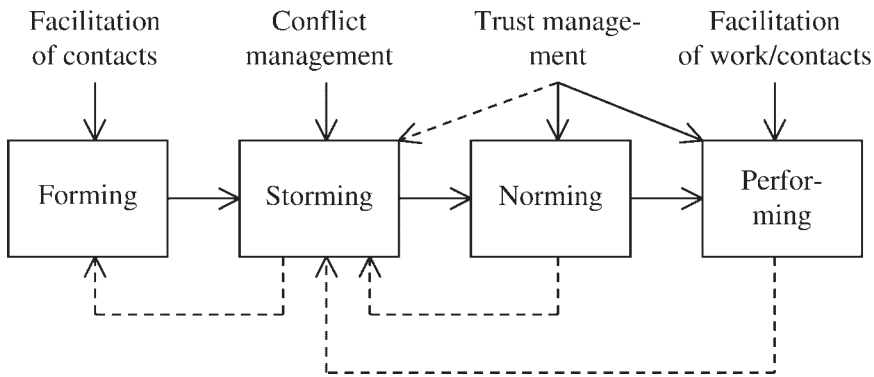


Figure 5. Management of inter-organisational collaboration

Although there is a lot written about the structural barriers to inter-organisational collaboration, they can usually be managed by the organisations involved through formal agreements on rules, regulations and financial support (van Raak *et al.*, 2003; Hultberg *et al.*, 2003). The main task for the management of collaboration is therefore to deal with the barriers that are related to cultural differences, values, interests and commitments. These barriers have to be managed within each multidisciplinary team, and between the team and the collaborating organisations, usually by the leader of the team. A team leader may be appointed by the collaborating organisations, but may also be elected by the members of the team. In some teams, there may even be a rotation of the leader position among the members of the team (Øvretveit, 1993).

The management of inter-organisational collaboration can be described in relation to the different stages of team building as shown in Figure 5.

In the forming stage, the main task of the team leader is to facilitate contacts and communications between the newly recruited or appointed members of the multidisciplinary team. The members have to get acquainted with each other and learn how they can work together. Another managerial task is to keep in touch with the collaborating organisations. There is a difficult balance between autonomy and accountability in a multidisciplinary team, which requires a skilful communication based on knowledge of the organisations involved (see Huxham, 1996; van Raak *et al.*, 1999).

In the storming stage, the team leader has to manage conflicts within the multidisciplinary team by helping the members of the team to find common interests, values and goals. This may require long and difficult negotiations between the team members. Such a process may however lead to a development of 'social capital' within the team (Putnam, 1993). This means that, as an outcome of the storming stage, there may be an increasing mutual understanding and a strengthening of social bonds between the members of the team, which may limit and ultimately override their initial differences in interests, values and goals (see Ring and Van der Ven, 1994).

In the norming stage, the most important task of the team leader is to build and sustain trust among the members of the multidisciplinary team. There is an

agreement among many researchers that the degree of mutual trust is the most important factor in any collaborative endeavour (cf. Ring, 1997; Child and Faulkner, 1998). A trust building process may have started already during the storming stage, but it should be systematically managed during the norming stage. The management of trust requires a continuous process of 'nurturing' (Vangen and Huxham, 2003). This means, among other things, that the team leader has to secure an open flow of information and an equal distribution of power and rewards within the team. As a result of such a process, the members may be able to formulate shared goals for the team and also develop a common team culture (see Mur-Veeman *et al.*, 2001; Page, 2003).

In the performing stage, finally, the team leader can concentrate on facilitating the work of the multidisciplinary team towards goal achievement. At the same time, however, the process of trust building from the norming stage must be continued in order to sustain the mutual trust among the members of the team. Moreover, the balance between autonomy and accountability may have to be reconsidered if the team becomes more autonomous from the parent organisations and the patients or clients become more involved in the decision-making. This may require considerable diplomatic efforts from the team leader (Øvretveit, 1997; van Raak *et al.*, 1999).

In addition to these management tasks, or as a part of them, it is important not only for the leader but also for the members of a multidisciplinary team to continuously evaluate both the process and the effects of the inter-organisational collaboration. In the field of public health, this means that the multidisciplinary teamwork as well as the health effects of the different services should be continuously evaluated (Mitchell and Shortell, 2000). A continuous evaluation is necessary for creating a 'learning organisation' (Senge, 1990), and organisational learning is necessary for developing and sustaining inter-organisational collaboration.

## CONCLUDING REMARKS

Public health is an inter-organisational field with a high degree of differentiation. There are many different organisations involved in the pursuit of public health. This means, at the same time, that there is also a great need for integration of the different services provided. According to the theoretical reconstruction attempted in this article, the high degree of differentiation requires a high degree of horizontal integration. This can be achieved mainly in the form of inter-organisational co-operation or collaboration. The difference between these forms of horizontal integration is that co-operation also implies a high degree of vertical integration. Such integration is usually not possible when different sectors of the society are involved. Inter-organisational integration in public health is therefore mainly a question of intersectoral collaboration.

There are many different organisational arrangements that may be used to promote inter-organisational integration, but intersectoral collaboration in public health is organised mainly in the form of multidisciplinary teams. This means, in effect, a matrix structure, where the teams provide horizontal integration between different organisations and sectors of the society. A multidisciplinary team is, however, a

fragile and volatile form of organisation, which needs a constant nurturing in order to survive. In fact, the management of inter-organisational collaboration seems to be a challenge for practitioners as well as researchers in the field of public health. Hopefully, this conceptual framework may contribute to a better understanding of the complexities of intersectoral collaboration in public health, which may be useful both for practical managers and researchers in the field.

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