Universal Journal of Public Health 2(5): 147-153, 2014
DOI: 10.13189/ujph.2014.020502 http://www.hrpub.org

# Management, Structure and Perceived Positive Outcomes of Hospital Alliances: An Exploratory Multinational Study

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**Abstract** Pooling resources, knowledge and technologies is a necessity in the health sector. Many hospitals do so through alliances with compatible establishments, which have been studied from the organizational perspective for many years. However, many alliances are reported to fail and the conditions which could foster their success are still not well known. The aim of this exploratory study was to identify the administrative and governance structures of hospital alliances associated with reported positive outcomes. A questionnaire was mailed to hospital administrators and directors from Germany, Switzerland, Austria and Canada. Administrative and governance practices were ascertained and correlated with reported outcomes. Management practices pertaining to initiation, formalization, steering and operations of alliances were correlated with financial, treatment and corporate outcomes. Characteristics significantly linked to perceived positive alliance outcomes include: clearly defined targets and their monitoring, governance by executive management and involving the board of directors, rather formal coordination mechanisms, a project champion and a written contract including conflict resolution mechanisms.

**Keywords** Alliance, Network, Hospital, Governance, Structure, Management

## 1. Introduction

Increasing therapeutic potential, associated costs and resulting financial constraints have had profound effects on health care both in the public and private sectors [1]. Hospital administrators are faced with technology, infrastructure and expertise requirements which force them to look for ways to make the best use of available resources, including cooperation with other centers of medical competence through various types of alliances [2]. Hospital alliances can best be described as mutual agreements between compatible institutions enabling the sharing of equipment, expertise, costs, operations and human resources. Their degree of complexity and their breadth vary, which is reflected through their structure and their day-to-day management. The number of reported alliances among health care organizations has been increasing in the last decades [3-4]. A survey of US healthcare executives reported that two-thirds of them were engaged in one or more strategic alliances [5].

It is assumed the alliances can help in dealing with rising costs and resource scarcity without losing autonomy, control, flexibility and with lower transactional burdens than the alternative inter-organisational arrangements [6].The development of alliance management skills can also be a potential source of competitive advantage [7]. However, expected benefits are not always present, the overall success rate of alliances being far from optimal, with many authors reporting that over 50% of alliances have failed[8-12]or noting the absence of any significant economic advantage in a hospital alliance[13-15].

Much emphasis has been placed on the importance of compatibility between partners' characteristics to foster successful alliances [16-17].It also appears that one of the main factors influencing success is the capacity to put in place effective and efficient ways to coordinate and control their joint efforts [18]. However, it seems that managers use less than 8% of the time spent on creating and planning the alliance on setting up management systems[19-20].

The health care industry is considered as distinct because of its unique combination of characteristics: the difficulty to measure the output, the complexity and variability of the work, its urgent nature, its lack of error-tolerance, its highly cross-functional dependency, the high specialisation of its personnel, the loyalty of professional groups to their profession rather than to the organisation, inadequate means to control physicians and the presence of dual authority lines[21].Management in an industry combining these

attributes is very challenging; therefore governance issues are of high relevance.

## 2. Conceptual Framework

A pilot study investigating management practices in six alliances including three hospitals [22]concluded that clear objectives and a formalised governance structure are key assets to ensure the success of an alliance, in addition to a trusting relationship between partners. However, carefully structured and documented agreements are not sufficient: expectations, perceptions and behaviours of key executives must also be aligned. The study of success factors for strategic alliances in the food, health and personal care industries [23]identified five factors influencing success: trust, senior management support, ability to meet performance expectations, clear goals and partner compatibility. Common factors for a positive alliance outcome were: defined business objectives, active involvement of senior management, coordination and decision-making structures, arbitration rules as well as shared behavioural guidelines. Established processes in alliances[2,24]such as regular meetings, manuals of best practices, checklists, as well as dedicated alliance managers who focus on alliance work and progress, all contribute to successful alliances [25].

Effective alliance control, such as the regulation and monitoring of target achievement, is important for satisfactory alliance performance [26]and can be attained through governance structures, contractual specification and informal mechanisms. Also important to governing an alliance is an established arbitration system to deal with the process when it goes awry [27]. The accepted use of conflict resolution mechanisms may limit the negative impacts of disagreements [28]and is particularly important where high levels of trust are lacking. Various governance and management practices have been identified as potential success factors for hospital alliances. They include the executive partner sharing of expectations and understanding of the purposes of the alliance, consensus-driven decision-making and representation of all members in the governance processes, commitment of senior management, structured management mechanisms and an arbitration system. Unfortunately, the empirical basis for such assertions is often lacking, or derived from observations made in other sectors. Furthermore, it is still not known which expectations are more likely to be fulfilled through hospital alliances, or which specific governance and management practices are related to better outcomes.

## 3. Aim and Research Questions

The aim of this exploratory study was to further knowledge on hospital alliances with regards to the following dimensions: governance of alliances, expectations of partners and governance characteristics associated with fulfilled expectations. Three research questions were investigated:

**3.1-**What management practices are in use in inter-hospital alliances?

**3.2-** What expectations in terms of benefits and outcomes are reported by hospital executives regarding the alliances they are involved in?

**3.3-** Which management practices are related to positive alliance outcomes for the hospital?

## 4. Materials and Methods

### 4.1. Participants

Private and public hospital administrators and directors in Europe and Canada were requested by mail to answer a questionnaire on alliances, regarding the structure, processes, governance and outcomes for their respective institution. Using public lists of hospital administrators and directors, a questionnaire was mailed out to a total of 2,365 potential participants. Qualifying alliances had to fulfill two requirements: 1) they had to include independent hospitals with distinct owners and/or governing board; 2) they had to be dedicated to hospital service delivery.Incomplete questionnaires (in the case of a positive response to an alliance but less than half of the remaining questions answered), or alliances which were only in the planning stage, were eliminated from the final database which included 313 participants. The overall valid response rate was 13% which is well within the norm for mail-in surveys [29]. Participants came from Germany (59%), Canada (16%), Austria (7%) and Switzerland (18%). Participants came mostly from public hospitals (87%), a smaller proportion working in private hospitals (13%).

### 4.2. Instrument

A 13-item questionnaire with fixed alternatives and open-ended questions was specifically designed by the authors for the study. The following topics were covered: a) involvement in an alliance, or reason for non-involvement; b) medical area of the alliance and the hospital disciplines involved; c) structural elements (such as contract, initiating professional group, project champion, duration); d) expected and reported outcomes of the alliance; e) governance, committee membership and decision-making processes.Equivalent versions in German, French and English were prepared, cross-checked by native speakers and pre-tested in a sub-sample of institutions selected according to the author's respective country of residence.

### 4.3. Procedure

The 2012 database of European addresses for Germany, Switzerland and Austria was obtained from DKA Deutsches

Krankenhaus Adressbuch, Freiburg, Germany. The Canadian addresses were obtained from the 2012 Guide to Canadian Healthcare facilities, Canadian Healthcare Association. The questionnaires were addressed to the hospital director and / or to the medical director along with a self-addressed envelope for returns.

### 4.4. Data Treatment and Analysis

Item scores were used in three ways: directly in specific descriptive analyses, aggregated to create composite scores and transformed into standardized scores for comparison purposes.

In order to study the relationship between structural and organizational characteristics of alliances and the presence of positive outcomes (defined as fulfilled expectations), three categories of outcomes were created and computed using standardized Z scores: financial outcome (1 item: economic success), treatment outcomes (2 items: quality of treatment and access to innovations) and corporate outcomes (2 items: image and competitive position). These standardized scores were compared across hospitals according to the presence or absence of structural and organizational characteristics within the alliance using basic T-tests.

## 5. Results

Among the 313 respondents, 189 (59%) reported being involved in one inter-hospital alliance, or two or more (41%). Main motives reported for not being in an alliance (n=124) were a prior inclusion in a hospital group (52%), competition from neighbouring hospitals (19%), or the perception that an alliance was unnecessary (15%). Only 3% of respondents reported having had a previous negative experience with alliances. The main medical fields of the alliances were cancer, heart and brain with over half of the alliances involving one or more of these areas. The corresponding medical disciplines, cardiology, oncology, neurology, radiology, internal medicine and surgery were predominantly involved in alliances.

**Table 1.** Correlations between alliance duration, hospital size and number of governance structures and processes, expectations and achievements

| Governance indicators | Duration | Size |
|---|---|---|
| Governance processes | -,155* | -,017 |
| Governance structures | -,208 | -,023 |
| Expectations indicators | | |
| Expectations | -,185* | -,041 |
| Fulfilled expectations | ,037 | -,026 |

*Significant at the .05 level.

Some of the alliances (n = 15) had been ongoing for more than 20 years while others were just starting out, the median being 5 years. In order to ascertain if the duration of alliances and the size of the institutions involved were related to the number of governance processes and structure, on the one hand and expectations on the other hand, Spearman correlations were computed (see Table 1). One weak negative correlation linking the duration of alliances to governance was found: long term alliances were characterized by a slight tendency to reduce the number of processes such as meetings, target setting and monitoring as well as a smaller number of expectations.

The characteristics of the alliances were allocated to four dimensions: initiation, formalization, governance and processes. The proportion of alliances where these characteristics were reported was then tallied (see Table 2).

**Table 2.** Proportions of alliances according to organizational structure and conditions reported by respondents.

| Categories | Characteristic of alliance | Alliances |
|---|---|---|
| Initiation | Management | 75% |
| | Physicians | 37% |
| | Both | 11% |
| Formalization | Written contract | 85% |
| | Verbal agreement | 15% |
| Governance | Project champion | 84% |
| | Executive management | 72% |
| | Steering committee | 35% |
| | Board of trustees | 25% |
| | Manned office | 22% |
| | Third party management | 6% |
| Processes | Alliance project meetings | 58% |
| | Target setting meetings | 36% |
| | Target achievement meetings | 28% |
| | Conflict resolution mechanism | 28% |

Most alliances were governed by executive management with only a third of the alliances having a steering committee. The composition of the steering committee, whether partner delegates, assignees or a third party was not related to any of the outcomes. The majority of alliances had a project champion (84%), indicating that one important member of the organisation was identified as the promoter and driving force behind the alliance. Most were initiated by management (75%) and were documented with a written agreement (85%), of which less than a third (28%) included conflict resolution mechanisms.

A breakdown of the individual alliance targets and their frequency of achievement (see Table 3) showed that economic success was expected and reported in close to 60% of the alliances, while improvement in medical services and hospital image were more often achieved (88%) than was initially expected.

**Table 3.** Proportions* of alliances according to expectations and fulfillment of goals as reported by the respondents

| Expectations | Expected | Fulfilled |
|---|---|---|
| Patient services improvement | 60% | 88% |
| Economic success | 59% | 59% |
| Hospital image improvement | 37% | 50% |

*Most respondents reported more than one expectation.

Other positive outcomes of alliances were noted in terms of improvement of competitive position (46% of the alliances), access to innovation (43%) and employee work conditions (36%).

In order to study the relationship between the presence or absence of alliance characteristics and possible increases in perceived positive outcomes, a series of T-tests with Bonferroni corrections were conducted using the various outcomes as dependent variables, after being transformed in standardized scores. Alliances with, or without, the aforementioned characteristics were then compared and a number of significant increases in standardized positive outcome scores was observed (see Table 4).

**Table 4.**Standardized outcomeincreases[1] according to the presence or absence of selected alliance characteristics

| Alliance characteristics | Financial outcome | Treatment outcomes | Corporate outcomes |
|---|---|---|---|
| **Initiation** | | | |
| Management initiated | +0.34* | n.s | n.s |
| Physician initiated | n.s | +0.41** | n.s |
| **Formalisation** | | | |
| Written contract | +0.59** | n.s | n.s |
| Conflict resolution mechanism | +0.40** | +0.47** | n.s |
| Manned office | n.s | n.s | +0.41* |
| **Management** | | | |
| Board of trustees involved | +0.54*** | n.s | n.s |
| Exec. management involved | n.s | +0.32* | +0.37* |
| Project champion | n.s | +0.53** | n.s |
| **Processes** | | | |
| Regular project meetings | +0.33* | n.s | n.s |
| Target achievement monitoring | n.s | n.s | +0.55*** |

[1]T-test: * p<.05; ** p<.01; *** p<.001

Significant increases were found for positive financial outcomes when alliances were initiated by management, formalized through a contract, when an agreed conflict resolution mechanism was present, when the board of trustees was involved and regular alliance meetings were held.

Improvements were also found for treatment outcomes when the following conditions were met: alliances initiated by physicians, an agreed conflict resolution mechanism, executive management involvement, or existence of an alliance project champion. Finally positive corporate outcomes increased when alliances included regular target monitoring, executive management involvement or the presence of a manned office.

# 6. Discussion

The aim of this study was to describe the administrative and governance practices in use in inter-hospital alliances and document the related expectations and outcomes of these alliances as reported by hospital managers and directors.

Results indicated that hospital alliances are characterized by non-uniform organizational structures and mechanisms which vary in terms of complexity, management involvement and governance. However, a combination of specific structures and mechanisms, which appear to be linked to a larger number of reported positive alliance outcomes, has been identified. A weak, but significant, negative relationship was observed between alliance duration and the number of governance processes and number of alliance goals. This suggests that partnering efforts could become more focussed and efficient with time. This is consistent with research results [30-31]which showed that trust development between the partners allows fewer hierarchical controls and looser practices in the alliances over time. The vast majority of respondents in this study qualified their alliances as successful, while the literature indicates that a sizeable proportion of alliances fail. Prior alliance experience has been reported to contribute to alliance success [17,32,33]. Here, neither “older alliances”, nor hospitals with multiple versus single alliances, showed differences in the proportion of successful outcomes. However, the likely presence of a positive selection bias in our sample precludes any definitive conclusion to that effect, considering the low number of unsuccessful alliances that were reported.

The overall success of the alliance (measured in terms of the number of success factors observed) was similar irrespective of whether the alliances were initiated by management or a physician. However, the majority of alliances were initiated by management (75%) and in these cases the alliance was more likely to achieve a positive financial outcome. When a physician initiated the alliance a successful treatment outcome was more often observed. The data corroborates management theory where organizational outcomes can partially be predicted by managerial background characteristics [34], in particular, in hospitals where the managers and clinicians complement each other [35], with management generally lacking clinical practice and physicians lacking financial acumen.

Most alliance agreements were found to be in the form of a written contract, which was related to a higher likelihood of positive financial outcome for the alliance. Contracts can be costly and time-consuming. A Coopers & Lybrand study

showed that executives spend 19% of their time drafting the legal documents for an alliance [20].Also important to alliance success is an established arbitration system in the contract. The existence of a formalised conflict resolution process was related here to improvement of medical treatment and economic success of the alliance and, to a lesser extent, to the access to innovation. This is in accordance with the literature where the accepted use of conflict resolution mechanisms may serve to limit the damages of disagreements [28], reduce partner opportunism and can help protect proprietary assets [36].

Governance mechanisms are of particular relevance in alliances when compared with other inter-organisational relationships due to the non-mandated, voluntary nature of partner interactions in alliances. Most alliances were initiated and managed with the direct involvement of executive management which results in improvements in medical treatment, corporate position and hospital image as a consequence. This probably reflects the frequent participation of experts with both medical and management background in the hospital executive management. Steering committees were present only in about one third of the alliances. Involving the board of directors in the alliance governance resulted in a perceived improvement in the economic situation and competitive position.

Guidelines for effective alliance governance from the literature are limited. The governing bodies of alliances tend to include at least one representative from each participating organisation since shared decision-making between partners has been reported to contribute to success [17]. In this sample the committee membership (whether direct representative, dual nominees or assigned third parties) was without influence on the alliance outcome.

Alliance project champions were identified in most cases and their presence significantly related to more positive outcomes for the alliance. In particular, both medical treatment and the competitive positioning of the healthcare provider are improved. A project champion can be described as someone exhibiting personal commitment to a project, generating support for the project from others and advocating the project beyond their job requirement. Several authors [37-38]have shown that involvement of a project champion equates with project success. Since alliances are fluid processes with low barriers to exit[39], « softer issues » such as personal relationships, credibility and trust are important to ensure resource commitment to the alliance. The direct influence of a project champion can therefore be real but difficult to quantify.

The establishment of institutionalised alliance capability[7]and cooperative competency [40]which are not restricted to single individuals, provides the partner with competitive advantage. In particular alliances reliant on reciprocal interdependence, which are particularly the case in patient service provision in health care, require more complex coordination mechanisms than alliances established on the basis of sequential, or pooled, interdependence [31,41]. Regular meetings, manuals of best practices, checklists, as well as dedicated alliance managers who focus on alliance work and progress, all contribute to success[25].

Regular and periodic alliance project meetings or target setting were often reported, with target monitoring in close to 30% of alliances, whereas a manned alliance office supporting the alliance, existed in only 22% of the alliances. All of these processes are related to better alliance outcomes, regardless of the presence, or composition, of the steering committee. These formalised processes are in line with the success factors reported in the literature [2,24].The presence of a manned office, dedicated to the alliance, improved the hospital image, echoing the results of a study of Taiwan hospitals which showed that the highest score directors assigned to alliance outcomes was for improvement of hospital image and reputation[42].Firms with a dedicated alliance function achieved a 25% higher long-term success rate than those without and this seems to be more important than prior experience in building alliance capability [2,43].

The most frequent expectations reported for hospital alliances were improvements in medical treatment (79%), patient services (60%), followed by economic success (59%), which all ranked higher than hospital image improvement (37%). Generally the rationale for forming alliances rests on attempts to increase market share, achievement of optimal size, integration across specialised services, increase in volumes of highly specialised services, improved access to care, economic gains and total healthcare expenditure reductions[14].All of these expectations were reported here, albeit with slight variations from one country to the other.

Success of alliances is often operationalized and measured as a single outcome variable. In order to further our understanding of alliances, the concept of fulfilled expectations was used instead. One major advantage was thus gained: the creation of a three pronged definition of “success” in terms of fulfilled expectations in the financial, medical and corporate image sectors according to the perception of the health care executives.

The main benefit hospital directors observed from their alliance was an improvement in medical treatment which exceeded the initial expectations. Financial benefit from the alliance was also achieved (particularly in alliances where it was a major goal) but with a slightly lower frequency than anticipated. This diminished financial advantage has also been noted by other authors in healthcare [13,14,15,44].Underestimated or hidden transactional costs may outweigh any economies of scale savings or cost reductions by rationalisation of duplicated activities in an alliance.

The dominant positive outcome was the improvement in medical treatment followed by economic success, competitive position, hospital image and access to innovation. Interestingly the improvement in employee conditions was ranked last, with only a third of the respondents identifying this as an actual benefit. In view of the staff shortages and high turnover rates in healthcare it could have been expected that strategies for improving recruitment and retention of hospital personnel would be

considered more important.

### 6.1. Study Limitations

One of the limitations of this study is linked to the under-representation of respondents involved in unsuccessful alliances, which could be explained by social desirability pressures and the auto-exclusion of those who have had negative experiences. Furthermore, this exploratory study relied on a single questionnaire filled out by the respondents at one point in time. Known as a single subject/method approach, this procedure generates biases which are inevitable. This does not indicate that this type of data is per se unreliable, but that care must be taken in the interpretation and the possible generalization of results [45].

### 6.2. Directions for Future Research

The first issue to be addressed in a future study is methodological: random sampling, representative groups and multi-source data should be included in the research design, along with a triangulation of results according to each data source. The second issue deals with the nature of expectations and outcomes: negative expectations and outcomes can be as prevalent as positive ones, but still very little is known to that effect. Third, causes for failure are not necessarily the negative counterpart of success factors and research into unsuccessful alliances must be conducted, probably through comparative case studies. Finally, inter-hospital alliances are influenced by numerous endogenous and exogenous factors. This precludes the use of a "just add hospitals and mix" conceptual and methodological approach where knowledge gained from other sectors is simply applied to institutions in the health care system.

## 7. Conclusions

The aim of this exploratory study was to investigate the governance mechanisms, structure, expected outcomes and fulfilled expectations of inter-hospital alliances.

This study revealed a number of common features of successful inter-hospital alliances regarding their formal structure, governance systems and processes. At the outset of the alliance it is important to include clearly defined targets for the alliance with involvement of management for financial targets and physicians for medical goals. The agreement should be formalised in the written form and include conflict resolution mechanisms. In the operational phase, surveillance processes should include regular project meetings and target achievement monitoring supported by a manned office. Throughout, the chances of success are improved if a project champion, with suitable networking characteristics is involved and an appropriate governance structure is in place (extent dependent on the scale of alliance) including executive management and board of directors' involvement. These conclusions appear to be valid across different systems of health care as they were derived from interviews of a multinational group of health care administrators experienced in alliance management. Hopefully they may help guide alliance builders in establishing institutionalised alliance capability.

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