Benchmarking Inter-Hospital Alliances against Industry Best Practices

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Abstract

A semi-quantitative analysis of inter-hospital alliances in Germany, Canada and Switzerland was performed to: (a) Analyse the degree to which current inter-hospital alliances comply with best practices for inter-organisational business alliances; (b) identify management opportunities to improve the efficacy of hospital alliances.

An alliance best practices management benchmark was compiled using literature searches and compared with actual hospital alliances. A series of interviews were conducted at 12 different inter-hospital alliances, monitoring the perceived and factual attributes relating to management processes, structure and governance.

All alliances studied were perceived as successful. The healthcare contracts were short and pragmatic and management tended to be informal. There was an absence of rigorous partner selection on the basis of due diligence and no clear communicated, or monitored, alliance targets. The contracts often lacked conflict resolution, anti-solicitation and liability clauses. Clinical parameters specific to the alliance were not measured but an improvement of patient standard of care was perceived. There was a low awareness of financial parameters. Compatible IT systems / databases between the partners were lacking and institutionalised alliance capability is, in Europe, in the planning phase.

Healthcare alliances have a high (perceived) success rate yet opportunities remain to improve the partner selection assessment, setting and monitoring of alliance targets and centralising alliance capabilities. Transparent performance rewards and conflict resolution mechanisms need establishing upfront.

Keywords: *hospital alliances; management; success factors; collaboration; standards*

1. Introduction

Changes in hospital funding structures, environmental turbulence, growing complexity and competition as well as financing concerns and increases in resource requirements, cause independent hospitals to rethink their strategy and consider cooperation with other health care providers (Buechner, Hinz, & Schreyoegg, 2014). Whether strategic alliances, participation in networks, or groups (multi-hospital systems with common ownership), cooperation is expected to provide the hospitals with competitive advantage in the form of improved efficiency and cost reductions (Walston, Burns, & Kimberly, 2000). Many of the anticipated benefits of alliances have failed to materialise, or have done so only temporarily, or after a time lag (Buechner et al., 2014). Still, resources invested in establishing and maintaining such alliances are considerable and warrant a thorough understanding of how certain institutions have successfully integrated and implemented formal cooperation into their strategic planning.

Documented experience on multiple hospital alliances is restricted and assembled from the perspective of local efficiencies [Italy (Daidone & D'Amico, 2009), New Zealand (Barnett et al., 2009), Catalan (Bernardo, Valls, & Aparicio, 2011; Bernardo, Valls, & Casadesus, 2012), South Moravia (Kristina, 2012), Taiwan (Lu, Tsai, & Liu, 2011; Tsai & Liao, 2013), Germany (Vera, 2004; Vera, 2006)] rather than through a comparison of practices in order to find common features of successful alliances. An exception is the US healthcare system where community partnerships dominate and provide helpful guidelines (Alexander, Comfort, & Weiner, 1998; Alexander, Comfort, Weiner, & Bogue, 2001; Alexander, Lee, & Bazzoli, 2003; Alexander, Weiner, Metzger, Shortell, Bazzoli, Hasnain-Wynia, et al. (2003); Bazzoli, Casey, Alexander, Conrad, Shortell, Sofaer, et al. (2003); Bazzoli, Shortell,

Dubbs, Chan, & Kralovec, 1999; Bazzoli, Stein, Alexander, Conrad, Sofaer, & Shortell, (1997); Burns, 1990; Carman, 1992; Christianson, Moscovice, & Wellever, 1995; Judge & Ryman, 2001; McSweeney-Feld, Discenza, & De Feis, 2010; Nurkin, 2002; Provan, 1984; Shortell, Gillies, Anderson, Erickson, & Mitchell, 1996; Shortell, Zukoski, Alexander, Bazzoli, Conrad, & Hasnain-Wynia, et al. (2002); Weil, 2003; Weiner & Alexander, 1998; Weiner, Alexander, & Shortell, 2002; Zuckerman & D'Aunno, 1990; Zuckerman & Kaluzny, 1991) for alliances.

Whilst alliances are a global phenomenon, country-specific differences in the healthcare systems are often reflected by variations in the alliance expectations, structures and outcomes. Our study focussed on inter-hospital alliances in Germany, Switzerland and Canada. In Germany 30% of health care providers are public, 35% private non-profit and 34% private for profit (Buechner, Hinz, & Schreyoegg, 2015). Swiss healthcare is a combination of public hospitals and private and in Canada the majority are public, non-profit healthcare institutes funded by the state. Extensive health care reforms occurred in 1993 onwards in Canada whereas European regulatory changes (such as diagnosis-related group reimbursement in Switzerland in 2012) are more recent, their full impact still unfolding. International comparative studies within Europe (Buechner et al., 2014), or those comparing Europe with North America, respectively Asia, are scarce.

In this study we investigate how 12 hospital alliances in three countries with different healthcare systems conformed in their organisation, structure and processes to a set of compiled alliance best practices. Hospital alliances, for the purposes of inclusion in this study, were any official interaction between two or more independent organisations in order to achieve a common objective, contributing to patient services and lacking an equity component.

There are a number of studies examining the alliance attributes which contribute to success. A pilot analysis of six alliances (Collerette & Heberer, 2013) from the healthcare and non-hospital areas concluded that alliance success factors included defined targets, formalised governance and active involvement of senior management as well as collaborative behaviour exhibited by the involved participants. These findings were confirmed in a broader survey of healthcare providers in Germany, Switzerland, Austria and Canada (Pelletier, Wildhaber, Collerette, & Heberer, 2014) and revealed additional success factors such as formalised coordination, presence of a project champion and a written contract including conflict resolution mechanisms. Elements influencing alliance success according to Whipple and Frankel (2000) are trust (character-based and competence-based), senior management support and the ability to meet performance expectations, clear goals and partner compatibility. Zajac, D'Aunno, & Lawton (2012) consider clear targets (articulated mission statements), structural form and infrastructure as critical for success. Kale and Singh (2009) further differentiate success factors according to the stage of the alliance. In the initial emergence stage of an alliance, complementation, compatibility and commitment are considered critical. In the second phase success depends on coordination and control and in the mature phase the functionality of the coordinating mechanisms is considered critical and whether trust develops among the partners. Additionally a dedicated manager (Hoang & Rothaermel, 2005) and developing alliance capability based on experience (Draulans, deMan, & Volberda, 2003) are also thought to be fundamental to alliance success.

A comprehensive list of alliance management best practices was prepared both from the previous studies and from the alliance literature, irrespective of the industry or sector (see Table 1).

Table 1. Best Practices for Alliance Management Identified in the Literature*

Categories and itemised components	
1. Strategic vision for the alliance	
• Common, articulated vision for the alliance	(Spekman, Kamauff Jr, & Myhr, 1998; Zajac et al., 2012)
• Alignment of alliance objectives with corporate aims	(Dyer, Kale, & Singh, 2001; Holmberg & Cummings, 2009)
2. Formalised partner selection and assessment	
• Task to be performed	(Cummings & Holmberg, 2012; Geringer, 1991; Holmberg & Cummings, 2009)
• Strategic rationale & fit	(Zollo, Reuer, & Singh, 2002)
• Learning potential	(Cummings & Holmberg, 2012; Inkpen & Tsang, 2007)
• Risk profile	(Cummings & Holmberg, 2012)
• Geographical proximity	(Kim & Burns, 2007; McCue, Clement, & Luke, 1999)

• Partner's characteristics	(Das & Teng, 2003; Geringer, 1991; Nielsen, 2007; Saxton, 1997)
• Commitment	(Kale & Singh, 2009; Medcof, 1997; Shah & Swaminathan, 2008)
• Capability and competence	(Kale & Singh, 2009; Medcof, 1997; Shah & Swaminathan, 2008)
• Competitive & technology position	(Duysters, Kok, & Vaandrager, 1999)
• Strategic network positioning	(Das & Teng, 2003; Holmberg & Cummings, 2009)
• Partnership track record	(Saxton, 1997; Nielsen, 2007)
• Inter-organisational routines availability	(Zollo et al., 2002)
• Side by side comparison of different targets	(Holmberg & Cummings, 2009; Medcof, 1997)
3. A contract defining the targets, structures and processes	
• Roles and responsibilities defined	(Argyres & Mayer, 2007; Mayer, 2006)
• Operational control and governance	(Arino & Reuer, 2004; Faems, Janssens, Madhok, & Looy, 2008; Mellewigt, Decker, & Eckhard, 2012)
• Conflict resolution mechanisms in place	(Argyres & Mayer, 2007; Kristina, 2012)
• Adaptation to changes (strategic fit or operational fit)	(Gulati, Lawrence, & Puranam, 2005; Reuer, Zollo, & Singh, 2002)
• Pre-specified duration and evaluation time points	(Arino & Reuer, 2005)
4. A transparent formalised governance process	
• Governance, oversight & defined shared leadership	(Judge & Ryman, 2001; Saxton, 1997)
• Structure and decision-making responsibilities defined	(Reuer, Arino, & Olk, 2010)
• Autonomy & decentralisation	(Albers, Wohlgezogen, & Zajac, 2013; Galbraith, 1974; Grant, 1996)
• Meetings & reporting: Format, participants & regularity	(Reuer, 2012)
• Steering committee representing all partners, levels & disciplines	(Reuer, 2012; Zajac et al., 2012)
• Timely, direct, accurate & relevant information exchange between partners.	(Cullen, Johnson, & Sakano, 2000); Mohr & Spekman, 1994)
5. Measure and monitor performance	
• Goal setting, monitoring & resetting targets	(Das & Teng, 1998; Dussauge, Garrette, & Mitchell, 2000; Elmuti & Kathawala, 2001; Kogut, 1988; Whipple & Frankel, 2000; Wohlstetter, Smith, & Malloy, 2005)
• Timelines & accountability plan.	(Das & Teng, 1998; Wohlstetter et al., 2005)
• Milestones	(Harbison & Pekar, 1998)
• Communication of goals to staff & mutual disclosure	(Cullen et al., 2000; Lei, Slocum, & Pitts, 1997)
• Standardised operational tools: Templates, checklists & scorecards	(Harbison & Pekar, 1998; Kale & Singh, 2009)
• Monitoring tools: Performance, cooperative score card, resource allocations (accounting /HR)	(Albers et al., 2013; Harbison & Pekar, 1998; Hoffmann & Schlosser, 2001; Sampson, 2005)
• Common IT platform for communication, data sharing etc.	(Bensaou & Venkatraman, 1995; Harbison & Pekar, 1998)
6. Safeguards and rewards	
• Rewards systems: Hierarchy-based or performance based systems	(Lei et al., 1997)
• Performance reviews & adjusted compensation	(Dussauge et al., 2000)
• Conflict resolution mechanisms	(Das & Teng, 1998; 2002; 2003; Doz, 1996; Dyer & Singh, 1998; Inkpen & Ross, 2001; Kale, Singh, & Perlmutter, 2000; Mohr & Spekman, 1994)

7. Coordinator facilitating internal / external interactions	
• Liaison / Boundary-spanner: Life-cycle dependent role, (1) vision & sponsor to (2) advocating and networking to (3) managing and conflict resolution.	(Albers et al., 2013; De Man, 2005; Kale, Dyer, & Singh, 2002; Sampson, 2005; Spekman, Isabella, MacAvoy, & Forbes III, 1996)
• Multiple roles coordination, managing interface, oversee resource flow, manage conflicts, reporting to the parent.	(Gulati, Khanna, & Nohria, 1994; Kumar & Nti, 1998)
• Interaction between respective liaison officers	(Albers et al., 2013; Currall & Judge, 1995; Luo, 2001)
• Project champion: Motivational, cooperative influence on alliance members.	(Chakrabarti, 1974; Markham, 1998)
• Senior management support	(Reuer et al., 2010; Whipple & Frankel, 2000)
8. Institutionalised alliance capability and portfolio management establishment	
• Assessment of alliance skills	(Harbison & Pekar, 1998)
• Seek, develop & disseminate best practices & experiences	(Harbison & Pekar, 1998; Hoang & Rothaermel, 2005; Kale, Dyer, & Singh, 2001; 2007; 2009)
• Checklists: Performance monitoring (review & analysis)	(Emden, Yaprak, & Cavusgil, 2005; Kale & Singh, 2007)
• Database integrating alliance knowledge & experiences	(Draulans et al., 2003; Duysters et al., 1999; Harbison & Pekar, 1998)
• Connection to top management	(Harbison & Pekar, 1998; Reuer et al., 2010)
• Enhance knowledge flow (learning), training	(Heimeriks & Duysters, 2007; Kale et al., 2002; Schreiner, Kale, & Corsten, 2009)
• Facilitate social bonding	(Schreiner et al., 2009)
• Portfolio management	(Hoffmann, 2005; 2007; Reuer et al., 2010)

*Derived from various sources with unequal empirical support; some research-based, some linked to models or theories of management or recommendations made in a variety of contexts.

The objectives of this study were as follows:

1) To benchmark inter-hospital alliances against generic alliance best practices.

2) To identify opportunities to improve the management of hospital alliances.

2. Methods

2.1 Case Selection

Hospitals were solicited for interviews if they had an alliance with one (or more) independent hospital without involving any equity participation and with the aim of providing patient services.

If the CEO agreed to participate in the study a confidentiality disclosure agreement (CDA) was executed (as required) and background documentation relating to the alliance gathered from the internet, or from the hospital. The CEO was requested to supply the names of the interviewees which should include staff from three levels of alliance involvement (minimally one representative per level): (1) Hospital management (2) alliance management and (3) operational staff (including physician and nurse or medical technical assistant). Depending on the size of the alliance the number of interviews per site ranged from 3 to 9.

The baseline characteristics of the sample used was purposefully heterogeneous in order to aim for wider applicability of the data. The sample was comprised of 58 respondents who took part in interviews (56 face-to-face, 2 by telephone, 16 interviews from 3 sites in Canada, 16 interviews in 3 Swiss hospitals and 26 interviews in 6 German healthcare providers). The interviews covered at least three levels in the alliance structure, namely the senior hospital management level (n=16), the alliance management level (n=21) and the operating staff (n=21). The number of interviews and number of levels differed according to the size of collaboration, size of institution and degree of relevance of the alliance for the hospital. The size of hospitals ranged from small (0-200 beds, n=2), mid-size (201-600 beds, n=4) and large hospitals (601-1,500 beds, n =6). The majority of centres were public institutions, one was private. Six were university hospitals, six non-university. The duration of alliance ranged from recent, 1-4 years

(n=4), 5-7 years (n=5) up to mature, 8-17 years (n=3). A range of alliance therapeutic fields was included [oncology (3), cardiovascular (2), central nervous system (2), paediatric (2), metabolic diseases (1), radiology (1) and trauma (1)].The complexity of alliances ranged from a simple dyad with provision of a single defined patient service, through bilateral collaborations creating a new separate entity, up to large regional networks of more than 10 hospitals.

2.2 Data Collection

A standardised questionnaire comprised of 56 items with multiple choices, open text response or Likert-scale responses covering alliance rationale, targets, structure, processes, governance and outcome was prepared by the authors. In addition to the standardised questions, interview time was reserved for open questions at the end regarding the respondents' overall perception of the alliance. The questionnaire was prepared in English and translated into French and German by native speakers. It was tested in a pilot run using interviews performed in English, French and German to check clarity and consistency and the questionnaire thereafter adapted where necessary and used for all remaining interviews without further modification. The face-to-face interviews usually lasted between 45 and 90 minutes and were performed in German in Germany and Switzerland by 2 interviewers, with the majority of interviews being voice-recorded (2/42 European participants preferred not to be recorded). Where interviews were performed by two interviewers, the two completed questionnaires were cross-compared and any inconsistencies reconciled with the aid of the recorded interview. The interviews in Canada were performed by one interviewer in French. The interview questionnaire transcripts in Germany and Switzerland were triangulated with the respondents; four of them requested minor changes which were implemented. All documents were translated into English and the quantifiable responses entered manually into an SPSS database.

Coding reliability was assessed by comparing ratings of selected interviews generated by two different raters. Discrepancies were discussed and corrected. The final rater agreement score was high (94.3%). Two missing interviews (absence due to sickness) were performed shortly thereafter by phone and the transcription, approval and translation process as described above for face-to-face interviews was otherwise identical. The factual data gathered from publicly available sources, or official documents, was cross-checked with the appropriate administrative staff at each site and included in the transcribed interview submitted for approval to each interviewee. The compiled data was manually summarised, overview tables per centre prepared and cross-checked for accuracy between interviewers.

Both quantitative and qualitative data generated by the interview process for each hospital were classified within the eight categories of best practices (Table 1) derived from the literature. Quantitative data from each respondent were tallied and averaged while qualitative information gathered through open questions and comments made at the end of the interview were compiled and merged for each hospital. Two independent judges used this information to rate the overall conformity of the hospital alliances to best practices using a five point Likert scale ranging from 1 (absent) to 5 (always present). Again, inter-rater reliability was checked and some minor discrepancies were resolved with a consensus approach. The individual alliances were anonymised and designated A-L.

3. Results

A sample of inter-hospital alliances was benchmarked against alliance best practices compiled from the literature (Table 1).

Mean results for the 12 hospitals, for the eight categories are presented in Figure 1. Alliance practices with the lowest average score are "institutionalised alliance capability and portfolio management establishment" (M=2.0 SD=1.1), and "safeguards and rewards" (M=1.9 SD=0.8). "Strategic vision for the alliance" generated the highest average score (M=3.3 SD=1.1). The average SD for all the 8 best practices is 0.97, indicating that hospitals in the sample are not widely dispersed from the mean. This was further confirmed by the results of a non-parametric Kolmogorov-Smirnov test which indicated the absence of significant differences in the distribution of scores for each best practice (Sig. values ranging from 0.19 to 0.72).
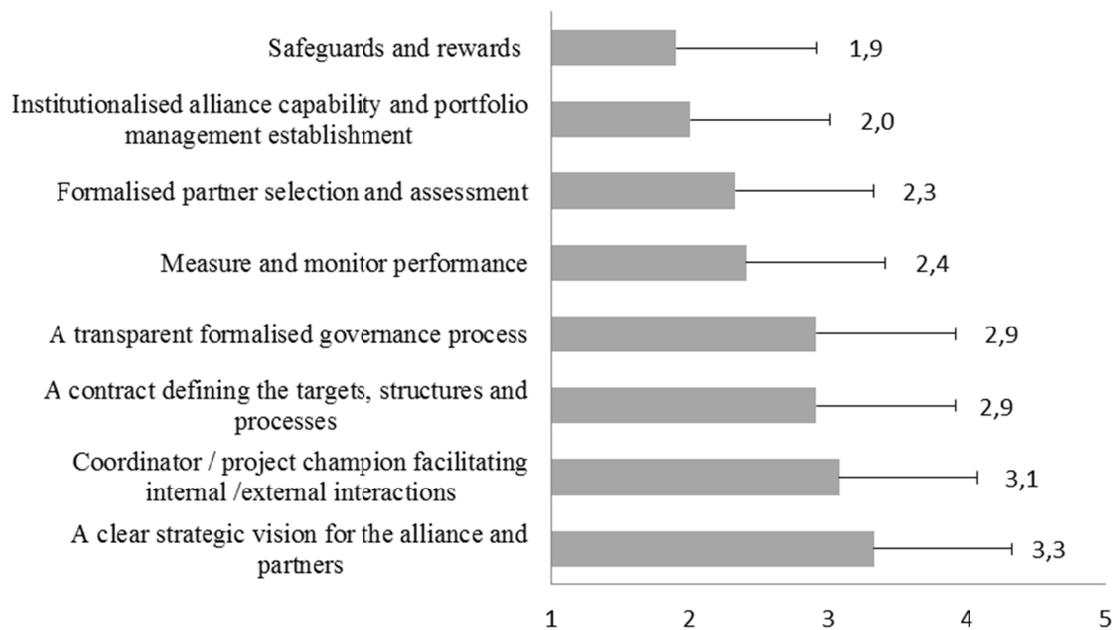
Figure 1. Mean Score of Best Practices for All Hospital Alliances in Our Sample

Mean combined best practices scores were computed for each one of the 12 alliances (see Figure 2). Alliances A and C have slightly higher overall scores. All other alliances scores are more or less within a one point range, between 2 and 3.
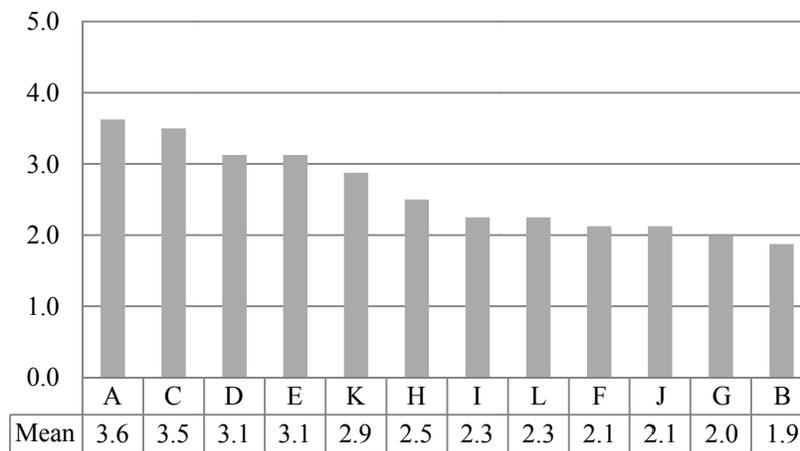

	A	C	D	E	K	H	I	L	F	J	G	B
Mean	3.6	3.5	3.1	3.1	2.9	2.5	2.3	2.3	2.1	2.1	2.0	1.9

Figure 2. Mean Combined Best Practices Score for Each Alliance[1] Included in the Sample

[1]A-L = 12 healthcare provider centers (anonymous)

The performance of the individual centres against the eight categories of alliance best practices is listed in Table 2.

Table 2. Individual Scores[1] for Each Hospital[2]

Best practice category (refer Table 1)	A	B	C	D	E	F	G	H	I	J	K	L
1. Strategic vision for the alliance	4	3	5	4	5	3	2	3	3	2	4	2
2. Formalised partner selection and assessment	5	2	3	2	1	2	2	1	5	1	2	2
3. A contract defining the targets, structures and processes	4	1	4	3	3	2	3	2	2	3	4	4
4. A transparent formalised governance process	4	2	4	3	4	3	3	3	2	2	3	2
5. Measure and monitor performance	3	2	4	2	3	1	2	2	2	3	3	2
6. Safeguards and rewards	3	1	2	3	2	1	1	2	1	2	3	2
7. Coordinator facilitating internal /external interactions	4	2	4	4	4	3	2	3	2	3	3	3
8. Institutionalised alliance capability and portfolio management establishment	2	2	2	4	3	2	1	4	1	1	1	1

[1]Scoring scale: 1 = Absent, 2 = Seldom observed, 3 = Limited observation, 4 = Often observed,

5 = Always present.

[2]A-L = 12 healthcare provider centers (anonymous)

Further analyses were conducted to ascertain the presence of possible differences linked to the category of respondent (management versus operational level). In order to allow the use of parametric tests, analyses were conducted using the coded quantitative data generated by each respondent (N=58). One way ANOVA tests revealed no significant effect linked to the Respondent factor (F values ranging between 0.247 and 3.005; sig. values ranging from .062 to .858) indicating that there was no bias dependent on the hierarchical level of the respondent.

3.1 Strategic Vision for the Alliance

A clear strategic aim for the alliance, articulated and communicated, needs to be elaborated and aligned with the parent organisations long term goals. The main business rationale for many of the European hospital alliances was focussed on an anti-competition strategy, basically enlarging the scope and dimensions of patient services with the aim to increase patient numbers (n = 5) as well as avoiding a potential partner going to the competition. Out of the eight benchmarks, a vision for the alliance received the highest scoring for hospital alliances (3.3 / 5, see Figure 1).

3.2 Formalised Partner Selection and Assessment

The geographical location of the partner was the prime rationale for selecting an alliance partner in all interviewed centres. Despite the growing influence of telemedicine, robotic surgery, global internet linkage, and services such as videoconferencing, the regional aspects still predominate in healthcare with travel time for patients and their relatives/friends, physicians and alliance committee members playing a decisive role. In all European hospitals, at all levels within the organisation, there exists a good understanding of the local competitive situation, much higher than the authors have observed in other industries. This represents a unique opportunity in healthcare for superior alliance selection, implementation and awareness amongst staff. This is less the case in Canada where sensitivity to competition is much lower. In contrast to other industries there was an absence of the due diligence processes. Only two hospitals out of twelve had performed a detailed analysis of the partner, plus alternative potential partners, prior to closing a contract.

Most hospitals showed a low scoring (2.3/5 see Figure 1) on selection due diligence and formalised assessment criteria.

3.3 Contract Defining Targets, Structures and Processes

In all cases a written agreement was available and in some cases provided to the interviewers. Both European and Canadian contracts are short and pragmatic in style, leaving a number of issues open to the partners' discretion and relying on good faith actions. Whilst conducive to trust development in the relationship these well-meant contracts do not include sanctions for breach of commitment. The majority of contracts lacked a fixed duration, or defined milestones and any review of the alliance performance appeared to be at the hospitals' own discretion. A problem cascading mechanism was sometimes present, otherwise conflict resolution processes, repercussions of non-performance, or rewards for good performance, were not explicitly addressed. Patient liability issues were rarely covered, which particularly in situations where patients transfer between partners seemed to expose the alliance to potential disputes. The contracts also lacked anti-solicitation clauses, although in a number of interviews it was clear that there was an unwritten understanding not to entice personnel from the partner.

3.4 Transparent Formalised Governance Process

In three alliances the oversight mechanism of the alliance was included in the operating rules, they closely reported to the parent hospitals and decision-making was usually a consensus process between the partners. The boards of directors were rarely involved (occasionally informed) and all but one of the alliances had a steering committee where the partners were represented. The steering committee did not have a budget and consensus was required for decision-making. The hospital management meetings played the major role in decisions, usually were less regular than steering committees (often on a yearly basis), which often resulted in a less regulated governance process. The larger networks additionally had their own reporting structure / steering committee which regularly informed the parent hospitals.

3.5 Measure and Monitor Performance

The prevailing aim of all alliances was to improve patient services yet most alliances lacked concrete measurable targets, defined responsibilities and timelines for delivery such as those frequently observed in profit-making commercial industries. Accordingly there was an absence of routine target monitoring with corresponding resource allocation distribution. Generally there was little awareness of financial resources associated with the alliances; possibly accounting issues hindered the practical differentiation between normal activities and those associated with the alliance. In financial terms it was difficult for most hospitals to answer whether the alliance was profitable for their institution but there was a high awareness of staff resources and headcount allocations.

The extent of formalised documented alliance processes depended on the scale of the collaboration. In large networks there was an exemplary sharing of standard operating practices (SOP's), guidelines and templates, which the authors found difficult to envision becoming practice in other industries where knowledge protection is of essence. Partners were sharing procedures and processes within their networks with the aim of improving the regional standard of patient care, often to the benefit of the smaller, or less experienced partners, who only through this support were able to offer the service. All partners contributed to the cost structure of the network and, proportional to their contribution, participated in the profits. These processes seem to strengthen the ties between the network members.

At the other end of the spectrum small bilateral relationships were observed, where the medical tasks were clear but one partner was not fulfilling their commitment, which threatened the ability of the other to provide patient services, thus resulting in a breakdown in trust and threatening the survival of the relationship. The lack of safeguard mechanisms became paramount despite clear processes, transparent medical quality standards and certification requirements and appropriate relational behaviour.

In a number of well structured, mature alliances the clear structure and processes combined with long standing experience with each other, tended to diminish direct interactions and communications. In fact staff found that paperwork and processes had replaced the use of direct face-to-face interaction and the quality of communication actually suffered as a result.

Information and knowledge transfer is a critical component of most alliances. In the substantial task of bringing two organisations (often former competitors) to work together for a common goal, the need for compatible computer systems often is delayed, or given lower priority. Depending on the alliance model the absence of a common / compatible information technology (IT) system can encumber data or knowledge sharing and prevent smooth operations and communication. Other than tele-monitoring alliances, where compatible IT is a pre-requirement, no other hospital adapted their IT systems.

3.6 Safeguards and Rewards

Neither performance rewards, nor penalty clauses for non-performance, were observed in the hospital alliances studied. The absence of contractual conflict resolution mechanisms was evident in all supplied agreements. Exercising control through board representation was one alternate, successfully implemented, approach. Certain alliances (2 centres) referred to the threat of termination as the only negotiation leverage, particularly effective where multiple alliances were present with the same partner. Hospital alliances scored lowest (1.9 / 5, see Figure 1) on this success factor, showing a large potential for improvement.

3.7 Coordinator Facilitating Internal and External Interactions

Approximately half of the alliances in our sample had one or more coordinators. These liaison or "boundary spanners" assumed a multitude of roles including defining and controlling the knowledge flow, seeking and distributing best practices, knowledge repository etc. In the smaller to mid-size collaborations the coordinators assumed a primarily

administrative role. When each partner has a nominated coordinator then the success of the interactions and tasks of the two boundary spanners played a fundamental role in establishing trust between the organisations. They can also play a leading role in establishing alliance capability with tool kits, guidelines, instigating training programmes etc. In the largest networks the boundary spanner role was split into several tasks namely an expert physician role, a nurse, as well as a quality officer who were nominated by the network members and partially paid for by the network. The role included training and coaching and auditing, with regular visits to each network site. Despite the lack of implementation authority at each site of the network, the coordinators' personalities generated a cohesive attitude and generally influenced the standard of care within the network.

In a quarter of the alliances a project champion was additionally identified, however in all cases the person had no formal authority and incentive systems were absent. The long term sustainability of the alliances thus hinged on a somewhat "missionary" dedication to the project in question.

3.8 Institutionalised Alliance Capability and Portfolio Management Establishment

Coupled with the absence of targets, monitoring mechanisms and milestones for most hospital alliances, we also failed to observe a regular review of contracts in a portfolio-type approach with decisions whether to redirect resources, expand or terminate agreements. Two European hospitals with a substantial alliance portfolio have clear plans in this regard and it is to be expected the professionalism of alliance monitoring will accordingly increase.

4. Discussion

The samples of inter-hospital alliances observed in this study were all considered to be successful. They were selected to represent a variety of institutions, systems and countries. Results revealed a number of differences compared to the alliance benchmarks in other industries.

4.1 Strategic Vision for the Alliance

The majority of European hospitals had a vision for the alliance, which usually consisted of contributing to the hospitals' anti-competition strategy and was well aligned with the parent hospitals' strategy. In Canada, examples related more to the provision of a particular service within the value chain. With the exception of large multihospital networks a communicated, common vision between the partners was absent.

4.2 Formalised Partner Selection and Assessment

Selection of an appropriate partner at the outset is clearly one valuable criterion (Medcof, 1997) and one that many US CEOs consider as their weakest area of alliance experience (Pekar Jr & Allio, 1994). Many alliances are entered into without a thorough partner analysis (Duysters et al., 1999). Whilst this process is difficult (Jap & Ganesan, 2000; Vlaar, Van den Bosch, & Volberda, 2006), costly (Arino & Reuer, 2005; Shah & Swaminathan, 2008) and often subjective (Shah & Swaminathan, 2008) it is nevertheless thought to mitigate risk (Dyer et al., 2001; Holmberg & Cummings, 2009) and influence alliance performance (Kale & Singh, 2009; Shah & Swaminathan, 2008), increasing the likelihood of success (Dacin, Hitt, & Levitas, 1997). In our sample, the majority of partners were selected on the basis of physical proximity [as was also the case with Korean hospital alliances (Kim & Burns, 2007; McCue et al., 1999)]. The use of close geographical configurations are expected to lead to lower costs through economies of scale, integration and coordination of services and avoidance of service duplication as well as elimination of excess capacity (McCue et al., 1999).

There were significant differences in alliance rationale between the different territories which would be expected to influence both the extent and type of due diligence performed. In Canada since most hospitals are public there is focus on providing high quality patient service which can occur largely in the absence of competitive pressure. Partner selection would therefore be expected to be on the basis of providing a specialised skill, be it complementary, upstream or downstream of the value chain. In Europe, however, the hospitals are under significant pressure and an opportunistic alliance often has to be quickly decided in order to avoid losing a partner to the competition, to satisfy political requirements, to attain critical size for certification or grant requirements, or in order to provide a competitive spectrum of services.

4.3 Contract Defining Targets, Structures and Processes

Proponents for appropriate contract formulation claim that 80% of the alliance outcome is already predictable from the initial structure (Faems et al., 2008; Hennart, 2006). Contract design affects the alliance partners' social interactions and relationship (Mellewigt et al., 2012; Susarla, Barua, & Whinston, 2009; Weber & Mayer, 2011) and those partners with contract design capability have a competitive advantage (Argyres & Mayer, 2007). Since it is

considered impossible to cover all obligations and eventualities in a contract in advance, it has been proposed that contractual remedies (Volery & Mansik, 1998) incompletely minimise risk and only serve as a weak impersonal substitute for trust (Malhotra & Murnighan, 2002; Sitkin & Roth, 1993). Whilst some advocate complex contracts (Arino & Reuer, 2005) as a safeguard against opportunistic behaviour, others say they actually encourage it and signal distrust (Fehr & Gachter, 2002; Ghoshal & Moran, 1996). In general the hospital alliance contracts are short and pragmatic, outlining the main aims but lacking detailed specific targets, timelines and performance-linked reward or penalty provisions. They also lacked a predefined duration, often being open-ended. Legal remedies should not replace the relational aspects such as mutual trust and cooperation, still, the incorporation of conflict resolution mechanisms in hospital contracts could help to avoid escalating issues to termination discussions with the associated irreparable damage in relationships.

4.4 Transparent Formalised Governance Process

The small- to mid-sized bilateral alliances in our sample were mainly governed informally, with reporting to the parent's hospital board and with little autonomy. This lack of operational autonomy of an alliance, the need to reach consensus for decision-making in the absence of a common management, as well as the lack of authority, can hamper the operations and decision-making process. In the larger multihospital alliances in our sample hierarchical governance structures were more apparent and created in response to the higher monitoring & coordination needs.

In the US, only 1 in 5 organisations had guidelines on maintaining alliances (Smith & Barclay, 1997; Whipple & Frankel, 2000) and 1/3 of those executives with alliance processes did not adhere to them (Harbison & Pekar, 1998). In determining alliance learning outcomes it is possible that processes may be more important than structure (Hamel, 1991; Kauser & Shaw, 2004), or at the minimum complementary (Nielsen, 2007), with alliance processes significantly affecting performance (Das & Teng, 2003). In the case of hospital alliances those processes directly associated with medical treatment are formalised. A broader accountability plan for effective alliance operations (Das & Teng, 1998) which includes, goals, structures and processes which are used to guide the alliance and monitor its success is required. This, coupled with the integration of incentives and a safeguarding mechanism, should mitigate the likelihood of conflict.

4.5 Measure and Monitor Performance

With the appropriate contractual safeguards in place and clear goals and expectations set, then more favourable alliance outcomes are expected and transaction costs reduced (Kogut, 1988). If attention is given to goal-setting at the outset (Whipple & Frankel, 2000), with a common vision of the future (Spekman, Forbes, Isabella, & MacAvoy, 1998) then there is enhanced likelihood of achieving goals and transaction costs are reduced. Mutual disclosure of long- and short-term alliance goals is considered crucial in the development of trust and commitment (Cullen et al., 2000).

The hospital alliances studied here lacked measurable targets with timelines. Considerable flexibility was granted to the partner within the context of an improved standard of care. Whilst narrowly defined agreements may undermine goodwill and trust development between the partners (Albers et al., 2013; Greenhalgh, 2001), the absence of monitored targets makes it difficult to assess the alliance impact (Wohlstetter et al., 2005), to utilise the full alliance potential (Hoffmann & Schlosser, 2001), or to realise when it is off-course. Regularly assessing the performance is an alliance success determinant (Harbison & Pekar, 1998; Sampson, 2005).

In the initial stages of alliance selection and formation, issues of IT compatibility may not be of uppermost priority unless the collaboration is clearly reliant on web communication such as tele-monitoring, robotic surgery etc. The lack of initial attention to IT avenges itself in the operational phase where data sharing, common registries etc. are hindered, something frequently observed.

4.6 Safeguards and Rewards

If individual employees contributions are critical to the alliance (Dussauge et al., 2000) then performance reviews and compensation must be included in alliance conditions (Lei et al, 1997; Dussauge et al 2000). Although there is evidence in the literature that incentives are important for learning and knowledge-sharing, we saw no indications of any performance-based incentives implemented in any of the alliances studied. In order to ensure the longer term commitment to an alliance and continuity of staff, a process enabling recognition of alliance contributions accompanied by career development programmes seems advisable.

4.7 Coordinator Facilitating Internal and External Interactions

Alliance-specific managers are considered important to success (Harbison & Pekar, 1998; Kale et al., 2002;

Spekman et al., 1996) and their absence linked to fragmented alliances, missed synergies and repeated mistakes (Dussauge et al., 2000). In the mid- to large-sized alliances we studied, one (or more) coordinator was present. Usually they were gatekeepers who assumed an administrative role. In those cases where each partner had a coordinator the interaction of such boundary spanners was a critical means of controlling the internal and inter-partner interactions. The interaction of such boundary spanners with each other is also considered vital in other industries (Albers et al., 2013; Currall & Judge, 1995; Luo, 2001) with them adopting a coordination role and driving inter-organisational trust (Perrone, Zaheer, & McEvily, 2003) as well as facilitating exploitative and exploratory learning. In two cases of novel networks the boundary spanner positions were nominated (and partially paid for) by the network members and were split into three roles; a senior physician/expert, a nurse and a quality officer. All three positions visited regularly all sites of the network, distributing guidelines and templates or SOP's, training personnel, auditing the facilities, organising a yearly network conference etc. Clearly small alliances would be unable to justify the personnel resource invested in this model; however this novel task division could act as a role model for new large scale networks in establishment.

In the majority of successful alliances studied here a project champion was present who functioned as a figurehead (internally and often externally as well) but usually lacked authority, performance-related incentives, or superior career prospects. The presence of a dominant champion, which is not duplicated at the institutional level, leaves a person-associated risk. Indeed in a number of long standing alliances (>8 years) e.g. in the Canadian sample, there was an absence of champions, with prior champions having moved on and no replacement found. In European hospitals the champion seems to play a significant relational role, particularly in the initial phases. If the project champion role is not formalized and accompanied by authority and incentives, the alliance may, over time, lose some of its impetus.

4.8 Institutionalised Alliance Capability and Portfolio Management Establishment

A number of studies have shown the advantages of collecting and centralising alliance experience; enterprises with a dedicated alliance function were seen to achieve a 25% (Dyer et al., 2001) to >50% (Kale et al., 2001) increase in long term success rate compared to those without. US companies have devoted more attention to establishing alliance capability than European (De Man, 2005). Such management capability (Gulati, Lavie, & Singh, 2009; Ring & van de Ven, 1994) increases the success likelihood in new partnerships (Sampson, 2005) with prior experience linked to trust, success (del Campo, Pardo, & Perlines, 2014) and increased returns (Harbison & Pekar, 1998).

Inter-alliance skills associated with the operation of alliances used to reside in individuals (coordinator, project champion etc.) and only recently have been recognised as a potential competitive advantage if systematically internalised and institutionalised (Draulans et al., 2003; Harbison & Pekar, 1998; Heimeriks & Duysters, 2007; Kale & Singh, 2009; Schreiner et al., 2009). In the European alliances examined there was evidence that such capability was starting to be established at the hospital level. In more mature large networks, formalised procedures were established within the network and accessible to all members. In Canada, the absence of competitive pressure between the hospitals obviated the need to establish alliance capability as a competitive advantage and a hospital level assimilation of alliance experience was absent.

From our study we have identified eight areas where gaps to industry best practices have been identified:

(1) Vision: A common vision for the partnership elaborated by the partners together and communicated to all participants.

(2) Partner selection: A structured due diligence process reviewing potential partner characteristics, compared with alternatives and fitting the hospital strategy using a portfolio approach.

(3) Contract: Alliance objectives jointly defined by the partners, milestones/timelines and provisions for conflict resolution and liability obligations need inclusion.

(4) Governance: Formalised governance at all levels with more alliance autonomy.

(5) Monitoring performance: Clear targets and regular monitoring thereof (using transparent standardised assessment criteria) as well as addressing IT incompatibilities and database needs.

(6) Safeguards & rewards: Performance-based incentives or penalties.

(7) Coordinator: Identifying key staff assuming an integrative role (preferably at each site of the alliance).

(8) Institutionalised alliance capability: Provides a competitive advantage to the hospital. Coupled with portfolio approaches this decreases hospital vulnerability.

Healthcare alliances exhibit the following unique attributes:

(1) Sharing knowledge & templates: Exemplary distribution of treatment protocols, checklists and templates were seen in multihospital networks where improvement of patient care standards exceeded proprietary concerns.

(2) Multilevel coordinators: The complex coordination role was split into different roles (e.g. physician, nurse, quality officer) the positions were nominated, chosen and paid for by the network rather than one partner and regular rotation / visits in all centres scheduled.

(3) High level of competition awareness by all European healthcare staff.

(4) Considerable inter-professional trust and pragmatic approach to alliances leaving room for evolution.

5. Conclusions

Whilst alliance contracts have to be attuned to the required objectives and specific industry characteristics, there are nevertheless a number of structural, managerial and operational standards, common to effective alliances. Alliance benchmarks have been compiled and compared with results of interviews in the healthcare industry.

There are unique features of hospital alliances, one striking difference being the absence of measurable objectives. Additionally the partners' selection process was primarily based on geographical proximity and opportunity with a lack of due diligence, or assessment of alternatives. In general the alliances were all perceived as successful regarding the service access and quality of services for patients and family. In all cases there was hardly any hard data regarding costs and revenues and therefore the real financial impact of the alliance undiscernible.

Opportunities exist to improve the structuring of hospital alliances particularly regarding target definition (and communication thereof) as well as monitoring. Progress on the attainment of objectives as well as financial and clinical parameters should be transparent and formalized. The absence of contractual clauses on conflict resolution, penalty for non-performance and incentives is understandable from the flexibility and trust development viewpoint, however the lack threatens the long term viability of many relationships and should be integrated from the start. In Europe (but not in Canada) a trend to internalizing alliance experience and developing alliance capability has started however currently it is still predominantly individual alliance figureheads, or champions, who carry the alliances' relational, managerial and operational roles.

Unique aspects of healthcare alliances include the common interest in improving patient standard of care irrespective of issues such as proprietary concerns (enabling documents, treatment regimens, checklists etc. to be shared). There is also a very high allegiance to the discipline or medical field and there exist a number of multi-hospital networks which reach the stage of maturity to enable benefit from their positive experiences (such as multilevel coordinators shared within the network).

Understanding the differences between best practices in the literature and practice in health care can benefit healthcare alliances and other industry alliances alike.

6. Study Limitations

The mixed methodology used in this study generates two opposite positions regarding generalization. One the one hand, 58 interviews is considered a large data source in qualitative interview; on the other hand, the same number is considered as low in quantitative research. The rich interview material was quickly saturated regarding the best practices, however the sample cannot be considered as representative, neither for the industry nor on a country-basis. Furthermore, information on alliances was not systematically collected from all the individual hospital partners involved.

7. Directions for Future Research

More research is needed regarding alliance success indicators and markers, especially with regard to financial elements. Costs and profits of alliances are at the forefront in the private sector, but there are notably absent in the public healthcare system. Tracking the evolution of individual alliances by comparing the different partners' perspectives would also prove useful, as well as broadening the scope to include different healthcare systems and environmental pressures.

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References

Albers, S., Wohlgezogen, F., & Zajac, E. J. (2013). Strategic Alliance Structures; An Organization Design Perspective. *Journal of Management,* 0149206313488209. http://dx.doi.org/10.1177/0149206313488209

Alexander, J. A., Comfort, M. E., & Weiner, B. J. (1998). Governance in Public-Private Community Health Partnerships: A Survey of the Community Care Network SM Demonstration Sites. *Nonprofit Management and Leadership, 8,* 311-332. http://dx.doi.org/10.1002/nml.8402

Alexander, J. A., Comfort, M. E., Weiner, B. J., & Bogue, R. (2001). Leadership in Collaborative Community Health Partnerships. *Nonprofit Management and Leadership, 12*, 159-175. http://dx.doi.org/10.1002/nml.12203

Alexander, J. A., Lee, S.-Y. D., & Bazzoli, G. J. (2003). Governance forms in health systems and health networks. *Health Care Management Review, 28*, 228-242. http://dx.doi.org/10.1177/1077558703259069

Alexander, J. A., Weiner, B. J., Metzger, M. E., Shortell, S. M., Bazzoli, G. J., Hasnain-Wynia, R. et al. (2003). Sustainability of Collaborative Capacity in Community Health Partnerships. *Medical Care Research and Review, 60*, 130S-160S. http://dx.doi.org/10.1177/1077558703259069

Argyres, N., & Mayer, K. J. (2007). Contract design as a firm capability: An integration of learning and transaction cost perspectives. *Academy of Management Review, 32*, 1060-1077. http://dx.doi.org/10.5465/AMR.2007.26585739

Arino, A., & Reuer, J. J. (2004). Designing and renegotiating strategic alliance contracts. *The Academy of Management Executive, 18*, 37-48. http://dx.doi.org/10.5465/AME.2004.14776166

Arino, A., & Reuer, J. J. (2005). Alliance contractual design. In Schenkar, O., & Reuer, J.F. (Eds.), *Handbook of strategic alliances*, (pp. 149-167). Thousand Oaks, CA. Sage Publications ISBN 0-7619-8863-7.

Barnett, P., Tenbensel, T., Cumming, J., Clayden, C., Ashton, T., Pledger, M. et al. (2009). Implementing new modes of governance in the New Zealand health system: An empirical study. *Health Policy, 93*, 118-127. http://dx.doi.org/10.1016/j.healthpol.2009.06.004

Bazzoli, G. J., Casey, E., Alexander, J. A., Conrad, D. A., Shortell, S. M., Sofaer, S. et al. (2003). Collaborative Initiatives: Where the Rubber Meets the Road in Community Partnerships. *Medical Care Research and Review, 60*, 63S-94S. http://dx.doi.org/10.1177/1077558703259082

Bazzoli, G. J., Shortell, S. M., Dubbs, N., Chan, C., & Kralovec, P. (1999). A taxonomy of health networks and systems: bringing order out of chaos. *Health Services Research, 33*, 1683-1717.

Bazzoli, G. J., Stein, R., Alexander, J. A., Conrad, D. A., Sofaer, S., & Shortell, S. M. (1997). Public-Private Collaboration in Health and Human Service Delivery: Evidence from Community Partnerships. *Milbank Quarterly, 75*, 533-561. http://dx.doi.org/10.1111/1468-0009.00068

Bensaou, M., & Venkatraman, N. (1995). Configurations of interorganizational relationships: a comparison between US and Japanese automakers. *Management science, 41*, 1471-1492. http://dx.doi.org/10.1287/mnsc.41.9.1471

Bernardo, M., Valls, J., & Aparicio, P. (2011). Organisational innovations in Catalan hospitals: the case of telemedicine. *International Journal of Healthcare Technology and Management, 12*, 307-320. http://dx.doi.org/10.1504/IJHTM.2011.040481

Bernardo, M., Valls, J., & Casadesus, M. (2012). Strategic alliances: an analysis of Catalan hospitals. *Revista Panamericana de Salud Pública, 31*, 40-47. http://dx.doi.org/10.1590/S1020-49892012000100006

Buechner, V. A., Hinz, V., & Schreyoegg, J. (2014). Health systems: changes in hospital efficiency and profitability. *Health Care Management Science*, 1-14. http://dx.doi.org/10.1007/s10729-014-9303-1

Buechner, V. A., Hinz, V., & Schreyögg, J. (2015). Cooperation for a competitive position: The impact of hospital cooperation behavior on organizational performance. *Health Care Management Review, 40*, 214-224. http://dx.doi.org/10.1097/HMR.0000000000000027

Burns, L. R. (1990). The transformation of the American hospital: From community institution toward business

enterprise. *Comparative Social Research, 12,* 77-112.

Carman, J. M. (1992). *Strategic Alliances among Rural Hospitals* (Rep. No. 140049). Center for Cooperatives, University of California, Davis. http://ageconsearch.umn.edu/bitstream/140049/2/ucd-06.pdf

Chakrabarti, A. K. (1974). The role of champion in product innovation. *California Management Review, 17*, 58-62. http://dx.doi.org/10.2307/41164561

Christianson, J. B., Moscovice, I. S., & Wellever, A. L. (1995). The structure of strategic alliances: Evidence from rural hospital networks. In Kaluzny A.D, H. S. Zuckerman, & T. C. Ricketts (Eds.), *Partners for the Dance: Forming strategic alliances in health care* (pp. 99-117). Health Administration press. ISBN-13 978-1567930252.

Collerette, P., & Heberer, M. (2013). Governance of Hospital Alliances: Lessons Learnt from 6 Hospital and Non-Hospital Cases. *Gesundheitswesen, 75*, e1-e4. http://dx.doi.org/10.1055/s-0032-1331783

Cullen, J. B., Johnson, J. L., & Sakano, T. (2000). Success through commitment and trust: The soft side of strategic alliance management. *Journal of World Business, 35*, 223-240. http://dx.doi.org/10.1016/S1090-9516(00)00036-5

Cummings, J. L., & Holmberg, S. R. (2012). Best-fit alliance partners: the use of critical success factors in a comprehensive partner selection process. *Long range planning, 45*, 136-159. http://dx.doi.org/10.1016/j.lrp.2012.01.001

Currall, S. C., & Judge, T. A. (1995). Measuring trust between organizational boundary role persons. *Organizational behavior and Human Decision processes, 64*, 151-170. http://dx.doi.org/10.1006/obhd.1995.1097

Dacin, M. T., Hitt, M. A., & Levitas, E. (1997). Selecting partners for successful international alliances: Examination of U.S. and Korean firms. *Journal of World Business, 32*, 3-16. http://dx.doi.org/10.1016/S1090-9516(97)90022-5

Daidone, S., & D'Amico, F. (2009). Technical efficiency, specialization and ownership form: evidences from a pooling of Italian hospitals. *Journal of Productivity Analysis, 32*, 203-216. http://dx.doi.org/10.1007/s11123-009-0137-7

Das, T. K., & Teng, B. S. (1998). Between trust and control: Developing confidence in partner cooperation in alliances. *Academy of Management Review, 49*, 1-512.

Das, T. K., & Teng, B. S. (2002). The Dynamics of Alliance Conditions in the Alliance Development Process. *Journal of Management Studies, 39*, 725-746. http://dx.doi.org/10.1111/1467-6486.00006

Das, T. K., & Teng, B. S. (2003). Partner analysis and alliance performance. *Scandinavian journal of management, 19*, 279-308. http://dx.doi.org/10.1016/S0956-5221(03)00003-4

De Man, A. P. (2005). Alliance Capability: A Comparison of the Alliance Strength of European and American Companies. *European Management Journal, 23*, 315-323. http://dx.doi.org/10.1016/j.emj.2005.04.009

del Campo, J. D. S. d. P. G., Pardo, I. P. G., & Perlines, F. H. (2014). Influence factors of trust building in cooperation agreements. *Journal of Business Research, 67*, 710-714. http://dx.doi.org/10.1016/j.jbusres.2013.11.032

Doz, Y. L. (1996). The evolution of cooperation in strategic alliances: Initial conditions or learning processes? *Strategic Management Journal, 17*, 55-83. http://dx.doi.org/10.1002/smj.4250171006

Draulans, J., DeMan, A. P., & Volberda, H. W. (2003). Building Alliance Capability: Management Techniques for Superior Alliance Performance. *Long range planning, 36*, 151-166. http://dx.doi.org/10.1016/S0024-6301(02)00173-5

Dussauge, P., Garrette, B., & Mitchell, W. (2000). How to get the best results from alliances. *European Business Forum, 3*, 41-46.

Duysters, G., Kok, G., & Vaandrager, M. (1999). Crafting successful strategic technology partnerships. *R&D Management, 29*, 343-351. http://dx.doi.org/10.1111/1467-9310.00145

Dyer, J. H., & Singh, H. (1998). The relational view: Cooperative strategy and sources of interorganizational competitive advantage. *The Academy of Management Review, 23*, 660-679.

Dyer, J. H., Kale, P., & Singh, H. (2001). How to make strategic alliances work. *MIT Sloan Management Review, 42*,

37-43.

Elmuti, D., & Kathawala, Y. (2001). An overview of strategic alliances. *Management Decision, 39*, 205-218. http://dx.doi.org/10.1108/EUM0000000005452

Emden, Z., Yaprak, A., & Cavusgil, S. T. (2005). Learning from experience in international alliances: antecedents and firm performance implications. *Journal of Business Research, 58*, 883-892. http://dx.doi.org/10.1016/j.jbusres.2003.10.008

Faems, D., Janssens, M., Madhok, A., & Looy, B. V. (2008). Toward an Integrative Perspective on Alliance Governance: Connecting Contract Design, Trust Dynamics, and Contract Application. *The Academy of Management Journal, 51*, 1053-1078. http://dx.doi.org/10.5465/AMJ.2008.35732527

Fehr, E., & Gachter, S. (2002). Do incentive contracts crowd out voluntary cooperation? CEPR disussion paper No 3017. http://papers.ssrn.com/sol3/papers.cfm?abstract_id=289680

Galbraith, J. R. (1974). Organization design: An information processing view. *Interfaces, 4*, 28-36. http://dx.doi.org/10.1287/inte.4.3.28

Geringer, J. M. (1991). Strategic determinants of partner selection criteria in international joint ventures. *Journal of International Business Studies, 22*, 41-62. http://dx.doi.org/10.1057/palgrave.jibs.8490291

Ghoshal, S., & Moran, P. (1996). Bad for practice: A critique of the transaction cost theory. *Academy of Management Review, 21*, 13-47.

Grant, R. M. (1996). Toward a knowledge-based theory of the firm. *Strategic Management Journal, 17*, 109-122. http://dx.doi.org/10.1002/smj.4250171110

Greenhalgh, L. (2001). *Managing strategic relationships: The key to business success*. New York: Simon and Schuster, The Free Press.

Gulati, R., Khanna, T., & Nohria, N. (1994). Unilateral commitments and the importance of process in alliances. *Sloan Management Review, 35*, 61-69.

Gulati, R., Lavie, D., & Singh, H. (2009). The nature of partnering experience and the gains from alliances. *Strategic Management Journal, 30*, 1213-1233. http://dx.doi.org/10.1002/smj.786

Gulati, R., Lawrence, P. R., & Puranam, P. (2005). Adaptation in vertical relationships: Beyond incentive conflict. *Strategic Management Journal, 26*, 415-440. http://dx.doi.org/10.1002/smj.458

Hamel, G. (1991). Competition for Competence and Inter-Partner Learning Within International Strategic Alliances. *Strategic Management Journal, 12*, 83-103. http://dx.doi.org/10.1002/smj.4250120908

Harbison, J. R., & Pekar, P. (1998). Institutionalising alliance skills: secrets of repeatable success. *Strategy and Business*, *4*(2), 79-94.

Heimeriks, K. H., & Duysters, G. (2007). Alliance capability as a mediator between experience and alliance performance: An empirical investigation into the alliance capability development process. *Journal of Management Studies, 44*, 25-49. http://dx.doi.org/10.1111/j.1467-6486.2006.00639.x

Hennart, J. F. (2006). Alliance Research: Less is More. *Journal of Management Studies, 43*, 1621-1628. http://dx.doi.org/10.1111/j.1467-6486.2006.00654.x

Hoang, H., & Rothaermel, F. T. (2005). The effect of general and partner-specific alliance experience on joint R&D project performance. *Academy of Management Journal, 48*, 332-345. http://dx.doi.org/10.5465/AMJ.2005.16928417

Hoffmann, W. H., & Schlosser, R. (2001). Success factors of strategic alliances in small and medium-sized enterprises - an empirical survey. *Long range planning, 34*, 357-381. http://dx.doi.org/10.1016/S0024-6301(01)00041-3

Hoffmann, W. H. (2005). How to manage a portfolio of alliances. *Long range planning, 38*, 121-143. http://dx.doi.org/10.1016/j.lrp.2005.03.001

Hoffmann, W. H. (2007). Strategies for managing a portfolio of alliances. *Strategic Management Journal, 28*, 827-856. http://dx.doi.org/10.1002/smj.607

Holmberg, S. R., & Cummings, J. L. (2009). Building successful strategic alliances: Strategic process and analytical tool for selecting partner industries and firms. *Long range planning, 42*, 164-193.

http://dx.doi.org/10.1016/j.lrp.2009.01.004

Inkpen, A. C., & Ross, J. (2001). Why do some strategic alliances persist beyond their useful life? *California Management Review, 44*, 132-148. http://dx.doi.org/10.2307/41166114

Inkpen, A. C., & Tsang, E. W. (2007). 10 learning and strategic alliances. *The Academy of Management Annals, 1*, 479-511. http://dx.doi.org/10.1080/078559815

Jap, S. D., & Ganesan, S. (2000). Control mechanisms and the relationship life cycle: Implications for safeguarding specific investments and developing commitment. *Journal of Marketing Research, 37*, 227-245. http://dx.doi.org/10.1509/jmkr.37.2.227.18735

Judge, W. Q., & Ryman, J. A. (2001). The shared leadership challenge in strategic alliances: Lessons from the U.S. healthcare industry. *The Academy of Management Executive, 15*, 71-79. http://dx.doi.org/10.5465/AME.2001.4614907

Kale, P., & Singh, H. (2007). Building firm capabilities through learning: the role of the alliance learning process in alliance capability and firm-level alliance success. *Strategic Management Journal, 28*, 981-1000. http://dx.doi.org/10.1002/smj.616

Kale, P., & Singh, H. (2009). Managing Strategic Alliances: What Do We Know Now, and Where Do We Go From Here? *The Academy of Management Perspectives, 23*, 45-62. http://dx.doi.org/10.5465/AMP.2009.43479263

Kale, P., Dyer, J. H., & Singh, H. (2002). Alliance capability, stock market response, and long-term alliance success: the role of the alliance function. *Strategic Management Journal, 23*, 747-767. http://dx.doi.org/10.1002/smj.248

Kale, P., Dyer, J., & Singh, H. (2001). Value creation and success in strategic alliances: alliancing skills and the role of alliance structure and systems. *European Management Journal, 19*, 463-471. http://dx.doi.org/10.1016/S0263-2373(01)00062-7

Kale, P., Singh, H., & Perlmutter, H. (2000). Learning and protection of proprietary assets in strategic alliances: Building relational capital. *Strategic Management Journal, 21*, 217-237. http://dx.doi.org/10.1002/(SICI)1097-0266(200003)21:3<217::AID-SMJ95>3.0.CO;2-Y

Kauser, S., & Shaw, V. (2004). The influence of behavioural and organisational characteristics on the success of international strategic alliances. *International Marketing Review, 21*, 17-52. http://dx.doi.org/10.1108/02651330410522934

Kim, K.-J., & Burns, L. R. (2007). Success factors in hospital network performance: evidence from Korea. *Health Services Management Research, 20,* 141-152. http://dx.doi.org/10.1258/095148407781395946

Kogut, B. (1988). Joint ventures: Theoretical and empirical perspectives. *Strategic Management Journal, 9*, 319-332. http://dx.doi.org/10.1002/smj.4250090403

Kristina, E. (2012). Governance structure of strategic alliances - Evidences from the South Moravian region. *Journal of Competitiveness, 4*, 172-184. http://dx.doi.org/10.7441/joc.2012.02.12

Kumar, R., & Nti, K. O. (1998). Differential Learning and Interaction in Alliance Dynamics: A Process and Outcome Discrepancy Model. *Organization Science, 9*, 356-367. http://dx.doi.org/10.1287/orsc.9.3.356

Lei, D., Slocum, J., & Pitts, R. A. (1997). Building cooperative advantage: Managing strategic alliances to promote organizational learning. *Journal of World Business, 32*, 203-223. http://dx.doi.org/10.1016/S1090-9516(97)90008-0

Lu, J. R., Tsai, T., & Liu, S. P. (2011). Building a Hospital Alliance -Taiwan Landseed Medical Alliance. *Asian Case Research Journal, 15*, 123-148. http://dx.doi.org/10.1142/S0218927511001496

Luo, Y. (2001). Antecedents and consequences of personal attachment in cross-cultural cooperative ventures. *Administrative Science Quarterly, 46*, 177-201. http://dx.doi.org/10.2307/2667085

Malhotra, D., & Murnighan, J. K. (2002). The effects of contracts on interpersonal trust. *Administrative Science Quarterly, 47*, 534-559. http://dx.doi.org/10.2307/3094850

Markham, S. K. (1998). A longitudinal examination of how champions influence others to support their projects. *Journal of Product Innovation Management, 15*, 490-504. http://dx.doi.org/10.1016/S0737-6782(98)00031-9

Mayer, K. J. (2006). Designing interorganizational contracts: the role of detailed task descriptions. In A. Arino & J. J. Reuer (Eds.), *Strategic alliances: Governance and contracts* (pp. 184-195). Houndmills: Palgrave Macmillan.

McCue, M. J., Clement, J. P., & Luke, R. D. (1999). Strategic hospital alliances: do the type and market structure of strategic hospital alliances matter? *Medical Care, 37*, 1013-1022. http://dx.doi.org/10.1097/00005650-199910000-00005

McSweeney-Feld, M. H., Discenza, S., & De Feis, G. L. (2010). Strategic Alliances & Customer Impact: A Case Study of Community Hospitals. *Journal of Business & Economics Research, 8*, 13-22.

Medcof, J. W. (1997). Why too many alliances end in divorce. *Long range planning, 30*, 718-732. http://dx.doi.org/10.1016/S0024-6301(97)00050-2

Mellewigt, T., Decker, C., & Eckhard, B. (2012). What drives contract design in alliances? Taking stock and how to proceed. *Zeitschrift fuer Betriebswirtschaft, 82*, 839-864. http://dx.doi.org/10.1007/s11573-012-0591-y

Mohr, J., & Spekman, R. (1994). Characteristics of Partnership Success: Partnership Attributes, Communication Behavior, and Conflict Resolution Techniques. *Strategic Management Journal, 15*, 135-152. http://dx.doi.org/10.1002/smj.4250150205

Nielsen, B. B. (2007). Determining international strategic alliance performance: A multidimensional approach. *International Business Review, 16*, 337-361. http://dx.doi.org/10.1016/j.ibusrev.2007.02.004

Nurkin, H. A. (2002). The Creation of a Multiorganizational Health Care Alliance: The Charlotte-Mecklenburg Hospital Authority. In A.D.Kaluzny, H. S. Zuckerman, & T. C. Ricketts (Eds.), *Partners: Forming Strategic Alliances in Health Care* (pp. 63 - 67). Washington D.C.: Beard Books.

Pekar Jr, P., & Allio, R. (1994). Making alliances work - guidelines for success. *Long range planning, 27*, 54-65. http://dx.doi.org/10.1016/0024-6301(94)90056-6

Pelletier, D., Wildhaber, F., Collerette, P., & Heberer, M. M. (2014). Management, Structure and Perceived Positive Outcomes of Hospital Alliances: An Exploratory Multinational Study. *Universal Journal of Public Health, 2*, 147-153. http://dx.doi.org/10.13189/ujph.2014.020502

Perrone, V., Zaheer, A., & McEvily, B. (2003). Free to be trusted? Organizational constraints on trust in boundary spanners. *Organization Science, 14,* 422-439. http://dx.doi.org/10.1287/orsc.14.4.422.17487

Provan, K. G. (1984). Interorganizational Cooperation and Decision Making Autonomy in a Consortium Multihospital System. *Academy of Management Review, 9*, 494-504. http://dx.doi.org/10.5465/AMR.1984.4279689

Reuer, J. J. (2012). Beyond Contracts: Governing Structures in Non-Equity Alliances. *Academy of Management Annual Meeting Proceedings, 1*. http://dx.doi.org/10.5465/AMBPP.2012.73

Reuer, J. J., Arino, A., & Olk, P. M. (2010). *Entrepreneurial alliances*. Pearson (US). ISBN-10: 0132376717

Reuer, J. J., Zollo, M., & Singh, H. (2002). Post–formation dynamics in strategic alliances. *Strategic Management Journal, 23,* 135-151. http://dx.doi.org/10.1002/smj.214

Ring, P. S., & van de Ven, A. H. (1994). Developmental Processes of Cooperative Interorganizational Relationships. *The Academy of Management Review, 19*, 90-118.

Sampson, R. C. (2005). Experience effects and collaborative returns in R&D alliances. *Strategic Management Journal, 26*, 1009-1031. http://dx.doi.org/10.1002/smj.483

Saxton, T. (1997). The effects of partner and relationship characteristics on alliance outcomes. *Academy of Management Journal, 40*, 443-461. http://dx.doi.org/10.2307/256890

Schreiner, M., Kale, P., & Corsten, D. (2009). What really is alliance management capability and how does it impact alliance outcomes and success? *Strategic Management Journal, 30*, 1395-1419. http://dx.doi.org/10.1002/smj.790

Shah, R. H., & Swaminathan, V. (2008). Factors influencing partner selection in strategic alliances: the moderating role of alliance context. *Strategic Management Journal, 29*, 471-494. http://dx.doi.org/10.1002/smj.656

Shortell, S. M., Gillies, R. R., Anderson, D. A., Erickson, K. M., & Mitchell, J. B. (1996). Remaking health care in America. *Hospitals & health networks/AHA, 70*, 43-44.

Shortell, S. M., Zukoski, A. P., Alexander, J. A., Bazzoli, G. J., Conrad, D. A., & Hasnain-Wynia, R. et al. (2002). Evaluating partnerships for community health improvement: tracking the footprints. *Journal of Health Politics, Policy and Law, 27*, 49-92. http://dx.doi.org/10.1215/03616878-27-1-49

Sitkin, S. B., & Roth, N. L. (1993). Explaining the limited effectiveness of legalistic remedies for trust/distrust. *Organization Science, 4*, 367-392. http://dx.doi.org/10.1287/orsc.4.3.367

Smith, J. B., & Barclay, D. W. (1997). The effects of organizational differences and trust on the effectiveness of selling partner relationships. *The Journal of Marketing, 61*, 3-21. http://dx.doi.org/10.2307/1252186

Spekman, R. E., Forbes, T. M., Isabella, L. A., & MacAvoy, T. C. (1998). Alliance management: a view from the past and a look to the future. *Journal of Management Studies, 35*, 747-772. http://dx.doi.org/10.1111/1467-6486.00118

Spekman, R. E., Isabella, L. A., MacAvoy, T. C., & Forbes III, T. (1996). Creating strategic alliances which endure. *Long range planning, 29*, 346-357. http://dx.doi.org/10.1016/0024-6301(96)00021-0

Spekman, R. E., Kamauff Jr, J. W., & Myhr, N. (1998). An empirical investigation into supply chain management: a perspective on partnerships. *International Journal of Physical Distribution & Logistics Management, 28*, 630-650. http://dx.doi.org/10.1108/09600039810247542

Susarla, A., Barua, A., & Whinston, A. B. (2009). A transaction cost perspective of the" Software as a Service" business model. *Journal of Management Information Systems, 26*, 205-240. http://dx.doi.org/10.2753/MIS0742-1222260209

Tsai, C.-T., & Liao, W.-F. (2013). *Medical strategic network, alliance behavior and hospital performance*. Retrieved August 24th, 2015 from http://gas.hk.edu.tw/main/download/journal/72/66-84.pdf

Vera, A. (2004). Neue Organisationsstrukturen in deutschen Krankenhäusern nach der DRG-Einführung. New Organizational Structures in German Hospitals after the Introduction of Diagnosis-Related Groups. *Gesundheitsökonomie & Qualitätsmanagement, 9*, 25-31. http://dx.doi.org/10.1055/s-2004-812699

Vera, A. (2006). Strategische Allianzen im deutschen Krankenhauswesen. Ein empirischer Vergleich von horizontalen und vertikalen Kooperationen. Strategic alliances in German hospitals. An empirical comparison of horizontal and vertical cooperations. *Zeitschrift für Betriebswirtschaft, 76*, 835-865. http://dx.doi.org/10.1007/s11573-006-0042-8

Vlaar, P. W., Van den Bosch, F. A., & Volberda, H. W. (2006). Coping with problems of understanding in interorganizational relationships: Using formalization as a means to make sense. *Organization Studies, 27*, 1617-1638. http://dx.doi.org/10.1177/0170840606068338

Volery, T., & Mansik, S. (1998). The role of trust in creating effective alliances: A managerial perspective. *Journal of Business Ethics, 17*, 987-994. http://dx.doi.org/10.1023/A:1006054912880

Walston, S. L., Burns, L. R., & Kimberly, J. R. (2000). Does reengineering really work? An examination of the context and outcomes of hospital reengineering initiatives. *Health Services Research, 34*, 1363-1388.

Weber, L., & Mayer, K. J. (2011). Designing effective contracts: exploring the influence of framing and expectations. *Academy of Management Review, 36*, 53-75. http://dx.doi.org/10.5465/AMR.2011.55662501

Weil, T. P. (2003). Governance in a period of strategic change in US healthcare. *The International journal of health planning and management, 18*, 247-265. http://dx.doi.org/10.1002/hpm.713

Weiner, B. J., & Alexander, J. A. (1998). The Challenges of Governing Public-Private Community Health Partnerships. *Health Care Management Review, 23*, 39-55. http://dx.doi.org/10.1097/00004010-199804000-00005

Weiner, B. J., Alexander, J. A., & Shortell, S. M. (2002). Management and Governance Processes in Community Health Coalitions: A Procedural Justice Perspective. *Health Education & Behavior, 29*, 737-754. http://dx.doi.org/10.1177/109019802237941

Whipple, J. M., & Frankel, R. (2000). Strategic Alliance Success Factors. *Journal of Supply Chain Management, 36*, 21-28. http://dx.doi.org/10.1111/j.1745-493X.2000.tb00248.x

Wohlstetter, P., Smith, J., & Malloy, C. (2005). Strategic alliances in action: toward a theory of evolution. *Policy Studies Journal, 33*, 419-442. http://dx.doi.org/10.1111/j.1541-0072.2005.00123.x

Zajac, E. J., D'Aunno, T. A., & Lawton, R. B. (2012). Managing strategic alliances. In L.R.Burns, E. H. Bradley, B. J. Weiner, S. Shortell, & A. D. Kaluzny (Eds.), *Shortell and Kaluzny's Health Care Management: Organization, Design and Behavior* (6th ed., pp. 306-331).Clifton Park, N.Y: Cengage Learning.

Zollo, M., Reuer, J. J., & Singh, H. (2002). Interorganizational routines and performance in strategic alliances.

Organization Science, 13, 701-713. http://dx.doi.org/10.1287/orsc.13.6.701.503

Zuckerman, H. S., & D'Aunno, T. A. (1990). Hospital alliances: Cooperative strategy in a competitive environment. *Health Care Management Review, 15*, 21-30. http://dx.doi.org/10.1097/00004010-199001520-00007

Zuckerman, H. S., & Kaluzny, A. D. (1991). Strategic alliances in health care: The challenges of cooperation. *Frontiers of Health Services Management, 7*, 3-23.