
A current market assessment for



Future Relevance and Consequences of Hospital Purchasing Cooperatives for Medical Technology Suppliers in Germany

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I. Executive Summary

Changes in the framework of healthcare policies, particularly the introduction of DRGs, create considerable cost management challenges in the German hospital sector. The pooling of bargaining power in purchasing cooperatives is a preferred instrument for lowering purchasing costs, which have become the focus of late. On the supplier side, the increasing consolidation of the hospital purchasing landscape creates considerable challenges. Ranking first is the continued severe price pressure. The effectiveness of the traditionally strongly clinically-oriented sales and marketing activities is fading.

Under these circumstances, the present study has two essential objectives. For one, it is intended to tap medium-term development trends in German hospital purchasing; secondly, it is supposed to highlight strategic need for action for suppliers to successfully face the changes in the future market place.

Key Results

- The influence of purchasing cooperatives is growing strongly. The entire supplier field, with the exception of highly specialized niche suppliers, is affected by the consolidation of the hospital purchasing landscape.
- The increasing cooperative activities have already led to considerable price and profit margin erosion among suppliers. The underlying cause is essentially quickly growing purchasing professionalization by customers, but also the simultaneous inaction by suppliers, which particularly lack price discipline and structure.
- We are expecting further consolidation of the hospital purchasing landscape in Germany over the next five years. This landscape will be characterized by a significantly lower number of purchasing cooperatives than today. The remaining alliances will act transregionally and manage a broad product range. Moreover, most of them will be in a position to enter into binding agreements between the affiliates and individual suppliers. In the medium term, apart from passing on prices and conditions, the focus of purchasing cooperatives will expand to include the mediation or provision of value-added services for the affiliated hospitals.

**Non-clinical
decision makers
become an
important target
group for sales and
marketing.**

- Apart from these binding purchasing cooperatives, also well-run and competition-oriented hospitals, which purchase individually and are open to direct value-added cooperations with suppliers, will hold their ground.
- The level of influence of purchasing cooperatives in the medium term and the future price development of hospital medical devices in Germany will depend significantly on goal-oriented adaptations of the suppliers' commercial strategies. E-procurement platforms will be of little strategic relevance in this context.
- Different customer priorities arise for medical technology suppliers as a function of the breadth and the degree of competitive differentiation of their product and service portfolio.

For special niche suppliers, the clinical user on the hospital level continues to represent the most important target group.

For innovation leaders, whose products typically account for a large percentage of hospital purchasing costs, it will be important to include non-clinical decision makers and purchasing cooperatives in their sales activities. In general this group of suppliers has the basic option of undermining the influence of non-binding purchasing alliances by selectively retaining individual members as direct customers.

Target groups for system suppliers are above all large individual hospitals and binding purchasing cooperatives and/or hospital groups. Since here, emphasis is placed on individually configured and high-value service packages, a high degree of commitment is required from the customer side. Non-binding purchasing cooperatives are consequently of no relevance for system suppliers.

Cost leaders, whose most important competitive parameters are low product prices, are dependent on economies of scale and consequently have high volume and capacity utilization requirements. Business development that is focused on selective accounts and customer loyalty is hardly effective in this sense. All types of customers, including non-binding purchasing cooperatives, are therefore of high relevance for this strategic supplier group. The important aspect here however, is that even low prices are tied to structures and to transparent conditions so as to minimize the risk of price referencing by the customer.

- On the basis of the above-described strategic business models also different priorities for action arise when it comes to further developing existing sales and service models.

The higher the degree of competitive differentiation of a supplier's product portfolio, the stronger the sales and service model can keep on targeting at clinical purchasing decision makers. For all innovation-driven companies, however, it will be essential to have hospital economic experts demonstrating the economic benefits of new products and technologies as well as to ensure their reimbursability.

The establishment of central commercial account responsibilities will become a crucial factor for dealing with purchasing cooperatives.

With the exception of pure niche specialists, the establishment of central commercial account responsibilities will become a crucial factor for dealing with purchasing cooperatives. Moreover, depending on the business model, there will be a greater or lesser need to further develop the hospital economic competencies of the sales organization. In particular when the scope of a supplier's offers includes commercial customer services, dual field-force structures are the logical conclusion, combining classic clinical field service with hospital economic experts.

In terms of value-added customer services, the topic of jointly optimizing revenue by supporting customers in managing their relations with health insurers, referring physicians and/or patients is an opportunity for niche specialists and innovation leaders. In this case, combinations of 'push instruments' towards related healthcare sectors (such as reimbursement optimization by applying for pass-through payments, managing the transfer of patients into the outpatient

sector, or establishing managed care models) and patient marketing may be employed.

For system suppliers and cost leaders the focus in terms of the supply of value-added customer services is more focused on managing the hospital cost side. Potential action areas in this context include the optimization of product usage and clinical processes, the establishment of operator models for clinical divisions or the optimization of hospital-internal and – external logistics.

Marketing and sales practices need to be adapted in a multi-stage process.

- Regardless of the business model, the adaptation of marketing and sales practices to the future hospital purchasing landscape requires systematic and disciplined change action by suppliers. The change process covers five elementary steps:

The first step is customer prioritization in terms of identifying the future success relevance of different customers and/or customer segments. Resource and service allocations have to be eventually geared towards the needs, the growth potential and the profitability of those accounts with the highest business success relevance in the future.

In the next step, value-differentiated offer packages need to be tied to a systematic, transparent and customer performance-oriented pricing policy. High value products and services at attractive price levels can only be offered in exchange for a high level of formal customer commitment, (e.g. annual demand volumes, contract duration). Implementing a value and customer-performance orientated commercial policy requires consistent and disciplined action.

Individual agreements and actionistic price concessions must be avoided by all means to manage the risk of ongoing price referencing eventually fueling price erosion.

The principles of the new commercial policy have to be communicated clearly to the market. Setting price signals, which clarify to the competition that cut-throat price competition or attempts to buy market share benefits only one party – the customer – and that in the end all suppliers suffer, can be a legal way of continuously appealing for rational market behavior.

Structural and human resources adaptations are necessary in order to increase sales efficiency. This implies re-aligning account responsibilities with customer structures and purchasing stakeholders and providing the sales force with economic bargaining and negotiating skills and tools. In order to drive compliance with a new and profitable growth-oriented commercial policy, compensation schemes need to be geared towards customer profit margins, not revenue or volume-targets. At the same time, this necessitates a new level of quality in terms of targeted sales management and controlling.

**It is the responsibility
of the entire industry.**

- It is the responsibility of the medical technology sector in Germany as a whole to actively participate in shaping of the future hospital purchasing landscape in Germany and to maintain the attractiveness of the marketplace. In addition to continuously monitoring anti-trust leeway, this includes that competitive differentiation has to focus on delivering customer value and not offering the lowest price. Price overreactions have to be avoided. Should signals to the competition become necessary, precedences shall only be made selectively.

The German market for hospital medical devices will achieve a new advanced level of maturity in the coming years. Large, professional and binding purchasing cooperatives will shape the customer landscape together with competition-oriented individual hospitals. Business relations with suppliers will increasingly adopt the traits of classical business-to-business relations. The traditional „clinician-to-business relation“ will lose strength. For the suppliers' success it will be critical that they adapt their commercial policy to the new framework conditions. The awareness of the imminent need for changes already manifests itself. In part selective adaptation processes are already ongoing. The extent to which Germany is able to maintain its attractiveness as a medical technology location will, however, essentially depend on more thorough and timely adaptations of commercial policies on the supplier side.

II. Study Background and Objectives

Changes in the framework conditions of healthcare policies, particularly the introduction of DRGs, create considerable cost management challenges in the German hospital sector. These challenges are aggravated by the fact that the transparency necessary for optimizing structure- and process-related costs on the part of the hospitals frequently is non-existent and that the legal leeway for implementing short-term human resources adjustments is limited.

This constellation causes the medical supplies of hospitals to be very much the focal point of hospital management as a short-term cost reduction valve - in particular the purchasing costs associated with medical devices, which represent the majority of these expenses.

The pooling of bargaining power in purchasing cooperatives is a preferred instrument for cutting purchasing costs. At present, two fundamentally different types of purchasing cooperatives shape the purchasing landscape in Germany. For one, independent hospitals are cooperating in terms of purchasing through purchasing consortia („PC“), secondly, private hospital groups are centralizing the purchasing functions of their affiliated hospitals („HG“).

On the surface, the level of fragmentation is still relatively high at about 70 cooperatives having varying structures and business models. A closer observation however reveals that the 20 largest purchasing consortia and hospital groups already influence more than 50% of suppliers' sales to German hospitals.

On the supplier side, the increasing consolidation of the hospital purchasing landscape and the resulting pooling of bargaining power create significant challenges. Ranking first is the continued severe price pressure. The influence of clinical users – the traditional core target group for medical technology suppliers – on the purchasing decision is decreasing. At the same time a new target group evolves with professional purchasing managers, who increasingly own the purchasing process but who are largely unknown to the suppliers. The effectiveness of the suppliers' traditionally strongly clinically-oriented sales and marketing activities is therefore, declining.

The effectiveness of traditionally strongly clinically-oriented sales instruments decreases when dealing with purchasing cooperatives.

The study is intended to tap development trends. The focus is not placed on company-specific recommendations.

Study Objectives

Under these circumstances, the present study has two essential objectives. For one, it is intended to tap medium-term development trends in German hospital purchasing; secondly, it is supposed to highlight strategic need for action for suppliers to successfully face the changes in the future market place. The key topics covered are:

- *Medium-term developments in the German hospital purchasing landscape*
- *Identification of most relevant cooperative models and strategies*
- *Learnings from the highly consolidated hospital purchasing market in the USA*
- *Analysis of strategies employed by suppliers in other industries for dealing with consolidation processes on the customers' side*
- *Need among medical technology suppliers in Germany for commercially adapting to the emerging new market structures*

The strategic recommendations deduced for suppliers from the research are of a general nature. Specific individual company framework conditions have not been taken into consideration. For confidentiality reasons we furthermore refrain from addressing or discussing company-specific case studies.

III. Approach

In the effort to answer the key questions of the study, secondary research was conducted and discussions were held with top-level decision makers from the relevant stakeholder groups.

Participants included:

- Members of the managing board and sales managers of medical technology suppliers with varying levels of product differentiation in Germany and the USA
- Decision-makers of purchasing consortia comprising varying cooperation models as well as hospital groups and hospitals with varying ownership structures in Germany and the USA
- Sales managers of several companies from other relevant industries in Germany

| PC / Groups / Hospitals | | Medical Device Suppliers | | GPOs / Hospitals - USA | | Medical Device Suppliers - USA | |
|--|--|--|---|--|--|---------------------------------|--|
| <ul style="list-style-type: none"> ▪ Diakonie-KH Rotenburg a.d. Wuemme ▪ Helios Kliniken ▪ Klinikeinkauf Niederrhein-Westfalen ▪ Klinikum Augsburg ▪ Klinikum Nuremberg ▪ Klinikverbund Bremen ▪ Prospitalia ▪ UNICO | Different Types of Consortia / Shareholder Structures | <ul style="list-style-type: none"> ▪ Baxter Germany GmbH ▪ Aesculap AG & CO. KG ▪ Ethicon GmbH ▪ Guidant GmbH ▪ PAUL HARTMANN AG ▪ KRAUTH medical KG (GmbH & Co.) ▪ Lohmann & Rauscher GmbH & Co. KG ▪ Zimmer Germany GmbH | Different Degrees of Product Differentiation | <ul style="list-style-type: none"> ▪ Consorta (GPO) ▪ Health Trust (GPO) ▪ Premier (GPO) ▪ Evanston Hospital (Illinois) ▪ Northside Hospital (Georgia) ▪ Reading Hospital (Pennsylvania) | <ul style="list-style-type: none"> ▪ Ethicon ▪ Percardia ▪ St. Jude Medical ▪ Wescor Inc. ▪ Medical Device Manufacturer Association | Other Industries Germany | |
| <div style="display: flex; align-items: center;"> <p>Discussion guidelines developed together with BVMed set the outline for the discussions.</p> </div> | | | | | | | |

Figure 1: Study Participants

IV. Current Developments in Hospital Purchasing

Increase in Cooperative Activities

Influence of purchasing cooperatives increased significantly over the past five years.

The influence of cooperative types of purchasing in the German hospital sector has increased significantly over the past five years. While five years ago medical technology suppliers achieved less than one third of their hospital sales from transactions with purchasing consortia, this percentage today is around 45%. A similarly strongly growing influence can be observed among private hospital groups. There the corresponding sales figures rose from 14% in the year 2000 to 24% at present. Experts interviewed expect that the influence of purchasing cooperatives will increase further and that by 2010 only about 10% of sales will be achieved directly through individual hospitals.

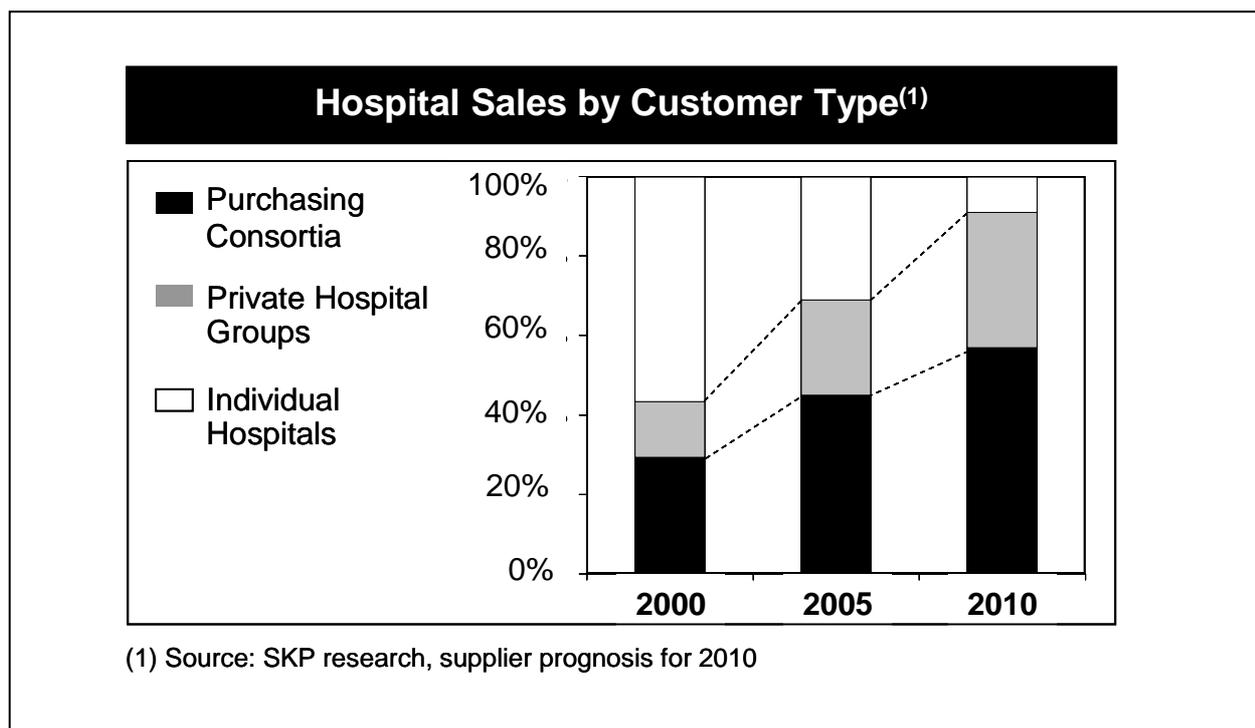


Figure 2: Development of Sales Breakdown

This development is driven by varying factors. For one, purchasing will continue to remain a primary cost reduction focus for hospitals. Secondly, the cost reduction successes achieved so far on the purchasing side reaffirm the hospitals' cooperative activities and result in increasing consolidation dynamics. By being affiliated with purchasing cooperatives, it is relatively easy for hospitals

to profit from price concessions made by suppliers: „We are achieving quick wins over and over.“ (Manager of a PC)

The affiliation with purchasing cooperatives is rewarded with significant price concessions made by the suppliers.

Moreover, the consolidation process is fueled by the ongoing external growth of private hospital groups, the motivation of which is last but not least driven by realizing economies of scale on the purchasing side.

A look at the hospital sales breakdown of different supplier groups or operating divisions having varying levels of product differentiation shows that the influence exerted by purchasing cooperatives is rising in every respect and that even high-tech product categories with short innovation cycles are affected. The latter is due to the fact that these product categories often represent a high share of the total costs for medical supplies and that the funding of their use is capped by existing DRG levels.

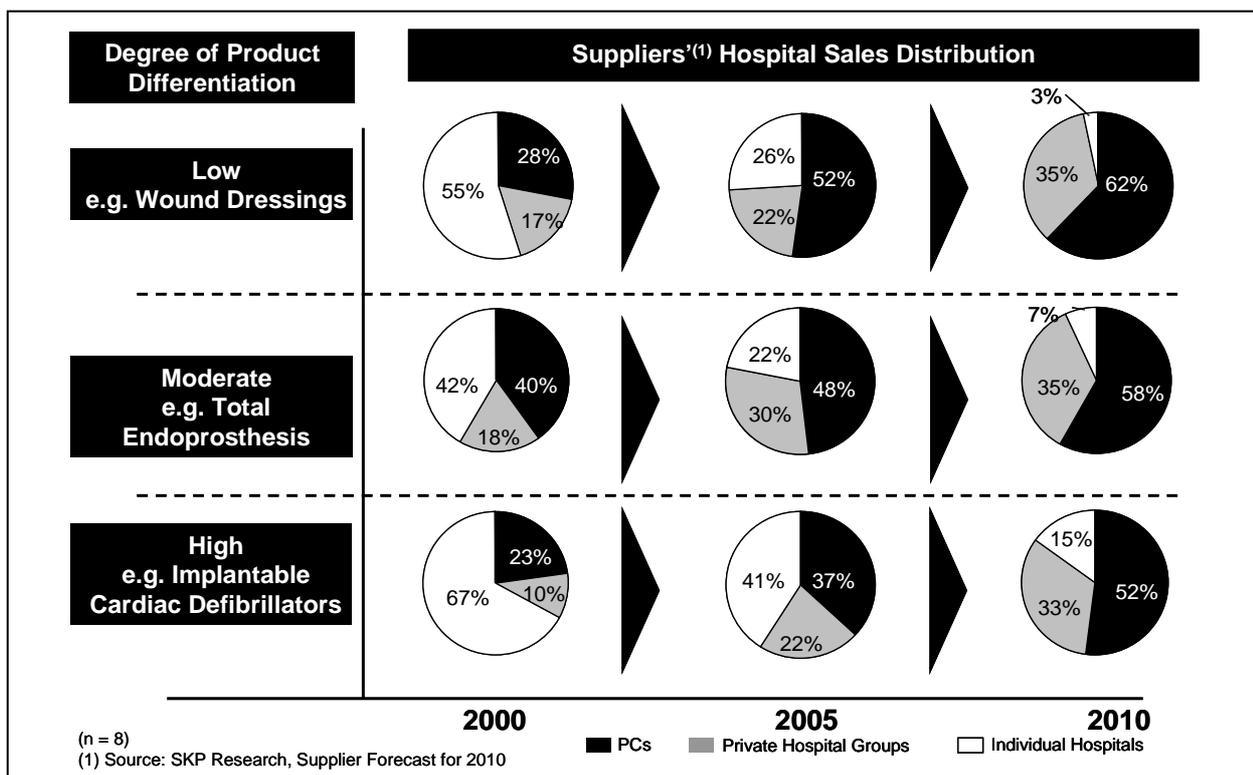


Figure 3: Sales Development by Level of Product Differentiation

Accordingly, it is in the interest of hospital administrations and purchasing managers for these product categories to have standardized and exchangeable offers to choose from within the shortest possible time so as to lower purchase prices through continuous negotiations with heavily competing suppliers.

The purchasing influence of clinical users decreases successively and in part quickly, from the clinical trial phase to standardized product specifications. It remains only strong for highly specialized products and procedures.

Effects of Purchasing Consolidation on Prices and Margins

The increasing pooling of negotiating power in hospital purchasing is accompanied by significant price erosion for hospital medical devices. This is particularly evident when comparing it to the price development for hospital drugs.

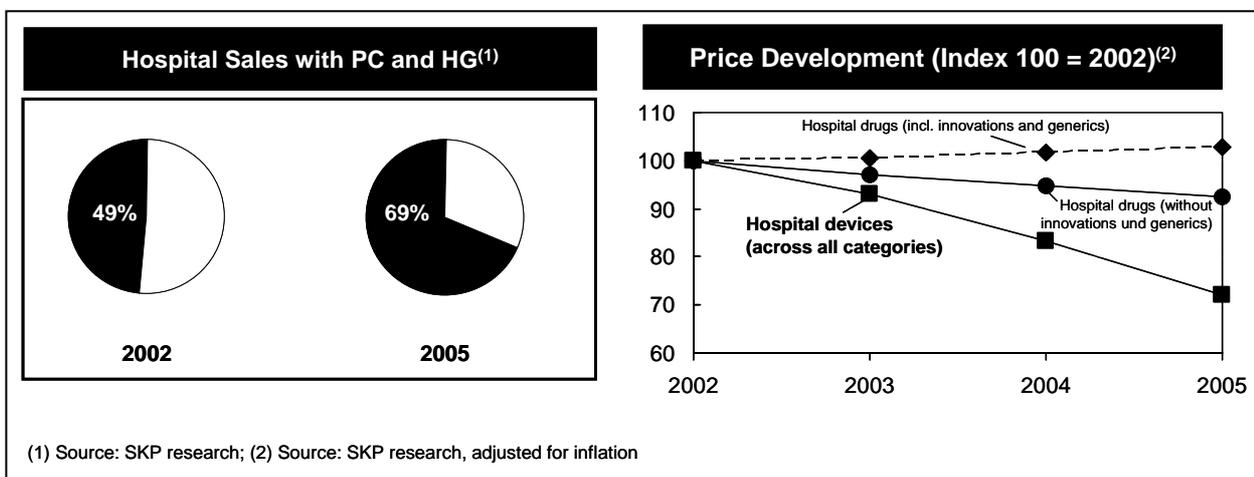


Figure 4: Price Erosion for Medical Devices

Between 2002 and 2005 an average net price decrease of about 10% annually occurred for hospital medical devices. During the same time period percent sales influenced by purchasing cooperatives rose from 49% to about 70%.

When looking at the price development for hospital drugs (including innovative and generic products), for which purchasing processes are still largely driven by drug formulary committees on the individual hospital level, over the same time period a slight net price increase can be observed.

Hospital experts consider a major reason for the significant price erosion among medical devices to be that hospitals are concentrating on those cost levers, which are most easily accessible in the short term:

„The manufacturers of medical devices make it relatively easy for hospitals: Since purchasing costs can be lowered so easily, the hospitals are not addressing necessary process cost optimization efforts.“ (Manager of a PC)

„Volume growth is a sacred cow, which will not be slaughtered for better prices.“

At the same time, price erosion is attributed to lacking pricing structure and discipline among suppliers. The latter in turn is a consequence of focusing excessively on volume and market share growth. Profit margin considerations all too often remain out of scope in pricing decisions. One supplier pinpoints it as follows: *„Volume growth is a sacred cow, which will not be slaughtered for better prices.“*

Net price decreases have sustained negative effects on the profit of medical technology suppliers. This is shown, by way of example, by the effects of a 5% net price decrease on a company having a starting EBIT margin of 8.7%, which can be considered as average in this industry.

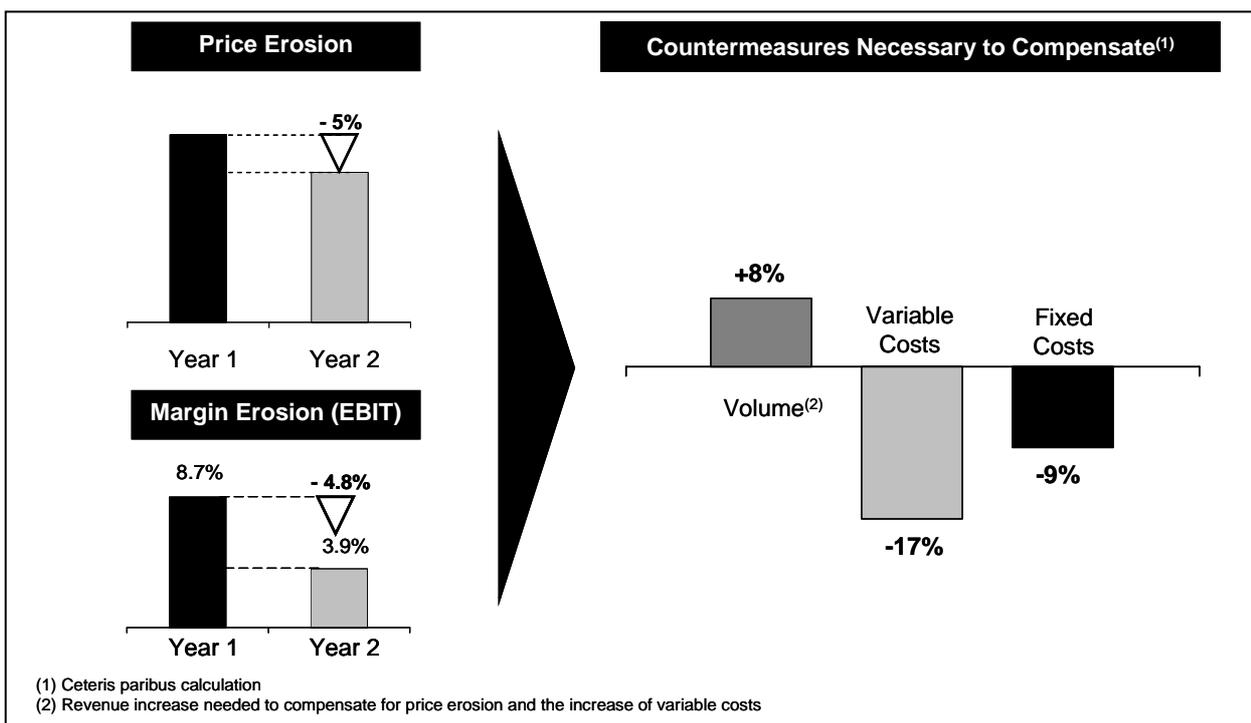


Figure 5: Effects of Price Erosion

Without compensating measures, the 5% net price decrease leads to a direct decrease in the EBIT margin by 4.8% to 3.9%. If selective compensating measures were to be taken at the same time, for example a disproportionate volume increase of 8% would be required to compensate for the net price decrease. In light of

simultaneously expected price reactions from competitors, the latter should certainly be a difficult move.

Further compensating attempts could consist of cost reductions. A decrease in variable unit costs by 17% or alternatively a decrease in fixed costs by 9% would be necessary. Cost decreases of such a scope cannot be implemented in the short term, if at all, they are associated with sustained restructuring efforts.

Net price decreases can typically not be compensated in the short term without the successful introduction of innovative products and technologies. With continued price erosion, innovative suppliers are therefore, ever more dependent on their R&D pipeline and, at the same time, on the willingness of the caregiver sector to reward innovative achievements with price premiums. Less innovative companies are subject to a sustained cost reduction pressure in order to maintain the margin level in light of ongoing price erosion.

The observed price erosion for hospital medical devices in Germany is a critical development for this location since lower profit levels and consequently lower cash flows lead to tighter investment leeway for medical innovations and jobs and/or provoke suppliers to transfer production to low-wage countries.

Typical Types of Purchasing Cooperatives

Despite the heavily fragmented purchasing cooperative landscape (more than 60 purchasing consortia), typical cooperative models are crystallizing. These models differ on one hand in terms of the spectrum of the jointly purchased products and on the other hand in terms of the level of centralized decision-making among the affiliated hospitals.

Net price decreases can generally not be compensated in the short term without the successful introduction of innovative products.

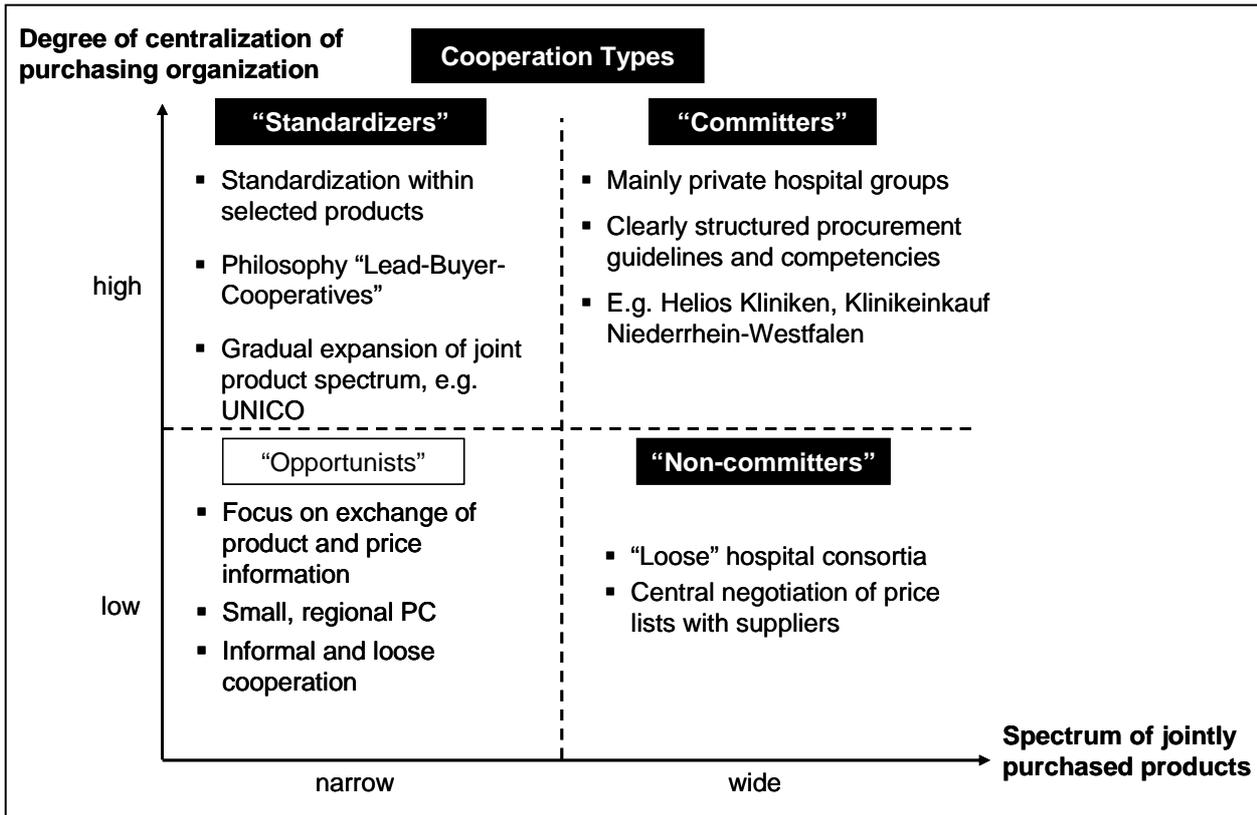


Figure 6: Cooperative Types

Several primarily small, regional purchasing cooperatives limit their joint activities to the exchange of product and price information. The purchasing decision in the end remains with the individual hospital. This type of cooperative is loose and informal and may be referred to as „**opportunistic**“.

At present the purchasing landscape is shaped by varying types of cooperatives.

A second group of purchasing cooperatives organizes their joint activities based on the „Lead Buyer“ principle. In such networks individual hospitals assume the centralized purchasing responsibility for a selected product category and are able to enter into binding agreements with suppliers for the entire consortium. The prerequisite for such purchasing networks to function efficiently are jointly agreed and binding product standards for the relevant product categories. Cooperatives of this type may therefore, also be referred to as „**standardizers**“.

In contrast, numerous purchasing cooperatives operate across a broad product range and have a centralized coordination function, which essentially negotiates individual price lists for the alliance with the suppliers, yet

cannot enter into binding agreements for the group. These price lists are a „**non-binding**“ offer for the associated hospitals. The final purchasing decision, however, remains at the hospital level.

„**Binding**“ types of purchasing cooperatives are characterized on one hand by a broad commonly purchased product range. On the other hand, they have a centralized decision-making body, which can negotiate agreements with the suppliers that are binding for all affiliated hospitals, such as price levels linked to different demand volumes. For such networks to function effectively, it is generally necessary that the individual members are strongly affiliated, which is particularly the case for private hospital groups.

While suppliers have to respect and accept binding cooperatives as „full-fledged“ customers, in the case of non-binding cooperatives, in general they have the choice to conduct centralized negotiations on the consortium level or to pursue selective direct-customer retention strategies on the member level. Currently, the frequently observed „hybrid form“ of dealing with non-binding purchasing consortia, i.e. price concessions without customer commitment through consortium-specific price lists and subsequent renegotiations on the member level, holds extremely high price erosion risks.

Cooperative Landscape

The organized hospital purchasing landscape in Germany is currently dominated by binding cooperative models. This includes purchasing consortia such as Klinikeinkauf Niederrhein-Westfalen, but in particular also private hospital groups, which are essentially, represented by the four large groups Asklepios, Helios, Sana and Rhön.

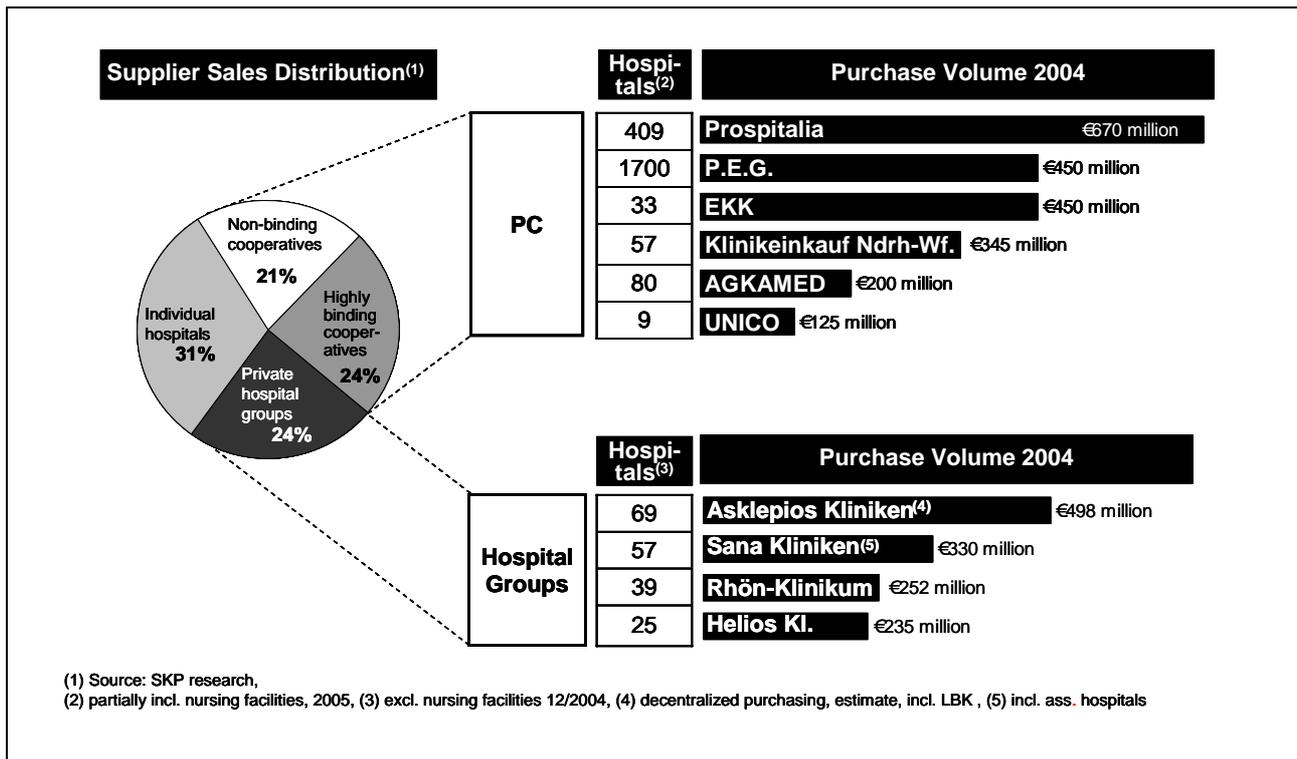


Figure 7: Cooperative Landscape

Purchasing Decisions in Purchasing Cooperatives

The overall responsibility for purchasing decisions of binding cooperatives is with the non-clinical decision-makers.

Non-clinical decision-makers and/or professional purchasing managers are becoming highly influential in the purchasing cooperatives purchasing decisions. Non-binding cooperative models, however, show that the roles in the purchasing process between the consortium level and the member level as well as between the purchasing manager and the clinical user levels are not clearly defined. This indicates a certain fragility of these alliances and once again illustrates the afore-mentioned opportunity for suppliers to increase direct-customer retention on the member level.

In contrast, in binding cooperative models, the roles in the purchasing process between the different levels and stakeholders are much more clearly defined, which at the same indicates greater unity and punch. The overall responsibility is with non-clinical decision-makers on the group level. Yet, influence on the user side remains with the affiliated hospital level. This is because, technical competence on the non-clinical side is, in part, insufficient and that complete incapacitation of the users would be counteractive to the acquisition and retention of highly qualified medical personnel.

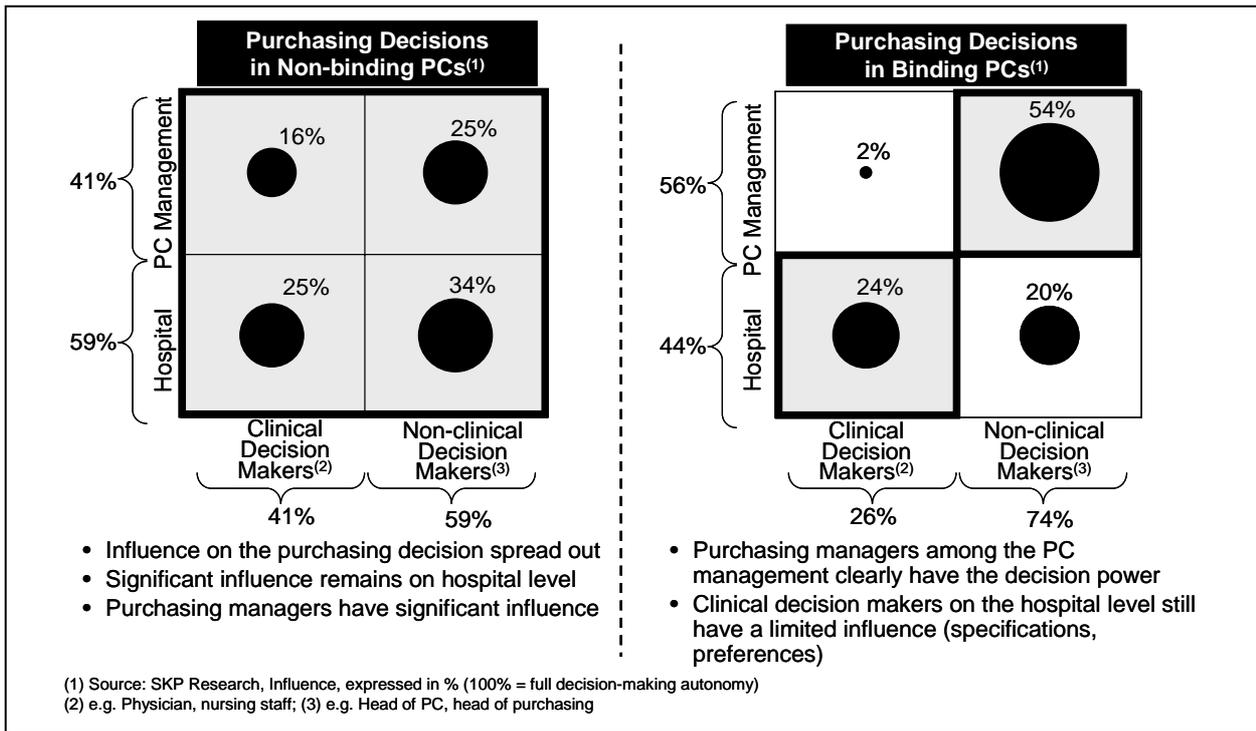


Figure 8: Influence on Purchasing Decisions

Advantages and Disadvantages for Hospitals

In the long term, non-binding purchasing cooperatives offer little benefit to hospitals.

From the hospitals' view, at present the affiliation to purchasing cooperatives is worthwhile. A hospital purchasing manager describes the situation as follows: *„Our affiliation with the PC does not have any disadvantages for us; we profit from price reductions, without anything having changed in terms of the direct servicing intensity we receive from the manufacturer.“*

In the long term, the benefits of being affiliated with non-binding cooperative models are considered questionable. The hospitals assume that the price reduction leeway of the suppliers will be exhausted in the medium term. Non-binding cooperative models, which are focused on merely passing on discount offers, therefore, are expected to lose their basis for existence. The situation with binding cooperative models is assessed differently, because due to the possibility of outsourcing significant parts of their members' purchasing organization they provide the opportunity to generate long-term process cost savings in addition to short-term purchase price advantages. It is assumed that binding consortia will even expand their service range in the future by mediating and/or offering consulting services in the areas of product usage or reimbursement management.

There are, however, also more critical opinions among hospitals when it comes to the long-term advantages of being affiliated with purchasing consortia. This involves primarily well-run individual hospitals, which pursue their own competitive strategies, seeing risks in joint purchasing due to restricting their strategic decision-making authority and sharing own competitive advantages. Particularly in the course of hospital specialization strategies, this group of hospitals sees higher benefits in a closer collaboration with the supplier side and in greater purchasing autonomy for the clinical user side.

Intermediate Conclusions (1)

The influence of purchasing cooperatives continues to grow. The entire supplier side, with the exception of highly specialized niche suppliers, is affected by the consolidation of the hospital purchasing landscape.

The increasing cooperative activities have already led to significant price and margin erosion among suppliers. The underlying causes are essentially quickly growing purchasing professionalization on the customer side and simultaneous inaction and lacking price structure and discipline on the side of the suppliers.

One can assume that in the future an increasing number of binding cooperative models will shape the purchasing landscape. The long-term existence of non-binding cooperatives which focus solely on mediating discount offers is, however, questionable and will depend above all on how strongly the suppliers will continue to give in to non-binding demands for discounts.

V. Current Developments among Suppliers

In connection with the ongoing consolidation of the hospital purchasing landscape, medical technology suppliers in Germany see a clear need for adapting their commercial activities, which traditionally are structured regionally and are geared heavily towards the clinical user side. The need for action is seen in particular in the following areas:

Organizational Development in Sales Management

New sales organizational structures have to satisfy the requirements of transregionally acting purchasing cooperatives. This requires proactive engagement with central economically driven purchasing decision-makers on the customer side. It becomes apparent that account responsibilities for purchasing cooperatives are transferred increasingly to key account managers on the supplier side, who at the same time coordinate the transregional sales activities on the member level of the cooperative.

At the same time, it is considered very important among suppliers to further develop the commercial competencies of the sales force, which so far in many cases are primarily clinically and scientifically oriented. The latter orientation, however, no longer satisfies the requirements of effective negotiations with commercially motivated decision-makers on the customer side. In this respect suppliers are currently also envisaging „dual field-force models“, which provide separate and appropriately qualified sales teams for clinical and non-clinical hospital target groups.

From the customers' view, however, so far little is noticeable in terms of adapted sales organizations. In many cases field forces still attempt to drive advantageous transactions by using clinical users as mediators, while bypassing purchasing managers. This creates internal tension on the customer side, for which suppliers are blamed. Sales organizations often still rely on the commitment and the influence of clinical users only, both of which show a clear tendency to decrease. One purchasing manager complains as follows: *„We expect*

Providers are increasingly considering „dual“ sales models with clinical and non-clinical field forces.

that the manufacturers to treat us like one customer, but their field forces always try to bypass ".

At the same time customers complain about sales forces being insufficiently commercially trained and oriented. Too little understanding of the customers' economic challenges and a lack of decision autonomy on the part of sales managers counteract effective negotiations. One purchasing manager has the following complaint: *"I don't care whether it is a key account manager as long as he can make commercial decisions."*

Value-Added Cooperative Services

In an effort to counteract the exchangeability of suppliers driven by ongoing standardization of supply needs, affected suppliers are attempting to bundle their product offers with high value customer services.

Services, which were employed successfully in direct business relations to hospitals in the past, such as professional education or consignment stocks, however, lose effectiveness as a differentiating competitive factor. This is due to the fact that such services are increasingly perceived by the customer as standard services and/or that their measurable benefit is being questioned. The effectiveness of these services as a tool for differentiation in competition or as argumentation in negotiations with institutional purchasing structures is weakening.

Suppliers in part are developing novel service models, with the objective of achieving economic advantages for the customer outside of mere price concessions. These services are aimed, among other things, at improving the level of process efficiency in the hospital or at clinically and economically efficient product usage. Customers are confirming a clear need for support in these areas: *"Manufacturers could provide more DRG consultation and support us in optimizing our processes in the operating room."*

Another field of action in this context is the support offered by suppliers to hospital cooperatives or hospitals in marketing their health services. Customers are desiring an increased involvement of suppliers in connection with managed care models or the marketing of innovative therapies to insurance companies and patients: *"In this*

The effectiveness of purely clinically oriented services as a means for distinguishing oneself from the competition is decreasing.

respect very interesting perspectives exist for cooperation with manufacturers, but we have a long way ahead of us."

Development of Systematic Price Structures

Suppliers see a need for action in the introduction of transparent prices and conditions.

The past pricing practice of suppliers was driven by fixing individual net prices with individual customers for a certain delivery period, in most cases without purchase commitments by the customer. This has led to significant net price differentials in the market and has become a decisive driving element for the observed price erosion in many product categories. Purchasing cooperatives are pursuing systematic price referencing, i.e. existing net prices are compared at defined intervals or when new hospitals join the alliance. During this process new minimum price levels are identified, thus serving as a starting point for subsequent renegotiations with the respective suppliers.

Under these circumstances, many suppliers see a need for action in the development and introduction of systematic and transparent price structures, in which net prices and services in the future will be tied to binding conditions, such as the realized purchase volume, the duration of delivery contracts or the spectrum of products purchased by the customer. Additionally suppliers would prefer a shift of discounting policies from invoice discounts towards year end bonuses, which only take effect when the customer fulfills the agreed-upon purchase objectives. The latter however, turns out to be difficult to implement since purchasing cooperatives and/or hospitals in many cases are not able to reflect year-end bonuses from a financial and cost accounting point of view.

Intermediate Conclusions (2)

In the course of the ongoing consolidation of the hospital purchasing landscape, suppliers see a clear need for action to adapt their sales, service and pricing practices to the new circumstances. In particular the establishment of central commercial account responsibilities, the development and the supply of economic value-added customer services as well as the introduction of systematic and transparent price structures play an important role.

Suppliers have clearly recognized the need for action in these areas. However, customer perception of strongly

clinically-focused sales staff, customer services which are less differentiated and provide little measurable benefit and/or continuous non-conditional price concessions by the suppliers reflect the fact that various measures are still being planned and that little adaptation has occurred in practice so far.

VI. Medium-Term Outlook

Consolidation of the Hospital Landscape

The presently observed consolidation in hospital purchasing is not a temporary phenomenon. Both suppliers and customers, as described before, expect further concentration in the future. It is expected that by 2010 over 80% of all German hospitals will be affiliated with 15-20 transregional purchasing cooperatives. Well-run and competition-oriented individual hospitals will remain independent.

U.S. Purchasing Landscape as a Role Model for Germany?

A look to the USA shows a highly concentrated hospital purchasing market. More than 60% of all purchases of hospital medical devices are presently controlled by seven purchasing cooperatives, so-called „Group Purchasing Organizations“ (GPO).

In the USA purchasing decisions are increasingly transferred back to the hospital level.

Unlike in Germany, however, the USA has experienced a decreasing influence of the purchasing cooperatives for several years. For the future the suppliers expect that the influence of the large GPOs will decrease further and that business relations will increasingly shift again to the hospital level.

This development is primarily due to anti-trust reasons. In fact patients in several cases sued hospitals, which did not use products requested by the patients due to existing exclusivity agreements between the GPO which the hospital was affiliated with and a specific manufacturer.

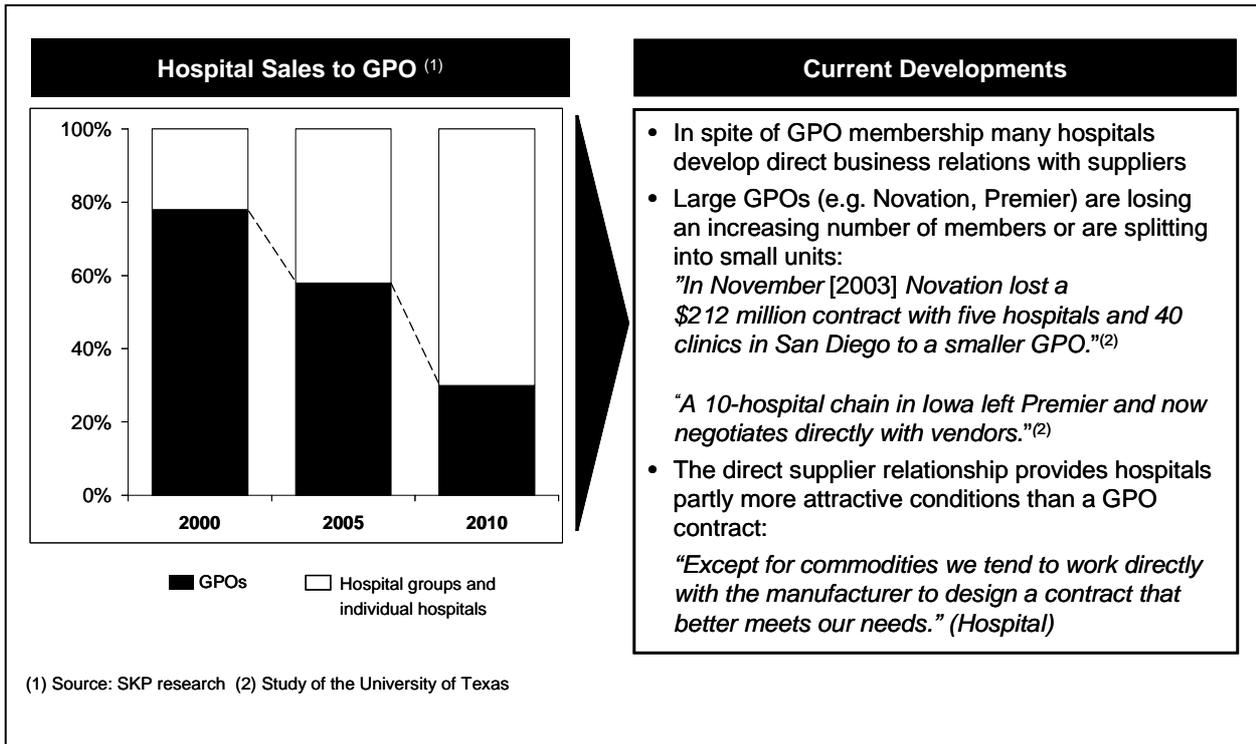


Figure 9: Pooling of Purchasing Power in the USA

In addition, smaller suppliers have also sued successfully on several occasions against the practice of contractual arrangements between GPOs and large medical technology suppliers, which have made it nearly impossible for smaller suppliers to establish business relations with the large GPOs.

The courts in the USA reacted, among other things, by introducing product category-specific market share restrictions for GPOs. For example, across the USA individual GPOs today must not control more than 35% of the entire purchasing volume in any one product category.

Another reason for the waning influence of purchasing cooperatives in the USA is the fact that hospitals are more oriented to competition. They weigh the benefits of a GPO affiliation very carefully against direct relations with the manufacturer. The advantages of direct relations with the supplier are particularly seen in slightly better purchasing conditions by eliminating the GPO margin and a more customized and personal support by the supplier: *„Except for commodities, we tend to work directly with the manufacturers to design a contract that really meets our individual needs.“*

In the medium term, developments similar to those in the USA appear less likely in the German market.

From a current point of view it is, however, unlikely that the consolidation process in Germany could be slowed down in the medium term by anti-trust arguments, as it occurred in the USA. Exclusivity agreements with individual manufacturers are not a common practice in Germany. Since the technological awareness and involvement of patients in treatment decisions is far less pronounced in Germany than in the USA, no opposition is to be expected from this side. Moreover, a look at past decisions made by German authorities shows that anti-trust investigations focus on the regional concentration of "supplier" power of hospital cooperatives, such as the number of beds in the relevant regional hospital market. So far, the pooling of purchasing power as a result of hospitals joining forces and forming purchasing cooperatives has not led to any anti-trust concerns in Germany.

In Germany it will depend very heavily on the suppliers to what extent they further strengthen the importance and the influence of even fragile purchasing alliances through continued inaction and defensiveness and thus, favor the formation of additional groups and concentration. A similar attitude among suppliers in the past initially also favored the concentration process in the USA.

In Germany the pressure for lowering purchasing costs in hospitals will continue. Especially in the case of „commodities“ or products with little differentiation it will be difficult for suppliers to reduce the influence of purchasing cooperatives. However, in all other areas, the supplier already has the possibility of prioritizing customers and deciding which cooperatives he would like to treat as one customer and where he would like to focus more strongly on direct customer relations and/or a more intensified partnership-orientated cooperation with individual hospitals.

Future Dominant Cooperative Models

The purchasing cooperatives, which in the medium term will prevail in Germany despite possible counteraction by the suppliers, will have to be in a position to establish binding business relations for their affiliates. Additionally, they will jointly procure a broad product range and provide their affiliates – either personally or by mediation - with value-added services in addition to attractive purchasing conditions.

Binding cooperative models will be dominant in the future .

This expected development has its roots in the opinion that small opportunistically acting alliances and large networks, which solely negotiate and provide centralized and non-binding group price lists, cannot survive the increasing competition for members in the medium term. Already existing binding alliances will grow further, driven by further acquisitions of private hospital groups, and/or will gain additional market share due to the aforementioned continuing value-added advantages.

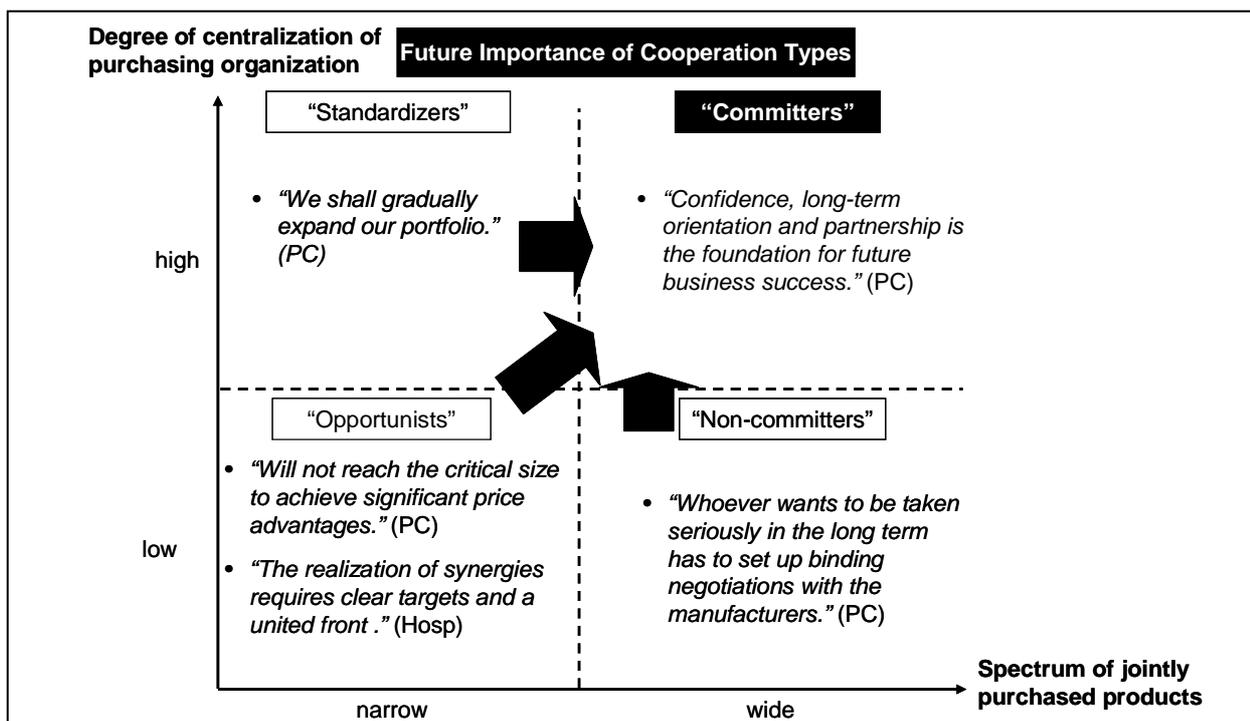


Figure 10: Development Trends in the Cooperative Landscape

New Types of Supplier Partnerships

Increasing transparency in the quality of the delivery of healthcare services and likely increasing patient co-payments generate a more selective approach of German patients when it comes to the choice of a hospital in the future.

Hospitals will compete more intensely for patients. This creates new opportunities for suppliers to enhance or expand business relations with binding purchasing cooperatives and/or well-run hospitals through intensified cooperation. Supplier approaches considered in this area are for example the acquisition of patients abroad, the involvement in communication with patients, the joint

development of services or products for managed care or support provided to the hospital when transferring patients to the outpatient sector.

Also in the area of hospital process optimization, purchasing cooperatives and hospitals see opportunities and/or the need for a more intensive collaboration with suppliers. The spectrum of conceivable options for action comprises the joint optimization of specific clinical processes or also the outsourcing of entire operating areas to suppliers. One purchasing manager of a purchasing cooperative has made the following comment: *„I can very well imagine having operating areas, such as the catheter lab, run entirely by a supplier.“*

Business with purchasing cooperatives offers the opportunity to develop novel value-added services.

In establishing value-enhancing partnerships, customers see interesting perspectives for raising business relations with the individual suppliers to a new level, away from the mere product/price competition. The prerequisite for purchasing cooperatives or hospitals to enter into fixed and long-term system supply agreements (i.e. products plus customized service) is, however, that measurable financial benefits materialize for the customer side, to offset the disadvantage arising from being bound to fixed prices and conditions.

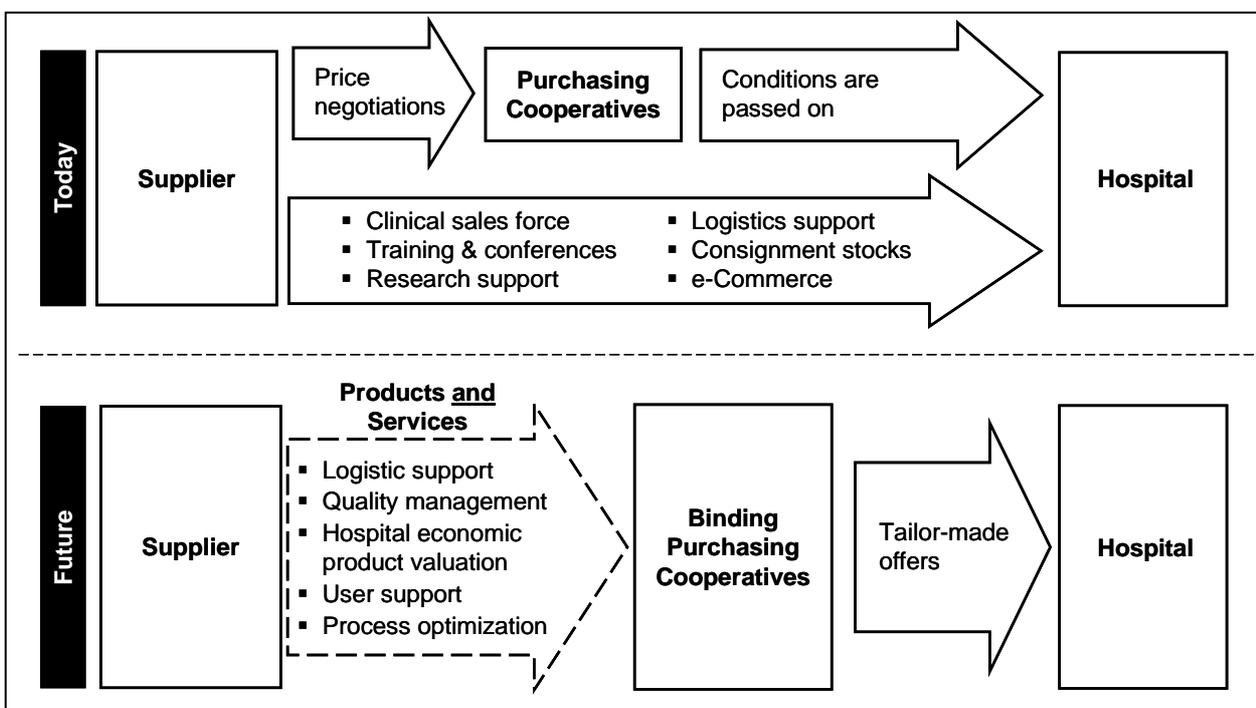


Figure 11: Tighter Linkage of Value Chains

In this context, purchasing cooperatives, which today essentially act as central negotiators for prices and conditions, see themselves in the future as mediators for customized product and service portfolios between the supplier and the hospital.

Future Requirements for Sales Management

The sales models prevailing today, which are regionally structured and strongly clinically-oriented, are increasingly losing compatibility due to the rising influence of purchasing cooperatives and non-clinical purchasing decision-makers. Extensive adaptation is required

In this respect two adaptation trends are becoming apparent. For one, suppliers are transferring central commercial account responsibility and coordination of clinical sales activities to key account managers. Secondly, suppliers are strengthening the qualifications and competencies of their sales staff in health and hospital economics. Customers are requesting new counterpart profiles: „A key account manager has to be someone who understands our clinical issues and is able to put himself in our economic situation.“ (PC)

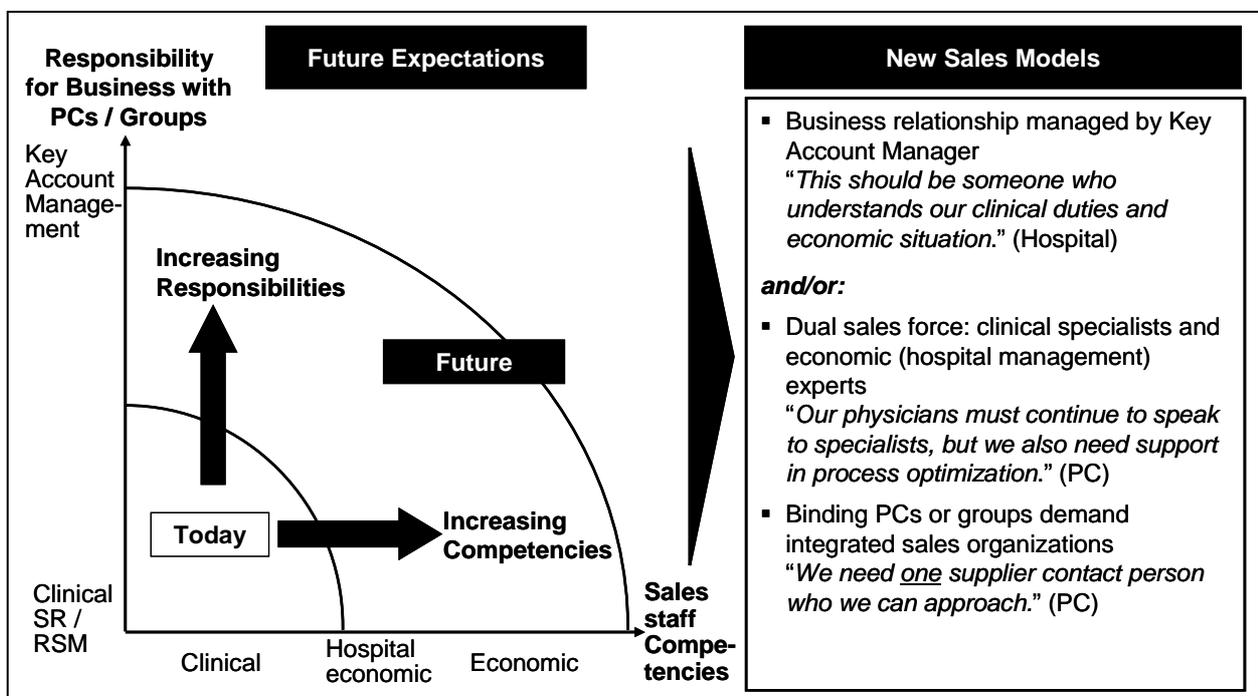


Figure 12: Development Needs in Sales Management

Simultaneously, clinical decision-makers have to remain in the focus of sales activities: „*Our physicians still have to be able to speak to specialists, yet we also require support in our process optimization efforts.*“ (hospital)

This means that from an overall perspective organizational sales models are required, which consider both the influence and the needs of central commercial decision-makers as well as those of clinical users by employing a coordinated dual sales approach.

E-Procurement

For quite some time attempts are being made to establish E-procurement platforms such as GHX or Medicforma as a means for facilitating transactions between hospitals and medical technology suppliers. This is motivated by the potential to save on process costs, both for the customers and the suppliers.

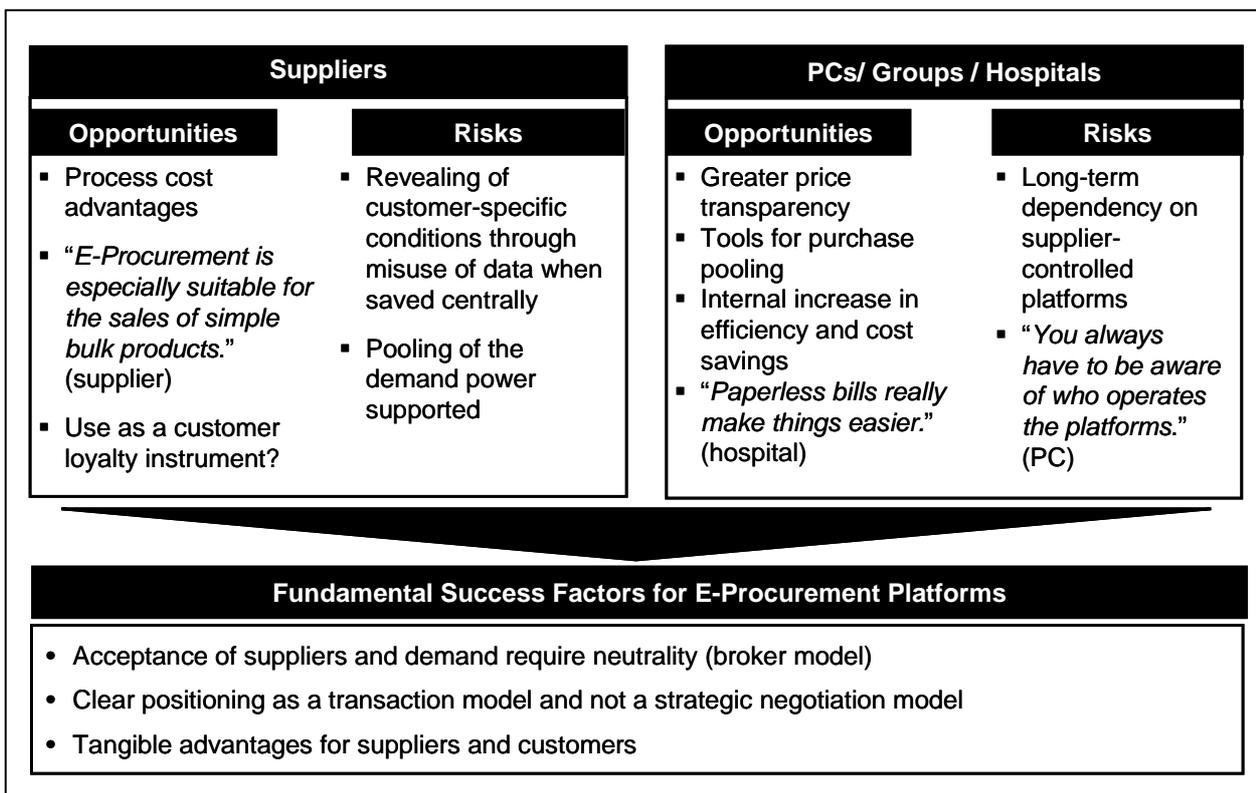


Figure 13: Requirements for E-Procurement Platforms

Despite long-standing efforts, among other things on the part of large supplier consortia, the transaction volume and the supply spectrum of above-mentioned E-procurement platforms have not met initial expectations.

Apart from technical limitations and incompatibilities, this can be attributed above all to a reluctant readiness for participation. The risk/reward profile of E-procurement platforms shows that the interests of the involved parties are in part not congruent and that in part they are considered to involve strategic risks.

A critical success factor for the broader use of E-procurement platforms in the future will be the neutrality of the platforms, i.e. the platform must be neither supplier- nor customer-controlled. Additionally, it has to be ensured that the platform acts solely as a transaction model and cannot be misused as an instrument for pooling negotiating power. In this respect, the strategic significance of E-procurement platforms for suppliers in the course of the consolidation of the German hospital purchasing landscape will be limited.

Case Studies from other industries

A look at other industries shows, by way of example, how suppliers have successfully met the growing power of the demand side with early counteraction. When translating the experiences made in other industries to the German hospital medical device market, industry-specific factors have to be taken into consideration. Yet, all these examples demonstrate general strategic options.

A clear **customer prioritization and joint marketing initiatives** have proven successful for several suppliers in the consumer electronics industry. Premium suppliers, such as Metz or Miele, concentrate less on electronics discount chains, but instead on service-oriented retailers, which in turn are partly organized in purchasing cooperatives or franchise systems, such as Euronics or Electronic Partner. The supplier side supports prioritized retailers or purchasing cooperatives through joint marketing and sales promotions. Proven concepts include e.g. shop-in-shop concepts or direct marketing support. These instruments support retailers in competing with large discount chains and secure a sales channel for premium suppliers, which is characterized by a strong customer value orientation and less price pressure.

The **linkage of value chains** has proven successful for several automotive suppliers in their business relations with large automobile manufacturers. During the „Lopez

era“ in the 1990s, suppliers with broad portfolios of low differentiated components suffered from enormous price pressure. The supplier side reacted by partly developing from component suppliers to system or assembly group suppliers. Hence automobile manufacturers were in a position to optimize process costs and to transfer R&D investments to the supplier side. Consequently prices for individual components became less important. Due to manufacturer- and model-specific systems and assembly groups, the possibilities for pooling purchasing power on the side of automobile manufacturers were restricted.

In construction and facility technology, systematic **direct customer retention** as a means for facing increasing purchasing power has proven successful. In these markets, purchasing cooperatives have been established for quite some time with up to several hundred members (i.e. installing companies). The function of the existing purchasing cooperatives is limited to the centralized negotiation of non-binding price lists for their members. Through targeted direct-customer retention strategies based on attractive price structures for buy-direct arrangements, technology suppliers have gradually undermined the influence of the large purchasing cooperatives and transferred business back to the installer level or to small purchasing cooperatives with binding agreements. Negotiations with large purchasing cooperatives have thus become „ *shadow boxing in a side show*“.

Intermediate Conclusions (3)

For the next five years, one has to assume that further consolidation will take place in the hospital purchasing landscape in Germany. A significantly lower number of purchasing cooperatives than today will shape this landscape. The remaining alliances will act on a transregional level and manage a broad product range. Moreover, most of them will be in a position to enter binding agreements for their affiliates with individual suppliers. In the medium term, in addition to passing on prices and conditions, the focus of purchasing cooperatives will expand to include the mediation or provision of value-added services for the affiliated hospitals.

Apart from these binding purchasing cooperatives, well-run and competition-oriented hospitals, which are not

affiliated with purchasing cooperatives and which are open to direct value-added cooperatives with the suppliers, will hold some ground.

The level of influence of purchasing cooperatives in the medium term and the future price development of hospital medical devices in Germany will depend significantly on goal-oriented adaptations of the suppliers' commercial strategies.

E-procurement platforms will be of little strategic relevance in this context.

VII. Conclusions for Suppliers

New Sales and Service Models

Sales organizations with a purely clinical focus still prevailing today in many areas are losing compatibility when dealing with purchasing cooperatives acting transregionally and across product categories. Successfully conducting business with purchasing cooperatives demands centrally coordinated commercial management and binding agreements with the customer side. Commercial activities need to be driven by profit margin considerations and not simply increases in volume or market share.

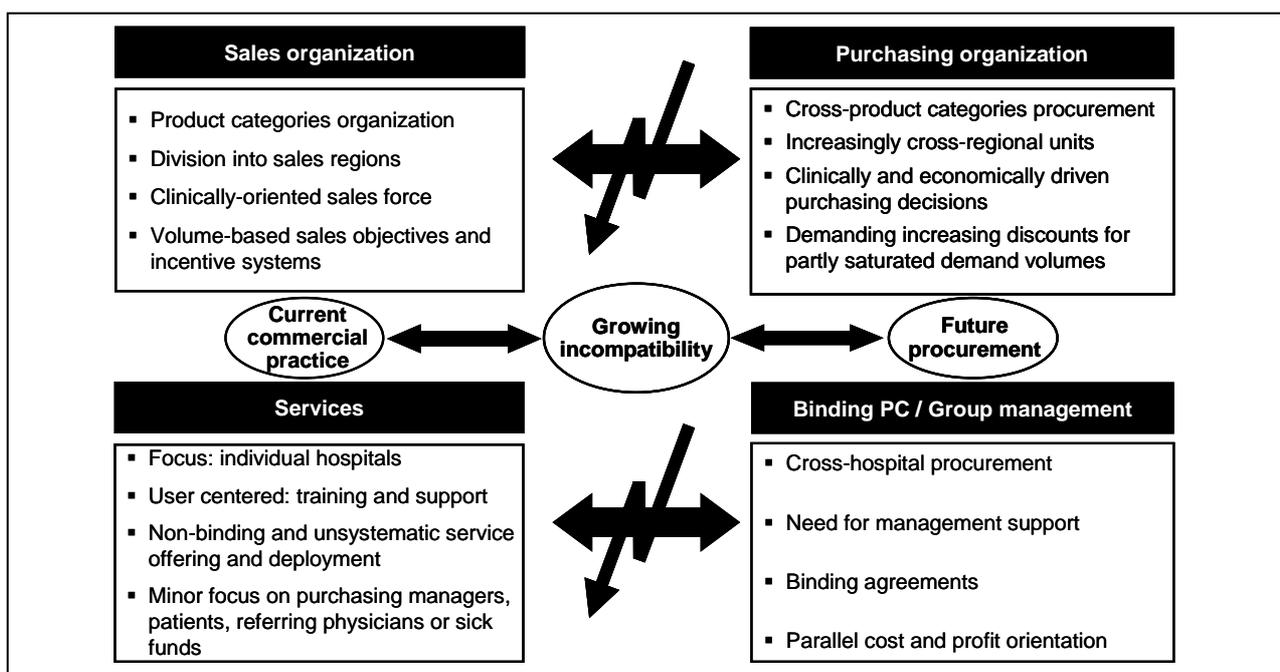


Figure 14: Incompatibility of Current Sales- and Service-Models

Sales and service models prevailing today must be further developed.

Purely clinically oriented customer services are no longer sufficient for creating added value in the eyes of non-clinical purchasing decision-makers. Competitive differentiation and customer retention demand new service models, which lead to measurable cost and/or revenue benefits on the customer side. The latter necessitates that suppliers have to consider how to include patients, referring physicians and insurance companies into their hospital marketing and sales activities. This applies in particular for innovative therapies and procedures, the economic benefit of which must be proven more clearly to hospitals than in the past.

Strategic Priorities for Action

Different customer priorities arise for medical technology suppliers and/or divisions as a function of the level of competitive differentiation and the spectrum of their product and service portfolio.

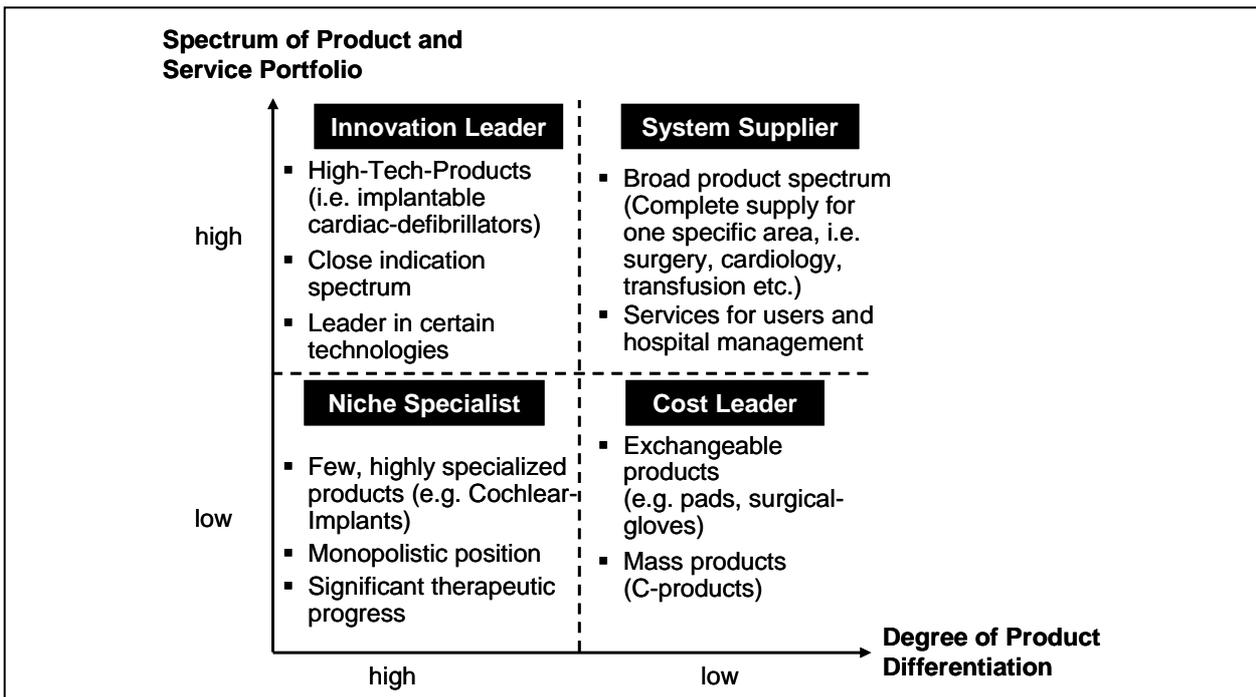


Figure 15: Strategic Supplier Groups

For niche specialists, the clinical user on the hospital level continues to represent the most important target group. For innovation leaders, whose products typically account for a large percentage of hospital purchasing costs, it will be important to include non-clinical decision-makers in the

Priorities for action with respect to sales and services are dependent on the suppliers' strategic positioning .

marketing and sales activities. They in general have an option to undermine the influence of non-binding purchasing consortia by selectively retaining certain consortium members.

Target groups for system suppliers are above all large individual hospitals and binding purchasing cooperatives and/or hospital groups. Since here, emphasis is placed on individually configured and high-value service packages, a high degree of commitment is required from the customer side. Non-binding purchasing cooperatives are consequently of lower relevance for system suppliers. Cost leaders, whose most important competitive parameters are low product prices, are dependent on economies of scale and consequently have high volume and capacity utilization requirements. Business development that is focused on selective accounts and customer loyalty is hardly effective in this sense. All types of customers, including non-binding purchasing cooperatives, are therefore of high relevance for this strategic supplier group. The important aspect here however, is that even prices are tied to transparent conditions so as to minimize the risk of price referencing by the customer.

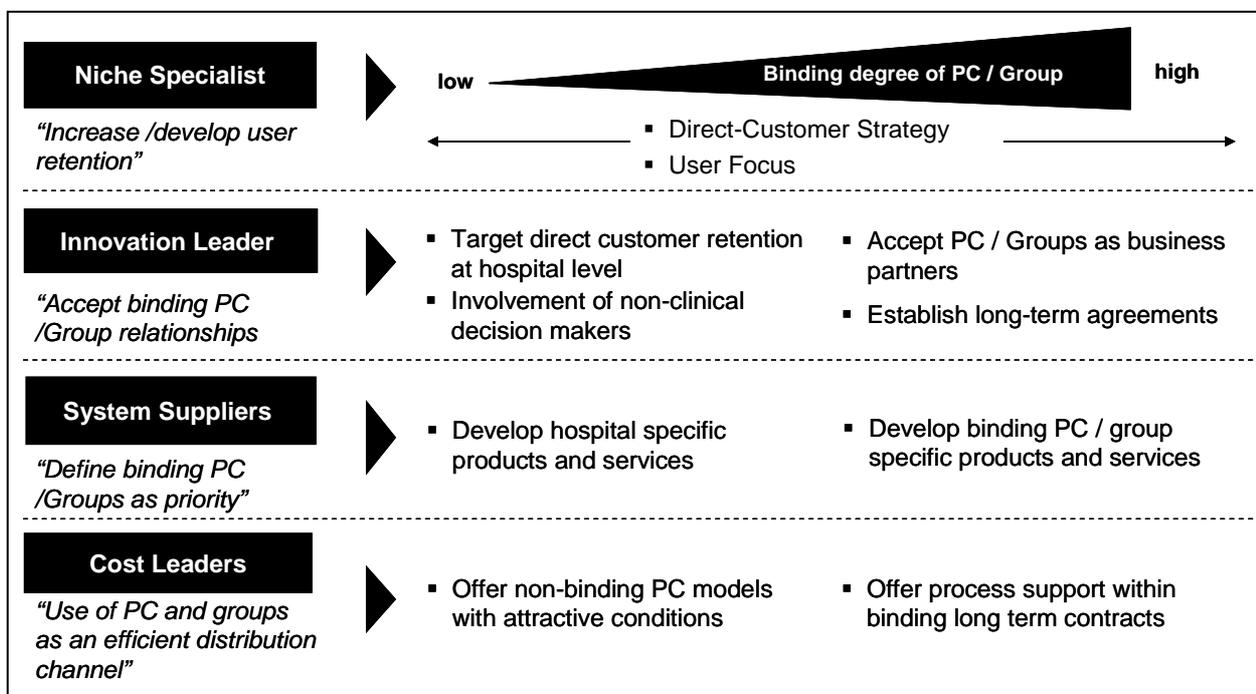


Figure 16: Customer Priorities by Strategic Supplier Groups

On the basis of the above-illustrated business models, also different priorities for action arise when it comes to further developing existing sales and service models.

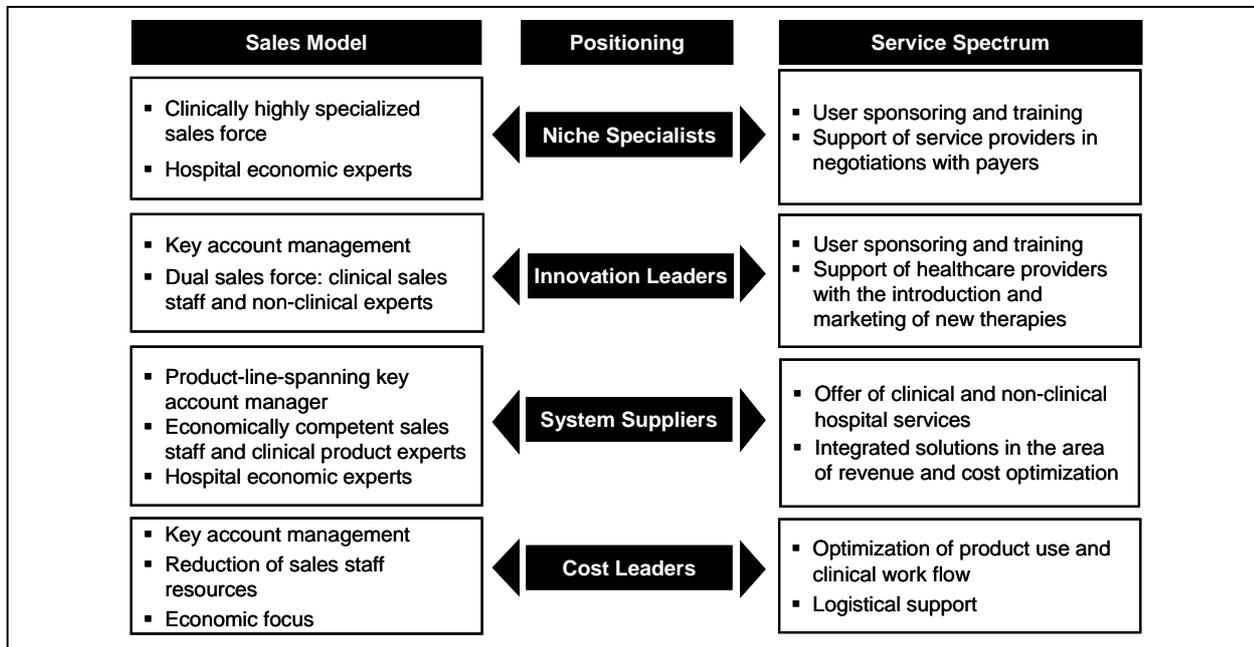


Figure 17: Sales and Service Focus by Strategic Supplier Groups

The higher the degree of competitive differentiation of a supplier's product portfolio, the stronger the sales and service model can keep on targeting at clinical purchasing decision makers. However, in the future there is demand for hospital economic experts within all product categories, who should secure the reimbursability and highlight hospital economic benefits even of innovative niche products.

With the exception of pure niche specialists, the establishment of central commercial account responsibilities will become a crucial factor for dealing with purchasing cooperatives. Moreover, depending on the business model, there will be a greater or lesser need to further develop the hospital economic competencies of the sales organization. In particular when the scope of a supplier's offers includes commercial customer services, dual field-force structures are the logical conclusion, combining classic clinical field service with hospital economic experts.

For niche specialists and innovation leaders jointly optimizing revenue and marketing support offers a high potential for hospitals.

In terms of value-added customer services, the topic of jointly optimizing revenue by supporting customers in managing their relations with health insurers, referring physicians and/or patients is an opportunity for niche specialists and innovation leaders. In this case, combinations of 'push instruments' towards related healthcare sectors (such as reimbursement optimization by applying for pass-through payments, managing the transfer of patients into the outpatient sector, or establishing managed care models) and patient marketing may be employed.

For system suppliers and cost leaders the focus in terms of the supply of value-added customer services is more focused on managing the hospital cost side. Potential action areas in this context include the optimization of product usage and clinical processes, the establishment of operator models for clinical divisions or the optimization of hospital-internal and -external logistics.

Systematic Adaptation Process

Regardless of the business model, the adaptation of marketing and sales practices to the future hospital purchasing landscape requires systematic and disciplined change action by suppliers. The change process covers five elementary steps:

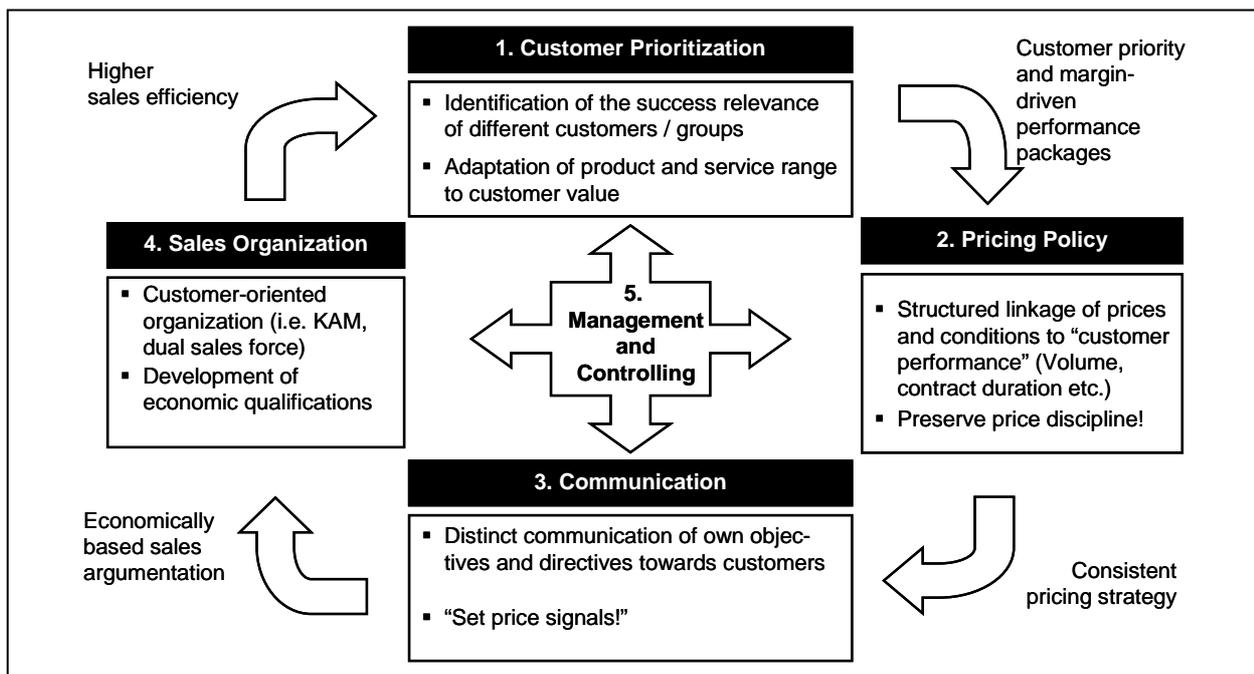


Figure 18: Systematic Adaptation

The first step is customer prioritization in terms of identifying the future success relevance of different customers and/or customer segments. Structure and value of a customer determine his relevance and the type and optimum volume of products and provided services. Thus, product and service packages are customized which have to be in line with customer priorities and customer profit margins.

In the next step, value-differentiated offer packages need to be tied to a systematic, transparent and customer performance-oriented pricing policy. High value products and services at attractive price levels can only be offered in exchange for a high level of formal customer commitment, (e.g. annual demand volumes, contract duration). Implementing a value and customer-performance orientated commercial policy requires consistent and disciplined action.

Actionistic price concessions must be avoided by all means owing to their limited effectiveness and their catalyst effect on price erosion in a given product category.

The principles of the new commercial policy have to be communicated clearly to the market. Transparent conditions for higher volumes i.e. better and conditions reduce the risk of future price referencing. Especially setting price signals clarify to the competition that cut-throat price competition or the attempt to buy market share benefit only one party – the customer – and that in the end all suppliers suffer. They can be a legal way of continuously appealing for rational market behavior.

Another important step to increase sales efficiency is to adapt and to further develop both the structure and the competence of existing sales organizations. This implies re-aligning account responsibilities with customer structures and purchasing stakeholders and providing the sales force with economic bargaining and negotiating skills and tools. Profit margin and price levels define room for negotiation and impose internal decision tracks. In order to drive compliance with a new and profitable growth-oriented commercial policy, compensation schemes need to be geared towards customer profit margins and not revenues or volumes. At the same time, this necessitates a new level of quality in terms of targeted sales management and controlling.

Sector Responsibility

It is the responsibility of the medical technology sector in Germany as a whole to actively participate in shaping the further consolidation process in the hospital purchasing landscape and to maintain the attractiveness of the German market through price discipline. In addition to monitoring anti-trust leeway, this means that competition has to focus on generating customer value (i.e. products and services) and not on offering the lowest prices.

Price overreactions have to be avoided. Should signals to the competitors become necessary, precedences shall be set selectively. Appeals regarding the futility of aggressive price actions are appropriate in order to encourage price discipline in the sector. This includes clear declarations of intent so that competitors realize they cannot win. Signals from the competitor side to allow reason to be restored in light of advancing price erosions should be met positively and timely and must not be foiled by the attempt to seek volume advantages for oneself.

Final Conclusions

The German market for hospital medical devices will achieve a new advanced level of maturity in the coming years. Large, professional and binding purchasing cooperatives will shape the customer landscape together with competition-oriented individual hospitals. Business relations with suppliers will increasingly adopt the traits of classical business-to-business relations. The traditional „clinician-to-business relation“ will lose strength. For the suppliers' success it will be critical that they adapt their commercial policy to the new framework conditions. The awareness of the imminent need for changes already manifests itself. In part selective adaptation processes are already ongoing. The extent to which Germany is able to maintain its attractiveness as a medical technology location will, however, essentially depend on more thorough and timely adaptations of commercial policies on the supplier side.

VIII. Appendix: Biographies and Bibliography

Simon ♦ Kucher & Partners is a consulting company specialized in revenue management and core expertise in the healthcare sector.

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| <p>Worldwide Presence</p> <p>€45 Million Revenue, 235 Employees, 10 Offices</p> <p>USA Europe Asia</p> | <p>Selected References</p> | <p>Thought Leader „Power Pricing“</p> <p>“Simon ♦ Kucher & Partners, a world leader in giving advice to companies on how to price their products” <i>Business Week, January 26, 2004</i></p> <p>...over 35 books on pricing, marketing and strategic management</p> <p>MTD THE WALL STREET JOURNAL SCRIP FT.COM FINANCIAL TIMES ...publications in leading special media and decision resources.</p> <p>“SKP are the leading pricing experts in the world.” <i>Eric Mitchell, President of the Professional Pricing Society, Chicago 2002</i></p> |
| <p>Core Industry = Healthcare</p> | <p>Core Competence = Revenue Management</p> <ul style="list-style-type: none"> ▪ Growth Strategy ▪ M&A Support ▪ Strategic Marketing ▪ Pricing ▪ Sales Effectiveness ▪ Implementation | |

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Bibliography

- Bohle T. (2005), „Fusionskontrolle im Krankenhaus ohne GKV-Wettbewerbskonzept“, Das Krankenhaus, 08/2005
- Drees C. (2003), „Beschaffungsmanagement im Krankenhaus“, Deutsches Forum für Krankenhausmanagement
- Femak-Report Nr. 54, 2004
- Franzke S. (2000), „Kompetenzen strategisch bündeln“, Produktionstechnik Hannover Informiert
- „The Value of Group Purchasing Organizations“, Health Industry Group Purchasing Organization, 2003
- „Helios Konzept Einkauf – Auf dem Weg zu mehr Qualität, Transparenz und Effizienz“, Helios Kliniken GmbH, 2005
- Hendrik T. (2000), „Purchasing Consortiums: Horizontal Alliances among firms buying common goods and services“, Arizona State University
- Kaufmann L. (2002), „Internationales Beschaffungsmanagement – Gestaltung strategischer Gesamtsysteme und Management

einzelner Transaktionen“, Wissenschaftliche Hochschule für Unternehmensführung

- Lambert E. „Unintended Consequences“, Forbes, 06.06.2005
- Ossen P. (2005), „Kommunal oder Privat - Wohin tendieren die Krankenhausunternehmen?“, Das Krankenhaus 08/2005
- Geschäftsbericht 2004, Rhön Klinikum AG
- Beschluss des Verwaltungs- und Personalausschusses der Stadt München vom 30.06.2005 (Bildung von interkommunalen Kooperationen)
- „Fragen, Antworten und Handlungsempfehlungen zum Vergaberecht“, Stadt und Gemeinde Interaktiv, 11/1998
- „Aktuelle Trends im Beschaffungsmanagement für Medizintechnik und Medicalprodukte“, The Boston Consulting Group, 2003
- Weinstein B. (2003), „Are Group Purchasing Organizations (GPOs) Helping or Hindering Competition?“, University of North Texas

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