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The Full Potential of eBusiness in Healthcare

When speaking about eBusiness as applied to the healthcare market two questions arise immediately. Firstly, what is eBusiness? Secondly, why is eBusiness in healthcare different from eBusiness in other sectors?

Answers should be given to these two questions against the economic, technical and patient care related background of the topic. It includes the perspective of the healthcare providers and that of the suppliers, showing the interdependencies between the two and developing concepts for a new synergistic cooperation. By taking an international approach one can demonstrate the many similarities of eBusiness problems and their solutions among the different countries and permit analysis of the differences which are often defined by the national healthcare systems and their rules. Case studies from healthcare institutions and from suppliers in the US, the UK and Germany illustrate the achievements, barriers and future plans, thus enabling newcomers to learn from previous experiences. Clinicians should be explicitly shown the interconnection between patient care processes and management issues at the level of medical supplies.

Added Value of eBusiness

Switching from a paper-based to an electronic paradigm always combines yet unknown opportunities with the necessity of reengineering major structures and processes of an enterprise. eBusiness, in particular, allows thinking in terms of new and altered business relationships and networked cooperation between customers and suppliers.

In contrast to the days of the internet hype, today healthcare providers and suppliers assume a down-to-earth pragmatic attitude towards eBusiness. They look back at a good amount of work and considerable success and they know what needs to be done next – with the understanding that eBusiness is the key for a number of solutions. Having started primarily as a means for process automation, today eBusiness is spawning a series of opportunities for both parties. Standardisation of procurement in terms of processes and goods, greater contract compliance and finally business analysis based on recent accurate data highlight the opportunities for the healthcare providers. They are aware that the incentives for doing eBusiness are already there. Beyond benefiting from all steps of an electronic transaction (from order to invoice), with eBusiness, suppliers get into a position where they can move towards providing more comprehensive services (“helping

our customers”). These services may affect all processes within the organisation, including procurement and logistics in addition to patient care, depending on the scope of the company. For the first time the business partners in healthcare are able to think about implementing a supply chain due to the information flow enabled by eBusiness. The enhanced catalogue containing clinical and business information acts as a turntable for distributing information to clinicians and purchasers at the same time.

eBusiness is Already Essential

Nowadays, stakeholders are of the opinion that eBusiness will move from a “nice to have” to a “must have” - the consequence being that those who don't have it will be out of the game – which applies to suppliers and healthcare providers alike. Those still hesitating with regard to eBusiness should keep in mind that eBusiness is not only about buying some pieces of new hardware and software but is about changing the organisation and its processes for the better. In contrast to earlier interpretations of eBusiness as a cost saver, experts in this field have learned to recognise eBusiness as an instrument for generating structured error-free data and thus for reducing process errors significantly, enabling them for the first time to perform business analysis on a large scale. This of course may lead to cost reductions but also to safer patient care. The success of eBusiness is strongly coupled with the use of standards at any level from product identification to catalogue formats and from messaging to process orchestration. Therefore a case can be made for concerted standardisation efforts in order to achieve an unrestricted information flow between the systems in the supply chain. Available standards such as EAN*UCC, EANCOM, UNSPSC and many more, each with their technical context, should be discussed and implemented.

Different eBusiness Models

Finally, an outlook to “eBusiness beyond transactions” is also helpful in order to illuminate the full potential of eBusiness including aspects of decision-making and collaboration. This outlook should be presented as the supply chain model of eBusiness in healthcare. It integrates a process, a document and a function model which are all geared to the combined view of clinical and economic issues related to the procurement, provision and use of medical supplies.

The first of the three sub-models, the supply chain process model, is split into two parts, the strategic model and the operations model, which both distinguish between healthcare provider and supplier-specific processes. The second model, the document model, concentrates on data related to the product and shows the various data sources, namely the documents, which become relevant in the product life cycle. Again, these documents embrace clinical as well as economic cases of use. Finally, the function model, the third model, integrates the process and the

document models. Similar functions are grouped into layers. The function model describes a Content, a Contract, an Order-to-Payment, a Service, a Clinical Process, a ClinicalOutcome and a Knowledge layer. These layers are arranged as a stack which roughly follows the product's path from the manufacturer to the healthcare providers where the product is used and where knowledge is accumulated about the products clinical usefulness and the costbenefit- ratio.

Conclusion

The supply chainmodel of eBusiness in healthcare is meant to support practitioners in assessing how supply chain concepts and eBusiness can strengthen their organisation and to help them develop an appropriate strategy to achieve this goal.

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