



Johanniter-Ordenshäuser
Bad Oeynhausen gemGmbH

Overview

Country: Deutschland

Industry: Health industry

Customer profile:

Die Johanniter-Ordenshäuser Bad Oeynhausen gemGmbH has been founded in 1877 under the name Johanniter-Hospital, "Asyl für bedürftige Badegäste" with 24 accommodations. Today the institution is an efficient rehabilitation centre with 225 accommodations, 13 day-patient and 15 short-term care places. The clinic focuses on the performance of rehabilitation measures and following therapies for patients with neurological and orthopaedic diseases. Altogether 400 employees guarantee the best possible and individual medical care of the patients.

Point of departure:

In the clinic only static systems had been available for the analysis of isolated data. A superior solution which illustrates as well automatically as also dynamically significant index numbers regardless of special software products should enable the consolidation of the data.

Solution:

Magrathea **TIMEBASE**[®] BI, which is based on Microsoft Excel serves in combination with MS SQL-Server as vital tool for the realisation of all required statistics within one single solution. Data bases of different sources are to be grouped logically and summarized using a data warehouse.

Magrathea **TIMEBASE**[®] BI and MS-SQL-Server 2005 offer a transparent overview over the complex facts in hospitals

"A report evaluating the performances which really have been generated with the patient was of special interest for us. Our aim is to be able to itemise any performance into field, rehabilitation phase and ward. By means of TIMEBASE BI we have immediately appropriate overviews."

Dipl.-Kfm. Michael Schelp, administration of the clinic

Business-Intelligence in Health service

In the last decade only one or a few different daily rates existed to cash up the executed performance. Today – in contrast – validation is becoming more and more complex because of a huge number of contracts and combinations of deductions and additional payments. Even if the hospitals are under enormous pressure to reduce or at least to keep costs a lot of expenditures are to be added because of intercurrent diseases and additional performances which are not included in the daily rate. Therefore it is obvious that it exists a strong need for transparency and determination of therapy costs of different groups of subjects and their assignment to a cost unit.

The market is especially fought in the field of performance which follows the treatment. Here and there the people released from hospital to go to rehabilitation constitute the proportional biggest group. Here the necessity to have consistent figures at disposal in order to be able to stand up adequately against the cost units is the most.

Another fact is that the within a hospital finished performances - including as well therapeutic and custodial performances – represent due to the required workforce resources a high portion of the total expenses of the hospital. Against this background the desire to assign these costs to one patient and have them poured in the total calculation becomes more and more comprehensible.

Even if DRG's (Diagnosis Related Groups) are not yet used in rehabilitation-hospitals these hospitals nowadays need effective tools to control and direct their actions in order to prepare themselves for a changing market.

From the operational point of view it is important for the department manager to make available exactly the requested amount of performance of perfect quality and quantity - regardless of employees being on holiday or ill - without blocking resources unnecessarily. The information which is necessary to react to such imponderability can be provided by daily updated inputs. For that an always actual data-basis is required in order to serve as a well-founded basis for the execution of ad-hoc queries concerning individual questions.

It is therefore obvious that rehabilitation hospitals need a

Benefit:

- Current operating figures for tactical and strategic decisions,
- Easy handling, satisfied users,
- Changes can be discovered faster and can be included directly into the clinic processes.

controlling system which provides a comprehensive view on the data in order to produce an exact and correct assignment of therapy costs to the cost unit accounting, to plan the resources and to orientate the hospital strategically.

Requirements of the Johanniter Ordenshäuser

The hospital did not want to receive figures spread over different sheets of paper but to have an overview which shows the essential things at first glance. This overview should provide the possibility to fork into deeper levels in order to learn the reason for particular developments and connections without problems.

Until that moment it was only possible to ask specific questions which could be answered by statistic programs. Those answers were correct but could not supply a deeper view on the “why” – which means the background of the question because the data had to be collected in parts in different systems.

The hospital's Electronic Data Processing Department (EDPD) called for the fact that no additional effort was to be arisen from a labour-intensive database system with the appropriate complex structures. Besides simplicity and robustness in day-to-day business the low license fees were important criteria for their choice.

The formation of the data-warehouse

First of all in November 2006 a data-Warehouse on the basis of magrathea TIMEBASE was realised. Nevertheless soon the importance of Business-Intelligence became obvious for the hospital. Therefore the decision to expand the Data-Warehouse with inputs of the hospital information system was soon made. Thus the database being available within the data-warehouse was extended constantly. It was especially important to implement the cost unit data entirely in order to illustrate and evaluate not only case rates but also a proportional distribution of expenses on the cost units of the rehabilitation, etc. On no account the different forms of diagnosis such as admission, transmission and discharge including each several forms of individual diagnosis could be left out. This will be of importance especially for the evidence-based therapeutic modules. Moreover in spring 2007 the new KTL-coding (Classification of therapeutic performance in medical rehabilitation) has been integrated in the data-warehouse. During the whole development a tight connection has been kept between developers and the clinic's department of electronic data processing so that to wishes and suggestions could be reacted immediately.

Although the solution is in use since June 2007, other modules are successively implemented in order to enable the system to answer effectively to every possible question.



Experiences with magrathea TIMEBASE BI

With magrathea TIMEBASE BI a modern instrument has been created so that all these requirements can be illustrated in one tool.

Apart from the necessary overview over the reference numbers - such as utilization of departments and wards - the causes can be showed easily. One example is that the question of the extent of utilization of definite offers to groups in therapeutic sector can now be answered a lot more precisely. The factual time worked with the patient can be contrasted to the therapeutic time interval of the therapist. Thus it is possible to calculate the costs of all performances according to subject area up to a single patient. In addition excel-based price-tables can be consulted in order to realise a classification in price e.g. according to years or quarters.

The system is working quickly and due to the front-end which is based on Excel applicable on a lot of workplaces cost-efficiently and without extra training for the personnel. The possibility of fast adaptations is another reason for its high acceptance. To the local department of electronic data processing it hardly results in any additional effort. Normally the solution does not require any maintenance in everyday life. Besides the existent infrastructure can be used. The tables are created by the local department of electronic data processing as a template only once and actualise themselves when they are opened. Hence on the user-side there is no additional interaction required. Only time-spans are adapted by mouse-click. The dates in the data-warehouse are interrogated in the background by Microsoft Excel from the SQL-server and are to be presented to the user within seconds. Because of an easy handling modifications of layout are immediately possible even without foreknowledge. Therefore this system is not only recommended to the trained Excel-specialist.

Another advantage is that it is no longer necessary to generate numerous questions in different systems. This had been difficult as these partial results had to be correlated with results of other systems in order to receive reference numbers which are usable on a long-term. It had been a very time-consuming task. With the help of magrathea TIMEBASE BI and MS SQL-Server 2005 decision relevant information can be put actualised edited over night at the managements' and heads of departments' disposal. Microsoft SQL-Server constitutes the stable backbone. Microsoft -Partner magrathea Informatik could realize the solution as a data-warehouse by means of the latest SSIS-technologies (SQL Server Integration Services). Magrathea does not only evaluate its own data base of the date- and resource planning program magrathea TIMEBASE but also data bases of other products by using the ETL-Tools (Extraction, Transformation and Loading) which are integrated in the SQL Server. The actualisation of the data is being dealt with in times where there is not a lot of activity e.g. during the night. It runs fully automatic and without mal-

Customer

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function towards the daily business.

In a word: The decision-maker possesses over an instrument with which he has got - operational and every day actualised numbers for further use at his disposal regardless of definite software-products and ignoring boundaries. Neither is it necessary to devote one to impose those numbers nor is time wasted for the supply. Everything is immediately available for consideration and analysis.

From the point of view of the developer MS SQL Server 2005 with its abundant offer of functions combined with an excellent performance is the right choice for a stable basis. The creation of data-warehouses and business intelligence with integrated analysis-services has been successfully realized. As on the customer's side the data of the hospital are stored in different data base the ETL-charge processes and their possibilities are essential regarding a quickly adaptable data processing. Beyond it MSSQL-Server 2005 combined with Visual Studio 2005 offers numerous possibilities for the integration of features.

As a further objective the clinic is working on the transformation of the evidence-based therapeutic modules - envisaged by the cost unit - into treatment paths correctly. Magrathea TIMEBASE BI fits very well in the concept for the examination of the correct transformation of the treatment paths in which the nominal-actual value shall be compared.