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Ocena funkcjonalności systemu Jednorodnych Grup Pacjentów (JGP) przez użytkowników

Streszczenie

Wstęp. Autorami systemu opartego na grupowaniu przypadków, w zależności od rodzaju diagnozy i wykonanych procedur byli Robert Barclay Fetter i John Devereaux Thompson z Yale University. Po raz pierwszy DRG wdrożono w New Jersey na początku 1980 r. a w 1987 r. decyzją władz stanu Nowy Jork DRG stało się podstawą do rozliczania pacjentów. W Europie model rozliczeń oparty o DRG obowiązuje prawie we wszystkich krajach Unii Europejskiej z wyjątkiem Czech i Słowenii. W Polsce system został wprowadzony w lipcu 2008 r. co wywołało liczne kontrowersje w związku ze zmianą finansowania usług zdrowotnych

Cel. Celem pracy była ocena przydatności funkcji grupera JGP przez użytkowników.

Materiał i metody. Badanie przeprowadzono przy użyciu ankiety na grupie 200 szpitali w lutym 2009 roku. Udział użytkowników systemu w badaniu był dobrowolny. Ankiety wypełniło 14% wszystkich użytkowników. Uczestników badania podzielono na następujące grupy zawodowe: lekarze, sekretarki medyczne w oddziałach, pracownicy działu statystyki medycznej/rozliczeń z NFZ, inni.

Wnioski. Zebrane dane zostały opracowane statystycznie. Otrzymane wyniki wskazują na największą przydatność funkcji grupowania pobytu natomiast za najmniej przydatne użytkownicy uznali analizę czasu pobytu. Można stwierdzić bardzo podobny rozkład przydatności funkcjonalności gupera we wszystkich 4 grupach badanych. Wyraźnie widać, że użytkownicy wykorzystują oprogramowanie głównie do prawidłowego wyznaczenia grupy JGP, a znacznie rzadziej dokonują optymalizacji kodowania.

Słowa kluczowe: JGP, gruper, funkcjonalność.

The assessment of functionality of the Diagnosis-Related Group (DGR) system by its users

Abstract

Introduction. The authors of the system based on the grouping of the cases, depending on the type of diagnosis and procedures performed were Robert Barclay Fetter and John Devereaux Thompson of Yale University. For the first time DRG was implemented in New Jersey at the beginning of 1980 and in 1987. The decision of the authorities of New York DRG became the basis for the settlement of the patients. In Europe, the model based on the DRG billing applies in almost all EU countries except the Czech Republic and Slovenia. In Poland, the scheme was introduced in July 2008, which caused numerous controversies due to changes in the financing of health services

Aim. The aim of the survey was to assess the functionality of a web-based DRG grouper.

Material and methods. The survey was performed in February 2009 in 200 hospitals. The participation in the survey was optional and only 14% of users decided to fulfill the questionnaire. The collected data was analyzed and presented in tables. The surveyees were divided into the following professional groups: doctor, medical secretaries in the wards, employees of medical statistics department/department of settlements with the NHF, other groups.

Conclusions. The results show that the most useful functionality is that of grouping, whereas the least useful is that of a duration of hospitalization. You can find a very similar distribution of functional suitability grouper in all 4 treatment groups. The users mainly use the software to determine the correct DRG groups, and much less likely to make coding optimization.

Keywords: DRG, grouper, functionality.

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INTRODUCTION

The authors of the system based on grouping cases according to a diagnosis or procedures used were Robert Barclay Fetter and John Devereaux Thompson of Yale University. The system they designed was called the Diagnosis-Related Group (DRG) [1]. The project of developing the DRG was financed by the Health Care Financing Administration (HCFA) – now the Center for Medicare and Medicaid Services (CMS). The CMS is a federal agency established by the US government to administer the Medicare [1-3] social insurance system. At the beginning of 1980, the DRG was implemented in New Jersey for the first time and in 1987 by virtue of the decision made by the government of New York State the DRG became a basis for accounting patients with no Medicare social insurance program. Within 29 years of operation, the system has been modified many times and adjusted to the development of medical knowledge. The version that is now in operation is version 26 released on 1st September 2008 and which contains 999 groups [1].

In Europe, the model of accounting based on the DRG is used in almost all countries of the European Union excluding the Czech Republic and Slovenia. The German model in which the very process of testing the system lasted almost three years is generally considered to be the most effective and elaborated DRG implementation.

The introduction of the Diagnosis-Related Groups in July 2008 as a new system of settlements between the National Health Fund (NFZ) and an in-patient health service provider was not a novelty in Poland. Between 1999-2001 a pilot project within the World Bank program was launched in Podkarpacie, Dolny Śląsk (Lower Silesia) and in Łódź region. Lower Silesia Sickness Fund established a system consisting of 43 big DRG groups, with modifications. The system included 216 groups altogether, because some big DRG groups corresponded to 5 smaller ones. At the same time, Service-Related Groups of similar funding based mainly on hospital emergency departments – about 578 procedures (according to ICD-9-CM), grouped together in 9 therapeutic groups [4]. Unfortunately, experience and conclusions based on the said pilot project were not adopted by other sickness funds. The transformation of regional sickness funds in one central National Health Fund put an end to the idea of introducing the DRG within the whole settlement system between a payer and health service providers.

The currently implemented system consists of 501 groups for 39 specialties. At the moment of implementation in July 2008 the system contained 470 groups for the same number of specialties [4]. Within 12 months of using the DRG the rules of grouping patients changed 14 times, often embracing prior periods of time. Taking into account the imperfections and considerable complexity of the implemented system the National Health Fund ordered hospitals to improve the software they had already had to include the function of grouping diagnoses and procedures according to the algorithm released on 5 May 2008 [4,5]. For that purpose the algorithm, together with the parameter file, was made available on the NHF websites to enable producers of software for hospitals to prepare a computer program (a grouper) which would group according to the said algorithm.

A grouper is a computer program, which carries out a process of classifying a given case of hospitalization to a DRG group following chosen parameters:

- principal diagnosis according to ICD 10 classification,
- therapeutic and diagnostic procedures according to ICD 9 classification,
- duration of inpatient stay,
- patient's age,
- performing unit.

AIM

The aim of this work was to assess the use of functionality of a computer software for grouping hospital cases in settlements with the National Health Fund. The analysis comprised the results of the survey among users of the most popular grouper on the Polish market i.e. a DRG developed by UHC Company. From 1 July 2008 to 28 February 2009 ten thousand users conducted over 1.5 million groupings in the system in 200 hospitals. The analysis proved that apart from a grouping process the usefulness of functionality related to optimization process and benchmarking of grouping on the basis of the entered data was confirmed.

MATERIAL AND METHODS

The survey was conducted in the form of a questionnaire attached to the grouper. Due to the fact that the analyzed grouper uses WWW technologies (the access to the functionality of a computer software is provided by a web browser), the distribution of the questionnaires did not pose any difficulty. The system did not require filling in a survey by users, leaving it to their discretion. The said survey was conducted from 1 to 28 February 2009. The surveyed were divided into the following professional groups:

1. doctors,
2. medical secretaries in the wards,
3. employees of medical statistics department/department of settlements with the NHF,
4. other groups.

The surveyed answered 4 questions related to the usefulness of software functionality in everyday work.

Which of the functions of a DRG Optimizer do you find the most useful:

1. grouping ('List of all accepted groups' tab),
2. optimization of groupings ('potentially more expensive' tab),
3. how other hospitals group (statistical data – 'Most frequently coded' tab),
4. duration of inpatient stay bar for the group.

The first question concerned the process of grouping according to the algorithm on the basis of the entered data. The first question assessed the usefulness of optimizer i.e. the possibility of getting a better-paid group in cases where the modification of data is permissible. The third question evaluated the usefulness of benchmarking of grouping against all groupings in the system, whereas the fourth question concerned the analysis of the length of treatment according to the NHF conditions for a given DRG group.

The questionnaire was completed by 1337 people who use a DRG grouper in hospitals, which constitutes about 14% of all the registered users of the system. Table 1 presents a detailed list.

TABLE 1. Number of people surveyed in a particular group.

Professional group	Number	%
Doctors	871	65%
Medical secretaries in the wards	152	11%
Employees of medical statistics department/ department of settlements with the NHF	138	10%
Other groups	176	13%
Total	1337	100%

RESULTS

Analyzing the results of the survey it can be clearly noticed that what the users found that the most useful was the functionality of grouping hospital cases according to the algorithm in force. The function of optimizing the coding by the possibility of achieving a „higher" group when coding parameters are changed was of second importance. The next importance was given to a possibility of comparing the grouping performed by one user with groupings performed by other users of the system. In the said survey the least importance was attributed to the functionality of the assessment of the duration of inpatient stay for a given group. The detailed results of the survey in an aggregated form as well as for each group are presented in the tables below (Table 2,3,4,5,6).

TABLE 2. The assessment of the usefulness of particular functionalities of the grouper in all the surveyed groups.

Which of the functions of a DRG Optimizer do you find the most useful:	Number	%
Grouping ('List of all accepted groups' tab)	713	53%
Optimization of groupings ('potentially more expensive' tab)	424	32%
How other hospitals group (statistical data – 'Most frequently coded' tab)	223	17%
Duration of inpatient stay bar for the group	158	12%

TABLE 3. The assessment of the usefulness of particular functionalities of the grouper by doctors.

Which of the functions of a DRG Optimizer do you find the most useful:	Number	%
Grouping ('List of all accepted groups' tab)	525	60%
Optimization of groupings ('potentially more expensive' tab)	315	36%
How other hospitals group (statistical data – 'Most frequently coded' tab)	111	13%
Duration of inpatient stay bar for the group	122	14%

TABLE 4. The assessment of the usefulness of particular functionalities of the grouper by medical secretaries.

Which of the functions of a DRG Optimizer do you find the most useful:	Number	%
Grouping ('List of all accepted groups' tab)	86	57%
Optimization of groupings ('potentially more expensive' tab)	41	27%
How other hospitals group (statistical data – 'Most frequently coded' tab)	18	12%
Duration of inpatient stay bar for the group	35	23%

CONCLUSIONS

Summarizing the results of the survey it can be stated that the functionality of the grouper in all 4 surveyed groups lays out in a similar way. It can be clearly noticed that users use the software mainly to set a DRG group correctly and rarely do they optimize the coding. It is interesting how little they are interested in the duration of the patient's stay for a given DRG group.

Analyzing the above conclusions it should be stated that in Polish circumstances people in charge of a DRG grouping in hospitals are first of all interested in setting out a correct group on the basis of a diagnosis and procedures used during hospitalization. They do not take an interest in the duration of the patient's hospitalization, which indicates that they do not care about such an important parameter for a healthcare institution from the economic point of view. The observed phenomenon may be one of the reasons for a common belief that point valuations of each DRG group are too low. In cases when in the therapeutic and diagnostic process all the attention is focused on the very course of treatment without controlling its length, automatically the profitability of performing the treatment decreases. The above results show that in most cases doctors attempt to adjust a therapeutic and diagnostic process to DRG rules in order to achieve a maximum economic result. However, in the majority of cases this effect is apparent owing to the fact that the threshold of profitability is exceeded due to a very long hospitalization.

TABLE 5. The assessment of the usefulness of particular functionalities of the grouper by employees of medical statistics department/department of settlements.

Which of the functions of a DRG Optimizer do you find the most useful:	Number	%
Grouping ('List of all accepted groups' tab)	75	54%
Optimization of groupings ('potentially more expensive' tab)	48	35%
How other hospitals group (statistical data – 'Most frequently coded' tab)	22	16%
Duration of inpatient stay bar for the group	33	24%

TABLE 6. The assessment of the usefulness of particular functionalities of the grouper by other groups.

Which of the functions of a DRG Optimizer do you find the most useful:	Number	%
Grouping ('List of all accepted groups' tab)	28	16%
Optimization of groupings ('potentially more expensive' tab)	20	11%
How other hospitals group (statistical data – 'Most frequently coded' tab)	8	5%
Duration of inpatient stay bar for the group	35	20%

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