

Case-Mix and Hospital Management Evaluation

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Since 2007, all Romanian hospital discharges are validated based on the clinical data sent by hospitals. Consequently, the Ministry of Health developed a set of indicators, in order to evaluate the hospital management performance. This evaluation was first done in 2008, based on the new legal regulations that introduced Hospital Management Contracts between hospital managers and Ministry of Health starting with 2007. The evaluation process is based on quantitative indicators and qualitative indicators for general management of hospital.

The utilization of the minimum basic data set and case-mix for the evaluation of hospital management performance was done for the first time in Romania in 2008, but there are some problems that we have to consider in future. The main benefit of this evaluation is the idea of transparency and objectivity because the process of evaluation is based mostly on the hospital data. The things to be improved are related with: selection of indicators for evaluation, data accuracy, sources for hospital reporting and competency of personnel involved in the evaluation process.

Keywords: hospital management, case-mix, management evaluation.

INTRODUCTION

Romania introduced in 2005 the compulsory Minimum Basic Data Set (MBDS) for collection of hospital medical records in all hospitals. This was the necessary step towards the Case-mix based hospital financing implemented in 276 hospitals (in 2007). Since 2007, all Romanian hospital discharges are validated based on the MBDS sent by all hospitals.

In the same time, the 2006 Health Reform Law introduced the position of Hospital Managers instead of Hospital Directors. The specifics of this new managerial development are:

- The Hospital Managers are not anymore compulsory physicians, but could be;
- For hospitals with over 400 beds, if the Hospital Manager is physician, it could no longer practice as a physician;
- The Hospital Manager works with an Executive team which includes a Medical Director, a Financial Director, Nursing Director etc.
- There are Hospital Management Contracts between hospital managers and Ministry of Health for a 3 year

period with an annual revalidation of the contract, based on the hospital management performances.

Starting with year 2007, the Ministry of Public Health developed a set of indicators, in order to evaluate the hospital management performance. Most of these indicators are based on the MBDS collected for case-mix financing. This evaluation was first done at the beginning of 2008, for the activity performed by the hospital manager during 2007.

METHODS

The methods used were the review of the literature, description of experiences of various local experts involved in the evaluation and the critical analysis of legislation.

In spring 2008 the Ministry of Public Health was obliged to start the hospital management evaluation in order to maintain or suspend the contracts done with the hospital managers. Every manager with more than 6 months in this position in 2007 was qualified for the evaluation. The Performance Criteria were established at the level of Ministry of Public Health and a special set of regulation was promulgated in order to be used during the evaluation process.

The data used for hospital management evaluation comes from two main sources:

- The MBDS for the patient clinical data,
- The financial hospital reports for the hospital financial data.

The evaluation process of hospital managers is based on two types of indicators: quantitative and qualitative indicators. Each indicator represents a criterion for hospital management performance and for each of the indicators it has been done a comparison between the level of the indicator assumed within the Contract and the actual one obtained from the 2007 data. Depending of the type of indicator, the overpassing of the assumed level was considered a success or not from the managerial perspective (e.g. an increased % of revenues out of public funds meant a successful indicator, but an increased level of nosocomial infections meant a failure).

The quantitative indicators consist in a group of 19 indicators, grouped on 4 main areas:

1. *For human resources management.*

There are 4 indicators as follows:

- % Physicians in total staff;
- % Medical staff in total staff;
- % Medical staff with university degree in total staff;
- Average no. of visits per ambulatory physician.

The data for these indicators is provided by hospitals Human Resources department and has no implication on case-mix activities.

2. *For services utilization.*

There are 4 indicators as follows:

- ALOS for each department and for the hospital;
- Beds utilization for each department and for the hospital;
- CMI (Case Mix Index) for each department and for the hospital;
- % of cases with operating room (OR) procedure in total cases for surgical departments.

3. *For financial performance (7 indicators).*

- Total expenditures compared with approved budget;
- Expenditures structure based on type of revenues;
- % of private revenues in total revenues
- % of personnel expenditures in total expenditures;
- % of drugs expenditures in total expenditures;
- % of capital expenditures in total expenditures;
- Average cost per day for each department.

3. 4. *For quality of care (4 indicators).*

- Rate or hospital deaths for each department and for the hospital;
- Rate of nosocomial infections;
- Concordance between the diagnosis at presentation and the diagnosis at discharge;
- Level of solved patient complaints.

The qualitative indicators are developed in order to reflect the general management of hospital (planning, organization, coordination and control). For each of these functions of hospital management there are specific dimensions which are taken in consideration by the evaluators. For each indicator the marks were between 0 and 5 with 0 representing a failure and 5 representing the good performance. The process of hospital management evaluation was done directly by the Ministry of Public Health for the hospitals under its direct subordination and by the Local Public Health Authorities for the rest of the hospitals.

RESULTS

From the 23 quantitative and qualitative indicators, 6 are developed based on the data collected from the Romanian Case-Mix system:

- ◆ ALOS for each department and for the hospital;
- ◆ Beds utilization for each department and for the hospital;
- ◆ CMI (Case Mix Index) for each department and for the hospital
- ◆ % of cases with operating room (OR) procedure in total cases for surgical departments;
- ◆ Rate or hospital deaths for each department and for the hospital;
- ◆ Concordance between the diagnosis at presentation and the diagnosis at discharge.

The evaluation of hospital managers based on MBDS indicators (including case mix) was finalized and the final results shows that 33 managers were suspended, 167 managers will be reevaluated in 6 months and the remaining managers will be evaluated in one year.

The use of indicators for evaluation of hospital managers indicated also some problems regarding this process:

- The evaluation was done by comparison of the indicators with the assumed level for each one within the contract of management. Consequently the hospital managers that have made a good prognosis of the indicators (having no relevance of these indicators) had benefits from the methodology. On the other hand, the managers that assumed good level of indicators, but didn't realize them were penalized by the methodology. The conclusion is that it's necessary to introduce also in methodology a national or local target for the indicators in order to make comparison with the assumed and realized level of the indicators.
- The CMI was used during the evaluation process in the following way: in order to get maximal marks from the evaluation it was necessary to have a CMI greater with at least 10% than the assumed level. This methodology induced a tendency to increase the CMI through better coding, but also through over-coding (DRG creep). Consequently some of the hospitals hired different firms in order to optimize their CMI and most of the clinicians understood that CMI exists in order to be increased.
- Some definitions of the indicators were not appropriate and this created confusion at the level of hospital managers and staff.
- The financial data used during the evaluation was different from the data usually reported by hospitals.
- Some indicators were developed based on data reported by the hospitals towards several institutions. Some of the data were reported in the MBDS and case-mix system, but also in the national statistics. Because the definitions were different (e.g. the ALOS calculated on every discharged patient or aggregated at department level), the results were different and the complaints of hospitals managers were justified.

- There were some specific hospitals – psychiatric hospitals or rehabilitation hospitals, which didn't match some of the criteria, and their managers were penalized for this.

E.g rehabilitation centers didn't realized their drug expenses as expected, because much of the rehabilitation is procedure based and not drug based.

- The personnel involved in the evaluation process had no possibility to judge the results of the indicators. The evaluation process used software developed by the Ministry of Public Health that required the assumed level of indicators and the realized one reported by the central institutions. Consequently the software produced the final mark and the hospital managers with specific complain from the above mentioned reasons had no room to negotiate.

CONCLUSIONS

The utilization of the MBDS and case mix for the evaluation of hospital management performance was done for the first time in Romania in 2008, but there are some problems that we have to consider for the next years. The main benefit of this evaluation is the idea of transparency and objectivity because the process of evaluation is based mostly on the hospital data. The things to be improved are related with: selection of indicators for evaluation, data accuracy, sources for hospital reporting and competency of personnel involved in the evaluation process.

References

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