A Software Solution for Maternity Rooms Assignation Management

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The Maternity Department of the University Hospital of Lille has a total of 107 births capacity per week. The mean birth rate per week in 2011 was of 89. This important difference between birth rate and capacity seems to be related to organization problems regarding maternity rooms’ assignation which is manually recorded. In this paper, we hypothesized that the development of a software solution to manage maternity rooms’ assignation would increase the birth rate in this medical unit.

We developed a web-based software solution allowing to record and store all information about patients and rooms per week. During each patient registration in the database, the software system (based on ASP.NET and SQL Database Server) is able to check availability of rooms according to the estimated date of delivery. The application also allows freeing up rooms in several particular cases (transfer to another hospital, preterm birth, foetal death...).

The software solution was deployed in Oct. 2012 with more than 10000 records in the database until today. A birth rate analysis allowed us to demonstrate an increase of the mean birth rate in 2013 and 2014 (respectively 95 and 101 births per weeks). We conclude that our software solution allows increasing the maternity frequentation by offering a better management of waiting lists, a rooms’ assignation management and by better monitoring the availability of beds when a patient requires admission to hospital. Even if such a solution increases the hospital receipts, the real economic impact still has to be evaluated.