International Conference on Industrial Engineering and Systems Management

## **IESM' 2009**

May 13 - 15, 2009

MONTREAL - CANADA

# Can maturity model be useful for the evaluation and improvement of health organizations? Concepts and case studies. \*

## Auguste RAKOTONDRANAIVO<sup>a, b</sup>, Isabelle KLEIN<sup>b</sup>, Jean-Pierre GRANDHAYE<sup>a</sup>

<sup>a</sup> EA 3767 - Equipe de Recherche sur les Processus Innovatifs (ERPI) -Institut National Polytechnique de Lorraine - 8 rue Bastien Lepage - B.P. 647 - 54010 Nancy Cedex - French <sup>b</sup> Regional oncology network in Lorraine ONCOLOR -6 avenue de Bourgogne - 54500 Vandoeuvre lès Nancy - French

#### Abstract

Health organizations can be compared to "health care" and services production systems. The evaluation and improvement of their performances are a major concern to guarantee efficacy and efficiency. Within this framework, the results obtained from the manufacturing sector can enrich those currently used in the health sector. This report proposes an approach currently used in software development and systems engineering which are unfamiliar in the health organizations. It refers to a maturity model, CMMI. We describe the concepts and applications achieved within two health organizations in order to analyze its feasibility and effectiveness. This approach introduces an interesting perspective to the self-evaluation and the benchmarking in the health sector.

Key words: performance evaluation, modeling, maturity model, CMMI, health organization

### 1 Introduction

Health organisations can be compared to "health care" and services production systems. They are actually subject to important reforms within their infrastructure, their organisation and their governance. The performance of these organisations is a main concern for the public authority, the administrators and the health professionals. The classical management methods and tools used in the health sector require improvement and multidisciplinary approaches [1].

<sup>\*</sup> This paper was not presented at any other revue. Corresponding author Auguste RAKOTONDRANAIVO. Tel. 33(0)83598506. Fax 33(0)83598516

*Email addresses:* rak.auguste@gmail.com (Auguste RAKOTONDRANAIVO), i.klein@nancy.fnclcc.fr (Isabelle KLEIN), Jean-Pierre.Grandhaye@ensgsi.inpl-nancy.fr (Jean-Pierre GRANDHAYE).