Process modelling of organized screening programs – breast cancer

Inês Filipa Terras Marques

1 Terras Marques, C Santos, V Santos
1 Nova Information Management School, NOVA University of Lisbon, Lisbon, Portugal
2 National School of Public Health, Public Health Research Centre, NOVA University of Lisbon, Lisbon, Portugal

Contact: m20170211@novains.ulisboa.pt

Breast cancer is the most frequent cancer among women and one of the principal causes of cancer related death in women worldwide, being a public health problem. Oncology screenings allow its early detection and reduce its mortality. Business process management (BPM) is a management field that leads an organization into continuously improvement with increase of efficiency. The processes of the healthcare system are complex what makes the application of BPM techniques harder, however their usage has been increasing in this sector. The main objective of this study is the identifications and modelling of BPM processes for the Portuguese breast cancer screening.

The current processes and the entities (actors, systems and documents) involved in the Breast Cancer Organized Screening performed by the Portuguese League Against Cancer were identified through interviews to the employees. With the information retrieved and using Bizagi the related As-Is diagrams were developed.

In this work 5 processes within the Breast Cancer Organized Screening were identified: Process “Patients’ invitation”; Process “Screening”; Process “Reading of the exam”; Process “Check-up Consultation” and Process “Sending Results”. Through the analysis of the As-Is diagrams and of the available information, a critical analysis was made. As for example, in the process “Patients’ invitation” an invitation letter is sent 15 days earlier to the patient but no telephone contact is done before the screening. An improvement could be sending a message in the day before the screening, remembering the appointment, avoiding forgetfulness absences.

With this work the mainly processes of the breast cancer organized screening were modelled as “As-Is” diagrams and, in a macroscopic way, some of the problems were identified and improvement suggestions were made in order to achieve the main objective of the process, the early detection of breast cancer, while optimizing the process.

Key messages:

- This work represents an important contribution to the Breast Cancer Organized Screening since, through the use of BPM, a set of actions is proposed with an impact on its effectiveness and efficiency.
- This work represents an example of what the BPM techniques can do to help in the optimization of all the processes of the healthcare sector, from screening to diagnosis and treatment.