



Department C

Department B

Department A

CONTEXT

The Radiation Oncology Department of C.R.O. Institute has been certified ISO 9001:2008 since 2003. The operators report nonconformities through a generic notification system called "RDC" report. Department Quality Manager collects and analyzes the nonconformities in order to carry out improvement actions. Our clinical risk management program includes a voluntary incident reporting system. Two Divisions of the Department have been involved in the pilot phase, one of these is located onto two sites, about 15 km apart.

CHANGE STRATEGY

The first step was to involve the Institute leadership for strategy definition and to support the reporting culture. The second step was to disseminate the information to quality and risk managers of the Division, through training events. In 2012 the pilot program was launched in two Divisions. In the 2013, the program will be extended to all the Institute Departments

MEASUREMENT AND EFFECTS

We counted the number of incidents reported and measured the analyzing time, compared with the same period in 2011 and 2012. Collected data shown that:

-The number of incidents reported has increased (+250%).

-The percentage of analyzed incident reporting has increased (+170%).

-The overall time needed to analyze reporting and plan improvement actions has decreased.

-In terms of patient safety we generally obtained more information on adverse events and spent less time to promote changes and improve quality.

LESSONS LEARNT

The Kaizen approach (little and continuous improvement steps) is particularly useful when an organizational and cultural change is planned. Integration of the quality and risk management, with tool sharing, increases the effectiveness of the system. The use of a BPM framework (integrated with custom solutions), which drives the organization to a paperless system, with an unified dashboard of real-time indicators, increases its efficiency. In the next program phase we plan to spread more incisively the change culture

THE PROBLEM

By monitoring the voluntary incident reporting, we found only few reports, with a small amount (10%) of near misses. As nonconformity can lead up to a patient adverse events, the aim was to find an IR (incident reporting) monitor and analysis tool, linked to the software used to manage nonconformities, in order to increase effectiveness and efficiency.

INTERVENTION

In the Divisions the nonconformities, corrective and preventive actions, are managed through a specific setting of a third party commercial BPM framework, based on process management. The intervention started by implementing the BPM framework with a new specific process template tailored to the new objective. The new IR process runs as follows:

Step1: A user starts a specific process instance titled 'IR Alert', by filling a specific electronic form with few mandatory key informations. Alternatively the IR process can be started by the Department Quality Manager based on RDC⁽¹⁾ (generic notification system) or nonconformity analysis. The electronic form fields are equivalent than paper form, while their access are role based.

Step 2: An automatically alert, sent by the BPM framework, notifies the Department Risk Manager to start analysis, tasks and verifications to solve the specific IR event.

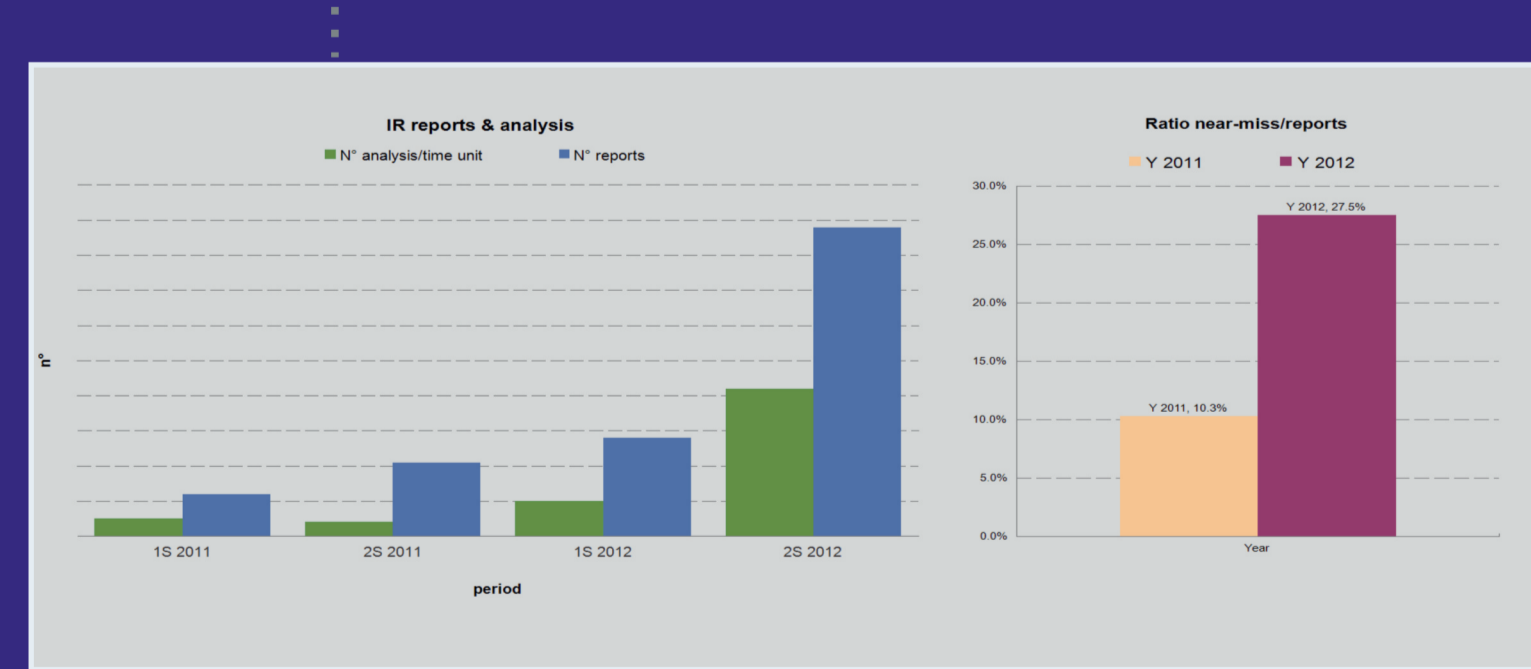
Step 3: Hospital Risk Manager, automatically alerted by the BPM framework, can supervise and monitor (real-time) all the above process steps. Risk management board periodically analyses the 'IR events' to evaluate any possible systemic corrective action, which will be assigned to the Department Quality Manager. If necessary, he can start a corrective or preventive action, through a new specific process instance (based on pre-configured templates).

In all the above steps, form data, user data, analysis data, timing, costs and actions data are recorded and stored in the BPM framework database for real-time reporting and analysis purpose. Processes are dynamically linked to the BPM document management system, to automatically extract the required documentations from a documental database. Implementation of the IR process to other Department, at the end of pilot phase, will be made by "cloning" the IR process template and updating only the referring contacts for the Department Managers.



TOOLS & MATERIALS

As BPM framework we use QUALIBUS™ V. 8.3 software (Nord Est Systems Srl - Italy). The RDC notification form/web-apps is an in-house solution developed on ADOBE® COLDFUSION® 8 application server (Adobe Systems Incorporated - USA)



¹A generic criticality survey & notification system. ² Business process management framework. ³ Nonconformity process managed by BPM framework. ⁴ CA: corrective action process managed by BPM framework.