IMPLEMENTATION OF A WRONG SITE/SIDE/PROCEDURE/ PATIENT PREVENTION POLICY WITH THE “Plan–Do–Check–Act” QUALITY IMPROVEMENT MODEL

Barbara Ragonese
Quality Services Manager
ISMETT-UPMC Italy
via Tricomi 1 - Palermo
Tel +39 091 2192 662
bragonese@ismett.edu

Giancarlo Cappello
Operating Room Nurse Educator
ISMETT-UPMC Italy
via Tricomi 1 - Palermo
Tel +39 091 2192 384
gcappello@ismett.edu

Alessandro Bertani
Division of Thoracic Surgery
ISMETT-UPMC Italy
via Tricomi 1 - Palermo
Tel +39 091 2192 111
abertani@ismett.edu

1. INTRODUCTION
The Quality and Patient Safety Improvement Program at ISMETT, a multi-organ transplant center located in Sicily, Italy, focuses mainly on patient safety and risk management, by means of a committee including managers, physicians, nurses, coordinators and educators. The committee uses both retroactive and proactive approaches. In this study we present the results of the development and implementation of the wrong site/side/patient/procedure prevention policy using the PDCA quality improvement model.

2. METHODOLOGY
The PDCA cycle (also known as Deming cycle) is a simple model that, through a 4-step data driven approach (Plan – Do – Check – Act) allows for active verification of the effectiveness of an improvement plan and mandates actions to reach the desired goal.

Following the JCI International Patient’s Safety Goals (goal #4) and the Italian Ministry of Health’s third recommendation, we planned to implement a pre-procedural pause (Time out) to identify the correct patient, procedure, positioning and site/side in all hospital surgical and invasive procedures settings (Operating Room, Endoscopy, Cardiac Catheterization, Interventional Radiology). The policy was collaboratively developed and piloted in March 2007. The main phases of the policy included a 4-step verification procedure: 1-informed consent acquisition, 2-site marking, 3-patient identification verification, 4-time out. The tool introduced to allow the policy implementation is a set of check-box based forms (pre-operative check list and pre-procedural screening form to document time out) for staff’s use; and the strategy included a training program for physicians and nurses involved in the processes.

The initial application setting chosen for this policy was the Operating Room. We assessed the correct application of the step-4 of the policy (time out), which included an evaluation of the appropriateness of former verification steps through use of the check box form (see Fig.1)

Fig.1 – Pre-Procedural Screening Form used during Time Out Procedure

Between March and December 2007, the policy was considered applicable in 942 patients admitted to the Operating Room. The time-out was correctly performed on 844 patients (89%). Following an initial good score in the first 3 months, data collection showed a slight deflection in the correct application of
the procedure (down to 79%) (see Fig.2). During this phase, an educational reinforcement was applied with in-services, meetings, and reminders sent via email. The last 3 months displayed the highest rates of compliance to the policy.

A further analysis related to missing check-box fields in the time-out form showed that the most recurrent missing field was the anesthesiologist and nurse anesthetist signature (up to 12.5% of the time out forms).

Following the data driven assessment, the PSRM Committee recommended a deeper involvement in the Time out process by the Anesthesiology Department, making the Anesthesia department the link to allow successful implementation of the Time Out in all interventional procedures within the hospital.

Starting from year 2008, a number of interventions were put in place in order to improve the policy enforcement, before extending it to all hospital surgical and invasive procedure settings. In particular:

1. Changes in the policy text
2. Changes on the forms related to the procedure
3. Modification of the forms filling process
4. Identification of missing or incomplete forms by secretarial staff
5. Immediate notification of non compliance to staff involved by unit’s responsible
6. Ongoing in-services for all nurses and physicians staff
7. Meetings with the unit’s responsible in order to identify new educational and operative needs

We decided to monitor the policy application for a 3 months period (Jan-Mar 2008). All efforts were made to maximize the efficacy of the process, in order to being able to extend it to all interventional procedures.

3. RESULTS

From January to March 2008 the policy was considered applicable in 261 patients admitted to the Operating Room. The time-out was performed on 252 patients (97%) (see Fig.3)

The percentage of anesthesiologist and nurse anesthetist missing signature decreased in March down to 1.1% and 0% respectively.

In January 2008 we observed:

- 75/79 Time out performed (94.93% of the cases, which is in line with bests performance of the year 2007)
- 7/79 Missing Anesthesiologist Signature (8.8% of the cases, which is less than 12.5% with reference to the 2007 value)
- 6/79 Missing Nurse Anesthetist Signature (7.5% of the cases, which is less than 12.5% with reference to the 2007 value).

In February 2008 the situation improved:

- 93/95 Time out performed (97.9% of the cases, which is better that the best performance of the year 2007)
- 4/95 Missing Anesthesiologist Signature (4.2% of the cases, which is lesser than 12.5% with reference to the 2007 value and better of January value 8.8%)
- 4/95 Missing Nurse Anesthetist Signature (1.05% of the cases, which is less than 12.5% with reference to the 2007 value and better than January value 7.5%).

In March 2008 we observed:

- 84/87 Time out performed (96.6% of the cases, which is in line with bests performance of the year 2007)
- 1/87 Missing Anesthesiologist Signature (1.1% of the cases, which is better of February value 4.2%)
- 0/87 Missing Nurse Anesthetist Signature (0% of the cases, which is better than February value 1.05% and it is the best value we can have in absolute) (see Fig.4).
4. CONCLUSIONS

The improved version of the policy, with the improved workflow (see Fig.5) and following interventions made and results reached in the test’s area, is now ready for implementation to all the hospital interventional areas. Data have been shared with staff on a monthly basis. A first process evaluation will be done after 3 month of the start date and will show the performance level that should be in line or superior to the highest level reached in the test area during the last observation.

A simple approach that allows monitoring and evaluating the results of a quality improvement project, the PDCA Model, is successfully supporting the implementation of a Time out process in all hospital interventional settings.

5. REFERENCES

[1] JCI International Patient’s Safety Goals (goal #4), Joint Commission International Accreditation Standards for Hospital, 3rd edition