

# Feasibility and Sustainability of Two Patient Identification Check Documentation to Drive Patient and Radiation Safety in a Radiology Department

Siok Mei NG  
December 2013

Research

Clinical Care

Education



## Excerpts from the ECRI Institute Executive Summary (Risk and Quality Management Strategies 4)

*“Today, risk management and quality improvement efforts in healthcare organizations are rallying behind **patient safety** and finding ways to work together more effectively and efficiently to ensure that their organizations deliver safe and high-quality patient care.”*

# International Patient Safety Goal: Correct Patient

- Failure in identifying patients correctly in health-care organization has serious implications on patient safety. The Joint Commission International (JCI) described identifying patients correctly as the first, most important, mandatory International Patient Safety Goal.
- Radiological exams performed in DDI mostly involve the use of radiation, which once delivered, the radiation dose cannot be retracted. Therefore, **correct patient identification is crucial for patient safety and radiation safety.**

**International Patient Safety Goals and Tools**

- Represent **proactive strategies** to reduce risk of medical error and reflect good practices proposed by **leading patient safety experts**
- Incorporating these new tools into our accreditation requirements is a **significant** step
- Organizations taking **responsibility** for using the IPSPG to foster an atmosphere of **continuous improvement** is even more important

Joint Commission International

JCI International Patient Safety Goals

1. Identify patients correctly
2. Improve effective communication
3. Improve the safety of high-alert medications
4. Ensure right-site, right-patient, right-procedure surgery
5. Reduce the risk of health care-associated infections
6. Reduce the risk of patient harm from falls

Joint Commission International

JCIA PRESENTATION  
by alaa E.G.F.hollel, physician at zagazig university of medicine on Mar 08, 2012

31

# **1. Aim, Background & Methodology**

# Aim

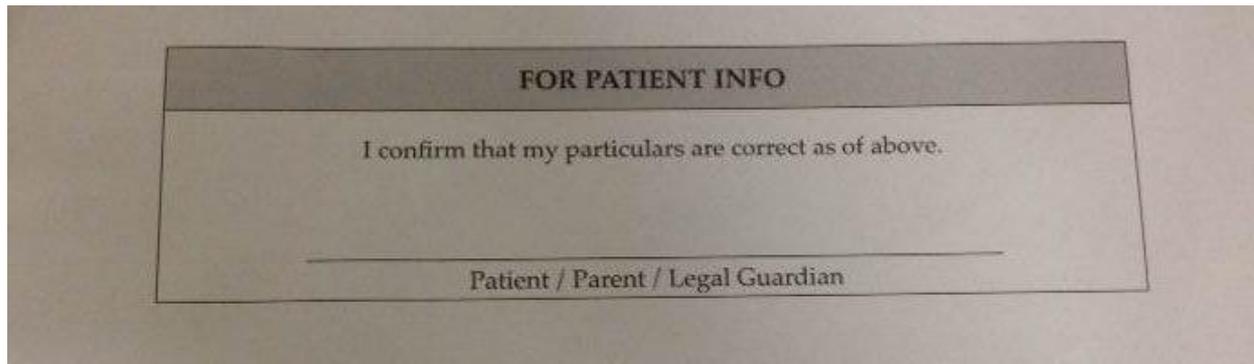
To explore the feasibility and sustainability of 2 patient identification (ID) check documentation to drive patient safety and radiation safety by reducing the incidence of wrong patients scanned.

# Background

After 4 serious patient misidentification incidents in 2010 (the wrong patient was scanned in the CT scanner and another patient given a wrong radiopharmaceutical injection), the radiology management team decided to explore the feasibility and sustainability of 2 patient identification check documentation to improve drive patient safety and radiation safety.

# Methodology

1. All Department of Diagnostic Imaging (DDI) radiographers were instructed to document at the back of the x-ray request forms that identification of patients were performed by
  - ✓ obtaining the patient's signature
  - ✓ or signing off for patients who were unresponsive or unable to sign.



FOR PATIENT INFO

I confirm that my particulars are correct as of above.

\_\_\_\_\_  
Patient / Parent / Legal Guardian

2. A retrospective convenience sampling of 5% or 30 (whichever is higher) total request forms of scans performed per month for 11 imaging modalities was performed: General x-rays, Emergency Medicine Department (EMD) X-rays, Intravenous Urography, Fluoroscopy, Breast Imaging, Main CT, EMD CT, Ultrasound, MRI, Nuclear Medicine and PET CT
  - Documentation that was accepted were patient's/Next-of-kin's or radiographer's signatures. Ticking was not accepted.
  - A total of 1218 request forms were sampled per quarter over a 1-2 week period.

# Methodology

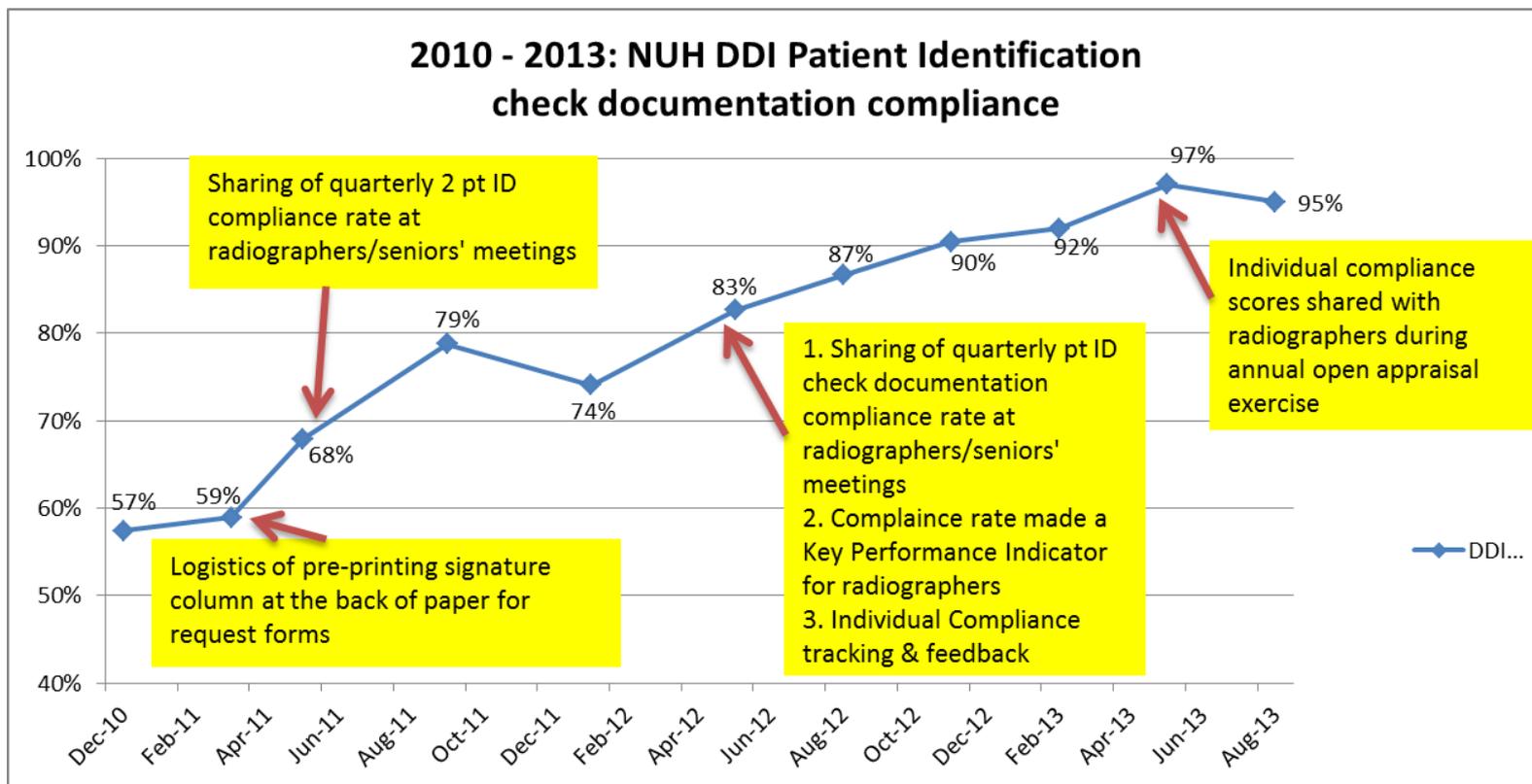
2. The documentation compliance rate was computed by modalities and by individuals.
3. A root cause analysis performed to identify the reasons for low documentation compliance showed the following causes: manual stamping of request forms with the signature box was tedious and radiographers lack time to do this, process seen as extra effort & not perceived as valuable.
4. 3 interventions were implemented from February 2011 to May 2012, and 1 intervention was implemented in May 2013 as a follow up of the 3<sup>rd</sup> intervention:

Root Cause for low compliance	Intervention	Implementation in
1. Manual stamping of request forms with signature box was tedious	1 <sup>st</sup> Intervention: Logistics of pre-printing signature column at the back of paper for request forms	March 2011
2. Effort nor perceived as valuable	2 <sup>nd</sup> Intervention: Sharing of quarterly ID check documentation compliance rate at radiographers/seniors' meetings	May 2011
3. Process seen as extra effort	3 <sup>rd</sup> Intervention: - Sharing of quarterly ID check documentation compliance rate at radiographers/seniors' meetings - Compliance rate made a Key Performance Indicator - Individual Compliance tracking & feedback	May 2012
	Individual ID Documentation compliance rates shared with staff during their annual appraisal	May 2013

## **2. Results & Discussion**

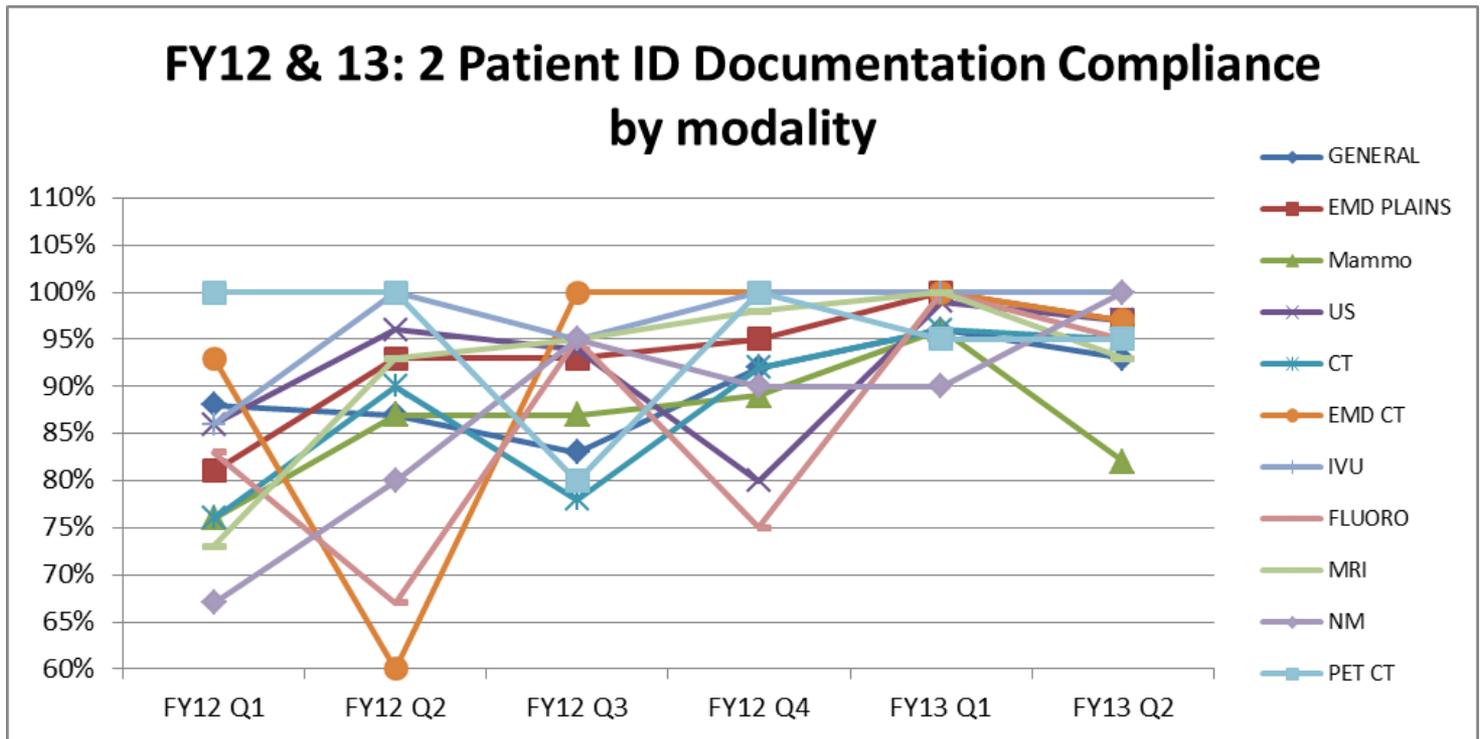
# Results

- The identification (ID) check documentation compliance rate increased by 9%, 6% and 16% after the 1st, 2nd and 3rd interventions respectively.
- The Pearson Chi-Square test (2-sided) showed a significant increase ( $p=0.000$ ) in the compliance rate after the 3rd intervention.



# Results

- Documentation compliance rates by imaging modalities were tabulated and shared quarterly, while individual compliance rates were tabulated for sharing on a yearly basis, due to resource constraints.
- All modalities showed increasing documentation compliance:



# Results

- Data analysis of the aggregated data from 2012-2013 showed the following:
  - There was no significant differences in the median compliance rates between gender groups.
  - Differences in compliance rates were observed between radiographers of different years of service and between designations

Demographics		Median compliance rate	Average compliance rate	Remarks
Length of service category	<1 yr	96	90	Higher compliance rate than >3 yrs categories
	1-3 yrs	97	91	
	3-10 yrs	90	86	Lower compliance rate than <3 yrs categories
	>10 yrs	92	90	
Designation	Radiographer	94	88	Radiographers and Senior radiographers have similar compliance rates
	Senior Radiographer	94	89	
	Principal Radiographer	63	63	Sample size = 2, significantly lower compliance rates

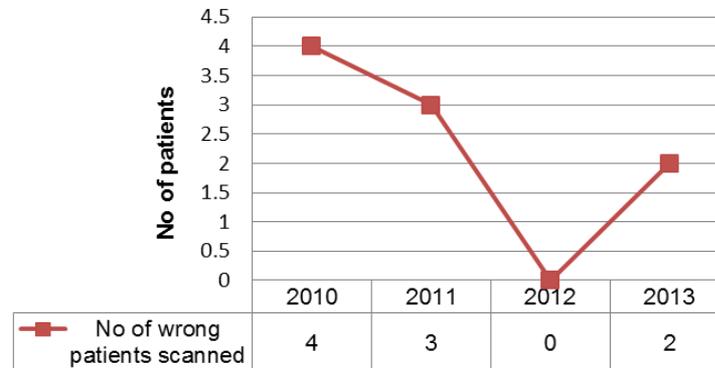
# Results

- An increase in the median compliance rate between 2012 -2013 was observed and the number of radiographers achieving 100% documentation compliance increased 88% from 2012 to 2013 after the 3<sup>rd</sup> intervention:

Year	No of Radiographers sampled	Median compliance rate	No of rads achieving 100% compliance
2012	100	91	17
2013	108	97	32

- The incidence is incorrect identification of patients for scans reduced from 4 in 2010 to 0 in 2012 (100% reduction over 2 years). 2 patients wrongly scanned reported in 2013:

**2010 - 2013 No of wrong patient scanned reported in the hospital occurrence reporting system**



# Discussion

## Challenges in implementation

- Resistance to implementation was high at the start but this process now only adds 30 seconds to the procedure time and is accepted as a routine step of the x-ray procedure or scan.
- A behavior change method is any process that has the potential to influence psychological determinants (attitude, risk perception, self-efficacy, and habit).<sup>[1]</sup>
- Compliance to the documentation (behavioral change) only significantly increased when individual compliance rates were computed and used during performance appraisal, since it increased the risk of non-compliance and there was high self-efficacy to mitigate that risk.
- The habit of documenting 2 patient ID checks is now engrained and new staff who are inducted to start documentation from Day 1, do not perceive this to be a an 'extra-step'.

## Reasons for missed Documentation

- patient is unable to sign, or is unconscious.
- non-compliance to the checking a patients' ID
- missed documentation despite actual checks done
- documentation already performed in 'time out checklists' for invasive procedures,
- incomplete or unacceptable forms of documentation.

# Discussion

## Resources required for audit and data analysis

- 60 man-hours per quarter was required for data collection and correlation, due to the large sample size.
- Manpower for the audit was planned and excess manpower during afternoon sessions was utilized, resulting in greater radiographer productivity.
- The current documentation is possible with hardcopy imaging request forms and possible digital documentation of patient ID checks needs to be explored when the department adopts a paperless workflow.

## Setting of Performance Indicators

Theoretically, for patient and radiation safety, 2 patient ID checks must be adhered to for 100% of procedures and scans. An 80% documentation compliance rate was set as a baseline target since lapses in documentation do occur when a patient is unable to sign, or is unconscious.

# Discussion

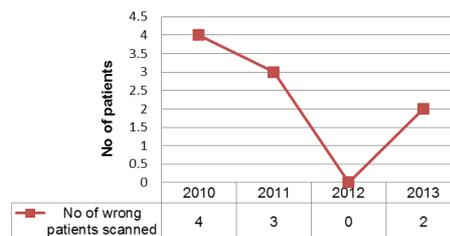
## Data on Wrong Patients Scanned

- However, the documentation of the 2 patient ID check, if it is or is not performed, may or may not reflect the correct identification process. If a staff signs after supposedly checking the ID of an unresponsive patient, the actual checking would be based on the staff's integrity.
- Mandatory documentation has increased awareness of the significance of this step to reduce errors.
- The incidence is misidentification of patients for scans reduced from 4 in 2010 to 0 in 2012 (100% reduction)

- 2 cases of wrong patients scanned occurred in 2013 despite average documentation compliance rate of 95%.

Feasibility of Patient ID Check Documentation to Drive Patient and Radiation Safety

2010 - 2012: No of wrong patient scanned reported in the hospital occurrence reporting system



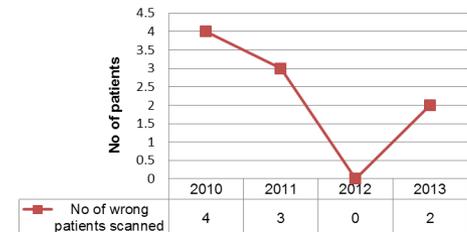
# Discussion

## Data on Wrong Patients Scanned

- 2 cases of wrong patients scanned occurred in 2013 despite average documentation compliance rate of 95%. The root cause analysis for both cases were patient identification was not performed according to protocol where patient is required to verbalize his/her ID:
  - ❑ Case 1: Patient's name and ID no was read out to her, and patient just nodded
  - ❑ Case 2: Patient's request form ID was checked against the casenotes, and not against the patient's wrist tag.
- Both cases of failure to correctly identify patients occurred with staff below 3 years of service. This category of staff have higher documentation compliance rate than all

Sustainability of Patient ID Check Documentation to Drive Patient and Radiation Safety fails with non-compliance to ID check protocols

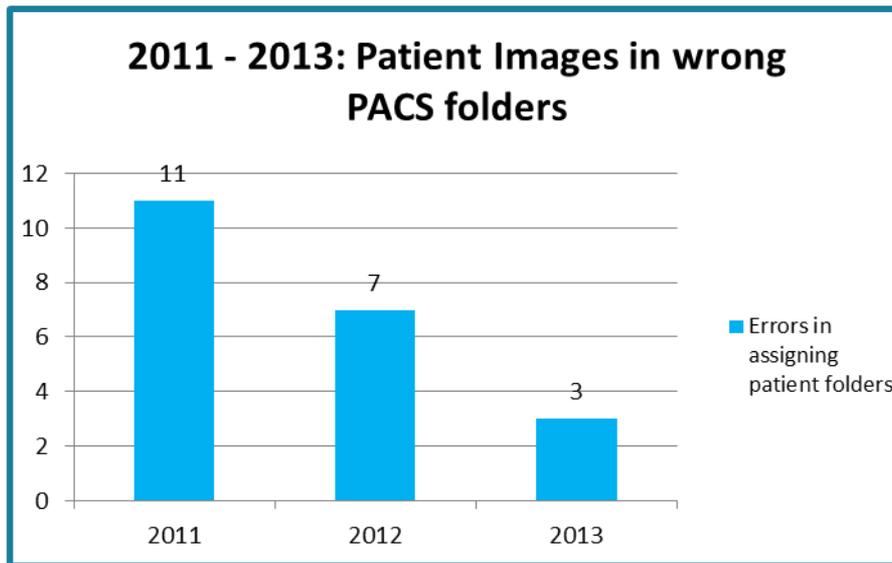
2010 - 2012: No of wrong patient scanned reported in the hospital occurrence reporting system



# Discussion

## Patient Images in wrong folders

- Similar errors to that of scanning a wrong patient that threatens patient safety, is scanning the right patient and placing the images into another patient's PACS folder.
- The incidence of patient images in wrong folders (detected and rectified) has also decreased in the same period, indicating a heightened awareness on patient safety:



# Discussion

## “4 Rights” are required for patient safety

•Moving ahead to increase patient and radiation safety, we recognize the need to move towards a more comprehensive patient safety net, modeling medication safety checks.

•The “4 Rights” we will propose are:

- ✓ **Right Patient**
- ✓ **Right Site**
- ✓ **Right Procedure**
- ✓ **Right Folder/Data**

•This direction of safety in radiology is echoed by the Australian Commission on Safety and Quality in Healthcare, who in conjunction with clinician experts and major clinical groups, has developed protocols to support matching of patients to their care in the areas of radiology, nuclear medicine, radiation therapy and oral surgery.



# 3. Conclusion

# Conclusion

1. Two Patient Identification Check Documentation has been shown to be feasible, sustainable, can be used as a performance indicator for staff to drive patient safety in a Radiology Department.
  2. Efforts to ensure compliance to patient identification protocols is key.
  3. “4 Rights” are required to make every patient experience a RIGHT one.
- 

**“There are many ways of going forward, but only one way of standing still.”**

Franklin D. Roosevelt





Thank you  
for your attention

# References:

- ECRI. Patient identification. Risk analysis. Risk and quality management strategies 16. *Healthcare Risk Control, Supplement A*. 2003.  
<http://www.saferhealthcare.org/uk/IHI/Topics/PatientIdentification/CaseStudies/DeliveringSaferPatientIdentification.htm>. Accessed October 9, 2006.
- Joint Commission, The. Implementation expectations for the universal protocol for preventing wrong site, wrong procedure, and wrong person surgery. 2003.  
[http://www.jointcommission.org/NR/rdonlyres/E3C600EB-043B-4E86-B04ECA4A89AD5433/0/universal\\_protocol.pdf](http://www.jointcommission.org/NR/rdonlyres/E3C600EB-043B-4E86-B04ECA4A89AD5433/0/universal_protocol.pdf). Accessed October 10, 2006.
- Joint Commission, The. 2003 national patient safety goals.  
[http://www.jointcommission.org/PatientSafety/NationalPatientSafetyGoals/03\\_npsgs.htm](http://www.jointcommission.org/PatientSafety/NationalPatientSafetyGoals/03_npsgs.htm). Accessed October 10, 2006.
- Joint Commission, The. 2006 national patient safety goals.  
[www.jointcommission.org/NR/rdonlyres/88ED0EA4-395A-4DBA-A12E-25C70AF72C00/0/06\\_npsg.ppt](http://www.jointcommission.org/NR/rdonlyres/88ED0EA4-395A-4DBA-A12E-25C70AF72C00/0/06_npsg.ppt). Accessed October 12, 2006.
- Joint Commission, The. Protocol for preventing wrong site, wrong procedure, wrong person surgery. 2003. [http://www.jointcommission.org/NR/rdonlyres/DEC4A816-ED52-4C04-AF8CFEBA74A732EA/0/up\\_guidelines.pdf](http://www.jointcommission.org/NR/rdonlyres/DEC4A816-ED52-4C04-AF8CFEBA74A732EA/0/up_guidelines.pdf). Accessed October 10, 2006.
- Bartholomew, L. K., Parcel, G. S., Kok, G., Gottlieb, N. H., & Fernández, M.E., 2011. Planning health promotion programs; an Intervention Mapping approach, 3rd Ed. San Francisco, CA: Jossey-Bass.
- Joint Commission International Accreditation Standards For Hospitals- Standards List Version 4th Edition, Joint Commission International 2011: 30
- Australian Commission for Safety and Quality in Health Care. Ensuring correct patient, correct site, and correct procedure in Radiology, Nuclear Medicine, Radiation Therapy and Oral Surgery