

## Patient Safety in eye surgery

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The safety of patients represents a problem for all advanced health systems; the preoccupation is shared and underlined by the World Health Organization which since 2001 has requested urgent interventions on behalf of the health systems themselves [1]. The adverse events are much more numerous than those hypothesized or those which create real damage to patients. The studies conducted to date have demonstrated that the majority of identified adverse events are “avoidable” errors and result often from not a single error (human, technological) but a chain of errors and events [2].

These events inevitably lead to poor quality of care, in terms of efficacy (clinical aspect), and in terms of increasing the costs of maintaining the health structure (management-organizational aspect), and last but not least the loss of patient trust (loss of image) for the structure which conducted the intervention. A health system is complex system due to the specificity of single patients, the complexities of interventions, the multitude of professionals and the diverse management processes found therein. Due to its own complexity it is impossible to eliminate all errors and incidents, but it is possible to implement interventions to keep them under control. Furthermore it is fundamental to recognize that a system can make mistakes, creating the circumstances for an error to occur (stress, poorly understood technology, etc.) which remain latent until an error by a health worker makes them obvious (active error). Therefore it is necessary to put in act: all the actions which make it difficult for humans to make mistakes, and all useful defense mechanisms, in order to face the consequences in

the event of an error occurring. To reduce these events it is necessary to improve the quality of health care through Clinical Governance namely Risk Management or Clinical Risk Management, which aim at identifying, analyzing, evaluating, communicating, eliminating and monitoring risks associated with any health activity [3]. Another Clinical Governance instrument useful to guarantee quality and safety of care is the continual training of health professionals. This instrument is strategic both for maintaining and updating specific technical and professional competences as well as sensitizing the professionals to “organizational culture and security”. Training should enable the acquisition of tools and techniques useful for managing risk so that an individual health professional can act as a “small” Risk manager able to identify, remove and report the risks for patients present within the organization [4]. Furthermore, to improve the safety of patients, it is useful to introduce Good Practices, represented by interventions which implement Recommendations of the Ministry of Health, enacted to provide health care information on the hazardous conditions that may cause serious consequences for patients, and that indicate actions to be taken for the prevention of adverse events. Among the good practices that describe interventions designed to prevent, reduce and manage specific adverse actions in addition to those designed to address sentinel events (the events which are particularly serious and can lead to death or serious damage to patients and threaten patient trust in the National Health Service), there are also other interventions aimed at: raising the awareness of the role

of the patient (such as the procedure of informed consent), improving the training of health professional, implementing systems for “incident reporting”, and the introduction of protocols/procedures and guidelines and technical solutions.

Among the areas most at risk of adverse events is surgery, which due to the complexity that characterizes it, is one of the contexts where it is necessary to ensure the highest levels of security.

Safety in the operating theatre is characterized by the intrinsic complexity characterizing all surgical procedures, even the simplest ones: - the number of personnel and professionals involved, - the acute conditions of patients, the amount of information required, - the urgency with which procedures must be conducted, - the high levels of technology, the multiplicity of critical points within the process which can cause serious harm to patients ranging from the identification of the patient, the accuracy of the site of surgery, to the appropriate sterilization of instruments, etc [5-7].

It has been demonstrated that, like many medical errors, the incorrect identification of the site of surgery does not usually result from a single catastrophic error but as a result of a chain of small errors. Even in the field of ophthalmology, the risk of incurring adverse events during surgical procedures, makes the introduction of useful interventions necessary to improve the safety of care. The Ministry of Health, in order to improve safety in operating theatres, strongly recommends the use of check-lists in the operating theatre, a useful tool in reducing adverse events, also in the field of

Sicurezza in sala operatoria: Raccomandazioni e Checklist per la sicurezza in sala operatoria 2009

ophthalmology. Indeed this tool through three phases: Sign – In, Time – Out, Sign –Out, not only reduces the possibility of false identification of the patient or the incorrect surgical site but also allows to anticipate possible intra operative difficulties and to plan post-operative services [5-7]. Although conducting the surgical procedure on the wrong side of a patient is a rare event, some observational studies have shown that, even in ophthalmology, transposition errors in documentation of eye surgery and treatments prescribed for the wrong eye is quite common for patients in hospital and for those in day care [8]. These errors, while not automatically associated with certain adverse events may be precursors of more serious errors which could on occasions lead to catastrophic events. These events can be reduced only if a system is built that provides tools to reduce the likelihood that such errors occur and a system able to identify and intercept the errors when they do occur.

The Royal College of Ophthalmologists has identified in first place among critical incidents in ophthalmology “intervention on the wrong eye”, apart from being a sentinel incident in the UK it is one of the most frequent causes of litigation (damage claims) [9]. Scientific evidence demonstrates that a check-list in the operating theatre, even in the field of ophthalmology, allows to intercept potential catastrophic errors [10] and underlines that the attention of health professionals, regardless of the intervention, must always be orientated to the safety and quality of care.

## References

1. World Health Organization. The second global patient safety challenge. Safe surgery saves lives. Switzerland, 2008 (Accessed May 20, 2014, at [http://www.who.int/patientsafety/safesurgery/knowledge\\_base/SSSL\\_Brochure\\_finalJun08.pdf](http://www.who.int/patientsafety/safesurgery/knowledge_base/SSSL_Brochure_finalJun08.pdf)).
2. Reason J. Human error: models and management. *BMJ*. 2000 Mar 18;320(7237):768-70.
3. Department of Health. A first class service: Quality in the new NHS. London, 1998 (Accessed May 20, 2014, at [http://webarchive.nationalarchives.gov.uk/+/www.dh.gov.uk/en/publicationsandstatistics/publications/publicationspolicyandguidance/dh\\_4006902](http://webarchive.nationalarchives.gov.uk/+/www.dh.gov.uk/en/publicationsandstatistics/publications/publicationspolicyandguidance/dh_4006902)).
4. Joint Commission Resources. Eventi Sentinella: quello che ogni organizzazione sanitaria dovrebbe sapere. C.G. Edizioni Medico Scientifiche, Torino, 2007.
5. Ministero del Lavoro, della Salute e delle Politiche Sociali. Dipartimento della qualità direzione generale della programmazione sanitaria, dei livelli di assistenza e dei principi etici di sistema ufficio III. Manuale per la
6. Raccomandazione n. 2 del Ministero del Lavoro, della Salute e delle Politiche Sociali per prevenire la ritenzione di garze, strumenti o altro materiale all'interno del sito chirurgico, Marzo 2008.
7. Raccomandazione n. 3 del Ministero del Lavoro, della Salute e delle Politiche Sociali per la corretta identificazione dei pazienti, del sito e della procedura, Marzo 2008.
8. Elghrably I, Fraser SG. An observational study of laterality errors in a sample of clinical records. *Eye (Lond)*. 2008;22(3):340-3.
9. Kelly SP, Astbury NJ. Patient safety in cataract surgery. *Eye (Lond)*. 2006;20(3):275-82. Review.
10. Cavallini GM1, Campi L, De Maria M, Forlini M. Clinical risk management in eye outpatient surgery: a new surgical safety checklist for cataract surgery and intravitreal anti-VEGF injection. *Graefes Arch Clin Exp Ophthalmol*. 2013;251(3):889-94.

(Accessed May 20, 2014, at [http://www.salute.gov.it/imgs/c\\_17\\_pubblicazioni\\_1119\\_allegato.pdf](http://www.salute.gov.it/imgs/c_17_pubblicazioni_1119_allegato.pdf))