

# Compliance with a Time-out Procedure intended to Prevent Wrong Surgery in Hospitals: Results of a National Patient Safety Program in the Netherlands



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# Dutch Hospital Patient Safety Program

The Dutch Hospital Patient Safety Program (Safety Program) was set up in 2008 to reduce preventable adverse events in Dutch hospitals by 50% by the end of 2012.

The Safety Program consisted of ten patient safety themes and clinical guidelines were developed for each theme. Hospitals were given five years to implement these guidelines.

# Wrong Surgery

- (1) surgery at the wrong side/site,
- (2) surgery on the wrong patient,
- (3) carrying out the wrong surgical procedure.

Incidence:

U.S.A. 0,009- 4,5% per 10.000 surgical procedures.

# Surgical checklists

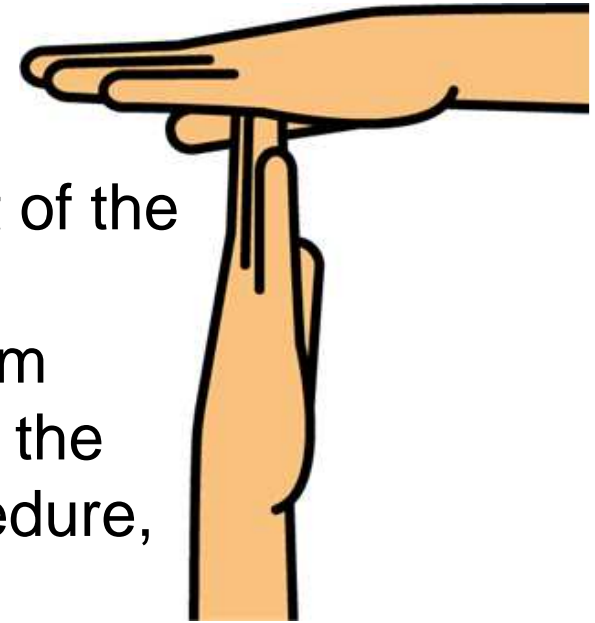
2003: JCAHO guideline “Universal protocol for Preventing Wrong Site, Wrong Procedure, Wrong Person Surgery”

2008: WHO “Safe Surgery Checklist”.

2008: SURgical PATient Safety System (SURPASS)

# Time-Out Procedure

- (a) preoperative discussion before the start of the surgical procedure.
- (b) review of the names and roles of all team members, characteristics of the patient, the operation plan, familiarity with the procedure, the presence of the correct materials.
- (c) reduce uncertainties in the OR among the surgical team and reduce the risk of wrong surgery.
- (d) final step before surgery therefore crucial in preventing wrong surgery.



# Objective

The objective of our study was to investigate the compliance at Dutch hospitals with the national guidelines of a TOP set by the Safety Program and how this changed over the final year of the program.

What factors are associated with compliance with the time-out procedure?

# Sample

Part of a larger evaluation study of the Safety Program.

Carried out between Nov 2011 and Dec 2012

18 Dutch hospitals (= 20% of total)

2 academic

4 teaching

12 general





# Observations

12 observers

Training and feedback meetings.

Random selection from elective surgeries.

ten observation days per hospital

six to ten surgical procedures per day

One observer per surgical procedure

Observer present at start of surgery.

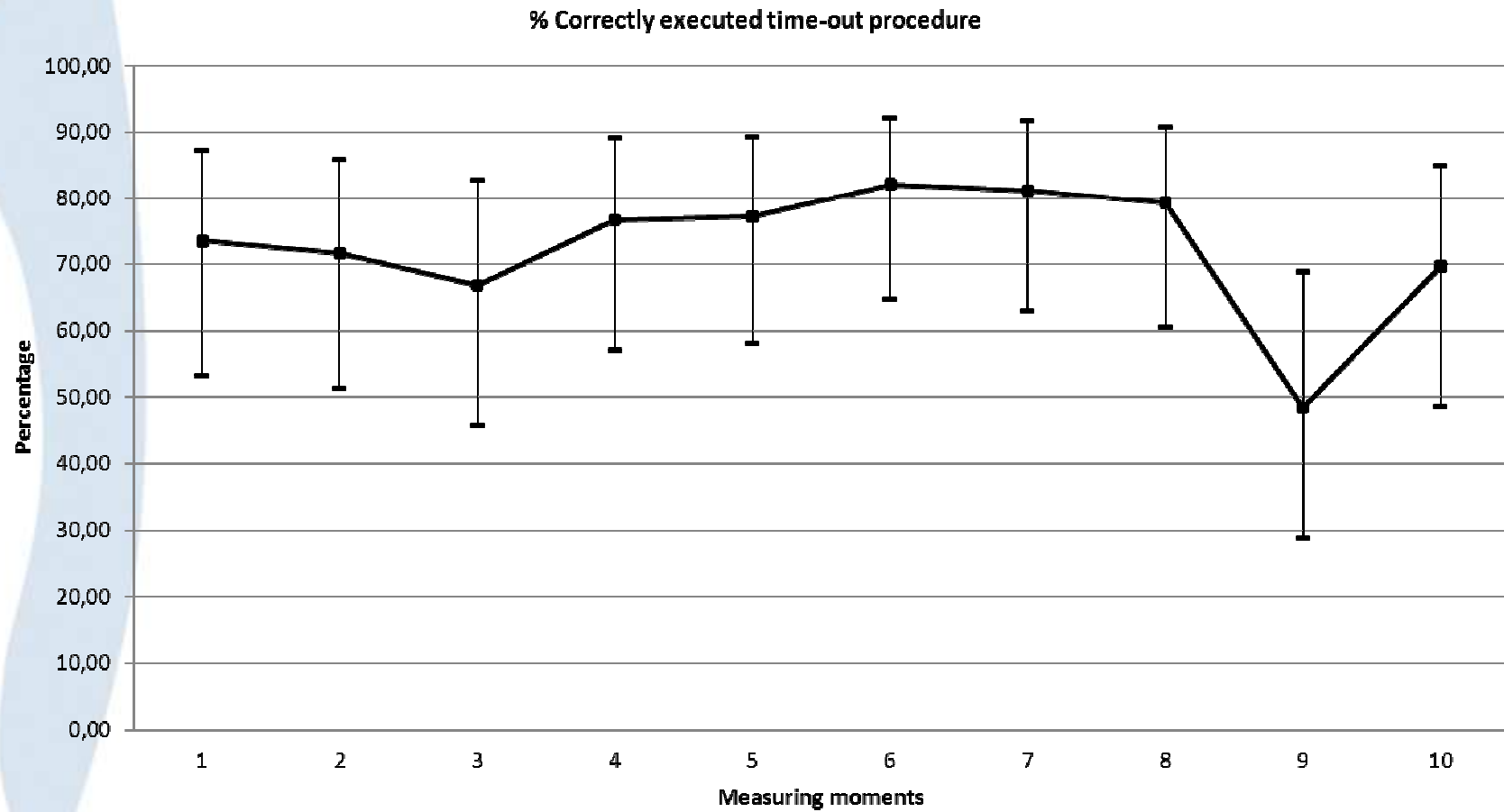


# Registration forms

Standardized recording form:

- (1) checking the patient,
- (2) checking the procedure,
- (3) checking the side/site,
- (4) attention of the team (focus),
- (5) completeness of the team,
- (6) background variables (type of surgical procedure, the patient's age, and sex.) I

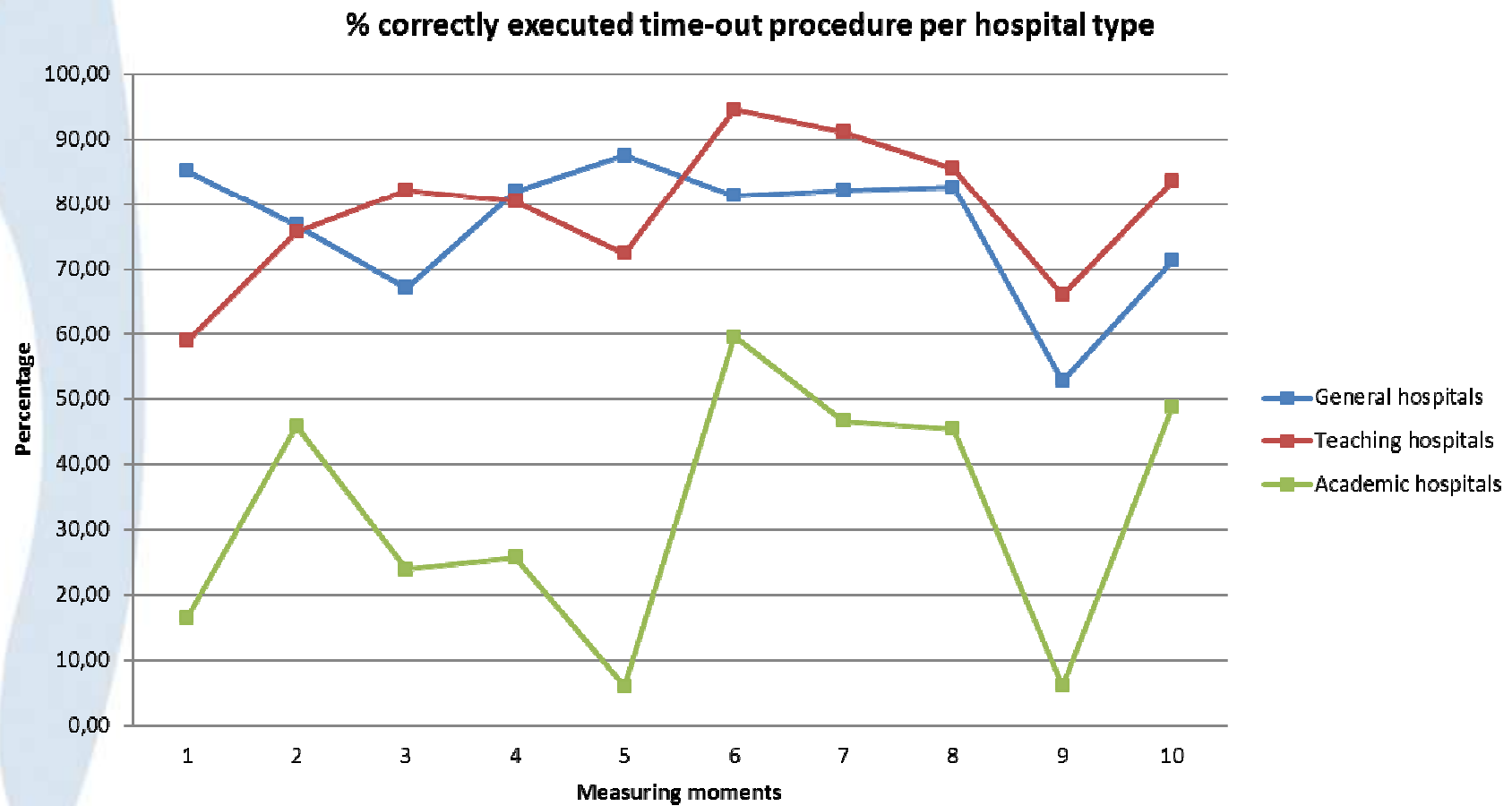
# Results



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- In 44% of observations the team was performing all kinds of other tasks during the TOP.
- In 56% of observations the team was not complete during the TOP: other team members joined the team after the TOP was performed.

# Results



# Large differences between hospitals

The high ICC rates suggest that the differences between individual hospitals are high.

Possible explanations:

- (1) Differences in the creation of awareness amongst healthcare staff
- (2) Differences in speaking-up cultures between hospitals.

# Differences between surgical specialties

Compliance with the TOP varied between different specialties and was lowest among general surgery teams.

Possible explanation:

- (1) Not all medical disciplines and their scientific communities have placed the same amount of weight on a thorough implementation of the Safety Program.

# Patient characteristics

Surgical procedure less often verified with elderly patients.

Possible explanations:

- (1) Elderly patients might be less able to verbally express themselves to healthcare staff.
- (2) Level of standardization of procedures that are commonly performed in the elderly population (such as hip- replacement surgery or cataract surgery) is relatively high and it is unclear what effect this has on compliance with TOP.

# Focus of the team during the TOP

Focus in the team positively associated with compliance.

Poor focus on the TOP in almost half of the surgical procedures.

Possible explanations:

(1) Lack of awareness of the importance amongst healthcare staff.

(2) Tight surgical schedules → healthcare staff might experience time pressure → perform multiple tasks simultaneously.



# Conclusion

Mean TOP compliance was 71.3%

No improvement in compliance over time was found.

Large differences were found between hospitals.

Compliance was influenced by several factors:

- (1) hospital type,
- (2) surgical specialty,
- (3) age of the patient,
- (4) focus of the team.

Half of the TOPs, the team was not focused.

Half of the TOPs, the team was incomplete.

# Resilience

Balance between standardization and resilience.

Several moments in the Safe Surgery Checklist to prevent wrong surgery.

Involves all healthcare staff.

‘Ticking the boxes’.

# Questions

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