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# PATIENT SAFETY AND COMPLEX CARE

## Design and interventions of a safety program for elderly patients with a hip fracture

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### TOPICS

- Elderly people and safety.

### KEYWORDS

Patient Safety, elderly patients, intervention program, hip fracture.

### 1. INTRODUCTION

The research program 'Patient Safety and Complex Care' focuses on a vulnerable group of patients, namely elderly patients with a hip fracture. Current research indicated that this group might especially be the patients that suffer from inadequate care, unintended events and avoidable harm. Two contributing factors are the multi-morbidity among these patients and the complex care chain that they have to go through after hip fracture. This care chain consists of the emergency situation and treatment by several different care providers back to (nursing/elderly) home where they often need further rehabilitation. The research program focuses on the communication between care providers, the role of the patient in the care process and complications that might occur in the period after discharge.

The objective of the research program is to gain further insight in:

- Prevention of unintended events and avoidable harm for vulnerable patient groups, in this case elderly patients with a hip fracture;
- Occurrence of sub-optimal information transfer and communication between care providers in hospitals, between hospitals and adjoining care sectors and between care providers and patients/informal carers;
- The effectiveness of a patient safety intervention program.

### 2. METHODOLOGY

The research program consists of a descriptive study and an intervention study. The descriptive study focuses on the complete care chain for elderly hip fracture patients and covers the three main phases of the Risk Governance Framework [1]. These phases are pre-assessment, risk-appraisal and risk management.

The intervention study takes place during the year 2008. The intervention study has three modules, in every module one of the following tools will be implemented:

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- **SBAR** communication tools [2] to improve the effectiveness of information transfer among care givers within and outside the hospital;
- **Patient Safety Pocket Card** during hospital stay to strengthen the role of patients and their families in preventing errors and harm;
- **Bundles** of evidence based recommendations for prevention or early detection of common complications that might occur in the period after discharge.

The modules will be implemented in an integrated manner in four intervention hospitals for the period of one year. During that year a maximum of 800 elderly hip fracture patients will be included. Two hundred patients in two other hospitals will serve as a control group. The study design is presented in Figure 1.

To measure the effectiveness of the intervention program questionnaires, observations, interviews and a patient record review study will be used.

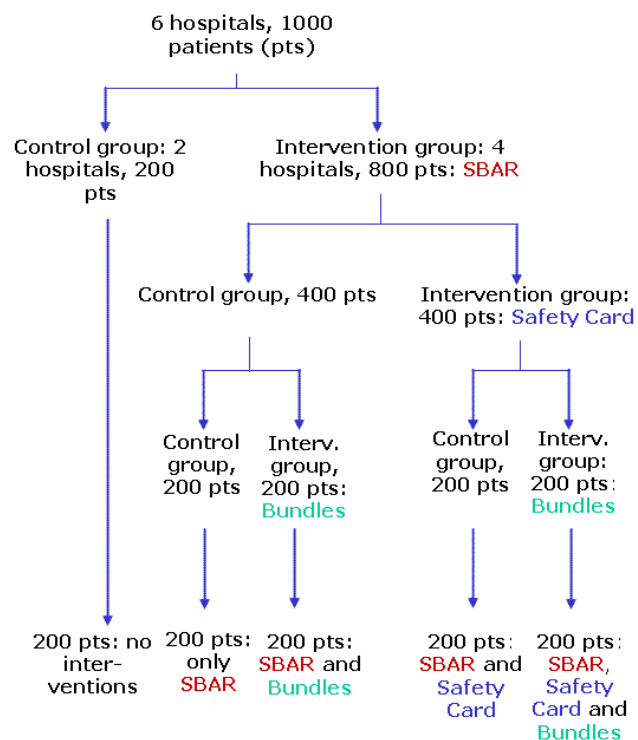


Figure 1: Flow chart of the integrated intervention study.

### 3. RESULTS

To measure the effectiveness of the different interventions and the total intervention program the following outcome variables were chosen:

- Mortality rate within 6 months after surgery;
- Length of hospital stay;
- Operative delay;
- Unintended events as a consequence of miscommunication;
- Avoidable harm during and after discharge.

The results of the research program will generate more knowledge and insight into the effectiveness of the intervention program and the nature of unintended events and avoidable harm to elderly patients with a hip fracture and possibly other patient groups with complex care problems.

### 4. CONCLUSIONS

We chose for a rather complex design by evaluating three intervention modules both separately and combined in a rather long care chain. This approach was chosen, because we believe solutions to improve patient safety have potentially more effect when multiple causes of adverse outcomes of care are addressed at the same time.

The integration of several intervention modules within an intervention program increases the chance of measurable effects at patient level. The strength of the research program lies in the focus on the whole care chain and an intervention program that focuses on the communication between care professionals, patient participation and the situation around and after discharge.

The study will provide usable results for research, practice and policy: insight into weak and strong barriers in the care chain makes it possible to adapt organization policies. Furthermore, the tools used in the interventions, e.g. the SBAR communication tools, the patient safety pocket card and the bundles with recommendations can be used for the development of a patient safety management system.

### 5. REFERENCES

[1] IRCG. *Risk Governance: towards an integrative approach*. International Risk Governance Council, Geneva, 2005.

[2] Haig, K.M., Sutton, S., Whittington, J. SBAR: A shared mental model for improving communication between clinicians. *Journal on Quality and Patient Safety* 2006; 32(3): 167-175.