

Rapid Recovery Fragility Hip Fracture

Case Study



Universitair Medisch Centrum Groningen

Hospital Data

The UMCG houses the largest trauma center in the Netherlands. It is the only trauma center in the northern Netherlands and northern Germany that offers the full range of emergency medicine from the moment of admission and treatment in the central emergency department, through to rehabilitation in the rehabilitation center at the Beatrixoord site. For more than three million inhabitants, they are the ultimate address for highly specialized acute medical care for every conceivable acute life threatening disorder.

Next to UMCG, three local rehabilitation clinics were actively involved in the implementation and alignment of the new care pathway and protocols.

Goals

- To reduce length of stay on the ER and time to surgery to prevent patients from deteriorating.
- To be able to preoperatively identify and treat potential complications often shown within this fragile population.
- To be able to mobilise as soon as possible after surgery and align the rehabilitation between hospital and rehabilitation clinic as optimal as possible.

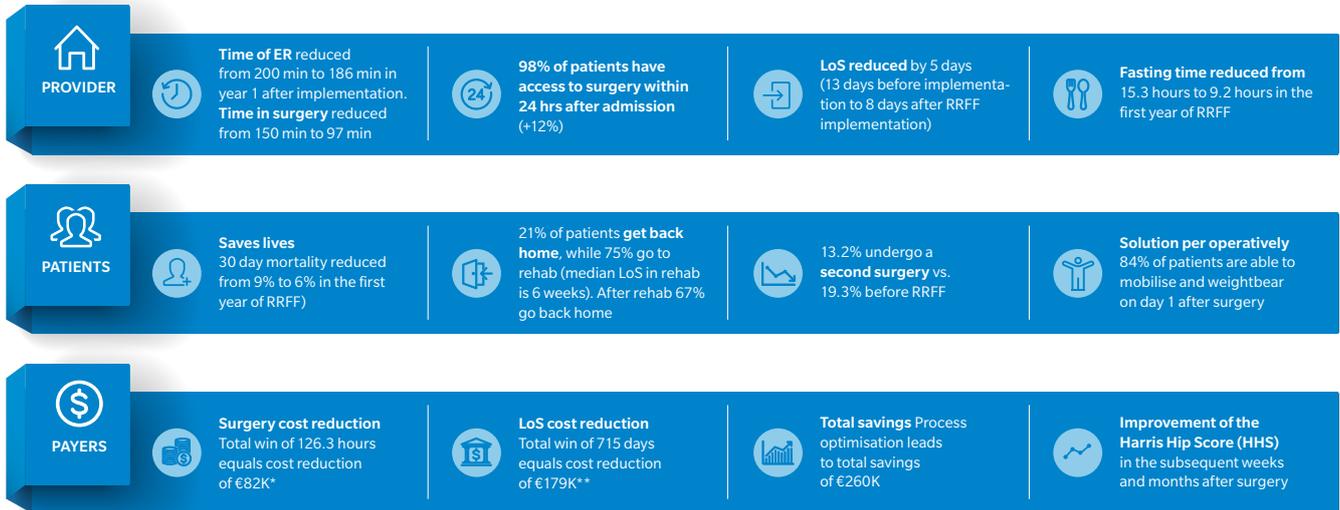
Objectives

- To create a care pathway for this elderly and fragile patient population with a hip fracture, which will result in optimising the survival rate as well as improving quality of life for this patient.
- Enhancing the availability of bed capacity for the hospital, by reducing the total Length of Stay.

How Did Zimmer Biomet Help?

When the need was discussed with Zimmer Biomet to implement Rapid Recovery Fragility Fracture we:

- Interviewed every involved stakeholder. Hospital employees, medics, rehabilitation partners, internal medicine, orthopaedic surgeons and trauma surgeons, physiotherapists, nurses, dietitians, OR staff, ER staff and management.
- Moderated sessions to identify their goals and objectives.
- Supported the hospital by moderating the creation of the pathway, identifying the steps, creating slots on the OR and aligning protocols.
- Established a culture for continuous improvement, data collection and feedback within their multidisciplinary group.
- Established focus on the perioperative solution that would enable patients to start mobilisation immediately after surgery.



Assumptions: *cost price hospital day €250, **cost price OR p/H €650

Patient Demographics*	Control group before implementation (2 years figures)	After implementation (1 year figures)
Patients	145	143
Average Age	79.6	78.6
Female	72%	68%
ER	200 min.	186 min.
Fasting	15 hour, 30 minutes	9 hour, 18 minutes
>24 Hours	13.7%	2%
Length of Stay	13 days	8 days
Second Surgery	19.3%	13.2%
30-day Mortality	9%	6%

*Hip fractures in old people – The development of a multidisciplinary care pathway. June 2011. Orthopedie Actueel; Y3, issue2. A quarterly publication by Academic Pharmaceutical Productions bv.

Results

- During the first year after implementation the number of patients has nearly doubled.
- Every day at 8:00 AM an OR slot is allocated for a Fragility Fracture patient which resulted in a reduction of the fasting period and a significant increase of patients operated within the first 24 hours after admission.
- Based on the results the number of second surgeries and mortality within 30 days has reduced. Also the total LoS in the new care pathway has reduced by 38% from 13 days to 8 days.

Continuous Improvement

One of the goals was to reduce the total time spent in ER to a maximum of 90 minutes. Although this was somewhat reduced, there is still room for improvement. Apparently the complexity of the ER organisation made it difficult to achieve this reduction in time during the first 12 months after implementation. This is therefore still part of the continuous improvement cycle of the Fragility Fracture pathway.