EXCEEDING THE HIGHEST STANDARDS.

YOURS.

Hip Fracture Solutions
Putting the Patient at the Center of Value Based Healthcare

Johnson & Johnson Medical Device Companies provides products and services to help hospitals provide the best possible care for hip fracture patients, from the operating room to the post-operative care environment. We offer solutions to enable hospitals and healthcare providers to achieve their Triple Aim goals of enhancing patient experiences and improving outcomes, while reducing costs.

The Hip Fracture Patient

Hip fractures are a major public health problem in terms of patient morbidity, mortality and costs to health and social care. The incidence of hip fractures rises steeply with age, with higher rates of osteoporosis and falls in the elderly population. In 2010, the annual incidence of hip fractures in the European Union was estimated at around 615,000 fractures, and this number is expected to rise to around 815,000 by 2025.

Clinical and Economic Burden

Hip fractures result in pain, loss of mobility and high mortality rates. Nearly all patients are hospitalized, and most undergo surgical repair of unstable fractures using orthopedic implants. There is often a significant loss of function, in patients above 60 with fewer than 50% of patients having the same walking ability they had prior to the fracture. Comorbidity is an important contributory factor to hip fractures and is often a determinant of outcome. These patients often suffer from post-operative complications that result in revision surgery in around 6.3% of trochanteric fractures and 33% of femoral neck fractures. The cost of managing these elderly hip fractures in the EU was estimated to be nearly €19.2 billion in 2010.

Priorities of Hip Fracture Treatment

Hip fracture treatment guidelines highlight the importance of:
- Early surgical intervention
- Early management of comorbidities
- Prevention of delirium
- Early supported discharge
- Coordinated multidisciplinary approach

Our Patient Pathway Solution

CareAdvantage is our approach to partnering with hospitals and healthcare providers in order to achieve the Triple Aim of enhancing patient experiences and improving outcomes, while reducing costs. It consists of programs and services that align our broad capabilities to your individual needs.

A component of our CareAdvantage offering is our Patient Pathway programs

Our Patient Pathway capabilities are built with the patient at the center to help ensure patients receive consistent, coordinated care, while supporting patients to take control of their own treatment and recovery.

Empowering patients through shared decision-making and technology to take control of their own treatment and recovery

Driving consistency among the multi-disciplinary team across the entire patient pathway episode

Providing continuity of care (in and out of the hospital setting) throughout the patient journey
**Care4Today® Hip Fracture Care Program**

An evidence-based care improvement program for the elderly fragility fracture patient population that facilitates interdisciplinary care coordination and clinical standardization to reduce variation and costs, improve outcomes and optimize care.\(^{11,12}\)

**Program Components**

**On-site opportunity assessment**
- Conducted by local J&J specialist
- Includes identification of and involvement of key stakeholders
- Includes interviews with multi-disciplinary stakeholders

**Implementation support & facilitation**
- Conducted by clinical subject matter experts
- Facilitates collaboration among providers to provide coordinated efficient care
- Utilizes multi-factorial interventions to manage various aspects of geriatric care
- May include visit to reference center to learn best practices

**Implementation Toolbox**
- Includes best practice materials to guide through implementation

**Diagnostic Health Check**
- Tracks data, visualizes progress and provides benchmarks

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**Case Study**

**Hip Fracture Care Program Implementation at the OLVG Hospital**

Through the on-site opportunity assessment at the OLVG Hospital in Amsterdam, it was discovered there were several variables in patient flow that influenced length of stay and the involvement of the orthogeriatrician. These included inefficiencies in A&E specialist review, OR scheduling, discharge and the pre-operation and post-operation ward process.

**Inefficiencies in the Patient Value Stream**

- Absence of flow in patient journey
- No uniform pathway design
- No pre-scheduled discharge date
- Overcrowded A&E and long waiting hours due to over processing and shared resources
- No scheduled OR time slot
- Understaffing for the orthogeriatrician
- Late involvement of transfer nurses
- Insufficient multidisciplinary meetings (took place only once a week)

**Outcomes from Hip Fracture Care Program Implementation**

- Length of stay reduced from 9 to 7 days\(^{13}\)
- Significant reduction in costs for the hospital of €252,000/year\(^{13}\)
- Orthogeriatrician support for elderly patients increased from 44% to 92%\(^{13}\)
Our Product Solutions

**TNF-ADVANCED™ Proximal Femoral Nailing System with TRAUMACEM™ V+ Augmentation System**

The TNF System is designed to advance the treatment of hip fractures by providing surgical options to enhance stability in poor bone, improved anatomical fit† and increased implant strength.‡ It is designed to reduce the risk of cut-out,§ distal cortical impingement∥ and nail breakage,∥ which are common post-operative complications.¶,§,∥ Several clinical studies have published reporting favorable outcomes in cut-out resistance.¶,§,∥

**4.5mm LCP™ Hook Plate with 3.5mm Locking Attachment Plate (LAP)**

Periprosthetic fractures

The 4.5mm LCP Hook Plate includes two proximal hooks to engage the superior tip of the greater trochanter. The 3.5mm Locking Attachment Plate is a less invasive alternative to cerclage cables and bypasses the prosthetic stem with an angular stable solution.¶,∥ LAP provides a stiffer, stronger construct than an orthopedic cable.¶,∥

**Femoral Neck System (FNS)**

Femoral Neck Fractures - Repair

The FNS System is a dedicated solution for femoral neck fractures, designed for improved angular stability¶ and rotational stability∥ with the intent to reduce reoperations related to fixation complications. It is also designed to reduce the risk of lateral implant protrusion that can contribute to post-operative thigh pain.¶,∥ Additionally, FNS has a reduced incision size compared to a sliding hip screw which may minimize the risk of infection.¶,∥

**CORAIL® Hip System**

Femoral Neck Fractures - Replace

The CORAIL® Hip System has over 30 years of clinical history and a 96.3% stem survivorship rate.¶ It can be combined with a variety of cup options, including the PINNACLE® Acetabular Cup System, for a complete total arthroplasty solution. In addition, when combined with the Bipolar and Unipolar head options for hemiarthroplasty, the construct can be a cost-effective and efficient approach to treat femoral neck fractures and avascular necrosis.

*Data is for augmentation used with the Proximal Femoral Nailing Antirotation System.

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References

30. Internal Case Study: CareAdvantage Partnership leads to Co-creation of Care4Today® Orthopedic Program at Guy’s and St. Thomas’ Hospital (GHT). Data on file at Hospital. May 2017.
31. Internal Case Study: CareAdvantage Supply Chain Capabilities drive efficiencies at Sant’Andrea Hospital Verona. Data on file at Hospital. May 2017.

* Benchtop testing may not be indicative of clinical performance.
Hip Fractures Solution Summary

The rise of hip fractures is a major public health problem in terms of morbidity, mortality and costs to health and social care. Johnson & Johnson Medical Device Companies provides products and services to address the needs of hip fracture patients.

Our patient pathway solution, the Care4Today® Hip Fracture Care Program, is an evidence based care improvement program aimed to reduce variation and costs, improve outcomes and optimize care. In a case study with the Hip Fracture Care Program at the OLVG Hospital in Amsterdam, length of stay was reduced by 2 days, orthogeriatrician support was increased 48% and the hospital saved €252,000/year in costs. In addition, our hip fracture implants are designed to reduce the risk of complications associated with hip fractures and improve patient outcomes.

Our solutions help hospitals and healthcare providers to achieve their Triple Aim goals of enhancing patient experiences and improving outcomes, while reducing costs.

Additional CareAdvantage Solutions

In addition to hip fracture care, other services are available to reduce costs and improve efficiency in your hospital.

Care4Today® Hip & Knee Program
- Procedural volume of Hip and Knee product portfolio increased by approx. 23%
- Large-volume orthopaedic trust with approx. 1,000 patients per year

Customer Supply Chain: Resolution
- Time taken to manage supplies for Medical Staff reduced by 73%
- Local hospital with 270 beds; 65 surgeries per week

Customer Supply Chain: eSIMS
- Saved 30 mins per day (based on 30 line items) for operating room staff
- Pilot data collection taken at three different European sites

This publication is not intended for distribution in the USA.

Results from case studies are not predictive of results in other cases. Results in other cases may vary.