

Innovation Brief

Medical Technology Innovation Dynamic Purchasing System - Quadsense, supplied by Eventum

Summary

Disruptive innovation

This briefing introduces a disruptive innovation newly available via NHS Supply Chain: The Quadsense system. Reviewed by clinical specialists and supported by key stakeholders, this device offers a novel approach to address the challenge of balancing the patellofemoral joint during total knee replacement (TKR).

Introduction

This document is intended to inform clinical stakeholders and procurement teams about innovative products that have undergone a clinical review and are now accessible through NHS Supply Chain.

Products featured in this brief may be classified as:

- Disruptive innovations
 - A disruptive innovation is novel.
 - It should offer improvements compared to the existing provision of care.
 - The proposed format should not exist elsewhere (either within or beyond the health and care sector).

Note: While robust evidence or validated savings may not yet be available, early data and clinical insights support the potential for patient and system-level improvements.

Departments / stakeholders for engagement

- NHS procurement teams
- Orthopaedic surgeons

Opportunity

- Increase patient satisfaction and quality of life post-surgery.
- Reduction of revisions, further treatment and further investigations.



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Product overview

- Quadsense is an innovative technology that provides surgeons with real time information on the patellofemoral joint during surgery. It does this by measuring the force through the patellofemoral joint at the start of surgery and again with the trial implants and provides the surgeon with options to rebalance the force.
- This innovation allows the surgeon to optimise patella implant positioning to balance the joint and reduce the chance of pain or decreased function for the patient.

Clinical relevance

- Quadsense addresses a critical issue in orthopaedics: approximately 20% of patients are dissatisfied with their functional outcomes following total knee replacement surgery (Nam Nunly et al., Bone and Joint Journal, 2014).
- A reduced risk of dissatisfaction from the outcome of the knee procedure.
- Increases Quality of Life: (PROMS)

Additional benefits

- Reduces need for further treatment: Quadsense could streamline the treatment process, effectively addressing the core health issue at an earlier stage - medication costs.
- Avoids a test procedure, by providing better outcomes. Quadsense could eliminate the need for further hospital visits or treatments associated with patient dissatisfaction of function. (X-ray, MRI, aspirations and arthroscopies, Revision 11% if revisions are performed due to pain).
- Operational efficiency - leads to fewer appointments: efficient and effective treatment means fewer follow-up appointments or check-ups, saving time for both patients and healthcare providers, pain team, physiotherapy, outpatients departments.

Cautions

- Patella needs to be resurfaced during procedure.

Supply details

Route - eDirect Supplier - Eventum Unit of Issue - Box of 10

Complete requirements form at <https://www.supplychain.nhs.uk/dps>

Supporting evidence / notes

- <https://eor.bioscientifica.com/view/journals/eor/8/5/EOR-23-0036.xml>
The third compartment of the knee: an update from diagnosis to treatment in EFFORT Open Reviews Volume 8, Issue 5 (2023).
- NICE Guidance - <https://www.nice.org.uk/guidance/NG157>
Joint replacement (primary): hip, knee and shoulder.

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