

Outcome based procurement of knee implants at the Hospital of Vejle

Category Management based procurement of strategic goods and services in the Region of Southern Denmark
Primary aim: Long-term / strategic collaboration focusing on output, development, risk sharing, cost reduction and / or TCO

Key procurement elements

- Category Management
- Knee implants are strategic goods
- Same or better patient outcomes
- Dialog with market and consultation
- Open tender with 3 offers and 2 winners
- Risk sharing around patient outcomes
- 3 clinical patient outcomes & 2 patient reported outcomes
- Collaborative relationship & development
- Clinical management support
- Business models and risk sharing
- Start market dialogue well in advance

Category Management

	Volume goods and services	Strategic goods and services
High	<p>Goods and services where the buyer has the most leverage at contract level</p> <p>Buyer has few alternatives (high dependence on supplier)</p> <p>Supplier has high market power and can be a price setter</p> <p>Supplier delivery risks (quality, quantity, or lead times)</p> <p>Supplier procurement complexity</p> <p>High market power (high access barrier)</p> <p>Low-medium transaction and/or switching costs</p>	<p>Highly strategic and/or essential goods and services</p> <p>Highly specialized (high quality of the supplier or service)</p> <p>High delivery risks (high quality of the supplier / high access barrier)</p> <p>High procurement complexity</p> <p>High switching costs and/or inertia</p>
Medium	<p>Routine goods and services</p> <p>Supplier delivery risks (quality, quantity, or lead times)</p> <p>Supplier procurement complexity</p> <p>Low-medium transaction and/or switching costs</p>	<p>Outcomes focused</p> <p>Supplier delivery risks (quality, quantity, or lead times)</p> <p>Supplier procurement complexity</p> <p>High switching costs and/or inertia</p>
Low	<p>Routine/non-critical goods/services</p> <p>Supplier delivery risks (quality, quantity, or lead times)</p> <p>Supplier procurement complexity</p> <p>Low-medium transaction and/or switching costs</p>	<p>Bottleneck goods and services</p> <p>Supplier delivery risks (quality, quantity, or lead times)</p> <p>Supplier procurement complexity</p> <p>High switching costs and/or inertia</p>

Risk and complexity in the procurement, delivery and/or use of the product / service

Market dialogue & Tender



Individual dialogue meetings with the 6 suppliers adjusted and shaped the patient outputs, development, risk sharing and payment parameters in the outcome based tender.

A consultation of the draft tender documents with written responses from 5 suppliers further sharpened the risk sharing and payment parameters.

Open tender completed in early 2018 with offers from 3 suppliers.
Contracts awarded to 2 suppliers in March 2018.

Patient outcome parameters & data

- Clinical patient outcome**
- Average patient hospitalization time
 - Average patient re-admission rate 30 days after discharge
 - Average patient revision rate after 1st, 2nd & 5th postoperative year
- Patient reported outcome**
- The patient reported total outcome 1 year after surgery
 - The patient reported functional lift 1 year after surgery
- Data on clinical patient outcome**
- Official data reported to the Danish knee replacement register
- Data on patient experienced outcome**
- EQ-5D-5L Score Health-related quality of life (total outcome)
 - Oxford Knee Score (functional lift)

Fundamental conditions

- The fundamental conditions for the tender of knee implants were as follows:
- Orthopedic implants are categorized as strategic goods
 - Same or better patient outcomes at the Hospital of Vejle than the present patient outcomes
 - Within the current budgetary framework for knee replacement surgery at the Hospital of Vejle
 - Bonus for realized better patient outcome than today's and reverse for underperformance
 - Possibility of "new knee replacement surgery" if suppliers guarantee patient revision rates

Strategic & Value adding elements

- Risk sharing around the realized patient outcomes**
- Price increase up to 17% for performance over baseline
 - Price reduction up to 17% for performance below baseline
 - Remedy for performance below baseline and guaranteed patient revision rates
- Collaborative relationship and development**
- 8 year contract period (if cooperation works)
 - Collaboration on solutions to improve patient outcomes
 - Collaboration on streamlining surgery & patient care
 - Contract modification clauses & open book calculations

Baseline and preliminary results

Patient outcome parameters	Total knee arthroplasty		Unicompartmental knee arthroplasty	
	Baseline	Results	Baseline	Results
Clinical patient outcome				
Average patient hospitalization time (in hours)	51,6	26,9		
Average patient re-admission rate 30 days after discharge	5,0 %	5,0 %		
Average patient revision rate after 1 st postoperative year	1,7 %	1,7 %		
Average patient revision rate after 2 nd postoperative year	2,0 %	2,0 %		
Average patient revision rate after 5 th postoperative year	4,1 %	4,1 %		
Patient reported outcome				
Very satisfied reported total outcome 1 year after surgery	65 %	65 %		
Satisfied reported total outcome 1 year after surgery	85 %	85 %		
Very satisfied reported functional lift 1 year after surgery	65 %	65 %		
Satisfied reported total outcome 1 year after surgery	85 %	85 %		

Lessons learned from outcome based procurement

- Ownership and support from the clinical management is essential
- Healthcare professionals are not always comfortable with the increased transparency
- Suppliers' business models are not always compatible with risk sharing especially SMEs
- Start the dialogue with the market well in advance

Yearly patient base

	Number of patients
Total knee arthroplasty	425
Unicompartmental knee arthroplasty	200