

## **Hospital Procurement with Concentrated Sellers: A Case Study of Hip Prostheses**

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Procurement within the NHS is attracting increasing research and policy interest. However, most of the emphasis has been on the buyer (the NHS), with less attention paid to the behaviour of suppliers (often pharmaceutical companies). For medical devices very little is publicly documented about procurement and even less about the supplying industry.

This paper uses a case study of artificial hip prostheses to indirectly explore how procurement choices are made within the NHS. We recognise the roles of the various players (patient, surgeon and hospital procurement department) when purchases are made from a potentially highly oligopolistic supplying industry.

Using data from the National Joint Registry for England and Wales, we show that the supplying industry is indeed highly oligopolistic, with the potential for the exercise of market seller power. At the national level the NHS as a whole purchases from the equivalent of just four large sellers. However, typically individual hospitals are buying from only two, or in some instances one seller. Given this backdrop, we develop a theoretical framework explaining prosthesis choice, considering the roles and preferences of the patient, surgeon, hospital and supplier. This provides a set of hypotheses tested using an econometric model in which the diversity of prosthesis choice at the hospital level is explained by a vector of patient and hospital characteristics. This reveals little evidence that patient heterogeneity is a major determinant of diversity of procurement choices. More important are hospital size (which will be related to the number of surgeons), status of the hospital, recent NHS reforms and the potential role of the supplier.

These findings provide a basis for future survey analysis of surgeons and hospital procurement departments designed to discover more directly how decisions are made and how suppliers bargain with hospitals.