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Initial results promising for bundled payment model in Stockholm

In 2009, a bundled payment model was implemented for total hip and knee replacement on a health system level in Stockholm. In 2010, a joint study was set up in collaboration between the Stockholm County Council, Karolinska Institutet and the Institutet for Strategy and Competitiveness at Harvard Business School to study the effects of this model. The outcomes of this study will be submitted for publication during 2012, but we would like already now to share some of the preliminary findings on how the bundled payment changed the market dynamics and made providers start to compete on value.

Prior to 2009, THR and TKR were predominantly performed by acute care hospitals under global budgets and DRG-based reimbursement schemes. Payer follow-up was mainly focused on volume, waiting times and process measures. National quality registries showed that Stockholm providers delivered high quality care, but patients were suffering from long waiting times due to insufficient capacity.

To address the capacity limitations, to increase the multitude of providers, and to encourage providers to innovate and compete on value, the Stockholm County Council decided to implement a bundled payment system in 2009 called OrthoChoice.

Development of the bundle

In the development of the new bundle payment model, the main questions for the county were: what patients and interventions will be included? What will be the boundaries of the bundle/what services should be required? How should quality be secured and followed up? And, what should the price of the bundle be?

- Initially, only ASA1-2 patients and only primary operations were to be included. By restricting the bundle to a homogeneous patient group and primary procedures, it was expected that the variation in treatment cost and outcomes would be lower which would simplify reimbursement and comparison of provider outcomes. Another reason to include only "healthy" patients initially was to reduce the risk of the new model leading to serious negative health effects.
- The bundle would cover the full TKR/THR care cycle (although outpatient rehabilitation was not included initially). This was expected to empower and encourage the providers to find innovative solutions to improve value. A minimum level of services and products were however required to secure the standard of care. These were initially a pre-op visit, surgery, a prosthesis (with >92% 10-year survival rate in the Swedish quality registries), X-ray after surgery, inpatient rehabilitation and follow-up within three months of operation. Providers were also made responsible for long-term follow-up although this was not included in the bundle price.
- A provider warranty was introduced to secure the quality of care and further foster innovation. Providers were made responsible for most complications related to the intervention arising within the first two years postoperatively, extended to five years if the patient was treated with antibiotics for a deep infection during the initial two years. Providers were required to register patient data diligently in the county patient database and the national quality registries so that complications and outcomes could be monitored.

- The price was set to $8500 per procedure for the whole bundle. The level was reached by estimating provider costs through studying already existing county contracts and represented a substantial decrease in price compared to the DRG reimbursement. Given the homogeneity of the patient group, the county decided to initially keep things simple and not risk-adjust payments to reflect differences in patient morbidity. 3.2% of the reimbursement was withheld and paid out based on performance.

In 2009, OrthoChoice was introduced and THR/TKR for the selected patient group was removed from the global hospital budgets and reimbursed separately. Public and private providers underwent an accreditation process in which specific requirements, including minimum volumes per surgeon and year, data reporting to registries, operating theatre air quality etc. was secured. After accreditation, providers were allowed to treat as many patients as requested and required their services provided that all patients met the predetermined inclusion criteria. There were no volume limitations for the providers and no gatekeeper function. And patients, often supported by their primary care physician, were free to choose among the accredited providers.

Effects of the bundle

Our preliminary analysis shows that the introduction of the bundled payment model affected both the overall market dynamics and how providers organised their work.

- Three new provides entered the market and volumes shifted from large acute care hospitals to smaller specialist units. Production volume increased significantly during the first year, most likely in response to the previously unmet demand, but thereafter decreased again. Waiting times were completely removed for this patient group.
- Several of the providers responded to the new funding model and carried out changes to improve outcomes, reduce complications, reduce non-value adding activities and improve the patient experience. These included standardization of treatment processes, development of manuals and check-lists, specialisation and education of staff, investments in improved air quality at the OR, introduction of extra wound control visit to avoid infections, reduction of ward time and increased OR productivity. Providers that underwent change reported in interviews that these actions were taken in direct response to the financial implications of the bundled payment model.

Two studies on the effects of OrthoChoice have been performed and finalized by the county during 2010 and 2011:

- In 2010, the county surveyed the OrthoChoice patients' satisfaction with the care experience. It was concluded that these patients were exceptionally satisfied and that satisfaction levels were significantly higher for those providers that increased their market share after OrthoChoice was introduced.
- In 2011, an external audit initiated by the county in the form of a chart review of 454 patient records was performed. The auditors concluded that providers had followed guidelines, that only prostheses with the best 10-year survival rate were used and that they found no reason to believe that OrthoChoice will led to any negative effects in terms of short- nor long term complications.

The effects of OrthoChoice on costs and health outcomes will be analysed submitted for publication during 2012.

Next steps for Stockholm
The Stockholm County Council has already implemented a bundled payment for cataract surgery, and based on their positive experience, they are now proceeding also in other treatment areas. In parallel, the OrthoChoice model is continuously being revised. During 2012, the county expect to start publishing outcome data on provider level on their webpage to support informed patient and physician choice. Future development under discussion includes adjustment of provider reimbursement based on patients' morbidity.

Relevance for the US
Although the initial OrthoChoice bundle was by no means perfect in its original design, its introduction has yielded several desirable effects as providers started to compete on value. These included better coordination of care, increased provider productivity, faster cycle times and satisfied patients. There was also a shift in production from acute care hospitals to smaller specialist surgery centres enabling the hospitals to focus their resources on more complex care. Over the initial three years, the Stockholm County Council has been able to keep the price of USD 8 500 per procedure without making any price adjustments.

We believe these effects were only achieved because the bundle payment model was fully implemented and used as a basis for payment – providers reported in interviews that changes in work patterns were undertaken in direct response to the financial consequences put upon them by the payment model.

When introducing bundled payment models, we recommend to start with simple models for a few well-defined treatment areas, and to refine these models over time.

We would be pleased to share more of our experience with you on request and through our coming publications.

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