Are surgeons willing to drive uptake of 3D printed medical devices?

There is undiscovered need for 3D printed medical devices amongst surgeons community.

“...There is an undiscovered need for 3D printed medical devices, because a few of my colleagues are unaware of this. 3D printing companies need to be visible on surgeons, but the best thing would be to have somebody like me, who has the experience of implanting 3D devices, to lecture other surgeons. A new product is used under the existing DRG – surgeons may not foresee widespread use in these cases...

- Surgeon at a public hospital, Sweden

Success will depend on balance between consolidated workload (pre- and during surgery) and safety aspects (wear and tear)

- There are many opportunities for 3D printing of specific medical devices (anything that benefits from customization)

Payer populations for which surgeons would recommend reimbursement of 3D printed custom-made medical devices.

1. Congenital or developmental disorders
2. Tumour area
3. Hip Dysplasia

No payer scrutiny

A new product is used under the existing DRG

- No payer scrutiny
- The tariff of the existing DRG is uplifted to include the additional cost of new product
- The patient’s plan deny or allow payment out of pocket

PAYER SCENARIO 1

PAYER SCENARIO 2

PAYER SCENARIO 3

Three potential scenarios for reimbursement of a new 3D printed medical device within the DRG system.

‘...The key point is to find out cost effectiveness for reimbursement of 3D printed medical devices versus standard devices, e.g., impact on direct medical cost and length of surgery...

3D printing is not on payers’ radar yet, as it is mostly reimbursed via DRG.

Many higher level (national/regional) payers/reimbursement authorities do know if they are dealing with a 3D printed device (vs. device produced via regular manufacturing techniques) and because of the Diagnostics Related Groups (DRG) (i.e., bundled) method of payment.

‘...The first question we, payers, ask is: Is it medically necessary? The second question is: ‘Do we have a contract with you? Does patient’s plan deny or allow payment out of network?’ That being the case – whether you used the implant from the same manufacturer, in the US or whether you do a homebrew 3D implant – we wouldn’t know...

- Chief Medical Director at a major ACS, USA

“...When we get the bill for 3D printed devices, we don’t know the cost. We don’t know which cost is in the device component or the care component...

- Payer at a major address fund, Germany

This is better, hence better value for money vs. currently available options

There is no change to the existing DRG

- No payer scrutiny
- No significant impact on budget
- Assumption that 3D printed, custom-made device is a better, better value for money vs. currently available options
- Time constraints—patients have “other things to worry about”

PAYER SCENARIO 1

PAYER SCENARIO 2

PAYER SCENARIO 3

Having a solid understanding on the reimbursement rules of 3D printed devices will be key for reimbursement, optimal value propositions, and preparing the substantiating evidence.

3D printed medical devices with a higher price premium vs. conventional devices, which will face a higher degree of scrutiny?

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Abbreviations

DRG – Diagnostics Related Groups
PMD – Patient Medical Device
REASONS:
- High level of payer scrutiny (e.g., HTA)
- Evaluated as an “innovative device” with request for additional evidence (e.g.,阿尔伯特修道院, etc.)

REFERENCES


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