Comparative Cost Effectiveness Of DCBs vs. DESs Favor DESs

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Cost Effectiveness
• Cost effective looking at cost of interventions with the improvement in health
  – Method for assessing the gains in health relative to the costs of different health interventions.
  – Usually uses disability adjusted life years (DALY) but may use other metrics (QALY, year of life gained, etc)
• Not the Same as cost benefit analysis
• Has different implications for different stakeholders

Medical Practice vs. Payer
• Medical Center
  – What is our cost and how much are we being reimbursed
  – Subsequent care and reinterventions
  – Additional payments
• Payer
  – What are we reimbursing and what are the results
    • Clinical
    • Financial

Background Information
Clinical
• Percutaneous transluminal balloon angioplasty (PTA) with high restenosis rates
• Percutaneous stenting with improved results but restenosis and reinterventions remain a concern
• Drug coated technology has shown to have improved primary patency over balloon angioplasty
  – Drug coated balloons (DCB)
  – Drug eluting stents (DES)

Background Financial Information
SFA Angioplasty DCB
• Superficial Femoral Artery Angioplasty
  – CPT 37224
  – APC: 5192
    • Products $1,429.58 ($406)
  – C2623
    • DCB average cost is $1,500-$1,700
    • Pass through payment expired in 2018
• Medicare Reimbursement Guidelines:
  – National Outpatient Reimbursement: $4,678.53 + $466.91 (↓ 7.99%)
  – Geometric Mean Cost: $7,451
  – Office Based Lab Reimbursement: $3,790.40 ($3,629.14)
Background Financial Information
SFA Stent DES

• Superficial Femoral Artery Angioplasty
  – CPT 37226
  – APC: 5193
    • $4,236.62 supply cost ($3,608)
    • Average cost for DES is approximately $1,500
    • Pass through payment for inpatient Stent only [expired]

• Medicare Reimbursement Guidelines:
  – National Outpatient Reimbursement: $9,669.04 + $548.99 (↓ 8.01%)
  – Office Based Lab Reimbursement: $9,099.62 ($10,795.15)

Net Financial Impact Based on Clinical Outcomes

• Use CMS Outpatient Reimbursement Figures as applied to:
  – Primary patency and TLR
  – Rates based on Meta analysis and Published Data*

• Reintervention with DCB and/or DES

• Failed initial treatment and Bailout stenting
  – No additional reimbursement for DCB and Stenting SFA

Net Financial Impact (Payer)

DCB N=100
• 100 x $5,145= $514,544
  – Pass Through: $170,200
  – Bail out stenting: 18.5%
    • 18.5 x $10,217=$189,014
    • CD-TLR Reintervention rate 12%
      Reintervention (Stent): $122,604
  – Total cost at 1 year is $996,362
  – CMS Outpatient Expenditure per patent limb(74%): $13,464

DES N=100
• 100 x $10,217= 1,021,700
  – No Pass through payment
  – No Bailout stenting
  – Reintervention rate 8.4%
    • 8.4 x $5,145= $43,221
  – Total cost at 1 year is $1,064,921
  – CMS Outpatient Expenditure per patent limb (84%): $12,677

Net Financial Impact (Medical Center Cost)

DCB N=100
• 100 x $7,451= $745,100
  – Additional cost: $150,000
  – Bail out stenting: 18.5%
    • 18.5 x ($11,713)= $216,690
    • CD-TLR Reintervention rate 12%
      Reintervention (Stent): $140,556
  – Total cost at 1 year is $1,252,346
  – Cost per patent limb(74%): $16,923

DES N=100
• 100 x $11,713= 1,171,300
  – Cost within CMS supply range
  – No bail out stenting
  – Reintervention rate 8.4%
    • 8.4 x $7,451=$62,588
  – Total cost at 1 year is $1,233,888
  – Cost per patent limb (84%): $14,689

Net Financial Impact of DES

• Fewer reinterventions and improved primary patency
• Studies have shown a systemic net impact with integration of DES
  – European modeling shows increased DES cost recouped
    • Gradual increase to 35% DES yielded 6.4% savings despite 19% increased cost
  – State modeling shows increased DES cost recouped by year 2
    • Gradual increase to 48% DES yielded $1.7 million in savings

Conclusion

• DES better primary patency at 1 year with decreased clinically driven TLR.
  – Increased cost than conventional PTA and BMS
• Decreased reintervention rate leads to offset of increased cost
• Bailout stenting and clinically driven TLR remain significant for DCB
• Loss of Pass through impairs Outpatient reimbursement
  – No pass through for office based labs