IHA CHA Medical Device Conference | May 21, 2008

James C. Robinson, PhD

Kaiser Permanente Professor of Health Economics

University of California, Berkeley

Chair, Medical Technology Project, IHA

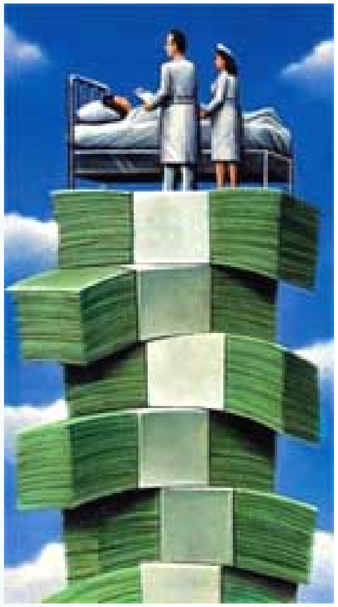
Pursuing Value for Medical Devices: Hospitals and Manufacturers

OVERVIEW

- Challenges to Hospitals and Device Firms
- Imperatives: Hospitals
- Imperatives: Device Firms
- Opportunities for Collaboration

Challenges: Cost

- Cost pressures are growing for all
  - **Federal budget deficit**
  - **Medicare and Medicaid:** CBO, GAO
  - **Employers:** eroding commitment to coverage (especially for retirees and dependents)
  - **Health plans:** affordability is the imperative
  - **Individuals:** rising copayments and deductibles



- The **BLAME GAME** is in full swing.

Challenges: Quality

- **Are we getting our money's worth?**
  - Utilization: unjustified geographic variations
  - Appropriateness: over-use and under-use
  - Safety risks and product recalls
  - Poor coordination along continuum of care
    - Hospital, ASC, clinic, rehab, home care

- **Demands for comparative effectiveness studies**
  - Registries, observational studies
  - Coverage with evidence development
  - Phase IV post-market studies

Challenges: Demonization

- **The medical device sector and associated procedures and providers are in the limelight**
  - Physician “bribes” from manufacturers
  - Price non-transparency for hospitals, manufacturers
  - Rising costs: insured, uninsured, under-insured
    - Medicine the leading cause of bankruptcy
    - Sicko: the worst health care in the world?
- **Litigation and regulation follow demonization as the day follows the night**

Challenges: The Zero Sum Game?

- Do hospitals and device firms have opposing interests? Is conflict inevitable?
    - Unit prices and price "transparency"
    - Adoption of new "off-contract" devices
    - Physician loyalty: hospital or device firm?
- Or do they (also) have common interests?
    - Are there meaningful opportunities for collaboration?

Opportunities: Common Interests

- **Prices and revenues**
  - From products to services
  - Episode-of-care pricing
- **Cost management**
  - Integrated data systems
  - Service line organization
- **Physician relationships**

Hospitals: Challenges and Opportunities

- **Device-intensive procedures are core**
  - Volume of procedures, revenue per procedure
  - Margins, especially from private insurers
  - Visibility: high tech and hopefully high touch
    - Center of excellence branding

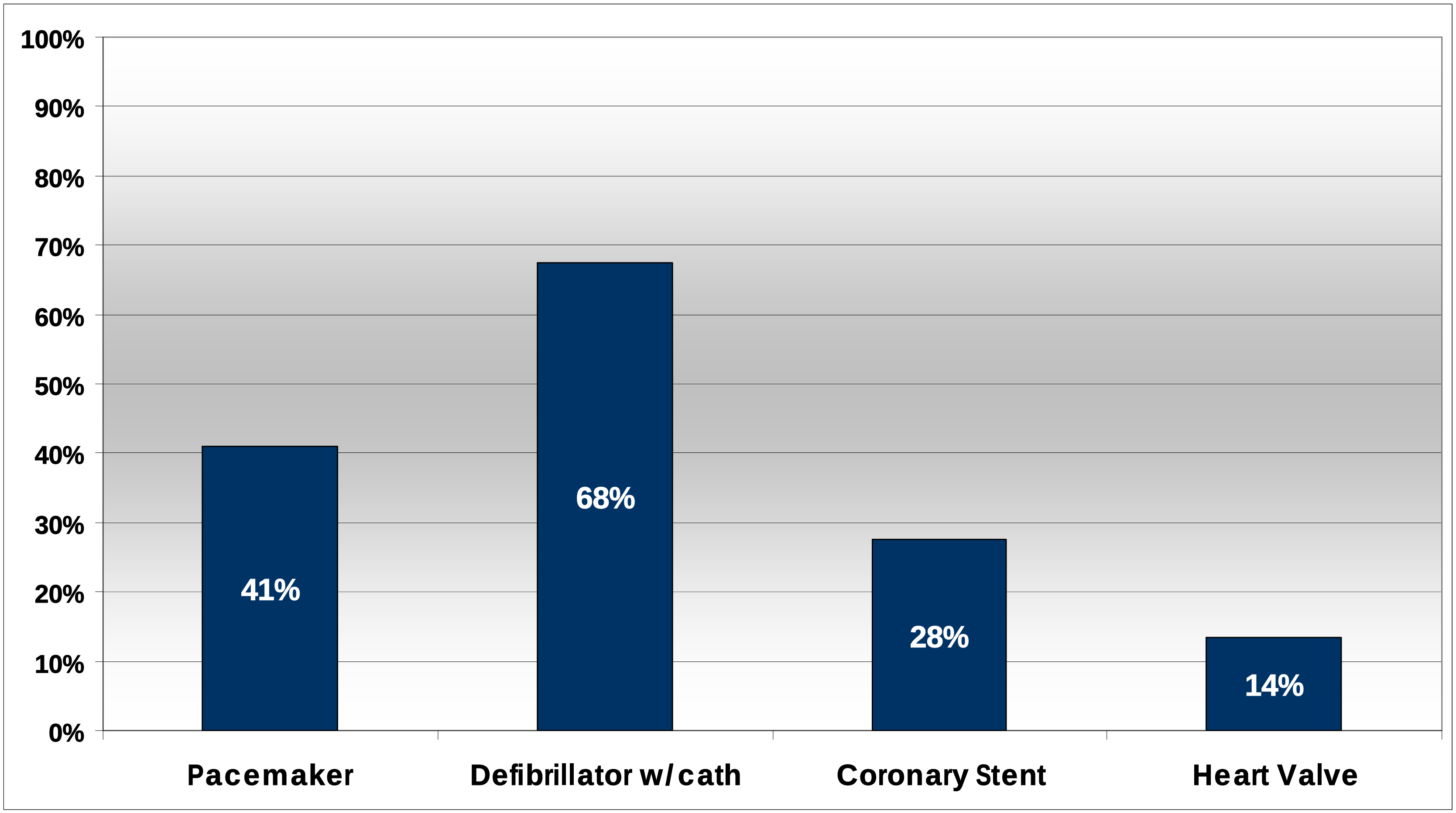
Designated a
Joint Replacement
Center for Excellence

- **Essential that hospitals overcome challenges**
  - Cost management
  - Revenues and pricing
  - Physician relationships

Hospitals: Cost Management in the Short Term

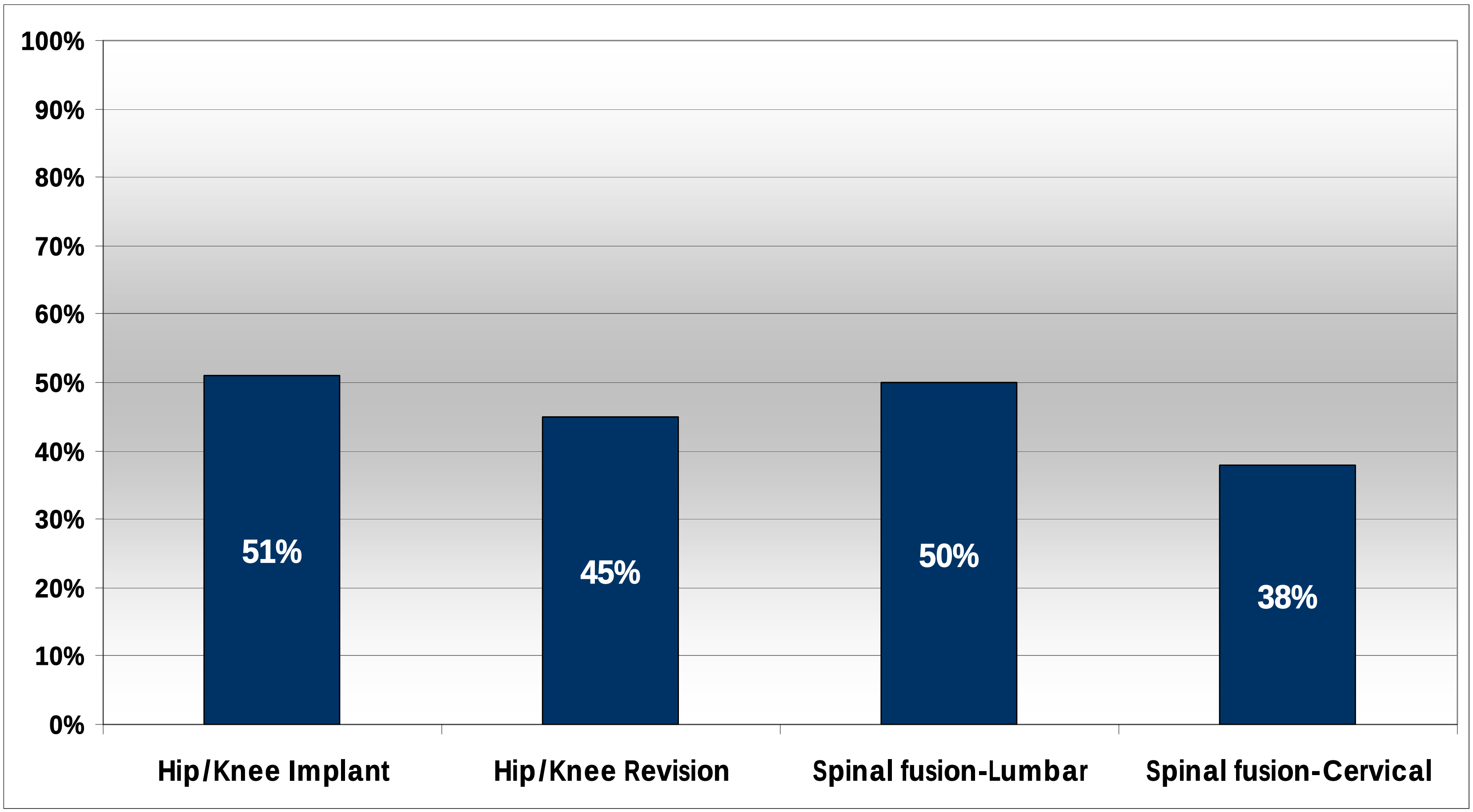
- **In the short term, costs are managed by reducing input prices, including devices**
  - Volume discounts; limits on off-contract use
- **It is imperative that hospitals manage device costs, as these are a high percent of revenues for high-margin procedures**
- **Supply chain principles:** obtain the best price for inputs and use only those inputs that are necessary (match device level to patient need)

Average device cost as a % of DRG revenue for cardiac procedures



Source: Orthopedic Network News, July 2006. Mendenhall Associates.

Average device cost as a % of DRG revenue for orthopedic procedures



Source: Orthopedic Network News, July 2006. Mendenhall Associates.

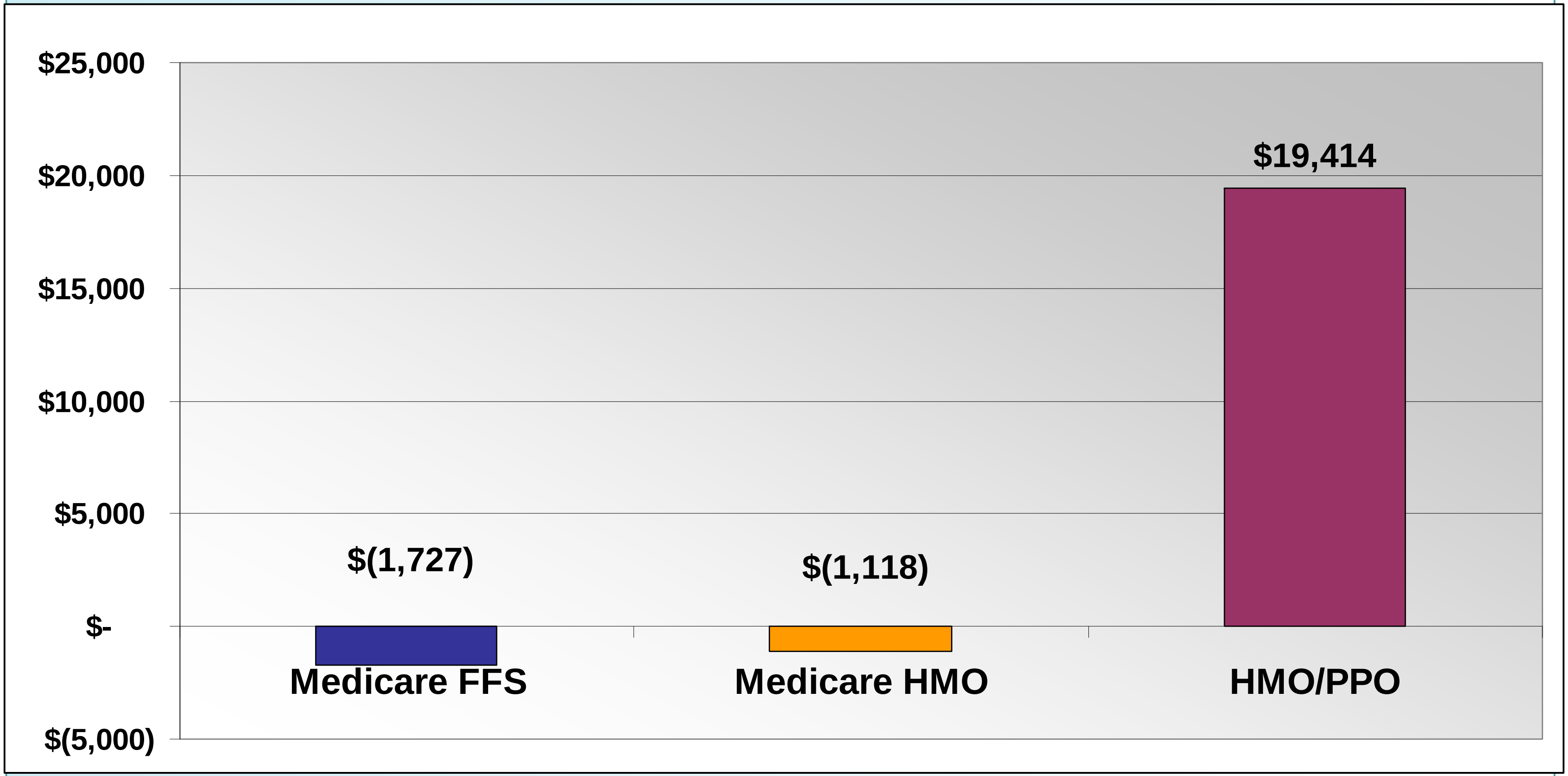
Hospitals: Cost Management in the Long Term

- **In the long term, costs are managed by restructuring along services lines in order to analyze and improve processes of care**
  - Data systems that capture full performance
    - Complications, LOS, outcome, cost, price
    - Preadmission tests, inpatient, post-discharge
  - Physician collaboration is essential
  - Device firms have much experience in TQM
- **Toyota, Virginia-Mason, Intermountain, Kaiser**

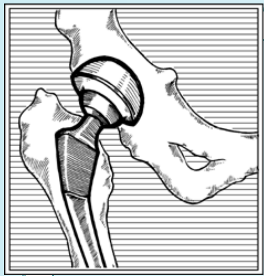
Hospitals: Revenues and Margins

- **Device-intensive procedures are growing in volume and usually are profitable**
- **Service lines as marketing mechanisms**
  - Better performance, better perception
- **Contracting strategies with private health plans**
  - Carve-outs in commercial contracts have been successful in offsetting the effects of Medicare DRGs on margins

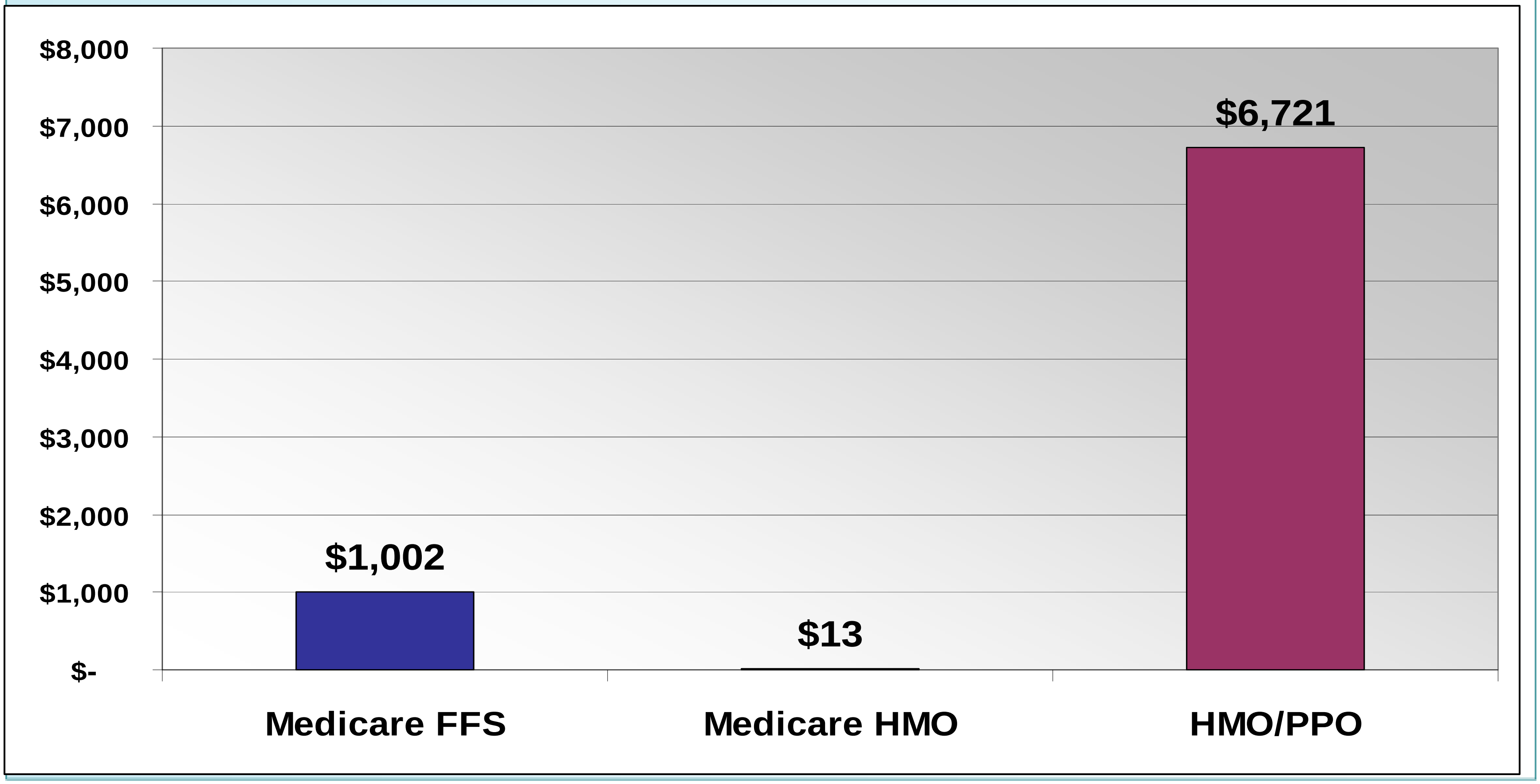
Average contribution margin for lumbar fusion procedures by payer (DRG 498)



Source: IHA Value-based Assessment and Purchasing Device Project, Jan 2008.

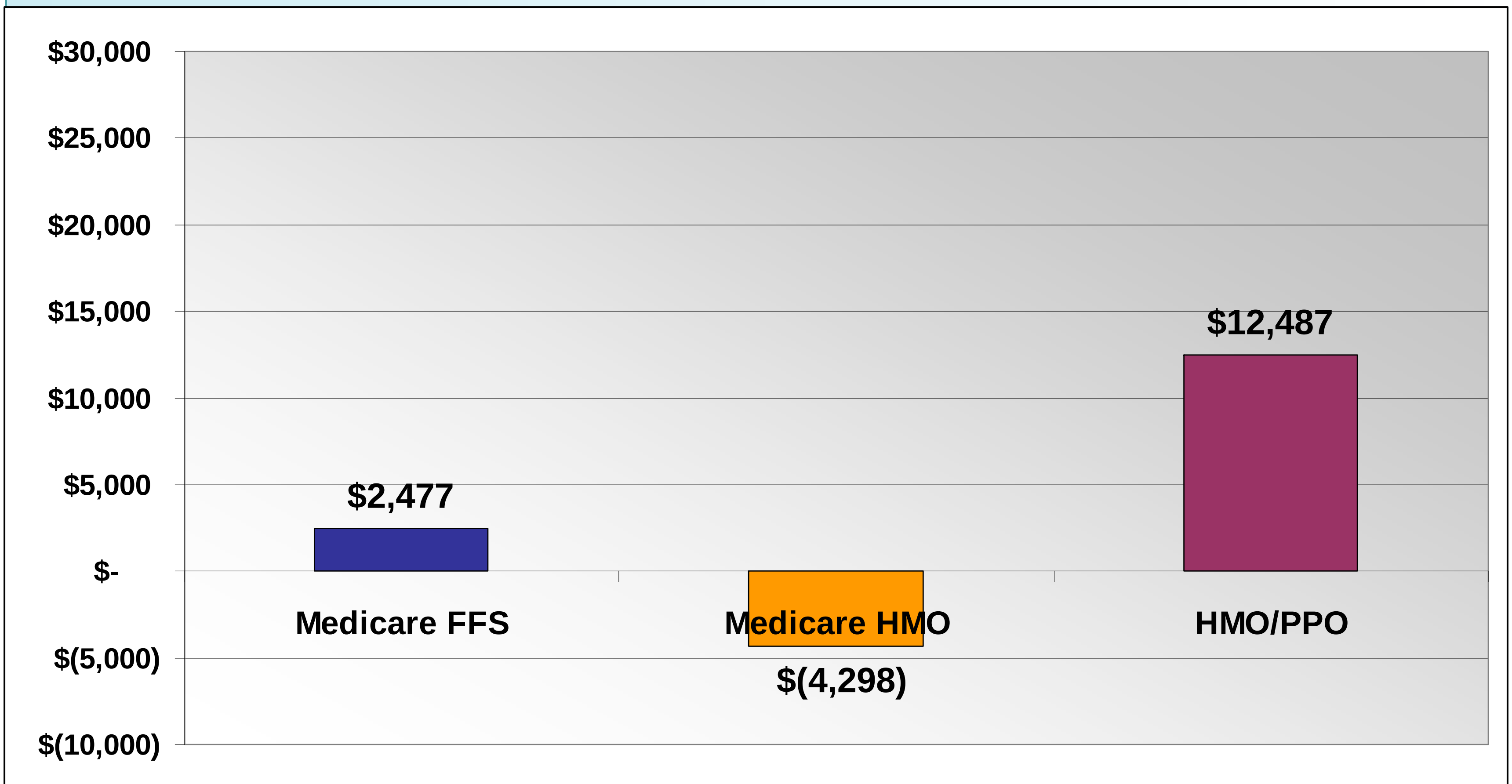


Average contribution margin for total hip replacement procedures by payer (DRG 544)



Source: IHA Value-based Assessment and Purchasing Device Project, Jan 2008.

Average contribution margin for cardiac defibrillator implant procedures by payer (DRG 515)



Source: IHA Value-based Assessment and Purchasing Device Project, Jan 2008.

Hospitals: Physician Relationships

- **Top strategic imperative**
  - **Supply chain management**
  - **Technology assessment and adoption**
  - **Cooperation rather than competition:**
    - Ambulatory surgery and diagnostic clinics
    - Short-stay orthopedic and cardiac hospitals
  - **Cooperation and leadership with service lines**

Response from CA hospitals:

Which best practice strategies are being used today?

Current Hospital Medical Device Strategy	% of CA Hospitals Using Strategy [N=83]
Technology assessment committee	55%
Pre-approval needed before vendor receives payment	36%
Share device prices with MDs	84%
Invest savings (from lower costs) in OR	36%
Disclose MD conflicts of interest	47%
Limit MD conflicts of interest	20%

Source: CHA-IHA Medical Device Strategy Survey, January 2008.

Response from CA hospitals:

Current purchasing strategies for orthopedic, cardiac and spine implants

	Total Joint Replacement	Cardiac	Spine
Limit # of Vendors	69%	74%	65%
Set a price-cap on devices	45%	45%	43%
Kit pricing	44%	36%	33%
Premium use rebates	44%	5%	8%

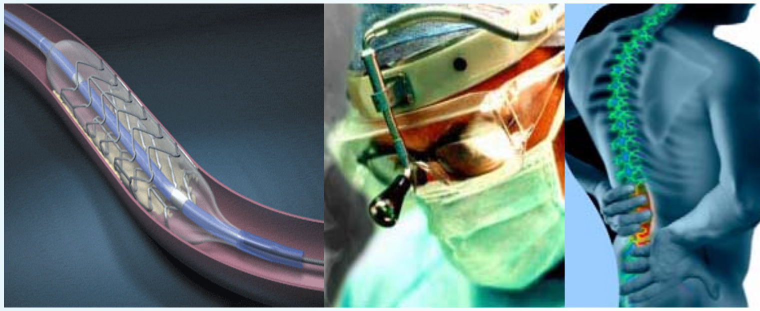
Source: CHA-IHA Medical Device Strategy Survey, January 2008.

Device Firms: Challenges and Opportunities

- **Hospitals are core to device firms**
- **Device firms have viewed surgeons (and patients) as their customers, not hospitals (or insurers)**
- **But hospitals, not physicians, actually purchase devices**
  - High-revenue devices still largely are used inpatient
  - Hospital share of outpatient sector is growing
- **Quality problems at the hospital feed patient fears and adversity to surgery; these fears are major reason for under-utilization of appropriate procedures and devices**

Device Firms: Core Needs

- Pipeline of new products
- Adoption of new products
  - Overcoming under-utilization of effective and cost-effective devices
- Reimbursement and revenues
- All these require good relationships with physicians and hospitals



Device Firms: New Physician Relationships

- **Firms have legitimate needs for physician cooperation in R&D, training, education**
  - The current climate is increasingly difficult
    - Payments to physicians seen as "bribes"
  - Orthopedics DOJ settlement
  - Hospitals installing COI disclosure policies
  - Continual adverse publicity
- **Need physician strategy that does not pit the device firm against the hospital**

Device Firms: New Revenue Model

- **Currently, firms are paid for products (devices) but not for related services**
  - Free is not cheap enough (physician honoraria)
  - Focuses attention on unit price, not total cost
  - Continual pressure to up-sell “off-contract”
- **But what really matters to payers is total cost**
- **Hardware firms in other sectors couple services with products, enhancing revenues**
  - Sell “solutions” not products
  - This puts buyer and seller on the same side

Collaboration: Better Data Systems

- The hospital and medical device sectors are **data rich** but **information poor**
- **Need data on total costs and total outcomes**
  - Not just unit prices and silo-specific outcomes
  - The entire continuum of care
  - All contributors and participants

- **Need benchmarks and best practices for improvement**
- **Need transparency among partners**

Collaboration: Aligned Payment Incentives

- **Episode pricing pays a single bundled fee for the entire episode and all its components**
  - Preadmission testing, procedure, rehab
  - Facility, surgeon, device, other inputs
  - Version 2.0 includes P4P bonus for total quality
- **Episode pricing is well adapted to device-intensive procedures (clear beginning & end to episode)**
- **This gives incentive for end-to-end performance analysis and continuous improvement**
- **Hospital, surgeon, and device firm must collaborate or all suffer (total gain-sharing)**

Collaboration: Service Line Organization

- **Health care is both fragmented and hypertrophic**
- **Hospitals need to focus data and incentives for each major clinical and business line**
  - Accounting, quality reporting, managerial responsibility, consumer branding
  - Service lines are particularly well suited for device-intensive acute procedures
  - Physicians need to lead service lines
- **Most services lines today are still rudimentary**
- **Device firms have expertise in product lines**

Conclusion

- **When used appropriately, medical devices offer breathtaking value to patients and to society**
- **This is an arena for either conflict or cooperation between hospitals and medical device firms**
    - Both seek better relationships with physicians
    - Both seek improved performance for patients
- **Having tried the alternatives, perhaps there are grounds for collaboration and gain-sharing**