



Corvinus Health Policy and Health Economics Conference Series 2019/1

Department of Health Economics, Corvinus University of Budapest

in cooperation with:
Health and Health Care Economics Section of the Hungarian
Economic Association

Challenges and Strategies for the Medical Device Industry in the United States: Potential Implications for MedTech in the European Union

James C. ROBINSON

University of California, Berkeley Center for Health Technology
Division of Health Policy and Management

March 26, 2019

INVITATION

Date
March 26, 2019

Venue
Corvinus University of Budapest
Building: Sóház
Room: EA1

[Map](#)





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**Challenges and Strategies for the Medical
Device Industry in the United States:
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**Building
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**Room
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**Time
13:40 – 15:30**

Moderator:

Miklós Weszli, PhD, assistant professor Department of Health Economics, Faculty of Economics, Corvinus University of Budapest

Program

- 13:40 – 13:45** **Prof. Márta Péntek**, Department of Health Economics, Corvinus University of Budapest
- Welcome speech
- 13:45 – 15:15** **Prof. James C. Robinson**, Berkeley Center for Health Technology, Division of Health policy and Management, United States
- Challenges and Strategies for the Medical Device Industry in the United States: Potential Implications for MedTech in the European Union**
- 15:15 – 15:25** Questions and Answers
- 15:25 – 15:30** **Zsombor Zrubka, MD, MBA**, Department of Health Economics, Corvinus University of Budapest
- Closing remarks

Challenges and Strategies for the Medical Device Industry in the United States: Potential Implications for MedTech in the European Union

Traditional medtech business model in US: The medical arms race

- Incremental innovation approved via 510K. More rigorous than CE Mark but less than for drugs
- Price increases accompanying incremental innovation
- Hospitals as purchasers
 - Mixed incentives: DRG favors price consciousness, private payer carve out

Erosion of traditional medtech business model

- Irony of success: innovation brings copying; profits stimulate innovation race. These create potential for competition among similar devices
- New payment models create incentive for translating potential into actual device price competition
 - DRG to EOC to ACO payment methods for device-intensive procedures
 - Experiences with bundled payment for joint replacement
- New provider consolidation and alignment creates capabilities for translating potential into actual device price competition.
 - Hospital horizontal consolidation
 - Vertical alignment with MDs: employment
 - Gainsharing is legitimized
- Insurer efforts to shift care to lower-price sites of care
 - Inpatient: Narrow networks, COE
 - Outpatient: ASC targeted networks
 - Reference pricing

Similarities and differences with EU market for devices

- Easier access to market with CE Mark
 - This leads to more competitors and potential for competition (eg stents, TAVR)
- Providers are under more budgetary pressure to minimize supply costs
- Physicians less willing and able to prescribe high priced devices for their patients without regard to hospital budgetary realities
 - This more readily translates into willingness of device manufacturers to offer low prices
- Health Affairs (Oct 2018) study: CVD medtech prices are higher in US than EU. All are drifting downwards, however, with modest convergence between US and major EU nations.
- Erosion of prices in the US is particularly worrisome for MedTech, as major firms have obtained most of their margins from the US market

Emerging opportunities for medtech in the US

Rise of consumerism

- Cost sharing, esp. HDHP
- Consumer culture of engagement: DTC advertising, product design on ease of use (contrast with focus on MD as decision-maker); transparency; decision support
- Mixed implications for structure of demand: compared to physicians, consumers are more price conscious, but also more responsive to design, implications for functional ability (importance of HQoL and PRO as metrics of value)

Digital revolution

MHealth: most patients have devices and apps;

Entry of major tech firms and platforms into healthcare and devices;

Connectivity and IoMT.

Digital revolution opens opportunities for:

- Greater patient engagement, self monitoring, self care
- More data enabling better MD decisions: continuous monitoring, therapy adjustment,
- Better regulatory oversight: RWE, recalls

Implications for medtech business model:

- Increased ‘stickiness’ with patients, as switching devices means switching/complicating data flows, analytics, etc., reducing the potential for price competition and the risk of price erosion (at least in the US)
- Manufacturers receive more and better real-time data on who is using their devices, how they are functioning, any problems they are creating, any need for recall/replacement or other adjustments. This allows firms potentially to go ‘beyond the product’ to offer services and solutions.
- In turn, this requires device firms to develop deeper relations with provider organizations, who may lack the capabilities or desire for closer ongoing relationships.
- Evolution of relationships for device firms: from (1) personal relations with surgeons and arms length, non-exclusive adversarial relations with hospitals to (2) business-to-business account management relationships with hospital supply chain management leading to price competition and eroding margins to (3) business-to-consumer/patient relationships, within framework of account relationship with provider organization, with the potential for greater value-added and the prices and margins that derive from it.

Conclusion

In the US, medtech is emerging from its golden era (‘field of dreams’) of rising prices, volumes, revenues for incremental innovations/improvements. Major breakthroughs will continue to receive good prices and sales, but incrementally improved devices face falling, not rising, prices. In this respect, the US market may be becoming more similar to that in the EU.

Device firms are seeking to escape from this ‘commodification’ of their business model, taking advantage of the revolutions of consumerism and digital technology. They seek to go beyond single products to suites of products, data generation/connectivity, analytics/treatment adjustment. These increase their clinical value and reduce their exposure to substitution and price erosion by payers and providers facing budgetary limitations.

Of course, the payers and the providers will seek to develop counter-strategies that incorporate consumerism and digital technologies but without allowing device manufacturers to capture the value. The chess game continues.

How similar are recent trends in the EU?

- Consumerism?
- Digital transformation?
- New business models that sustain the EU medtech industry?



James C. Robinson, PhD, MPH

**Leonard D. Schaeffer Professor of Health Economics
Director, Berkeley Center for Health Technology
Division Head, Health Policy and Management
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James Robinson is Leonard D. Schaeffer Professor of Health Economics and Director of the Berkeley Center for Health Technology (BCHT) at the University of California at Berkeley. He serves on a variety of professional advisory boards, including the Integrated Healthcare Association and National Institute for Health Care Management, and as contributing editor for Health Affairs journal. Professor Robinson gives numerous keynote speeches and board presentations for medical technology firms, health insurance plans, hospitals, medical groups, universities, and public agencies.

At Berkeley, Professor Robinson's research focuses on the biotechnology, medical device, insurance, and health care delivery sectors. He has published three books and over 130 papers in peer-reviewed journals such as the New England Journal of Medicine, JAMA, and Health Affairs. His most recent book, "Purchasing Medical Innovation: The Right Technology for the Right Patient at the Right Price" analyzes the roles of the FDA, health insurers, hospitals, and consumers in the assessment, purchasing, and use of high-cost implantable devices. Professor Robinson's econometric research currently centers on the impact of reference pricing on consumer choices and employer spending for surgical procedures, laboratory tests, diagnostic imaging, and pharmaceuticals.

Recent Publications

- Robinson JC, S Howell, SD Pearson. Value-based Pricing and Patient Access to Specialty Drugs. JAMA 2018; 319(21):2169-2170. doi:10.1001/jama.2018.5367
- Whaley C, Brown TT, Robinson JC. Consumer Responses to Price Transparency Alone Versus Price Transparency Combined with Reference Pricing. American Journal of Health Economics 2018; in press.
- Robinson JC, Whaley C, Brown TT. Association of Reference Pricing with Drug Selection and Spending. New England Journal of Medicine 2017; 377:658-675.
- Robinson JC. Medicare Advantage Reimbursement to Physicians. JAMA Internal Medicine 2017;177(9):1295-1296. Published online July 10. doi:10.1001/jamainternmed.2017.2689
- Robinson JC, Whaley C, Brown TT. Reference Pricing Changes the Consumer Choice Architecture of Health Care. Health Affairs 2017; 36(3):524-530.
- Robinson JC. Value-based Physician Payment in Oncology: Public and Private Insurer Initiatives. Milbank Quarterly 2017; 2017; 95(1):184-203.
- Robinson JC, Whaley C, Brown TT. Reference Pricing, Consumer Cost Sharing, and Insurer Spending for Advanced Imaging Tests. Medical Care 2016; 54(12):1050-55.
- Robinson JC, Megerlin F. Value-based Payment for Oncology Services in the United States and France. Journal of Cancer Policy 2016; <http://dx.doi.org/10.1016/j.jcipo.2016.09.001>.
- Robinson JC, Whaley C, Brown TT. Impact of Reference Pricing on Consumer Choices, Laboratory Prices, and Total Spending for Diagnostic Tests. JAMA Internal Medicine 2016;176(9):1353-1359. doi:10.1001/jamainternmed.2016.2492. Published online July 25, 2016.
- Robinson JC, Price A, Goldman Z. The Redesign of Consumer Cost Sharing for Specialty Drugs at the California Health Insurance Exchange. American Journal of Managed Care 2016; 22(4):Supplement S87-S91.
- Robinson JC, Brown TT, Whaley C, Bozic K. Consumer Choice between Hospital-based and Freestanding Facilities for Arthroscopy. Journal of Bone and Joint Surgery 2015; 97:1473-81.
- Robinson JC, Brown TT, Whaley C, Finlayson E. Association of Reference Payment for Colonoscopy with Consumer Choices, Insurer Spending, and Procedural Complications. JAMA Internal Medicine 2015; 175(11):1783-91. Published online 080815, doi:10.1001/jamainternmed.2015.4588.
- Brown TT, Robinson JC. Reference Pricing with Endogenous or Exogenous Payment Limits: Impacts on Insurer and Consumer Spending. Health Economics. Early View. Article first published online: 22 Apr11 2015 | DOI: 10.1002/hec.3181.
- Robinson JC. Purchasing Medical Innovation: The Right Technology, for the Right Patient, at the Right Price. Oakland, CA: University of California Press, 2015.
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- Hernandez J, Machacz SF, Robinson JC. US Hospital Payment Adjustments for Innovative Technology Lag Behind Those In Germany, France, and Japan. Health Affairs 2015; 34(2):261-270.
- Robinson JC. Biomedical Innovation in the Era of Health Care Spending Constraints. Health Affairs 2015; 34(2):203-09.
- Robinson JC, Megerlin F. Le Rapport Prix/Valeur des Médicaments d'Oncologie a L'épreuve des Méthodes de Paiement aux États-Unis. Techniques Hospitalieres 2014; Nov-Dec: 27-35.
- Robinson JC, Miller K. Total Expenditures per Patient in Hospital-Owned and Physician-Owned Medical Groups in California. JAMA 2014; 312(16):1663-1669.
- Robinson JC, Howell S. Specialty Pharmaceuticals: Policy Initiatives to Improve Assessment, Pricing, Prescription, and Use. Health Affairs 2014; 33(10):1745-1750.

Robinson JC, Brown TT. Quantifying Opportunities for Hospital Cost Control: Medical Device Purchasing and Patient Discharge Planning. American Journal of Managed Care 2014; 20(9):e418-e424.