

# The 2015 Chatham House Report

Kevin Outterson

**DRIVE-AB General Assembly Meeting**  
**Uppsala University, October 15 – 16, 2015**

# Key question

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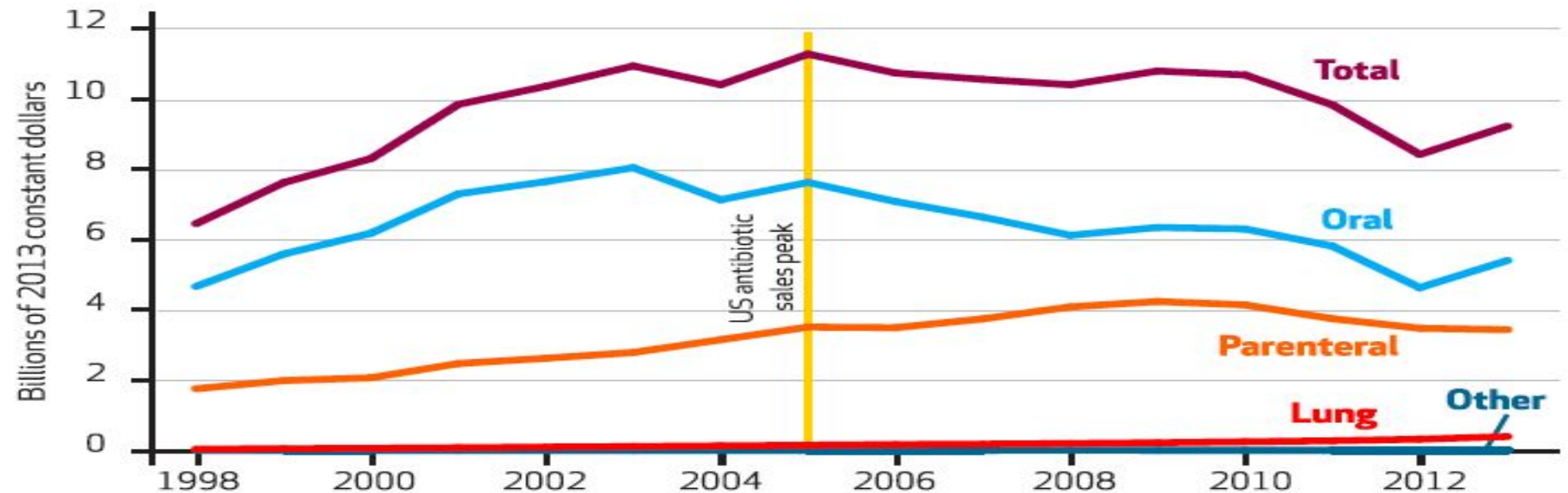
How is the antibiotic market broken?

ND4BBB

# Peak antibiotics

## EXHIBIT 2

US Antibiotic Sales For Human Use, In 2013 Constant Dollars, By Mode Of Administration, 1998-2013



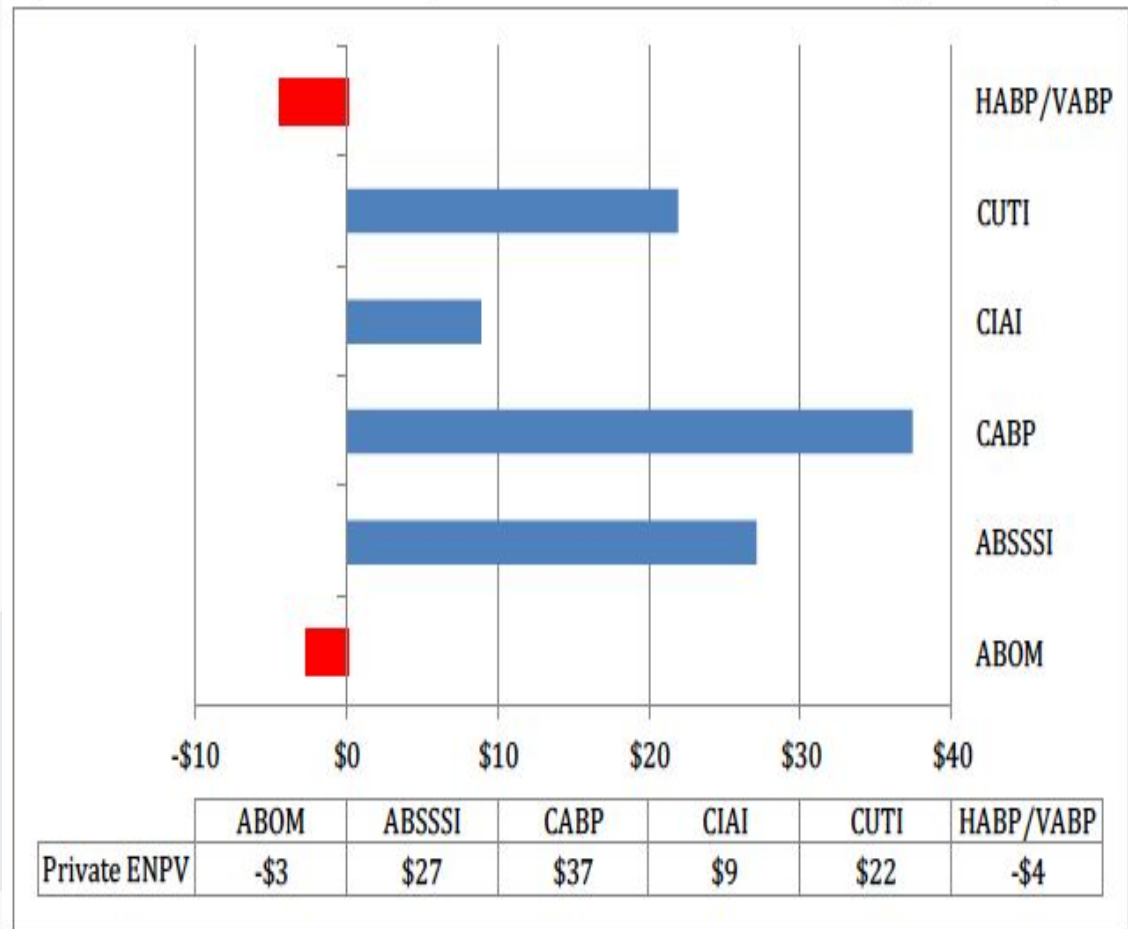
**SOURCES** IMS Health (US manufacturer US dollar sales at ex-manufacturer prices), and St. Louis Federal Gross Domestic Product deflator (2013 = 100).

Outterson K, Powers JH, Daniels GW, McClellan MB. Health Affairs 2015

# Private NPV

- Private NPV variable across indications
- CABP has the highest private NPV & HABP/VABP the lowest
- All are relatively small markets

Figure 3: Estimated Private ENPVs by Indication for a New Antibacterial Drug (in \$ Million)



# Key question

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## Will it get better soon?

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# CDC infection strategy

- CRE – 9,000 estimated cases 2011; target 60% decline by 2020 through aggressive measures
- 50% decline in *c. difficile*
- Nosocomial MDR *Pseudomonas* – ↓35%
- MRSA BSI – ↓50%
- Invasive pneumococcal <5 and >65 -- ↓25%

National Strategy for Combatting Antibiotic-Resistant Bacteria (White House, Sept. 2014, Table 3)

# CDC Rx goals

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- 20% reduction in inappropriate inpatient prescription for monitored conditions
- 50% reduction in inappropriate outpatient prescription for monitored conditions

**National Strategy for Combatting Antibiotic-Resistant Bacteria (White House, Sept. 2014, at 9)**

# Bottom line

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- Cases may decline
- Volume per case may decline
- **Shrinking, unattractive market**



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# Chatham House Working Group on New Antibiotic Business Models

# Chatham House WG

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- Broad ranging discussion leading to a workshop on new business models Oct. 2013
- Reports were prepared in advance for the workshop, covering all known proposals
- Workshop report published: Outterson K. *New Business Models for Sustainable Antibiotics* (Feb. 2014).

# Chatham House WG

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- March 2014: new *functional* approach
- 6 subgroups, with a broad range of Members and Observers
- Iterative process
- Full day workshop in Geneva Oct. 2014

Chatham House Report

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John-Arne Røttingen and Anthony So

# Towards a New Global Business Model for Antibiotics Delinking Revenues from Sales

Report from the Chatham House Working Group on  
New Antibiotic Business Models



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HOUSE**  
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innovative  
medicines  
initiative



efpia

# Strategic alternatives

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- Higher Prices
- Delinkage
- Hybrid models

# Key Recommendations

1. **Delinkage**
2. **Increased funding across the life cycle**
3. **Based on a global threat assessment**
4. **Global access based on medical need**
5. **Globally coordinated**

# 1. Delinkage

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- Delink revenues from sales volume;
- Increase total incentives for antibiotics; and
- Preserve access without regard to ability to pay.

Kesselheim AS Outterson K. Health Affairs 2010; Yale J. Health Policy, Law & Ethics 2011; Chatham House 10.2.13; Outterson. Health Affairs Feb 2015

# Analogies

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- Prizes
- Insurance
- Defense/Big Science
- Strategic Antibiotic Reserve



# 2. Life cycle funding



# 3. Global threat assessment

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**Global threat assessment, data-driven, transparent, and focused on threats posed by resistant pathogens**

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# 4. Access

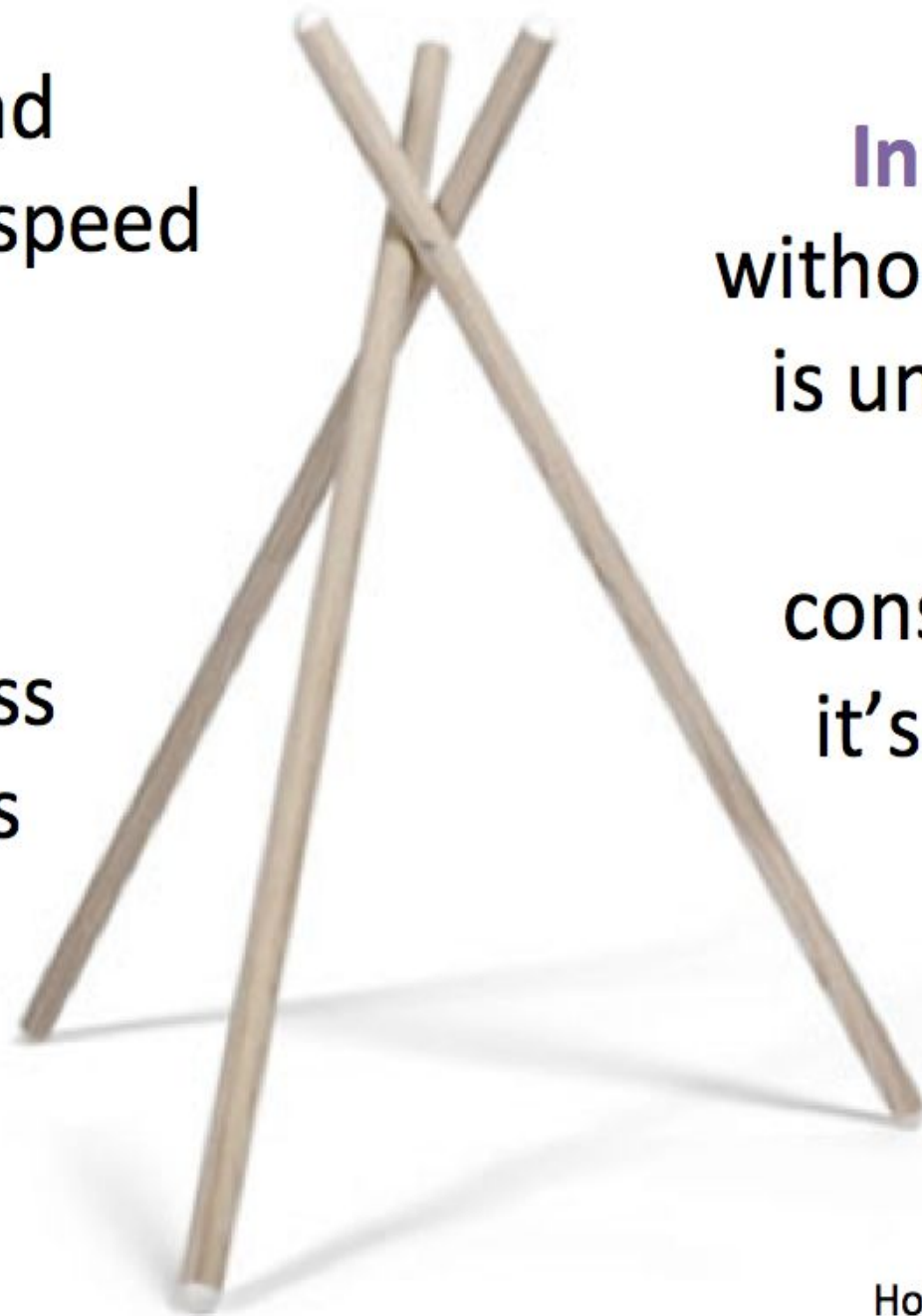
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**The delinkage business model should guarantee global access to antibiotics together with appropriate use.**

ND4BB

**Access** without  
conservation and  
innovation will speed  
resistance

**Conservation**  
constrains access  
and undermines  
innovation



**Innovation**  
without access  
is unjust, and  
without  
conservation  
it's wasteful

# 5. Coordination

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- **Domestic expenditures should be coordinated within a global framework**
- **Important roles for global coordination, joint funding, secretariat**
- **Positive incentives for participation**

# Key question

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## How much money?

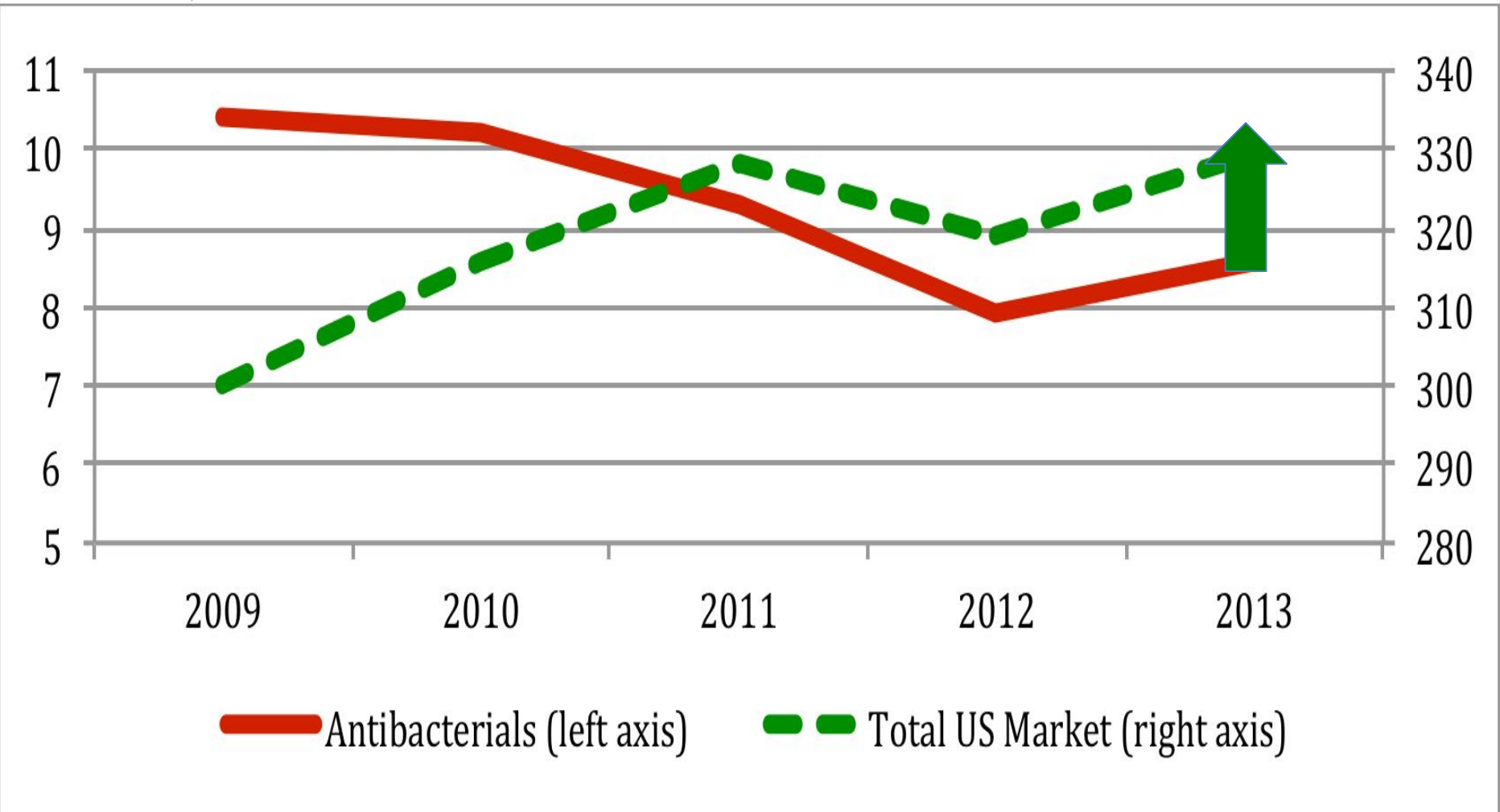
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# Magnitude of incentives

Model	Payments from Governments	eNPV benchmark at start of R&D
Sharma & Towse	\$2.5 bn (\$500m/yr over 5 years)	\$300m
Eastern Research Group	\$919m (over R&D cycle)	\$100m
O'Neill	\$2-\$4 bn	Not stated

Rex & Outterson, 2015 (in review)

**Figure 1b. Non-discounted US spending, antibacterials & all prescription drugs, US\$ billions, 2009-2013**



Source: IMS Health 2014.

Outterson K, Powers JH, Daniels GW, McClellan MB. Health Affairs 2015



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