

# Antibiotic Resistant Bacteria: Economic & Legal Threats

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11<sup>th</sup> Annual Liability Regimes Conference Keeping the Floodgates Shut? Mastering Accumulation and Bodily Injury Exposures in a Rapidly Changing Environment

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# Antibiotic Resistant Bacteria: Economic & Legal Threats

05 November, 2015 Thomas Blanz-Gilbert, Global Casualty Manager, Zurich Insurance Group

**Annual Liability Regimes Conference 2015** 





- Economic Burden
- Case Study: CRE Outbreak at UCLA
- National Health Care, Health Insurance and Jurisdiction

ARB = Antibiotic Resistant Bacteria
 CRE = Carbapenem Resistant Enterobacteriaceae
 ERCP = Endoscopic Retrograde Cholangiopancreatogram

Health and Economic Burden

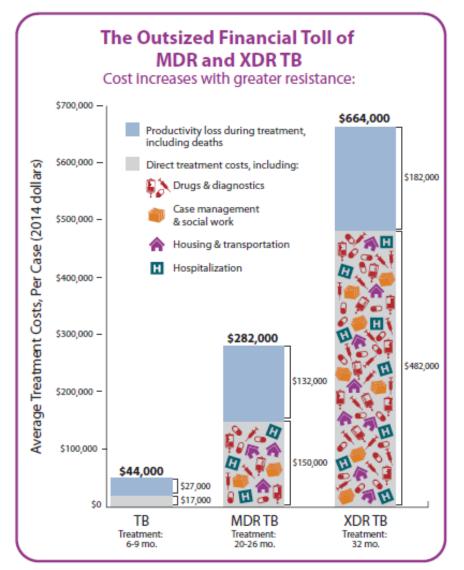


- death toll: 50'000 EU and USA combined, 700'000 world-wide
- additional medical costs: USD 10'000 40'000 per case
- additional non-medical costs, e.g. loss of earnings, expenses related to

disabilities

#### Multi-Drug-Resistant Tuberculosis





©CDC, TB fact sheet, 2015



Financial Impact on Healthcare and Social Benefit Systems

Medical costs and disability

- EUR 940mio (ECDC and EMEA estimate in 2009)
- CAD 1bn (Government of CDN in 2015)
- USD 20bn (CDC 2013)

Loss of earnings other societal costs

- USD 35bn in the US (2010 US study quoted in OECD Report)
- EUR 600mio per year in the EU

Endoscopy Cases in the USA



#### "Malpractice Trends Influenced By UCLA Superbug"



Endoscopy Cases in the USA

- 18.02.2015: UCLA reported 179 patients been exposed to Carbapenem-resistant Enterobacteriaceae (CRE), of which 7 infected, of which 2 died; outbreak linked to duodenoscopy (LA Times)
- 19.02.2015: FDA released "Awareness Letter" regarding Duodenoscopes used for Endoscopic Retrograde Cholangiopancreatogram (ERCP);
   "Design may impede effective cleaning" (FDA MedWatch)
- **20.02.2015**: lawyers targeting UCLA and Olympus (Associated Press)
- 25.02.2015: first UCLA patient suing Olympus (Law360)
- 04.03.2015: Cedars-Sinai Medical Centre reports 37 exposed patients of which 4 were infected (LA Times)
- 07.04.2015: first lawsuit against Olympus after 2012 Pittsburgh outbreak (Meyers Evans & Associates)

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Endoscopy Cases in the USA

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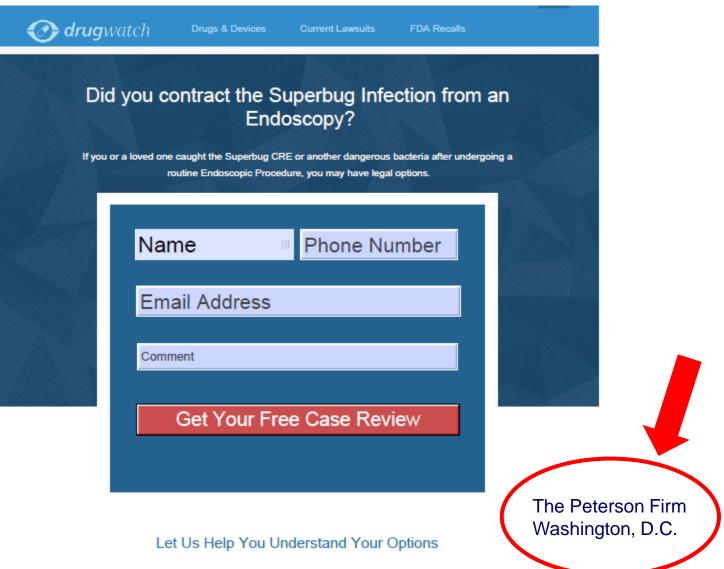
- 20.04.2015: Olympus had warned European hospitals in 2013 about risks related to endoscopes. No warning to US hospitals. (Seattle Times)
- 07.05.2015: FDA reporting 142 incidents since 2010 (121 injuries, 13 deaths);
  670'000 ERCP procedures per year (LA Times)
- 12.05.2015: LA Times reports about Dutch report on outbreak in a Rotterdam hospital in 2012 (22 infected) and an outbreak at the Charité hospital in Berlin (12 infected); these were followed by the Olympus warning in Europe (LA Times)
- 12.05.2015: Seattle hospital to join lawsuit against Olympus (after CRE outbreak in 2012 (11 died). Widow of victim filed lawsuit against Olympus (Reuters)
- 14/15 May 2015: FDA Advisory Panel Meeting. Olympus holds a 85% US market share. Others: Pentax, Fujifilm. "Custom Ultrasonics" (main reprocessing machine manufacturer)

Endoscopy Cases in the USA

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- 03.08.2015: Other types of endoscopes affected: bronchoscopes, cystoscopes, colonoscopes. Issues were known for years. FDA blamed for inappropriate gathering of data and reporting. (LA Times)
- 04.08.2015: FDA Safety Communication. Recommend additional cleansing steps when reprocessing. (FDA)
- 06.08.2015: Heavy criticism of FDA's reluctance in monitoring and warning. New lawsuit in Pittsburgh (2012 outbreak) (USA Today)
- **12.08.2015**: FDA "Warning Letter" to Olympus
- 19.08.2015: Huntington Memorial Hospital Pasadena. Suspected causation. (LA Times)
- **17.09.2015**: FDA recommendations on reprocessing of flexible bronchoscopes.

#### **Claims Farming through Patient Advocate Groups**





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Legal Considerations US

- Preparation of law suits is expensive and time consuming
- Proof of causation is not guaranteed
- Hospitals will not blame the victims of an infection as often is the case in negligence cases

#### Who will finally bear the economic burden?

- Health Insurance Carriers? (state funds or private)
- Social Security System?
- Employment Benefits Insurance?
- Health Care Providers?
- P & C Insurance Carriers?
- Who finally assumes liability?



USA: health care provider



- <u>2015 Study</u>: Surgical site infections (occurring 30 days after patient is discharged) are most common reasons for unplanned hospital readmission (Northwestern Medicine and American College of Surgeons, 03.02.2015)
- Medicare will reduce reimbursement to hospitals with too many unplanned readmissions (under the Affordable Care Act 2010) (WSL, 11.02.2015)
- Seattle hospital (Virginia Mason Med. Center) to join lawsuit against Olympus (after CRE outbreak in 2012 with 11 fatalities)

Germany: Hospitals

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- Flat-Rates for medical treatment to cover all medical/nursing costs during hospital stay
  - Rates based on original diagnosis which lead to hospitalization.
  - Additional costs during hospital stay are born by the hospital

=> financial loss to hospital

Germany: Health Insurance Carriers

- Additional medical treatment after patient's discharge from hospital: => <u>financial loss to the health insurance carrier</u> (Hospital's negligance leads to infection)
- Cost-Sharing Agreements between health insurance carriers and the liability insurance carriers of hospitals;
   45% of additional costs caused by hospital acquired infections are born by liability carrier.
- Boston Scientific Medizintechnik: health insurance carriers subrogated medical costs for replacement of probably defective pacemakers (EuGH 03/2015).

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Germany: Patient

• Financial losses born by patient:

loss of earnings, pain and suffering, other extra expenses related to disabilities.

 Reversal of burden of proof in case infection arose out of the so-called "hygienic fully controllable range" (hygienisch beherrschbarer Bereich) and have not been caused by any professional act of the medical staff (Federal Supreme Court decisions 2007/08) Q&A







**Potential Litiagation** 

- Europe?
- USA?
- Product Liablity
- Medical Malpractice
- Public Liablity (hospital operations)
- Business Interruption (closure of hospital ward)

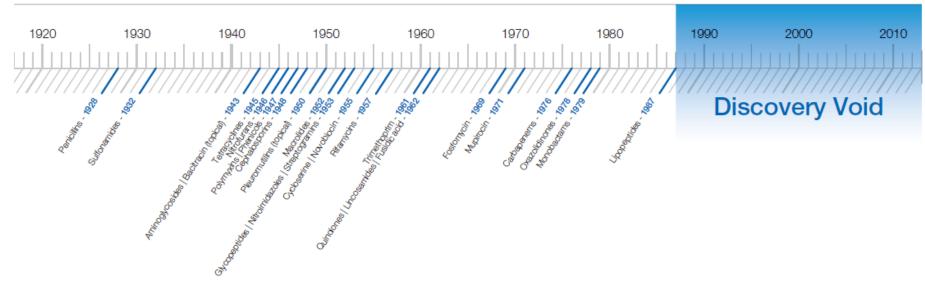


Endoscopy Cases in the USA: prior to UCLA 2015

- April 2005: Class action with 200 claimants against Forbes Regional and West Penn Alleghany
- **2011**: Maryland (11 deaths)
- 2012: University of Pittsburgh Medical Center
- 2012/1014: Virginia Mason Medical Center, Seattle. 37 infected of which 11 died
- **2013**: Advocate Lutheran General Hospital, Park Ridge (IL). 38 exposed, of which 10 infected, of which 2 died.

Dynamics of Spread of ABR

#### The Antibiotic Discovery Void (WEF Report 2013)



The discovery dates of distinct classes of antibiotics. No new classes have been discovered since 1987.

Source: World Economic Forum, adapted from Silver, L.L. Challenges of Antibacterial Discovery. In Clinical Microbiology Reviews, 2011, 24:71-109.





Use of Antibiotics strongly associated with Resistance

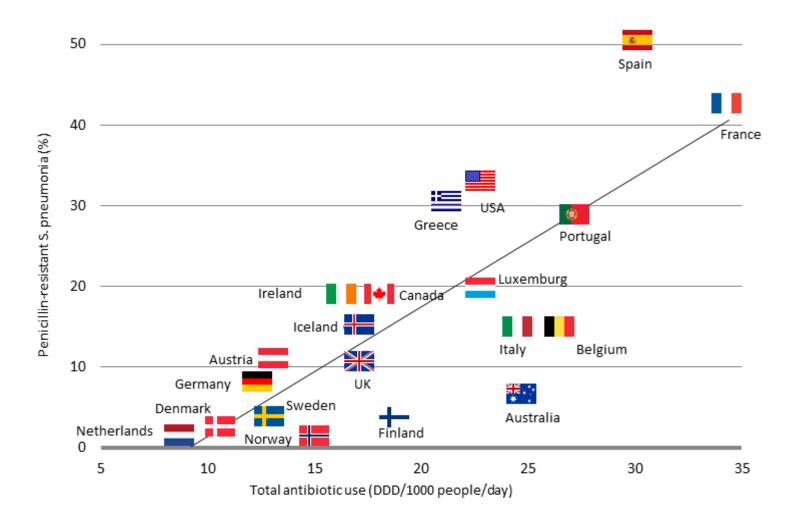
#### Selection and growth of ARBs in humans is largely man-made

- inappropriate prescription of antibiotics (e.g. for viral infections)
- poor adherence to the prescribed therapy
- utilization of counterfeit and sub-standard antibiotics
- insufficient hygiene practices in hospitals, nursing homes etc.

- Use of antibiotics in livestock production (therapy and growth promoter)
- In the USA, 80% of total annual antibiotics consumption used for livestock



#### Use of Antibiotics strongly associated with Resistance



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#### ARBs are a Global Health Challenge



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Affected Insurance

- General Liability
- Product Liability
- Workers Compensation / Employers Liability
- Medical Malpractice
- Business Interruption following enforced closure by public authorities (ABI 1989)

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Health Burden

- patients more likely to develop complications
- patients 3 times more likely to die
- time to agree on the appropriate therapy is up to 6 times longer during which the ARBs can spread to other organs