Controlling the spread of multidrug-resistant organisms in healthcare settings: Is it really possible?

Prof. Pierre Parneix, Center de Coordination de Lutte Contre les Infection Nosocomiales, Bordeaux, France

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Controlling MDROs
Facing the reality

Increased levels of multiresistant bacteria and resistance genes after wastewater treatment and their dissemination into Lake Geneva, Switzerland

Nadine Cazalski1,2, Tarek Berthold1, Serena Cossa2, Andrea Egli1 and Helmut Burgmann3
1 Department of Environmental Microbiology, University of Veterinary Medicine, Vienna, Austria
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http://www.awa.org/medien/bulletin/20120322/index_FR

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**Research**

Outbreak of colonization by extended-spectrum β-lactamase-producing *Escherichia coli* sequence type 131 in a neonatal intensive care unit, Italy

Controlling MDROs

**Plan**

Antibiotic stewardship: from guidelines to results!

Controlling MDROs

**Antibiotic stewardship**

- Regional centre for healthcare associated infection prevention and control (CCJN)
  - Including antimicrobial resistance prevention
- Management of surveillance networks in hospitals
  - National methodology
    - antimicrobial resistance (RMR-RAISIN 2002), antibiotic use (ATB-RAISIN 2009)
    - Regional survey
      - practical implementation of antibiotic policies at hospital level (yearly basis in South Western France since 2005)

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**Antibiotic stewardship**

- HAS national programmes since 1994
- Antibiotic use national plan since 2002

Monitoring antibiotic consumption in Healthcare Facilities (HCF) using the number of DDD/1000 PD - hospitals days:

- Guidelines: ANAES(1999), HAS (2008); National Authority for Health
- National circular 2008

ICATB since 2007

Surveillance ATB-RAISIN set up in 2006

Standardised methodology used by 3 CCJN since 2007

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Antimicrobial stewardship programmes: the need for wider engagement
Esmita Charani, Alison H Holmes

Reducing cross contamination: standard precautions or more?

Which precautions
Be aware and pragmatic
Avoid dogmatism!

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Which precautions

The highest compliance to standard precautions will be the most peaceful you will live

Do not hesitate to use wisely additional precautions

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Which precautions

HRBe: proportion of epidemics (N= 55) among warnings (N=373) according to infection control measures type

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HRBe: proportion of secondary cases according to infection control measures type within 48 hours after admission

A VRE outbreak: 39 colonisations in 6 hospitals – South-western France 2013-2014

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Don’t miss the power of root cause analysis!

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Root Cause Analysis
Outbreak of Esbl K. pneumoniae in an ICU – France 2013

Direct causes:
- Lack of compliance to precautions
- Poor alcoholic hand rub products use
- Lack of carriage screening
- High antibiotics consumption

Latent factors:
- Understaffing and burn out
- No medical head and poor team spirit
- Inappropriate patient software
- Environment in poor shape
- No IC link nurses

A need for an international cooperation at operational level

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International cooperation

World Alliance Against Antibiotic Resistance
Alliance Contre le développement des Bactéries Multi-Résistantes
The WAAAR declaration against antibiotic resistance
Jean Carlet, on behalf of the members of the WAAAR
June 2004
jcarlet@inra.fr

10. Request for UNESCO to include the “concept of antibiotic” in the list of the intangible cultural heritage.


Detection of decreased susceptibility to 3rd generation cephalosporin and treatment failures up to 2010

http://www.who.int/drugresistance/documents/surveillancereport/en/

Controlling MDROs
Plan

What could I do in my position on a daily basis?

Controlling MDROs
What could I do?

Don’t stay on the starting line!

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### Conclusion

- Think patient safety:
  - Control outbreaks early,
  - Dream widely but act in a focused manner,
  - Always promote the basics,
  - Develop new strategies to tackle remaining problems:
    - Focus on organizational and human factors,
    - Mind the microbiome,
  - But stay strong for ongoing and future challenges!

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Ed Kiernan, WRAN International, Connecticut

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Jason Teo, MD/CO Consulting and Communications, Canada

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Dr. Maryanne McDade and Mr. John O’Connor, McDade Methode International, USA

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