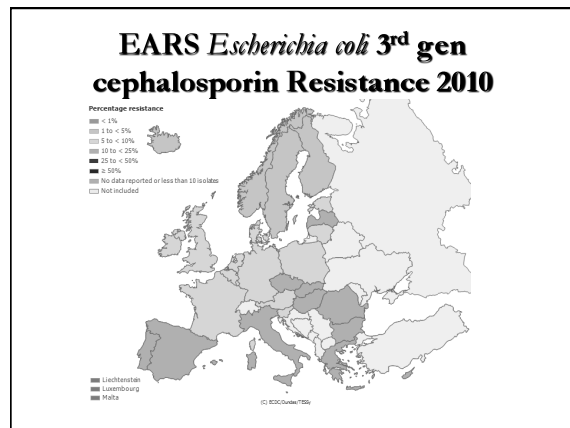
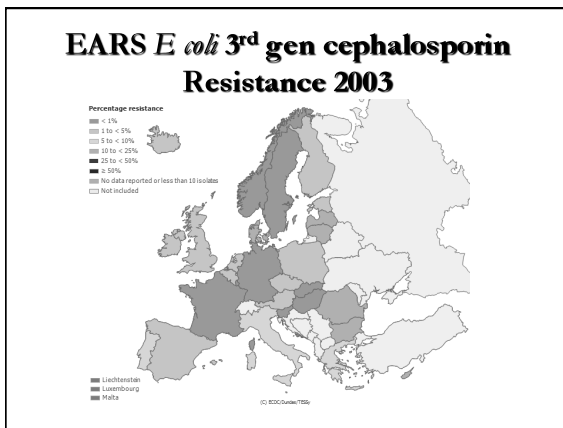

Multi-Drug Resistant Gram Negative Infections
INFECTION PREVENTION
 APR Wilson
 University College London Hospitals
www.webbertraining.com November 19, 2012

Transmission

- Complex network of transmission between humans, sewage, environment, food, crops and food animals, and pets.
- Pressure of human/animal antibiotic use
- CTX-M *E coli* often ciprofloxacin resistant
- Urinary infection most common
- Old age, long stay
- Clone *E coli* ST-131 spread CTX-M-15



Sources

- Residential homes – reservoir gut carriage
- Domestic - hand hygiene after toilet
- Hospital : Klebsiella, Enterobacter, Serratia – hand hygiene

Report of Joint Working Group, DARC/ARHAI 2012

Basic Principles

- Reduce urinary catheterisation, intubation
- Enhanced cleaning
- Pre-emptive isolation
- Hospital transfer handover
- Outbreak control + root cause analyses

High risk of transmission

- Diarrhoea, urinary incontinence, close contact
- Highly transmissible strain
- Vulnerable patients
- First case in unit
- Rising number of cases with transmission despite precautions

Serious Incident

- Involve senior management
- Check for transmission + screen patients
- Consider Outbreak Group Meeting - Infection Control Lead, managerial, estates, nursing and clinical members
- Case definition – case finding
- Criteria for unit closure

Patient Isolation

- Single room or cohort
- Case mix, multidrug resistance, staffing
- Faecal colonisation – enhance environmental cleaning
- Antibigram / send to reference lab
- Patient specific BP cuffs & stethoscopes

Antibiotic Stewardship

- Staff training
- Monitor and feedback use of antibiotics
- Limit 3rd generation cephalosporins, quinolones and aminoglycosides
- Do not treat colonisations

Screening

- Admissions to unit / ICU
- Pre emptively isolate and screen admissions from high incidence units or known carriers
- Weekly screens
- Do not screen staff unless implicated

Cleaning

- Targeted high contact surfaces bed rails, commodes, door handles, taps
- Close ward and terminal clean
- Consider steam clean or hydrogen peroxide

MDRGN – Infection Prevention
APR Wilson, University College London Hospital
 Broadcast live from the HIS/FIS conjoint conference www.hisconference.org.uk

Education

- Training of staff on transmission
- Patient and visitor information leaflets
- Record mortality rate and produce report with root cause analysis

**Carbapenem-resistant
Enterobacteriaceae**

- Single room isolation
- Look back 6 months
- Screen contacts – rectal swabs
- If uncontrolled close unit
- No routine surveillance
- Terminal clean – steam or hydrogen peroxide

Selective decontamination

- Topical non-absorbable antibiotics oropharynx and stomach
- SDD: Short course intravenous antibiotic
- SOD: no iv antibiotic
- 12 meta-analyses and 36 RCT: 10 studies show reduction in pneumonia
- Dutch study 5939 patients 3.5% reduction mortality

Problems

- Will ESBL E coli become common?
- Gut carriage – no accurate estimate
- Imported food
- Human - animal transmission
- BSAC/HIS/BIA Working Party

FEDERATION OF
infection societies

HEALTHCARE
INFECTION
SOCIETY

FIS/HIS 2012 19-21 November 2012 BT Convention Centre, Liverpool

Federation of Infection Societies (FIS)
For more information on the individual Federation of Infection Societies visit their websites by clicking on the logos below:

<p>British HIV Association BHIVA www.bhiva.org</p> <p>British Society for Antimicrobial Chemotherapy BSAC www.bsac.org.uk</p> <p>Infection Prevention Society IOS www.ips.uk.net</p> <p>United Kingdom College of Podiatry UKCPA www.ukcpa.org</p> <p>BSMM www.bsmm.org</p>	<p>British Infection Association BIA www.britisheinfection.org</p> <p>CHILDREN'S HEALTHCARE INFECTION SOCIETY CHIVA www.chiva.org.uk</p> <p>Microbiology SGM www.sgm.ac.uk</p> <p>RSPH www.rsph.org.uk</p> <p>www.clinical-virology.org</p>	<p>British Paediatric Asthma Infection & Infection Group BPAiIG www.bpaiig.org</p> <p>HEALTHCARE INFECTION SOCIETY HIS www.his.org.uk</p> <p>RSTMH www.rstmh.org</p> <p>Wales NHS www.wales.nhs.uk</p>	<p>Platinum Sponsor: ASP</p> <p>Gold Sponsor: PALL Medical</p> <p>Silver Sponsors: astellas STERIS</p> <p>Pfizer</p>
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