

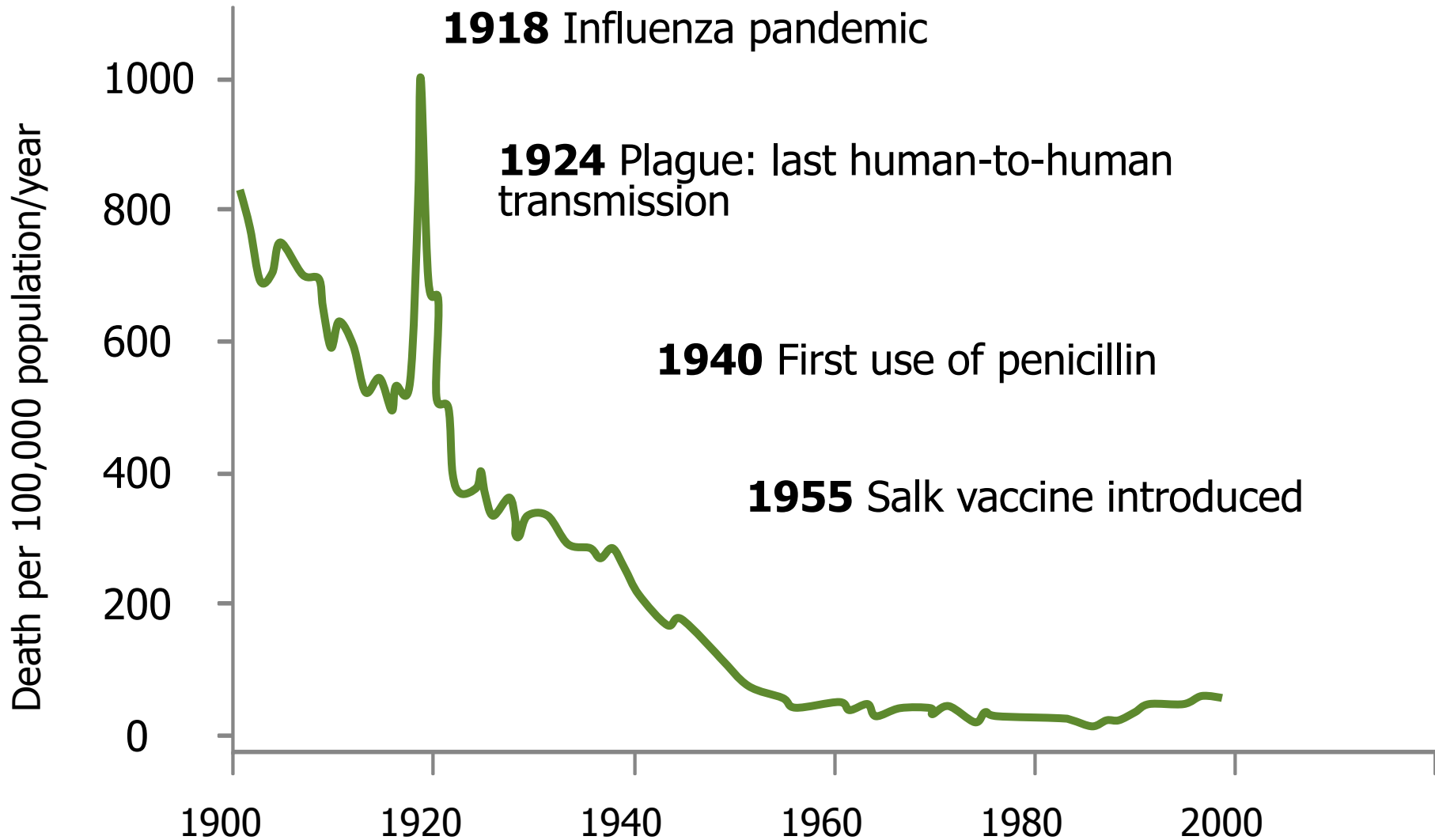


European Centre for Disease Prevention and Control

The threat of antimicrobial – An urgent global concern

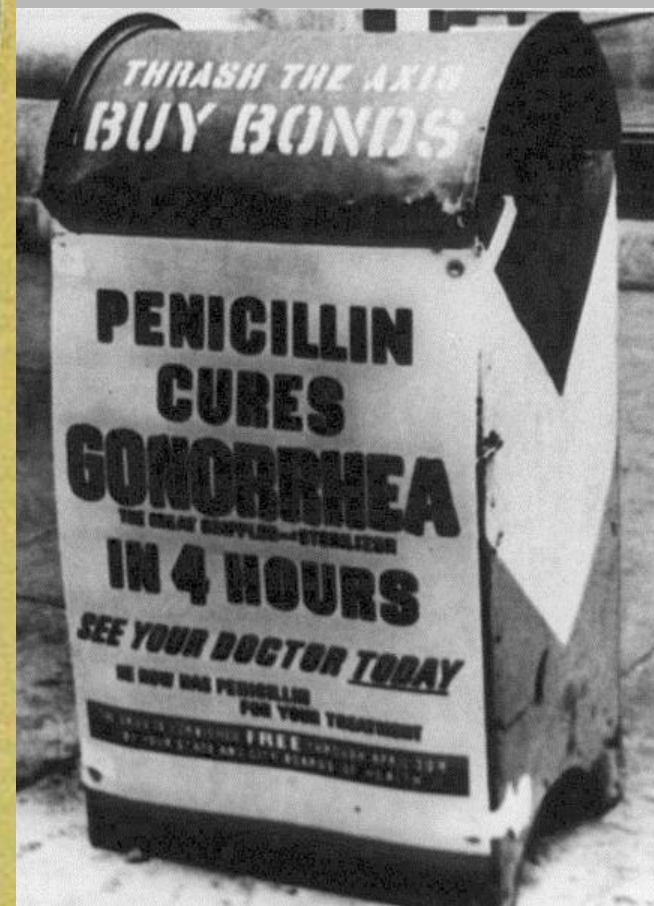
Marc Sprenger, Director ECDC,
Graduate Institute & Chatham House Meeting, 21 March 2014, Geneva

Human mortality, United States, 1900–2000



Penicillin, 1944: a new drug that saved lives

Thanks to PENICILLIN
...He Will Come Home!



Modern medicine: not possible without effective antibiotics

Hip / knee replacement

Organ transplant

Cancer chemotherapy

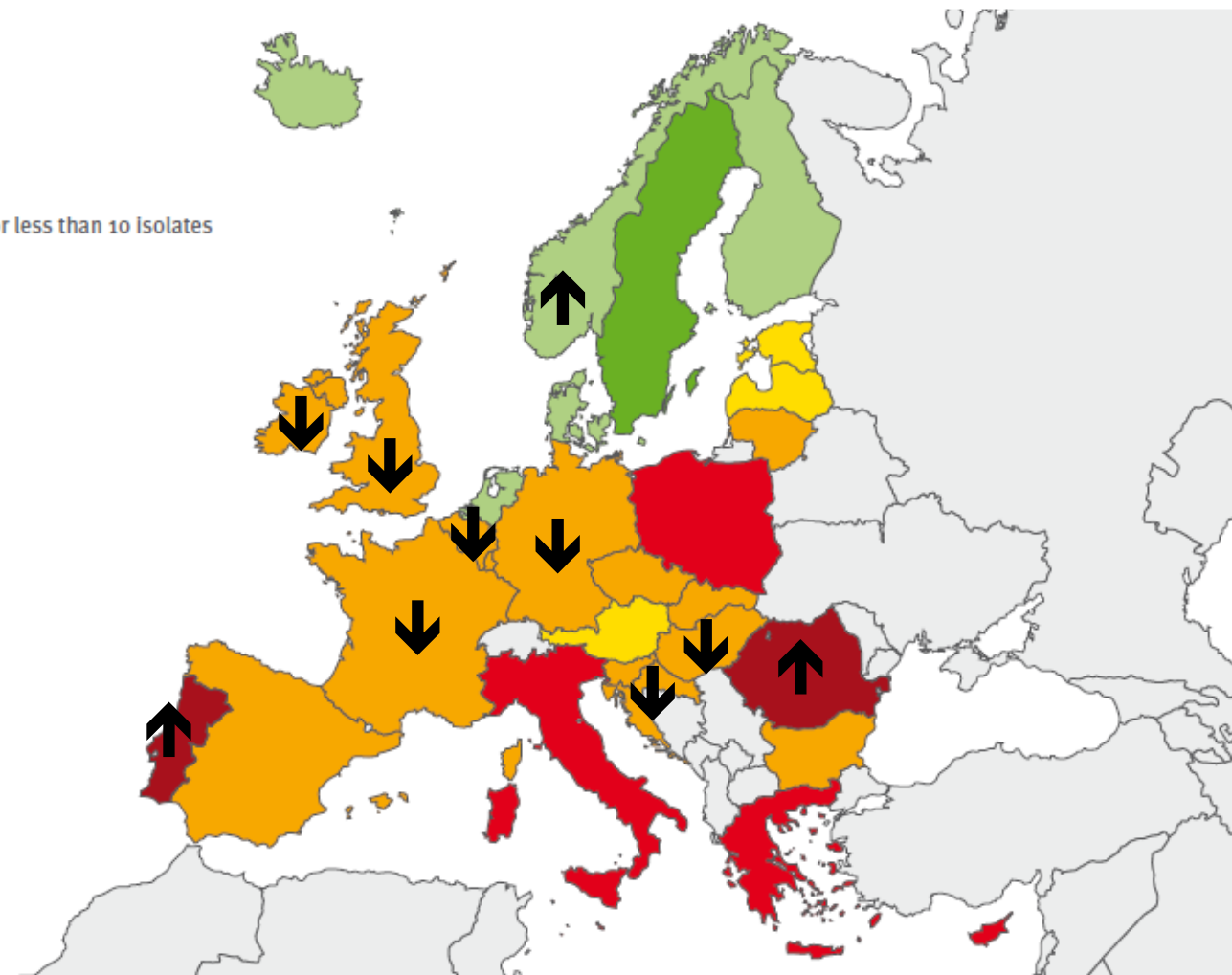
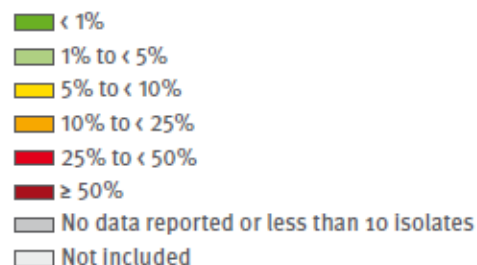
Intensive care

Care of preterm babies

Surveillance of antimicrobial resistance and antimicrobial consumption in the EU

- **European Antimicrobial Resistance Surveillance Network (EARS-Net)**
(formerly EARSS, integrated in January 2010)
- **European Antimicrobial Consumption Surveillance Network (ESAC-Net)**
(formerly ESAC, integrated in July 2011)
- **ECDC point prevalence survey of healthcare-associated infections and antimicrobial use in European acute care**
(pilot 2010, all EU MSs in 2011-2012, report 2013)

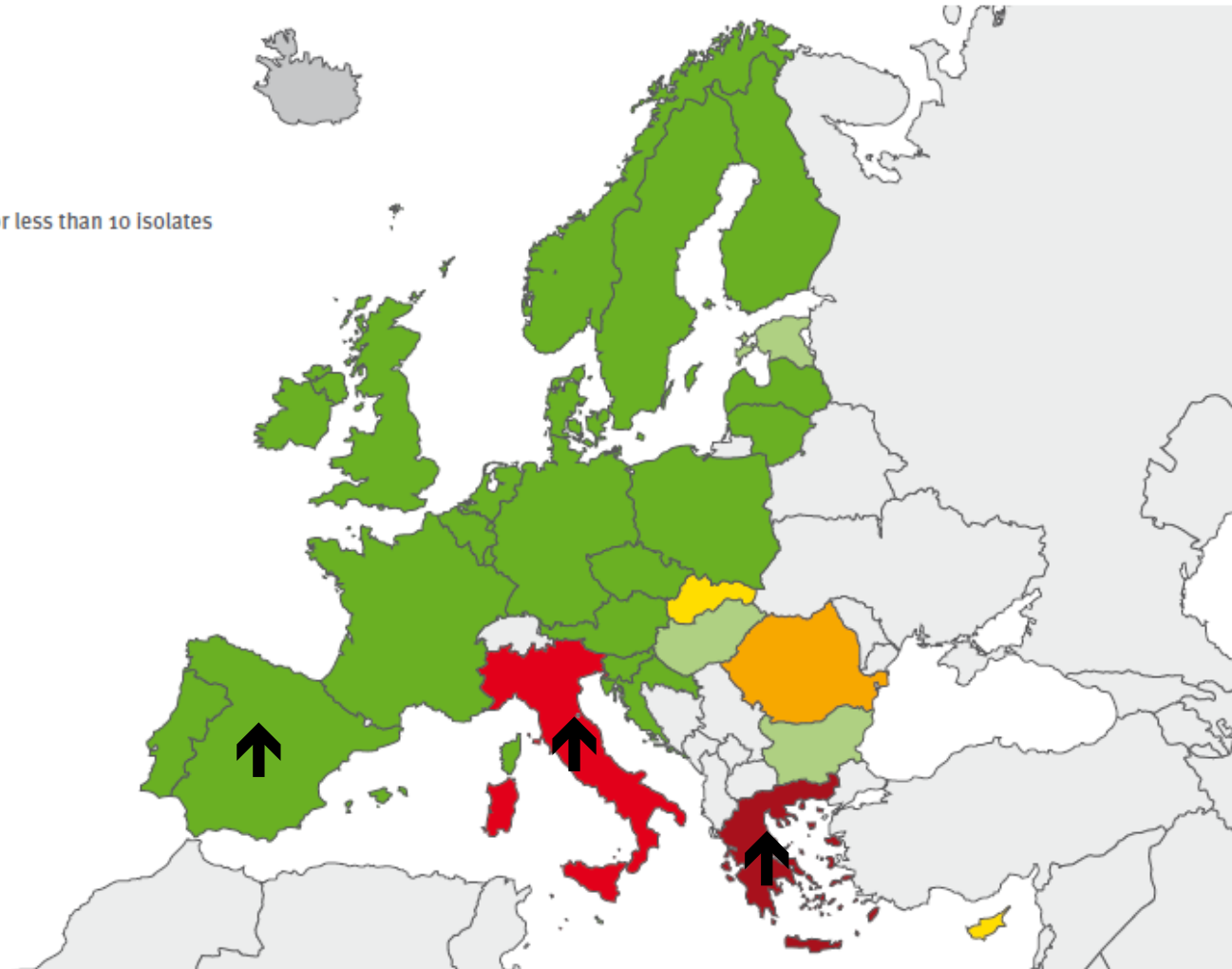
Staphylococcus aureus: percentage of invasive isolates resistant to meticillin (MRSA); EU/EEA, 2012



↑ and ↓ indicate a significant increasing or decreasing trend for the period 2009 to 2012.
These trends were calculated for laboratories that consistently reported between 2009 and 2012.

Source: EARS-Net, 2013.

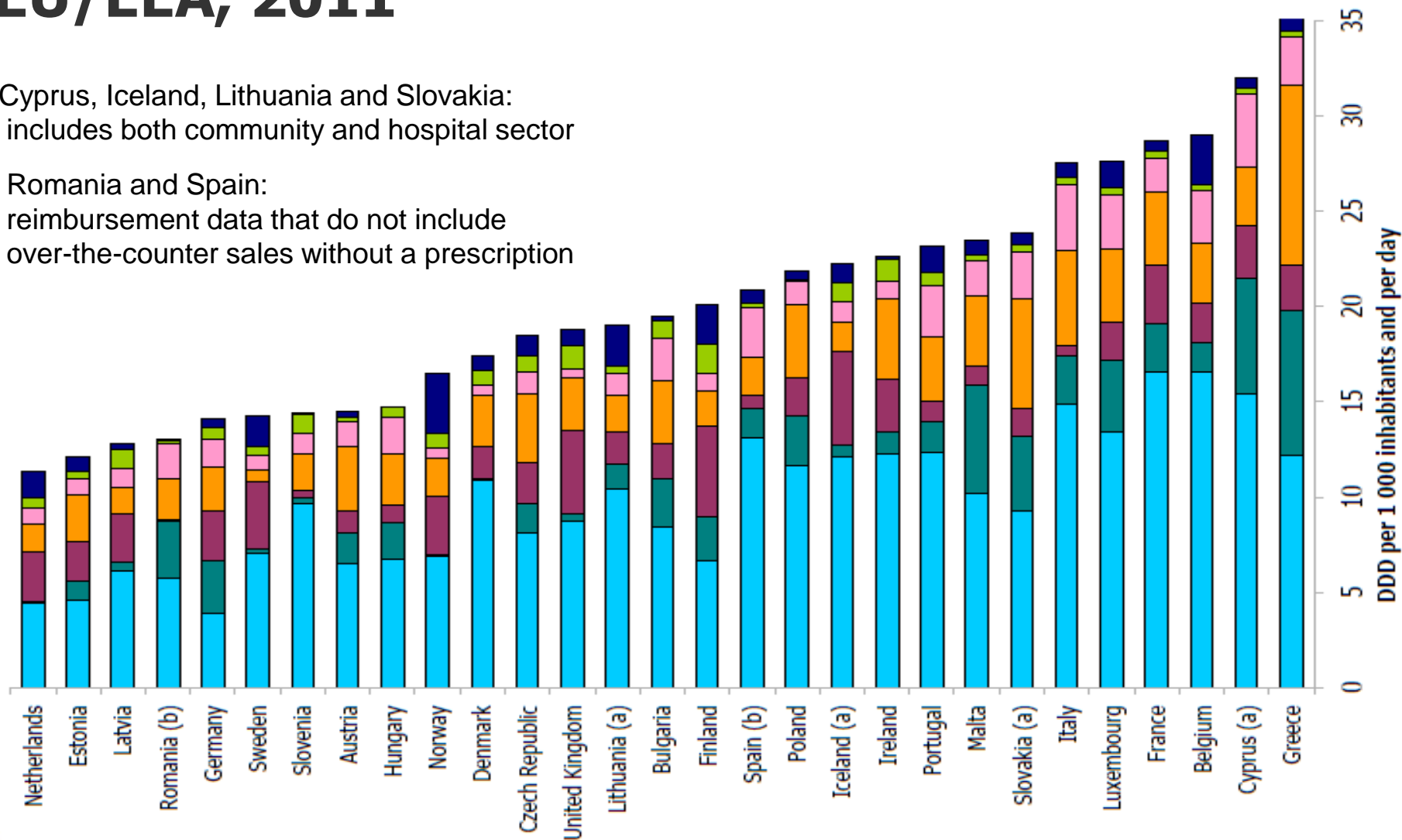
Klebsiella pneumoniae: percentage of invasive isolates resistant to carbapenems; EU/EEA, 2012



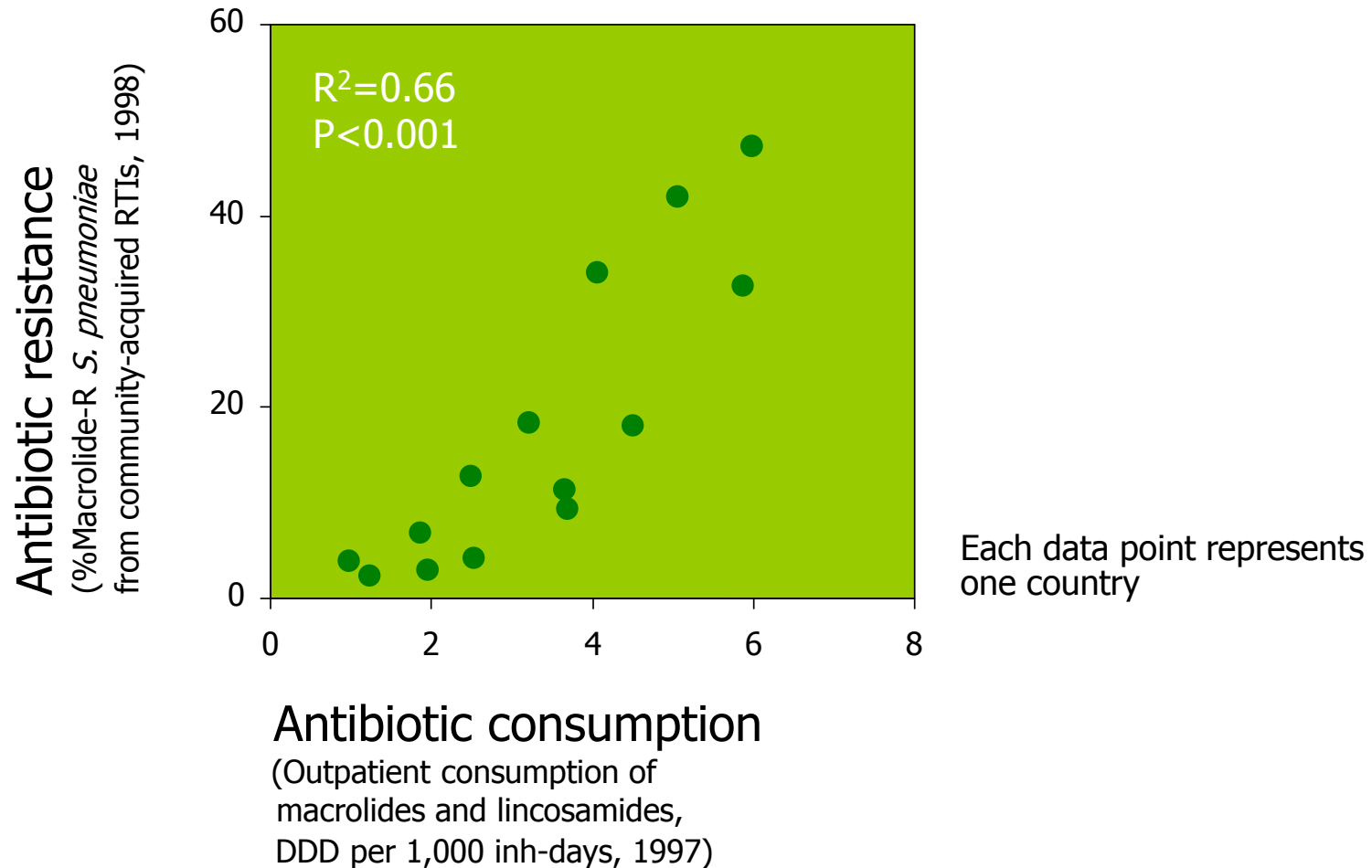
Consumption of antibiotics for systemic use (ATC group J01) in the community*; EU/EEA, 2011

Cyprus, Iceland, Lithuania and Slovakia:
includes both community and hospital sector

Romania and Spain:
reimbursement data that do not include
over-the-counter sales without a prescription

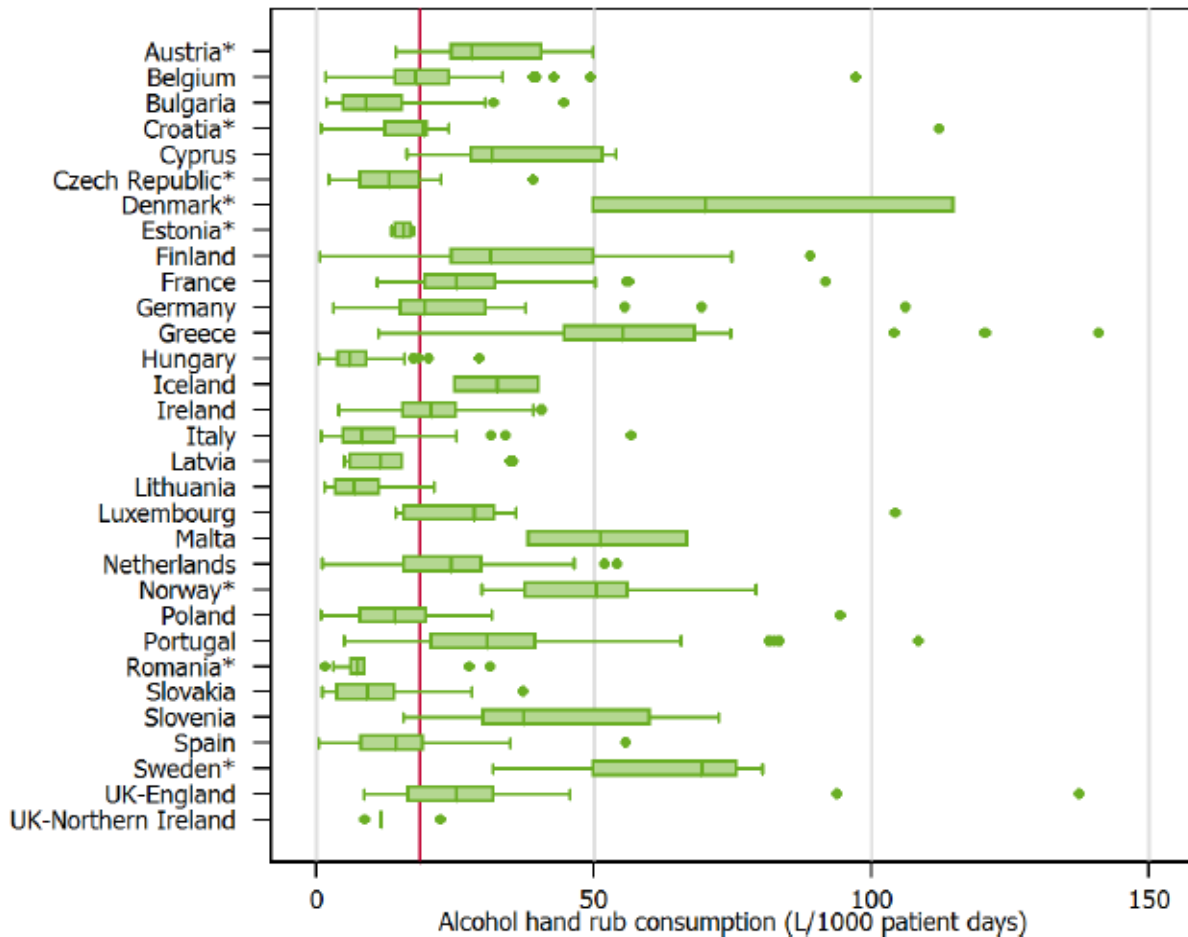


Relationship between antibiotic use and resistance in the community



ECDC point prevalence survey in European acute care hospitals, 2011-2012

median



*PPS data representativeness was poor in Austria, Croatia, Czech Republic, Estonia, Norway and Romania and very poor in Denmark and Sweden. Red vertical line=median (18.7 litres/1000 patient-days).

Comparative sales of antibiotics (in tonnes) for use in human and veterinary medicine, 10 European countries, 2007*



■ **Human medicine**
1600 tonnes

■ **Veterinary medicine**
3300 tonnes

*Czech Republic, Denmark, Finland, France, Germany, the Netherlands, Norway, Sweden & United Kingdom; 2007 (or closest available year)



Humans + Animals = One Health

**Prudent use of antibiotics.
Everyone is responsible!**

Main actions to prevent and control antimicrobial resistance (AMR)



New antimicrobial agents
(with a novel mechanism of action,
research, development)



Infection prevention and control
(hand hygiene, screening, isolation)



Prudent use of antimicrobial agents
(only when needed, correct dose,
correct dose intervals, correct duration)

Thank you!

EUROPEAN ANTIBIOTIC AWARENESS DAY



A EUROPEAN
HEALTH INITIATIVE

18 November 2014



Website: <http://antibiotic.ecdc.europa.eu>
Facebook: EAAD.EU
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