

Antibiotics: handle with care!



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Antibiotic resistance **keeps increasing** in Europe, threatening patient safety in all healthcare settings

The emergence of bacteria resistant to multiple groups of antibiotics is particularly concerning, as infections due to these bacteria can be **severe, costly and sometimes fatal**

Only 70 years after the introduction of antibiotics, we are facing the possibility of a **future without effective antibiotics**

Up to half of all antibiotic use in hospitals is **unnecessary or inappropriate**



Antibiotic stewardship programmes can contribute to reduce antibiotic resistance in healthcare settings

Antibiotic stewardship programmes can be established by following a set of actions

Get the leadership from your setting on board: ensure support and allocation of staff and resources



Appoint leaders: one for the overall programme and one in charge of antibiotic use



Form your team: include prescribers as well as infectious disease specialists, clinical pharmacists and



Find and use tools: e.g. antibiotic guidelines and policies, electronic systems, pre-approval and post-authorizations forms for specific antibiotics



Track and report back: audit proactively antibiotic prescriptions and monitor antibiotic resistance trends, then provide feedback to the team



Ensure training and education: for medical, pharmacy, laboratory, nursing, and non-clinical staff, as well as patients and their families



Reduced inappropriate prescribing by **96%**



Reduced use of broad-spectrum antibiotics by **86%**



Reduced overall expenditures by **80%**



Reduced length of stay or mortality by **65%**



Reduced healthcare-associated infections by **71%**



Reduced antibiotic resistance by **58%**



Hospitals that implemented an antibiotic stewardship programme reported these improvements:

Effective antibiotic stewardship programmes across Europe

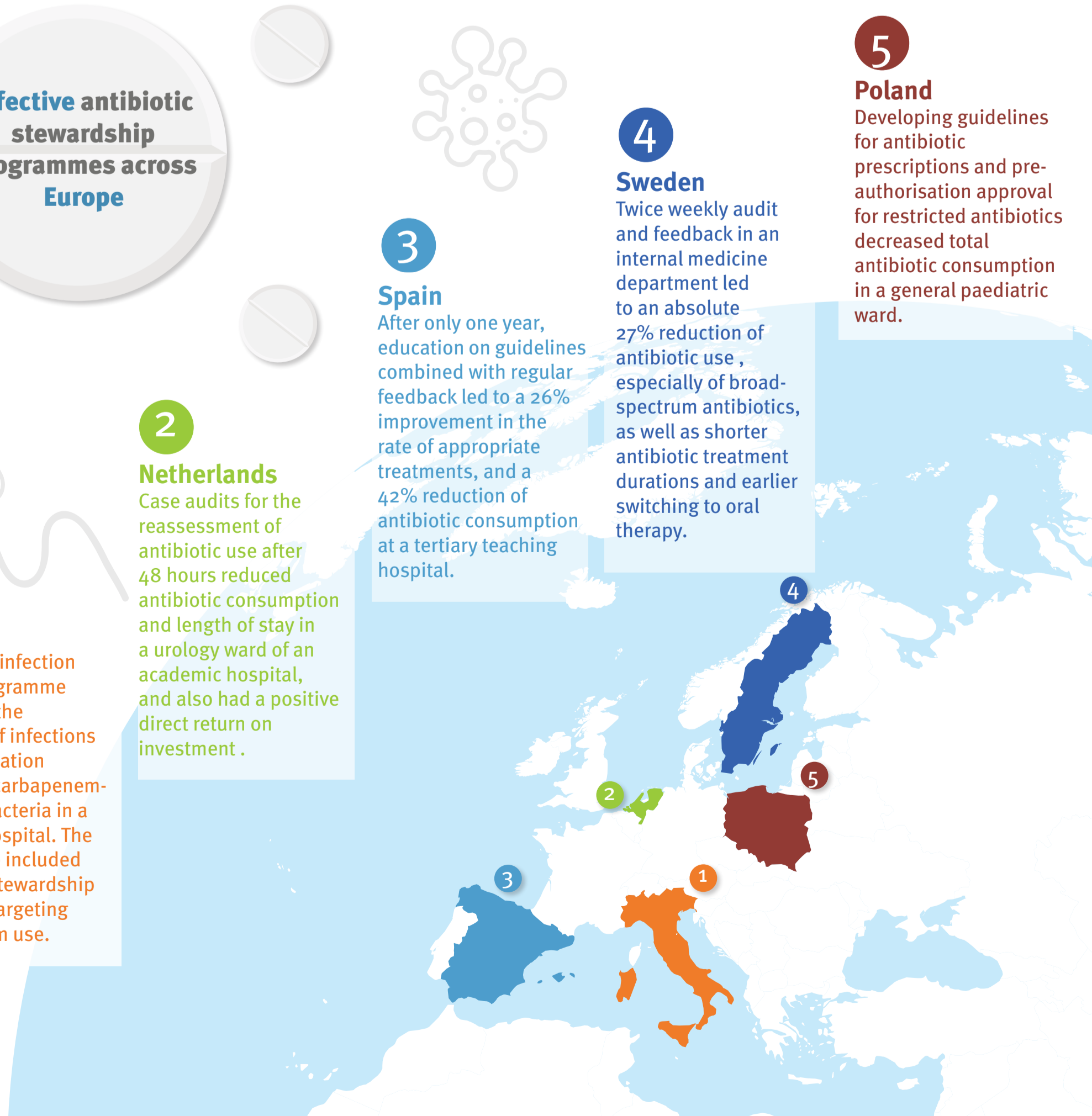
1 Italy
A four-year infection control programme decreased the incidence of infections and colonisation caused by carbapenem-resistant bacteria in a teaching hospital. The programme included antibiotic stewardship measures targeting carbapenem use.

2 Netherlands
Case audits for the reassessment of antibiotic use after 48 hours reduced antibiotic consumption and length of stay in a urology ward of an academic hospital, and also had a positive direct return on investment.

3 Spain
After only one year, education on guidelines combined with regular feedback led to a 26% improvement in the rate of appropriate treatments, and a 42% reduction of antibiotic consumption at a tertiary teaching hospital.

4 Sweden
Twice weekly audit and feedback in an internal medicine department led to an absolute 27% reduction of antibiotic use, especially of broad-spectrum antibiotics, as well as shorter antibiotic treatment durations and earlier switching to oral therapy.

5 Poland
Developing guidelines for antibiotic prescriptions and pre-authorisation approval for restricted antibiotics decreased total antibiotic consumption in a general paediatric ward.



If you would like to know more about the antibiotic stewardship programme in your hospital, contact [email address] or call [phone number]. See more information at [hospital website].

The statements in this infographic are supported by scientific evidence. Visit <http://antibiotic.ecdc.europa.eu> or scan the QR code.



Remember: everyone has a role to play to ensure that antibiotics remain effective!