

Experience with Strama in Sweden

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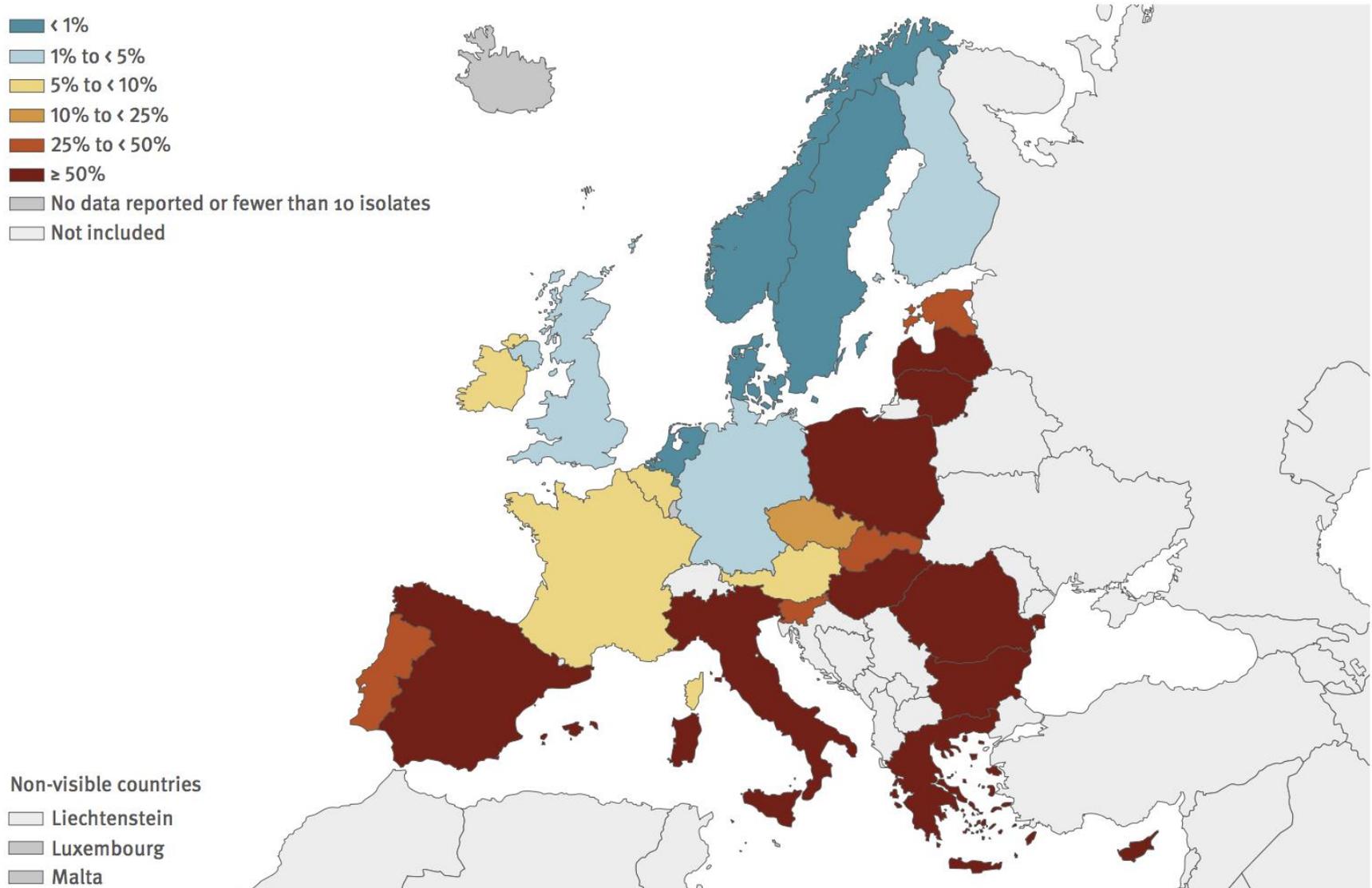
Chairman Strama Network

Member Swedish ICG AMR

WHO EURO Consultant on containment of AMR

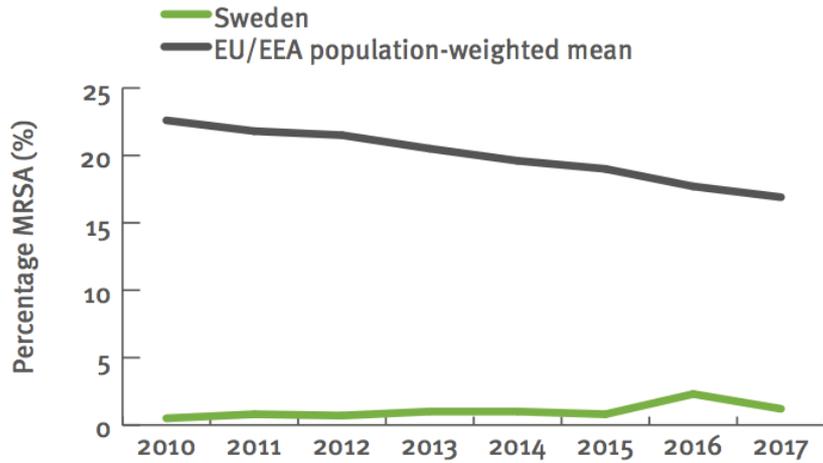


Figure 3.22. *Acinetobacter* spp. Percentage (%) of invasive isolates with resistance to carbapenems, by country, EU/EEA countries, 2017

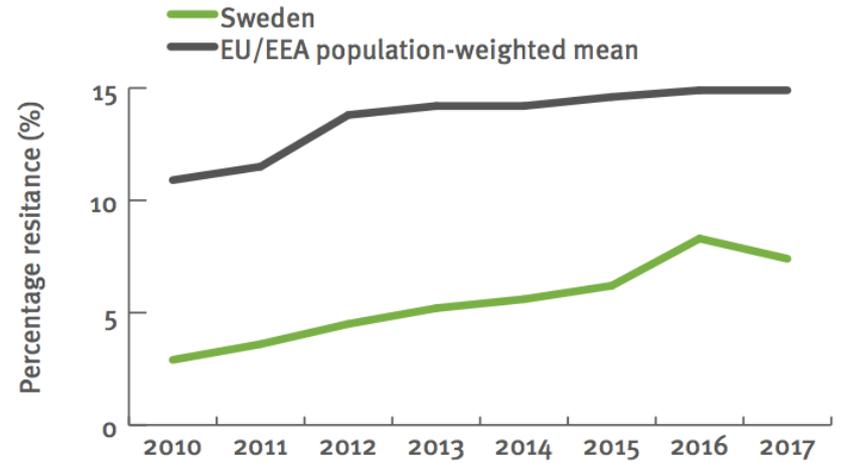


European Centre for Disease Prevention and Control. Surveillance of antimicrobial resistance in Europe – Annual report of the European Antimicrobial Resistance Surveillance Network (EARS-Net) 2017. Stockholm: ECDC; 2018.

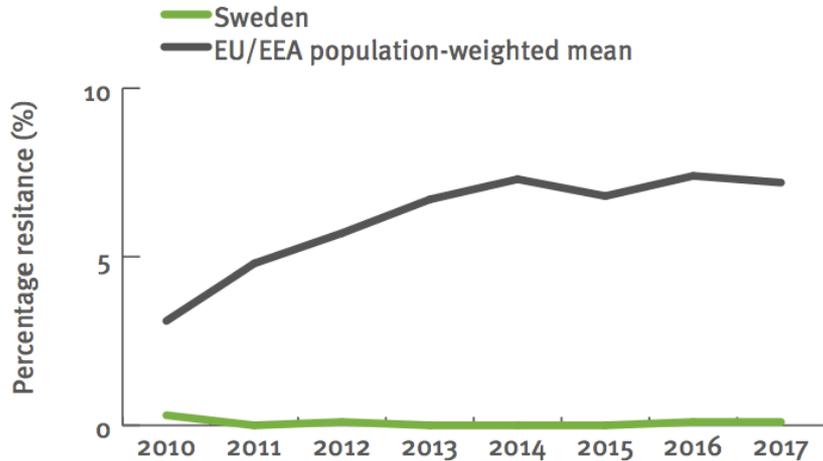
***Staphylococcus aureus*. Percentage (%) of invasive isolates with resistance to meticillin (MRSA), Sweden and EU/EEA population-weighted mean, 2010–2017**



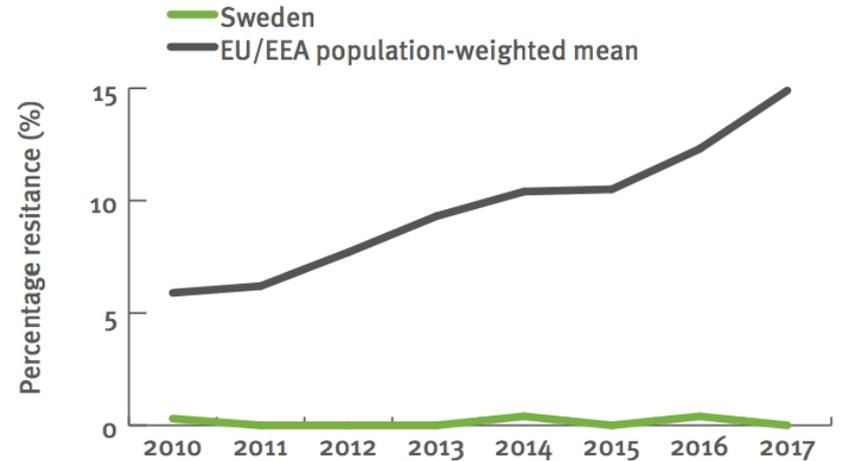
***Escherichia coli*. Percentage (%) of invasive isolates with resistance to third-generation cephalosporins, Sweden and EU/EEA population-weighted mean, 2010–2017**



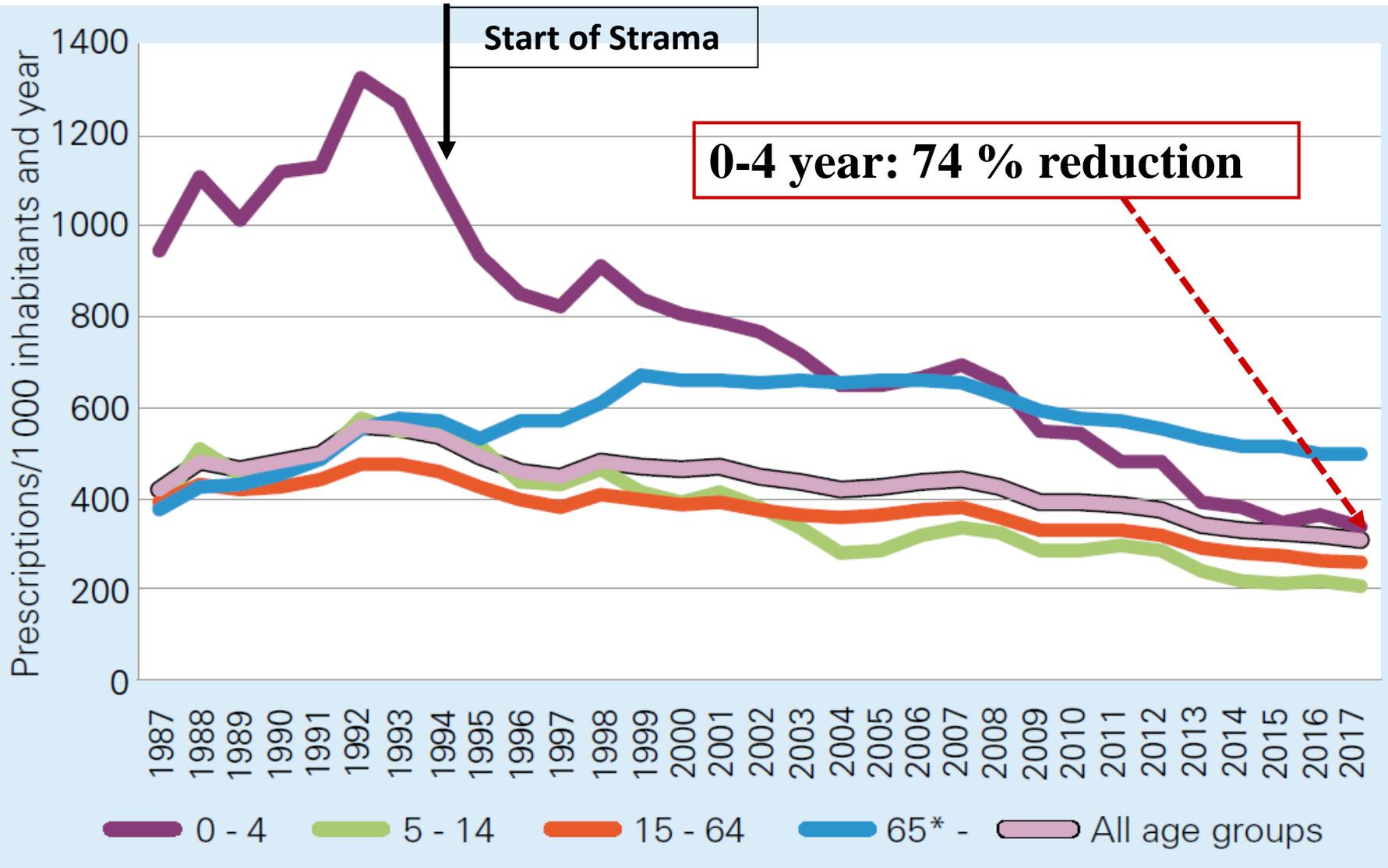
***Klebsiella pneumoniae*. Percentage (%) of invasive isolates with resistance to carbapenems, Sweden and EU/EEA population-weighted mean, 2010–2017**



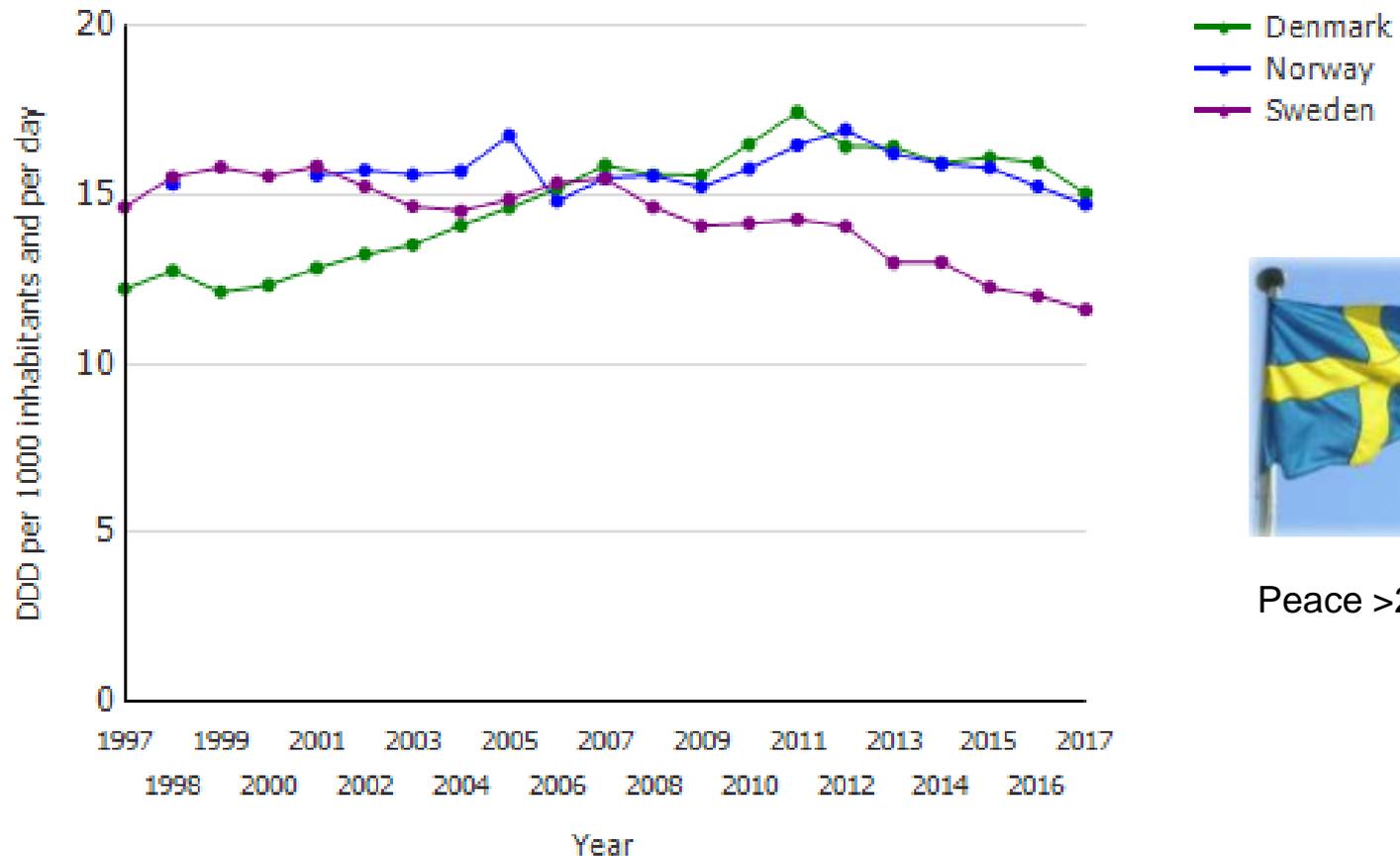
***Enterococcus faecium*. Percentage (%) of invasive isolates with resistance to vancomycin, Sweden and EU/EEA population-weighted mean, 2010–2017**



Antibiotic use Sweden 1987-2017 per age group



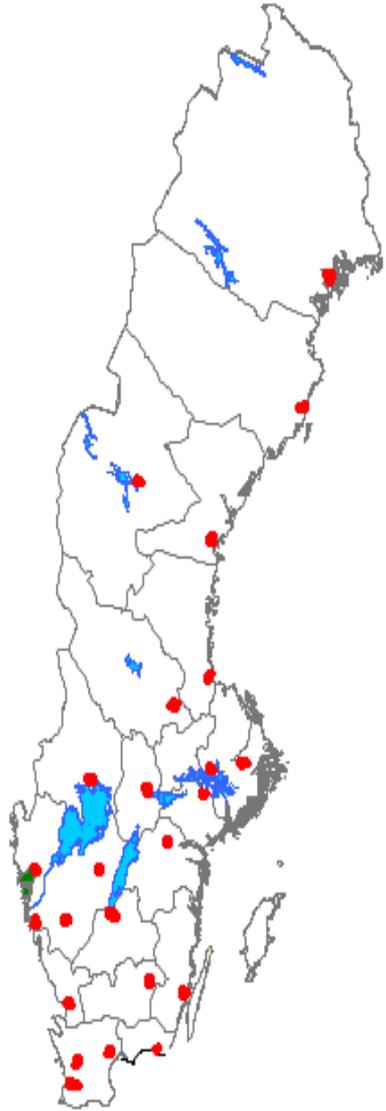
Trend of the consumption of antimicrobials in ATC group J01 (antibacterials for systemic use) in the community (primary care sector) in Sweden, Denmark and Norway from 1997 to 2017



Peace >200 years..

This report has been generated from ESAC-Net data submitted to TESSy, The European Surveillance System on 2018-11-20. The report reflects the state of submissions in TESSy as of 2018-11-20 at 20:00

Strama



- **Strama-groups were formed, 1995 in every county**
- **The County Medical Officers for Communicable Diseases Control have a leading role in these groups which include specialists from different medical fields**
- **A main objective is to evaluate the use of antibiotics and antibacterial resistance in the region and to improve prescribing patterns**

”Champions”..



Sigvard Mölstad, Professor
and PHC clinician

Strama's organization

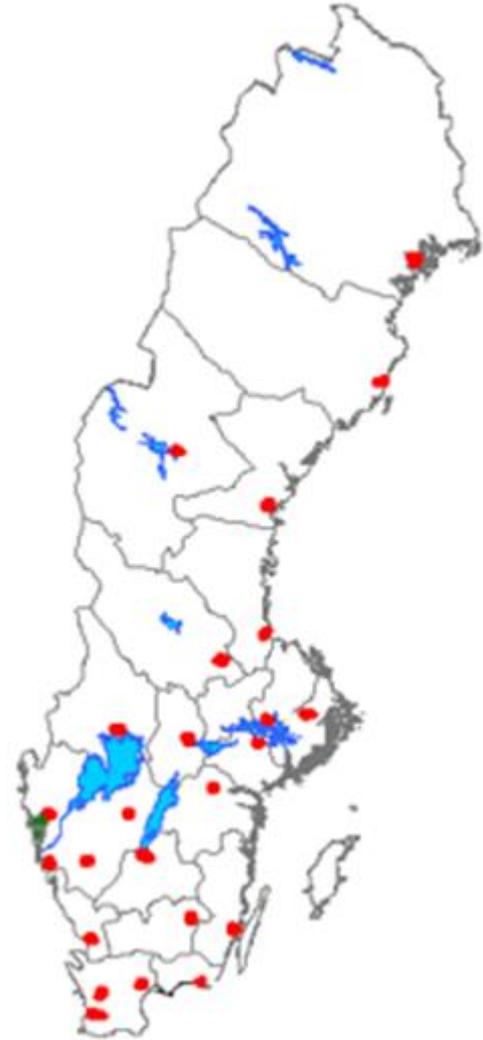
Remit and financing first from government, now from regional health-care providers

National Strama

The local (regional) Strama groups (typically):

- ✓ County medical officer
- ✓ Pharmacist
- ✓ Microbiologist
- ✓ General practitioner
- ✓ Infectious diseases specialist
- ✓ Infection control

- ✓ ENT, paediatrician, geriatrician, dentist...



The overall aims of Strama

- Best available treatment to the patient
- To preserve the effectiveness of antibiotics and prevent the emergence and spread of resistant bacteria

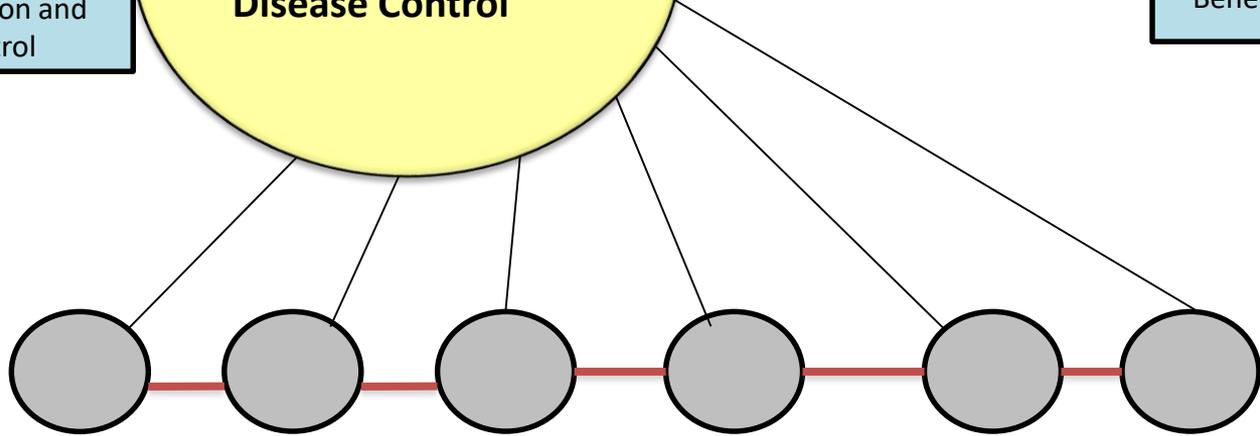
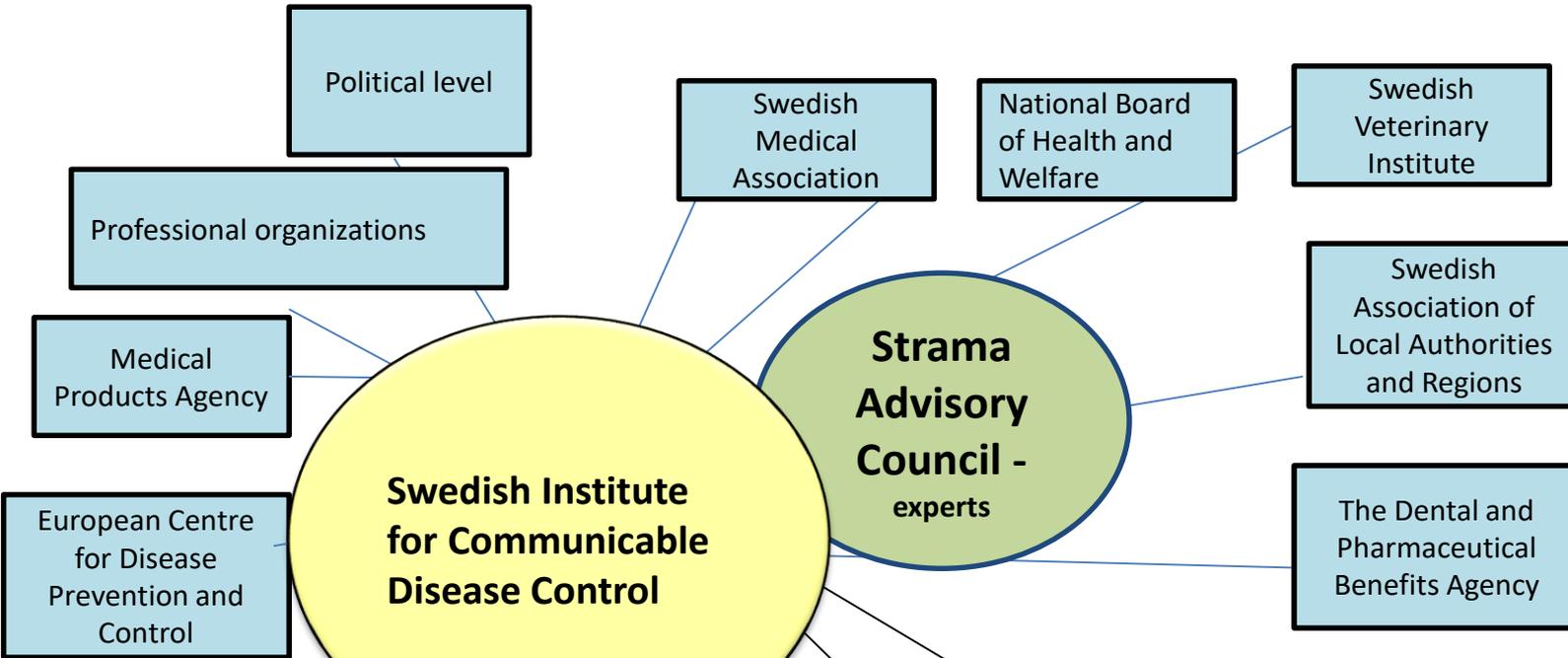
Multifaceted approach

- **Increase awareness about AMR** among professionals, politicians and the public
 - **Regular information** to Swedish media - local data!
 - **Campaigns** to improve prescribing and avoid unnecessary prescribing
- **National and regional meetings** to share experiences and ideas and catalyze multisectoral collaboration
- **Education and workshops** - multiple target groups
- **Scientific studies**; optimize use of old antibiotics, PPS
- **Monitoring** the international scientific literature and media

Strama

coordination and feedback

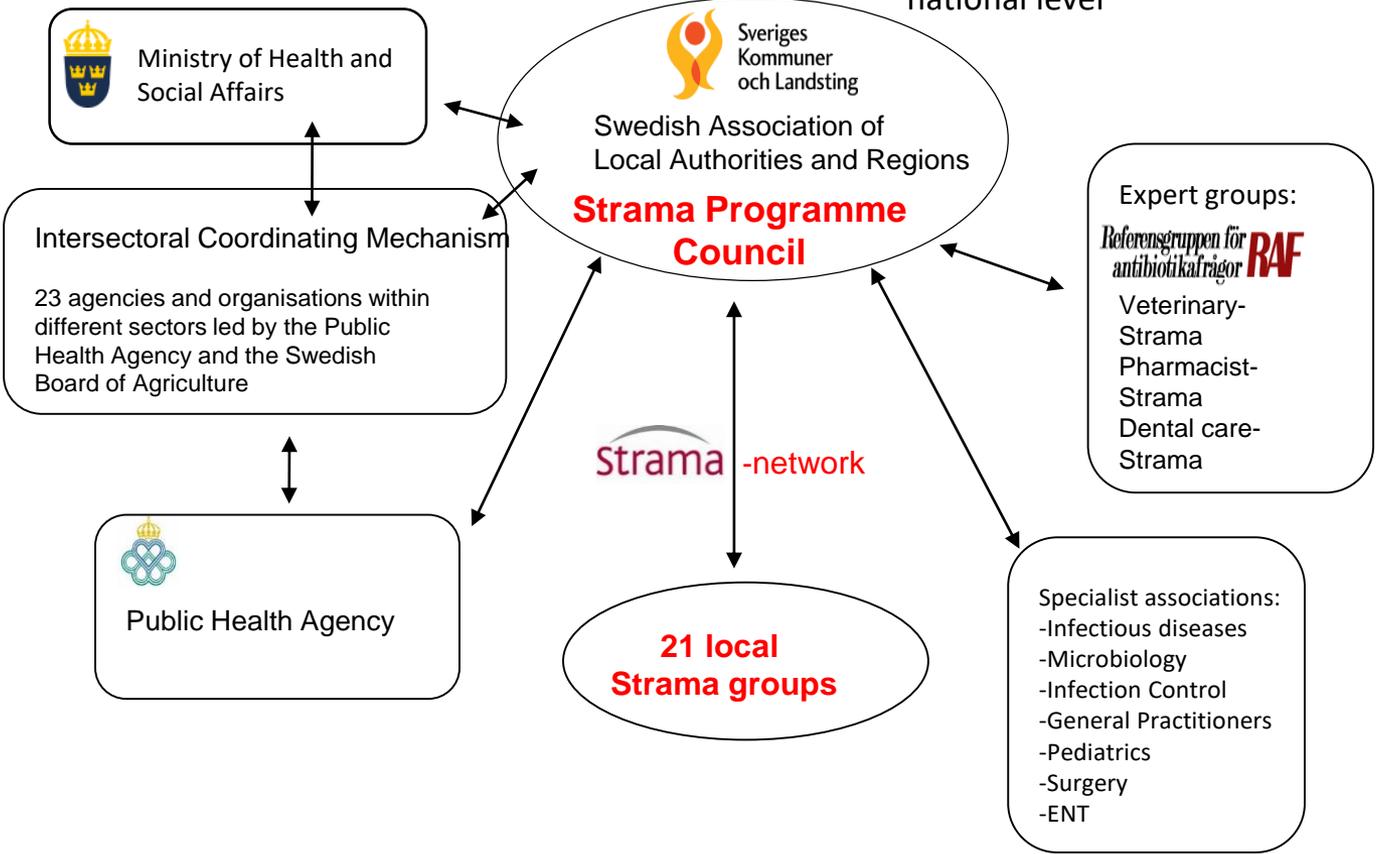
National coordination has always been needed but the means have shifted...



Network of local Strama groups

- Exchange ideas - What works?
- Web page
- Larger yearly meetings

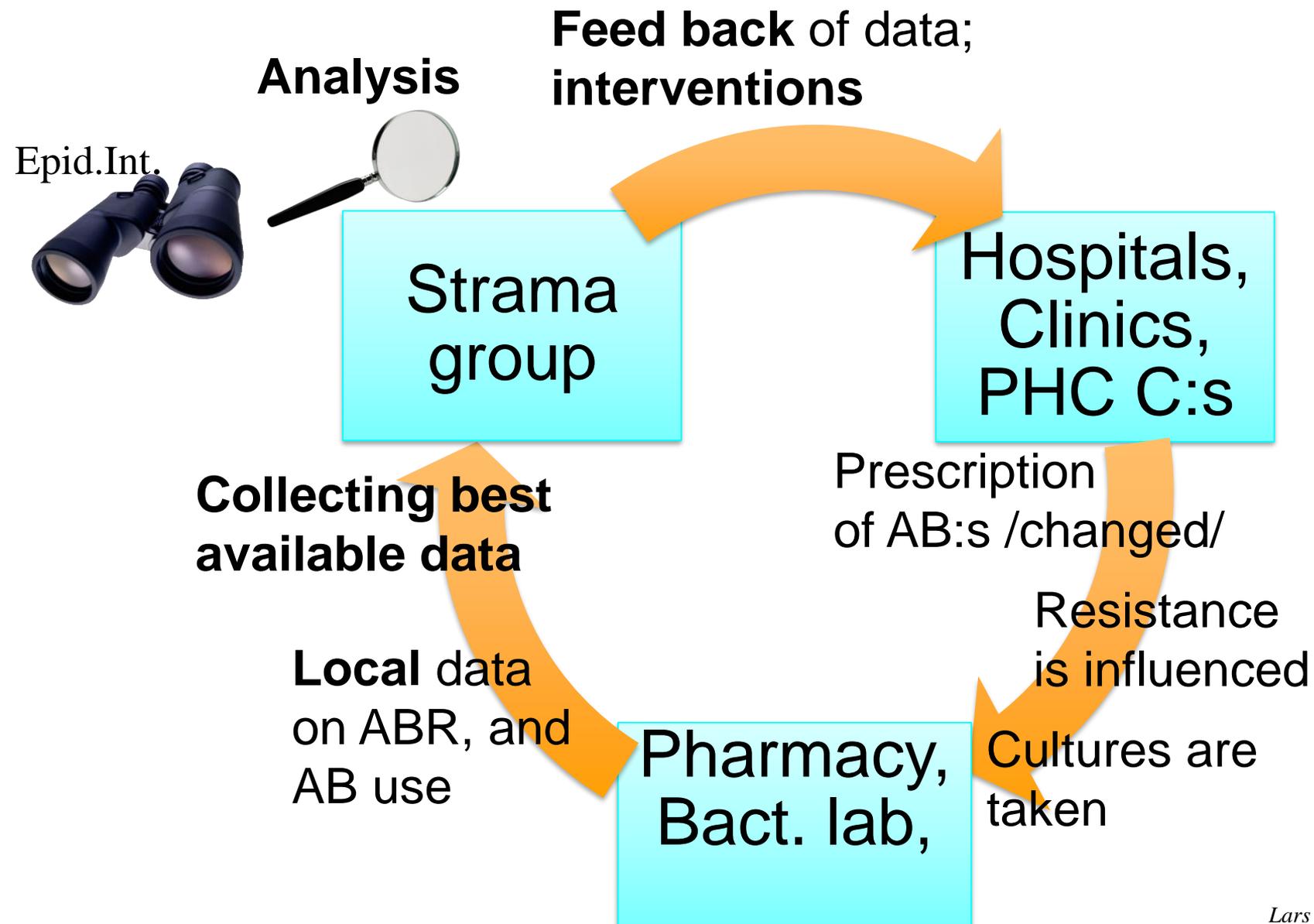
Current organization, 2 million SEK national level



Collaboration

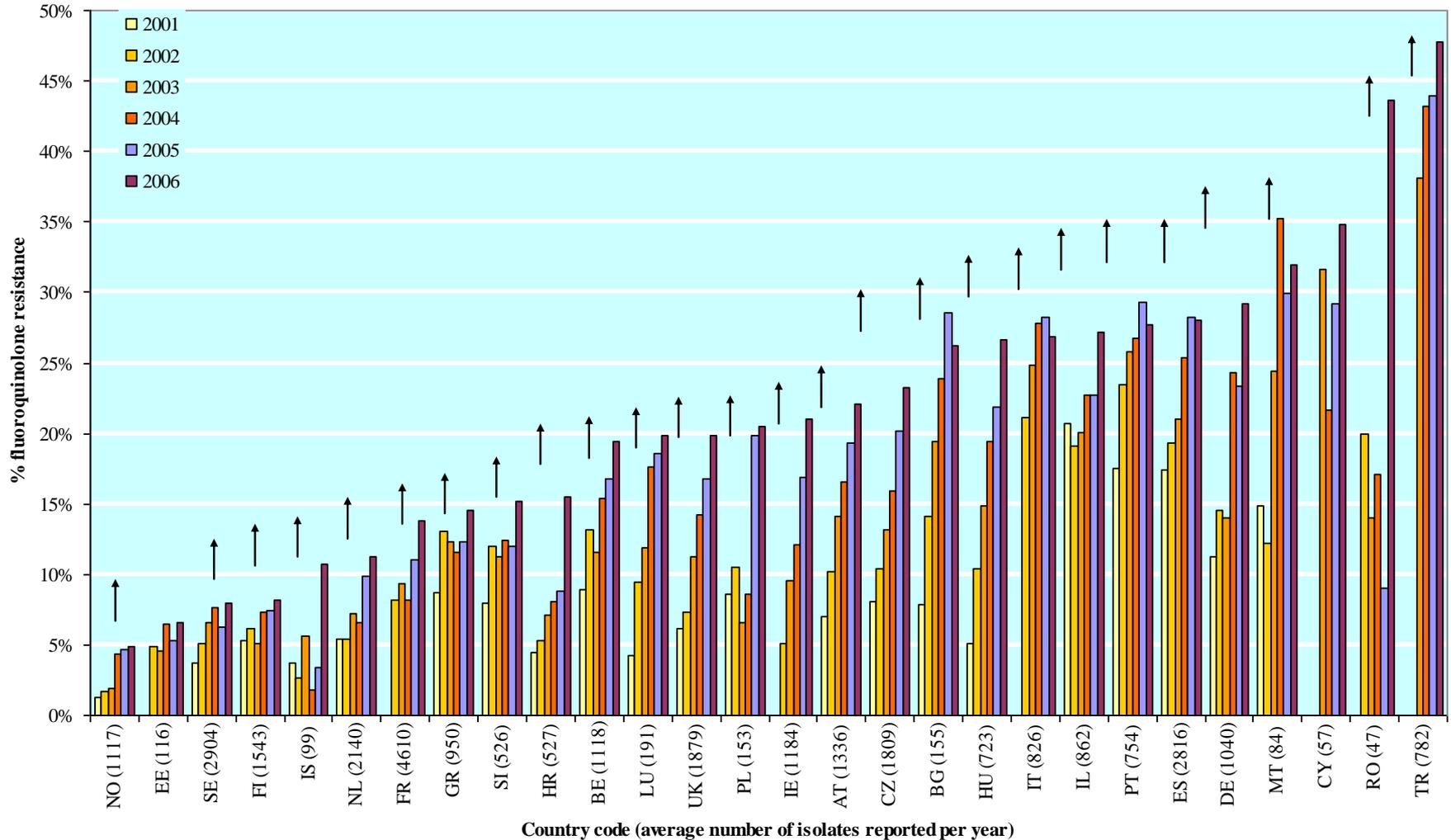


The continuous work of the Strama group

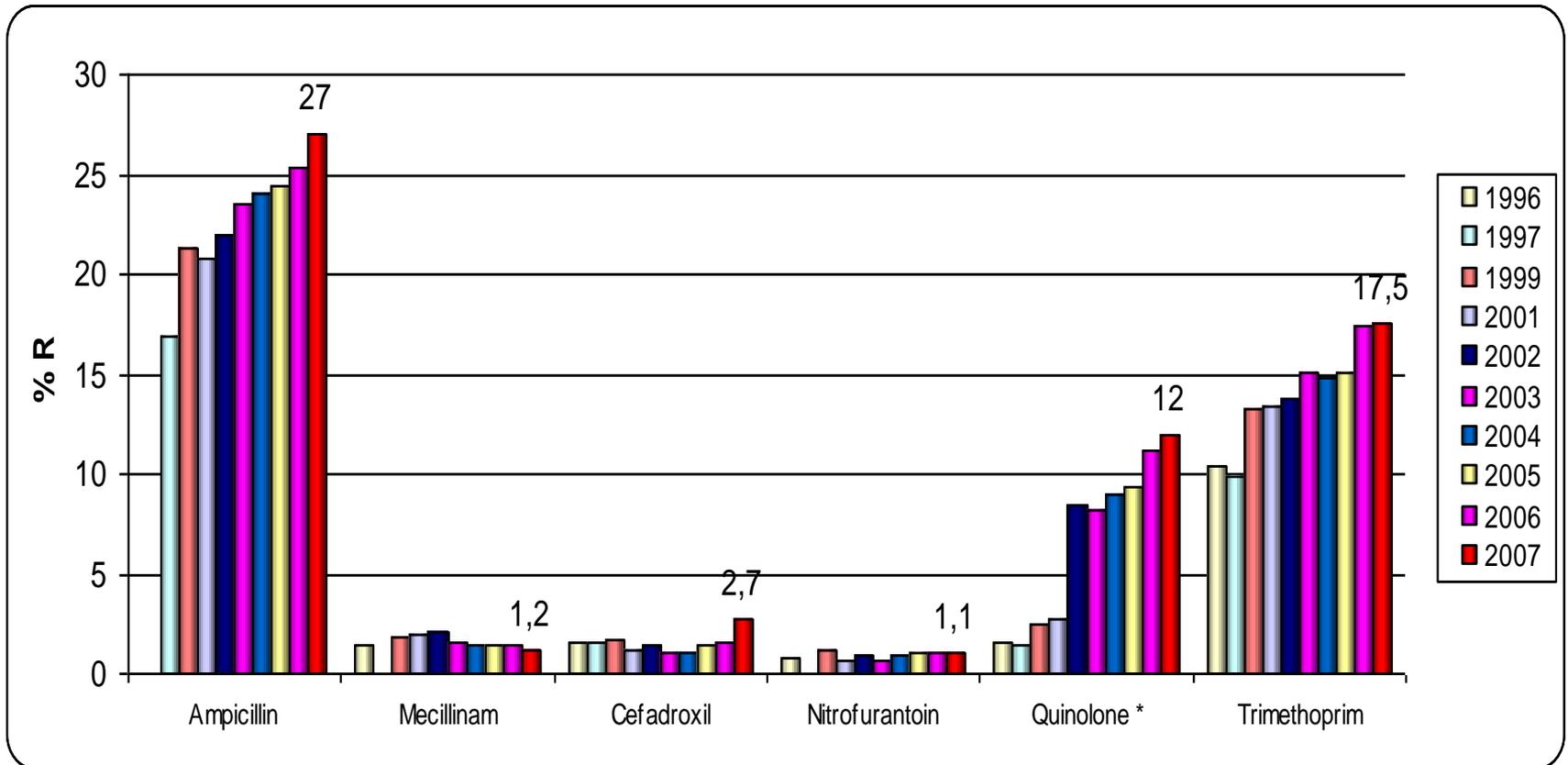


Example: fluoroquinolone resistance in *E. coli*

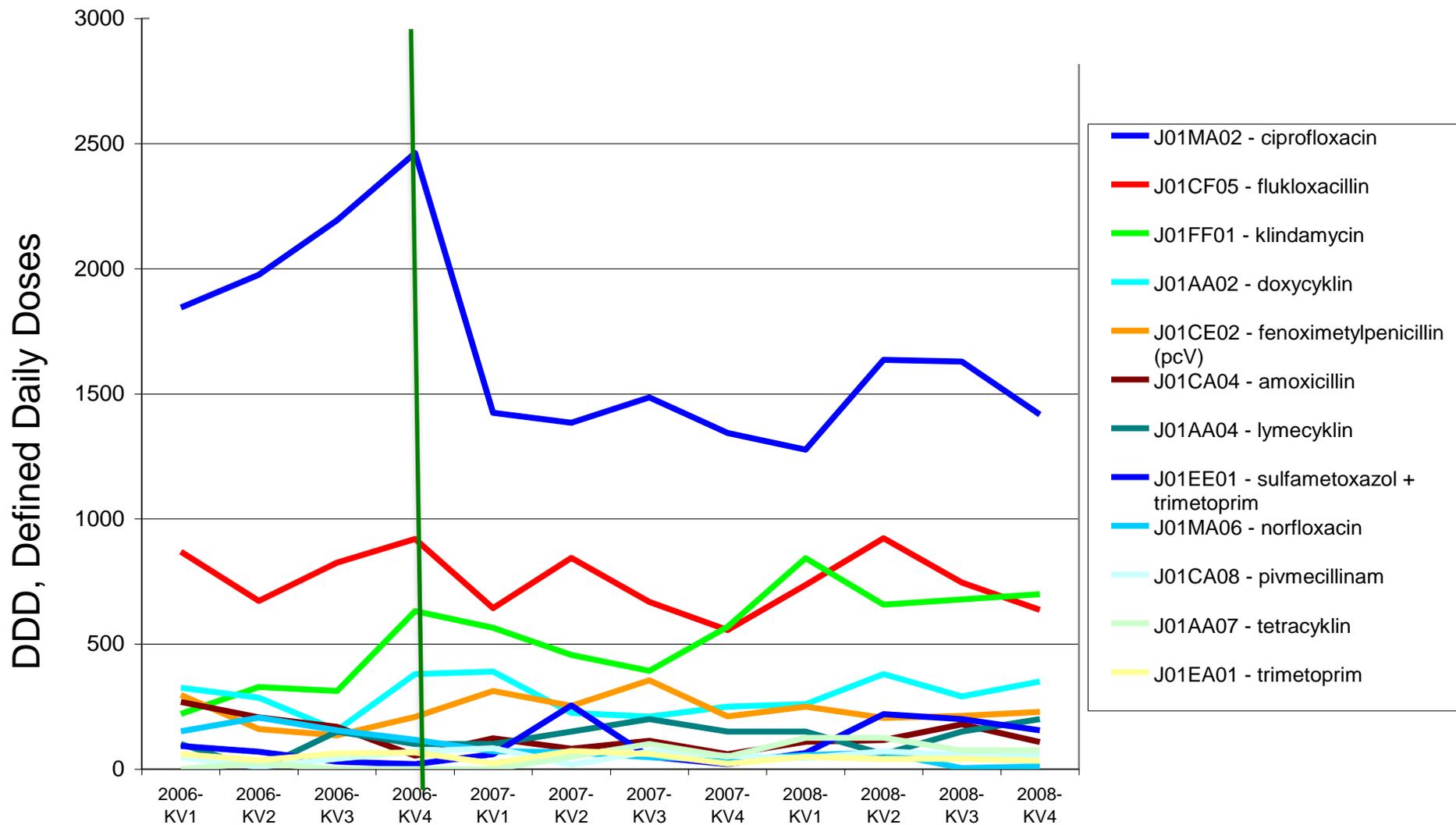
Fluoroquinolone-Resistant *E.coli* in Europe, 2001-2006



ResNet 2007: E.coli



Surgical clinic, Sundsvall hospital, antibiotic prescriptions 2006 - 2008



Fluoroquinolone use (J01M), total (prescriptions and requisitions)

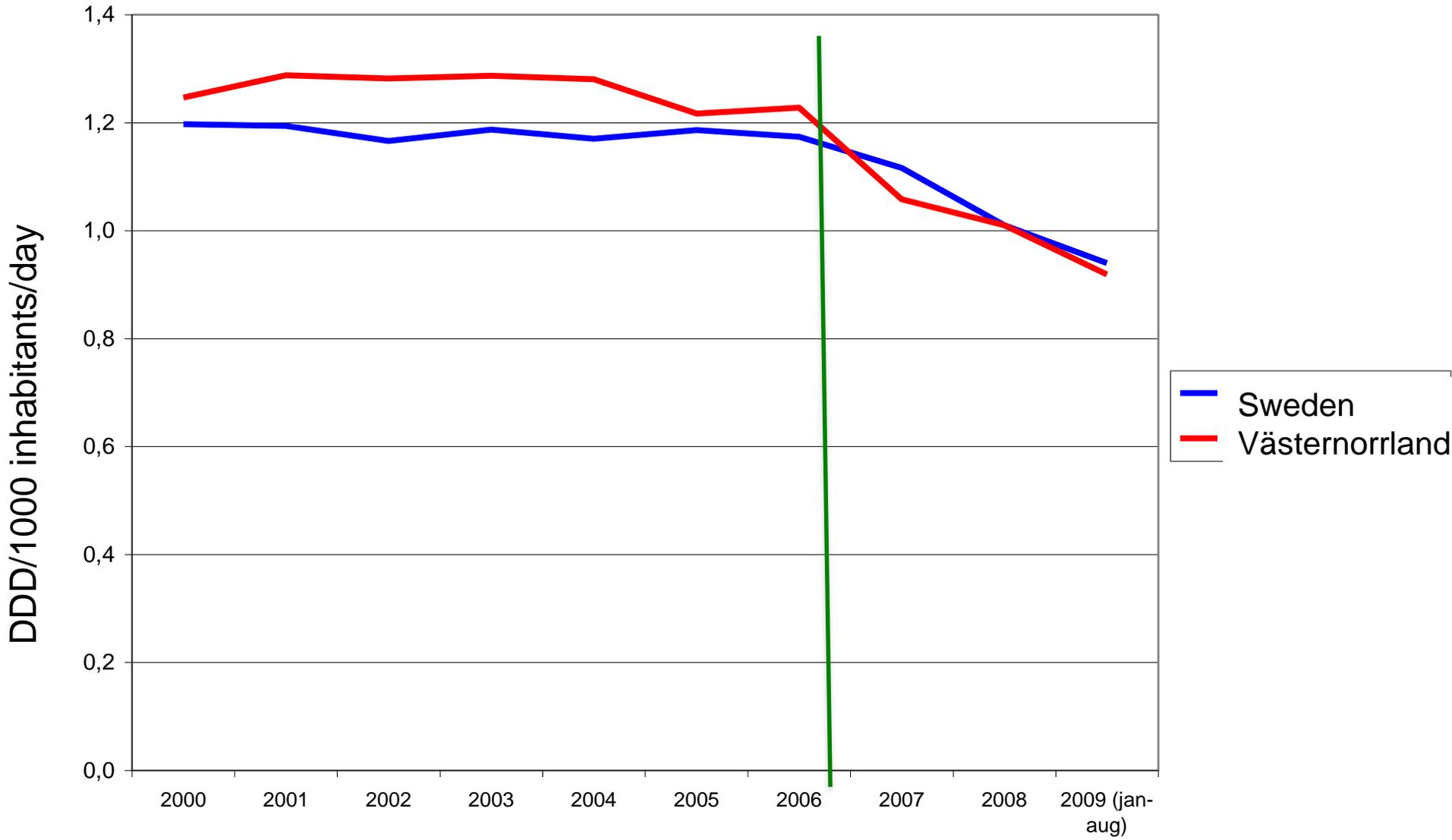
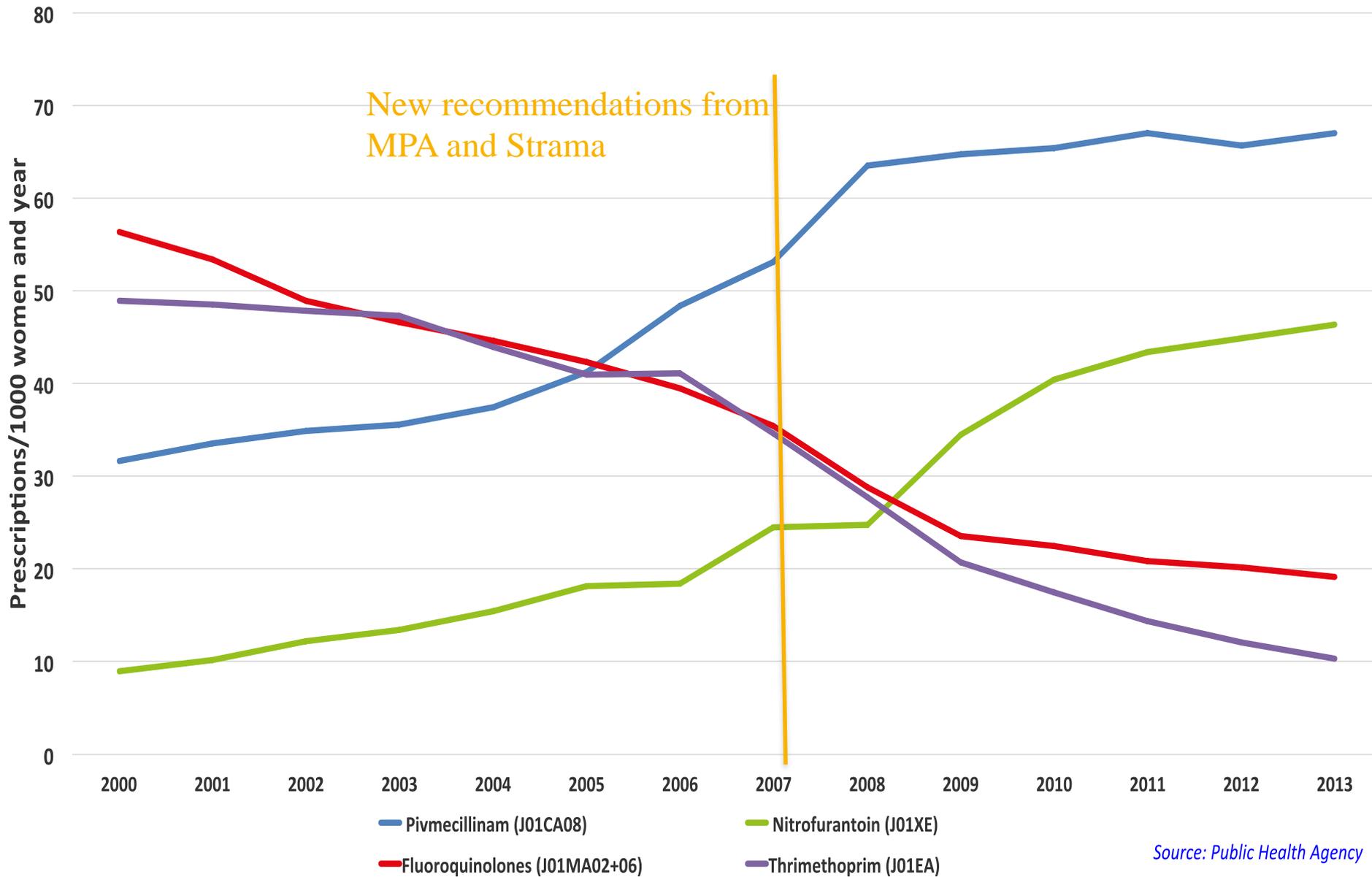


Figure by Ulf Lindahl, Strama Västernorrland

Sales of antibiotics commonly used to treat lower urinary tract infections in women (sales on prescriptions), age 18-79 years, 2000-2013, prescriptions/1000 women and year; Sweden



National treatment guidelines form the basis

- Written, evidence-based or consensus guidelines are released by MPA, PHA and Strama, means high **credibility**
- Distributed to all doctors
 - Short pocket and full printed versions

Info in "App" format

Face to face meetings by Stramagroups
Feed-back according to
prescription profile per
clinic



- AOM, 2000, updated 2010
- Tonsillitis 2001, updated 2012
- Sinusitis, 2005 (update 2019-20)
- Lower UTI, 2007, updated 2017
- Lower RTI, 2008
- Skin infections, 2009, updated 2018
- Early warning signs of serious infections in children, 2011

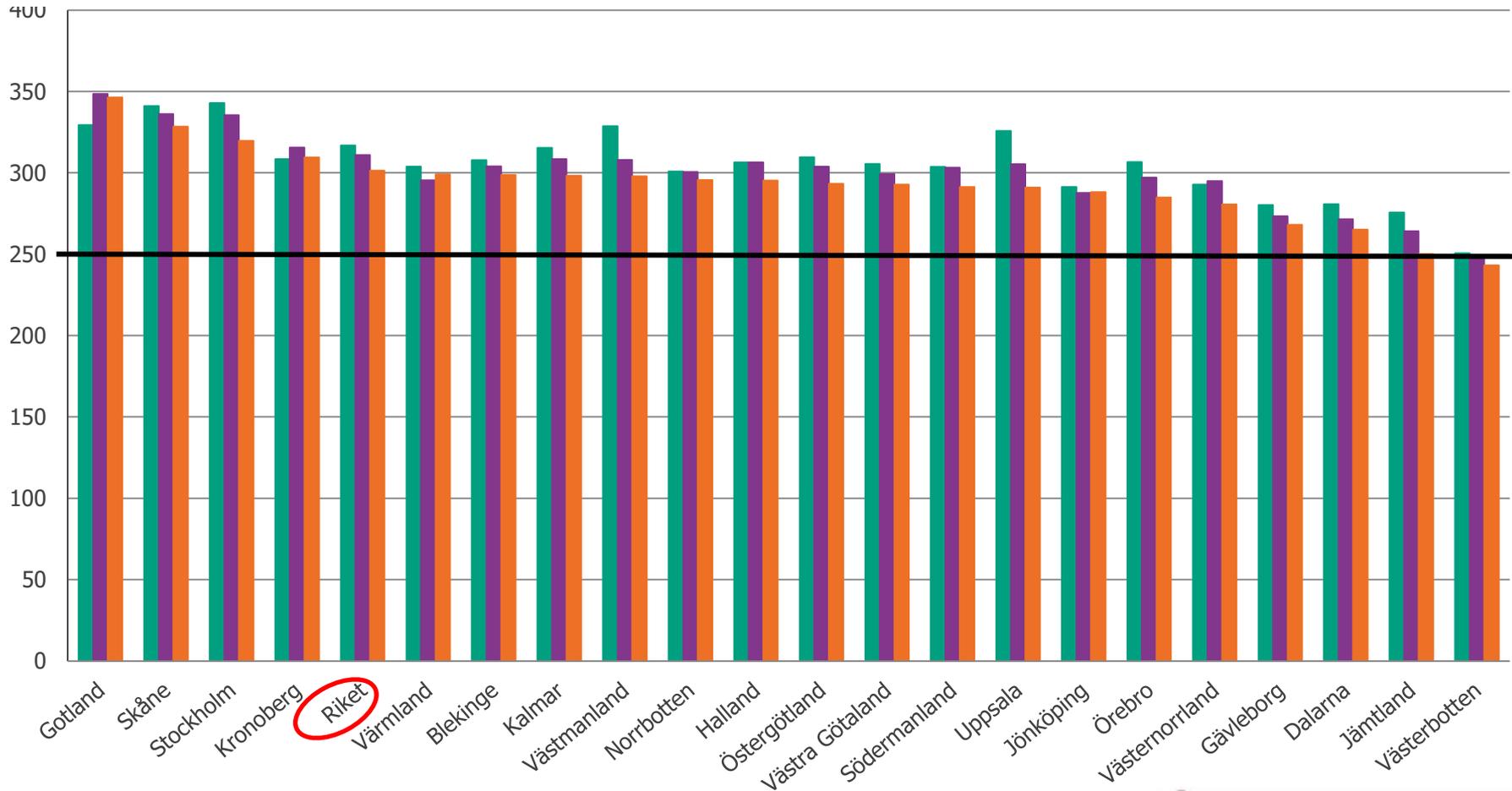
Open benchmarking at all levels (regions, municipalities, GP-station, hospital...)

■ 1 september 2015 - 31 augusti 2016

■ 1 september 2016 - 31 augusti 2017

■ 1 september 2017 - 31 augusti 2018

Recipes/ 1000 inhabitants/
year per region



Some LEAD WORDS – possible success factors

- Local engagement
- Network: bottoms-up, top-down, lateral sharing
- Early and strong government support
- Cooperation – multidisciplinary, multisectoral
- Champions
- Credibility
- Adaptability
- Long term perspective

Thank you for your attention!



Collaboration

