



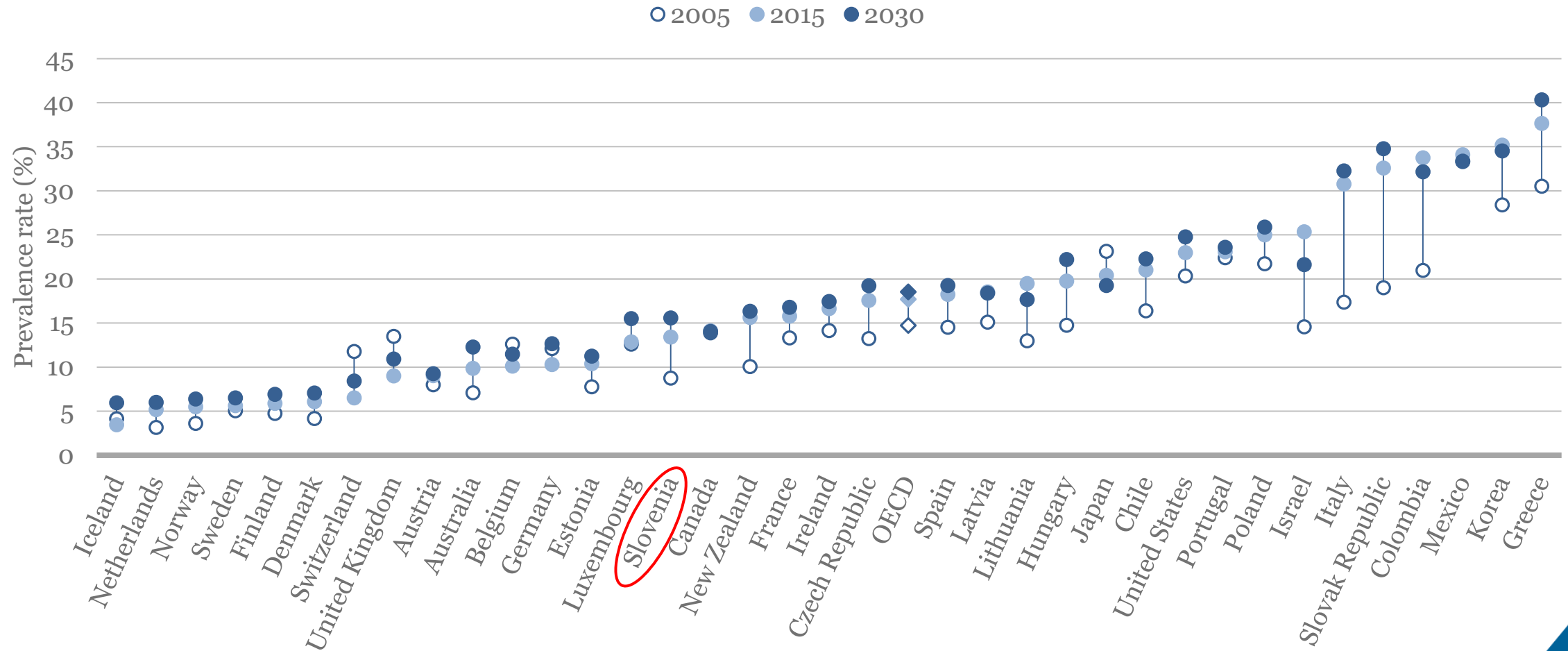
STEMMING THE SUPERBUG TIDE

Driss Ait Ouakrim
OECD – Health Division



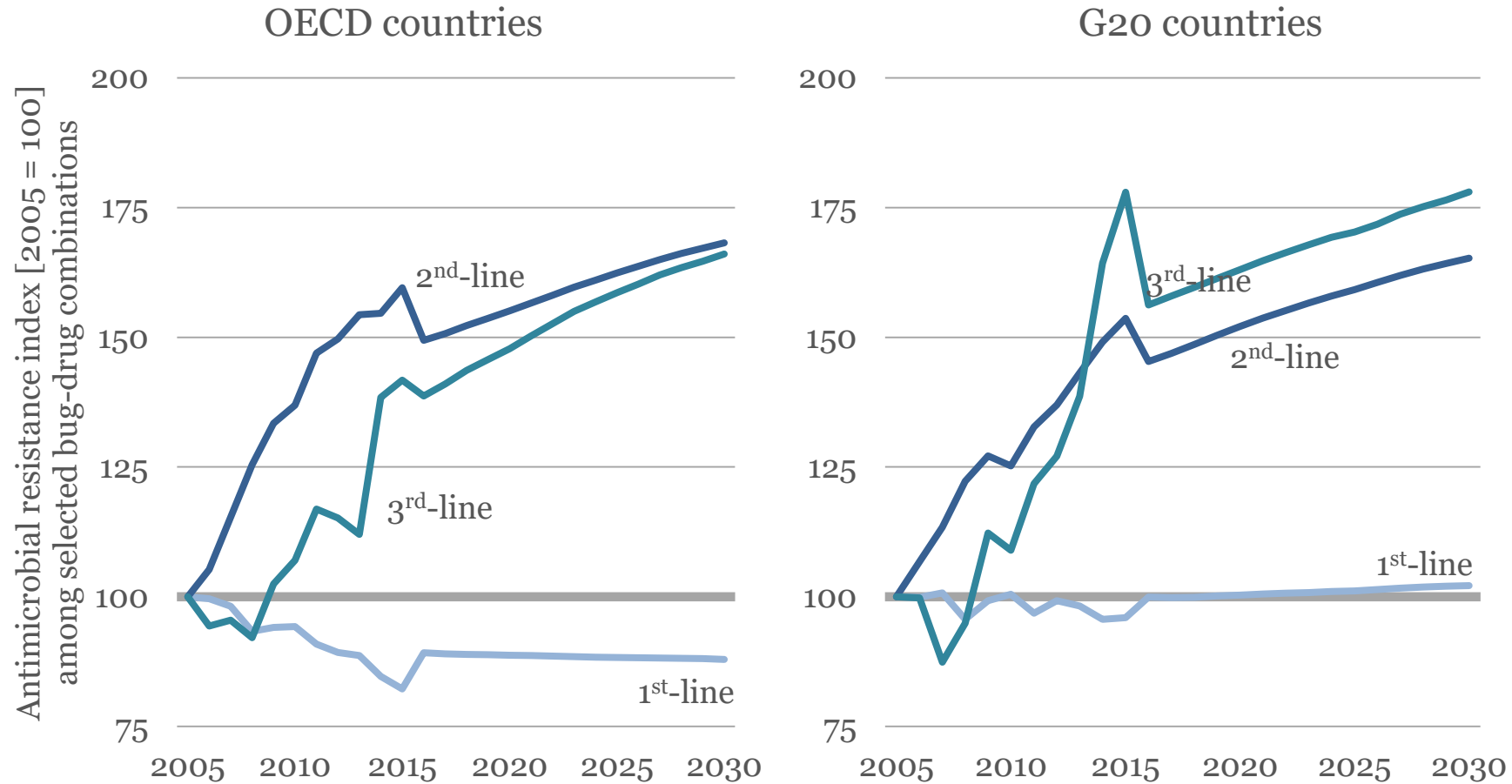
AMR Will Keep Increasing If No Effective Actions Are Put in Place

Resistance proportions for eight antibiotic-bacterium combinations in the OECD





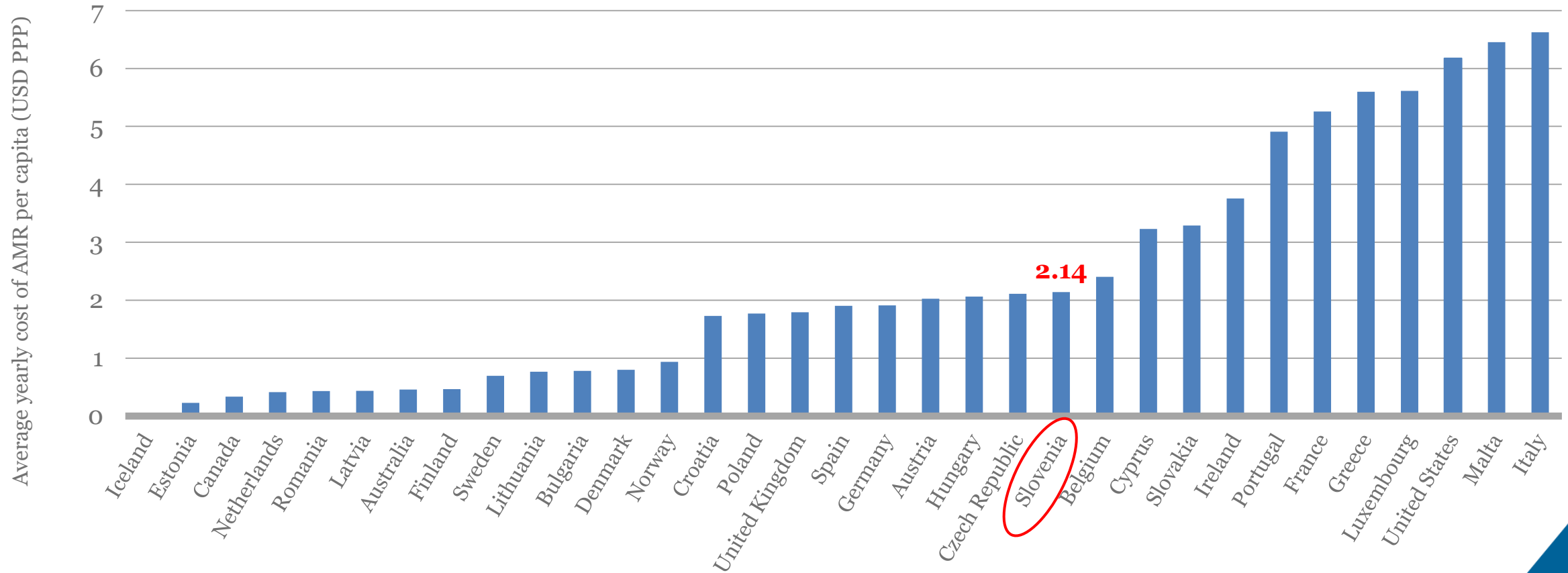
Resistance to 2nd and 3rd line Treatments Will Grow the Most





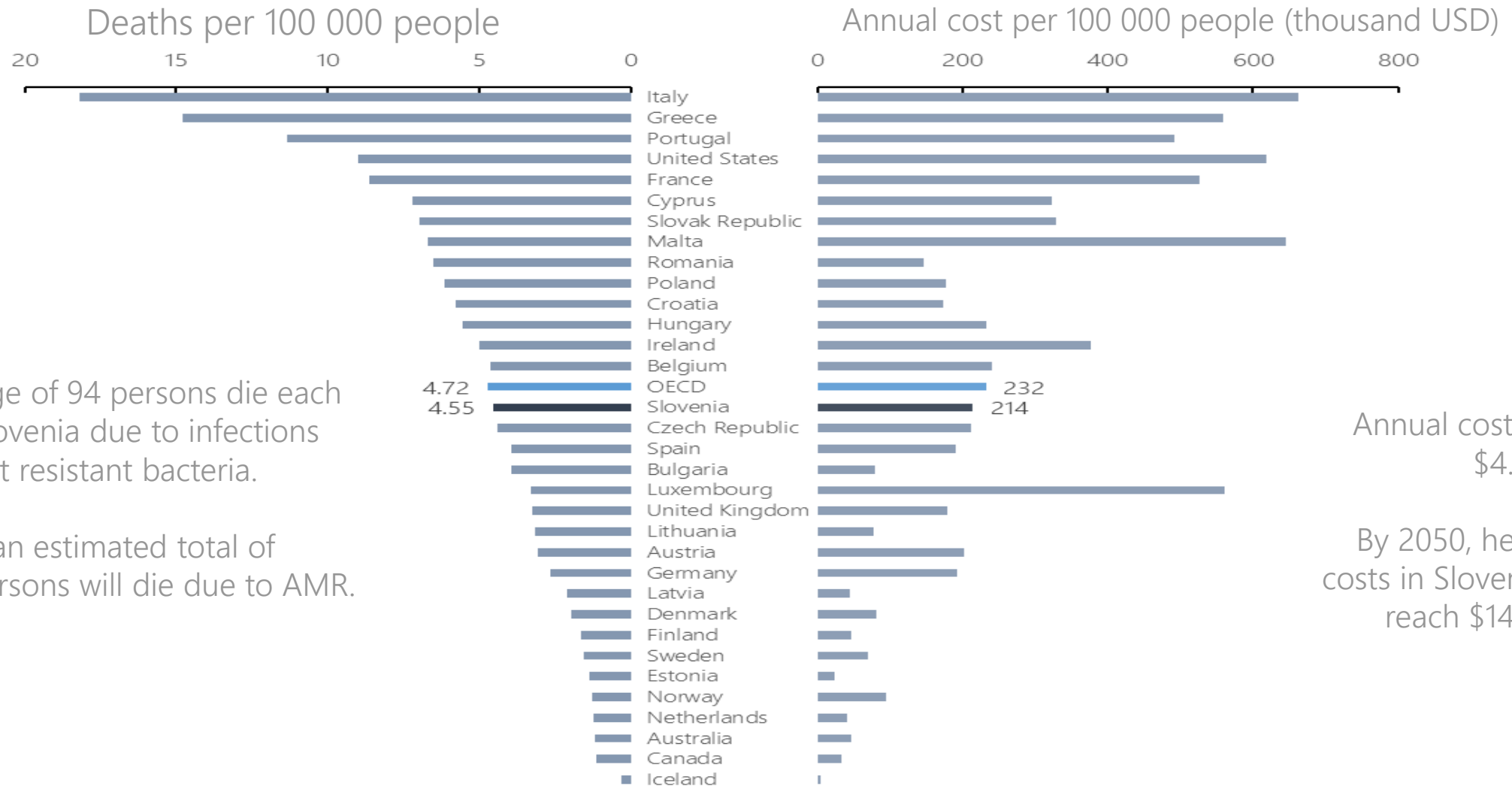
Health and economic burden of AMR

- 67 000 deaths per year
- 3.5B USD PPPs per year





Health and economic burden of AMR



An average of 94 persons die each year in Slovenia due to infections from eight resistant bacteria.

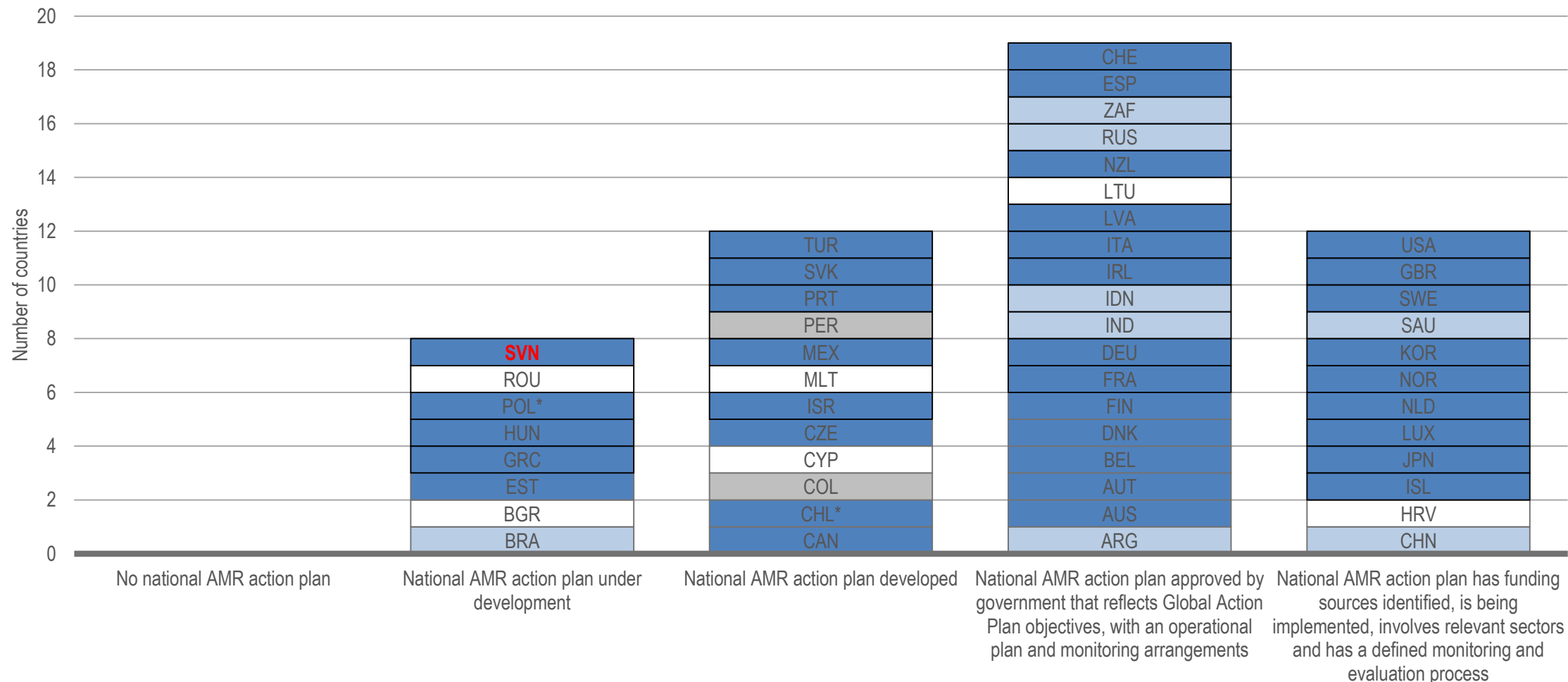
By 2050, an estimated total of 16 000 persons will die due to AMR.

Annual cost of AMR: \$4.4 million

By 2050, health care costs in Slovenia could reach \$143 million



Only 9 OECD Countries Have Developed and Fund a 'One-health' AMR Action Plan





Policy Approaches to Tackle Irrational Use of Antimicrobials



Delayed prescriptions



Mass media campaigns



Stewardship programmes



Enhanced environm. hygiene



Improved hand hygiene

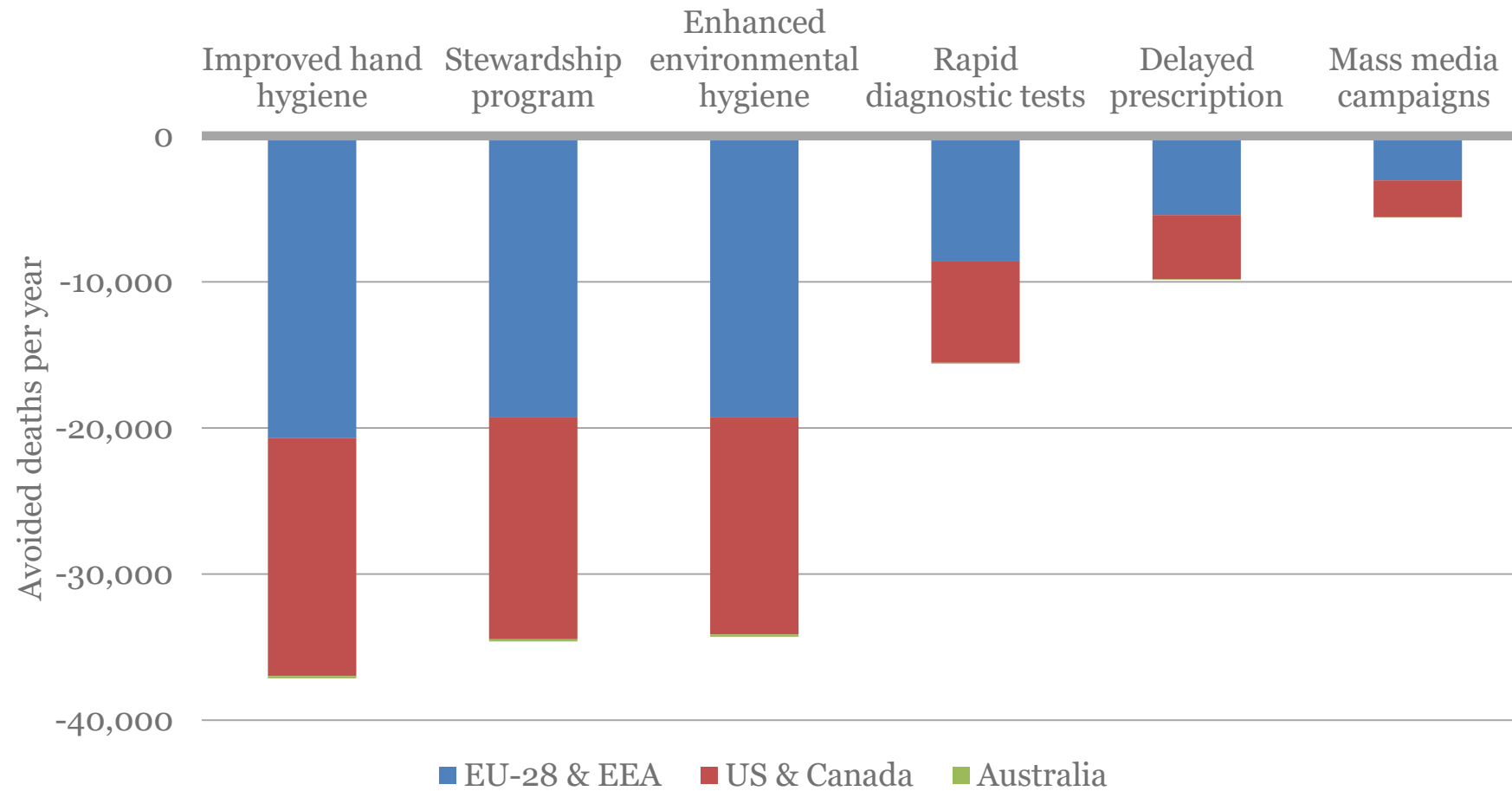


RDTs in GP practices

	Delayed prescriptions	Mass media campaigns	Stewardship programmes	Enhanced environm. hygiene	Improved hand hygiene	RDTs in GP practices
Key aspects	<ul style="list-style-type: none"> • Up to 3 days post-dated prescription • Education purposes while providing 'sense of safety' • Different approaches 	<ul style="list-style-type: none"> • Messages delivered by major mass media (TV, radio, journals, etc.) • Yearly waves centered on the winter season 	<ul style="list-style-type: none"> • Educational/behavioural interventions for physicians; • Decision aid tools 	<ul style="list-style-type: none"> • Implementation of advanced cleaning techniques (e.g. no touch) • Training support 	<ul style="list-style-type: none"> • Culture-change program on the WHO-5 campaign • Cleaning facilities available at the point of care • Training for healthcare personnel 	<ul style="list-style-type: none"> • Early identification of viral/bacter. infections and of AMR • Reimbursement of test to GP, incentive to use, info for patients
Effects in literature	63% ↓ filled-in prescriptions	6.5% ↓ antibiotic consumption	40% ↓ antibiotic prescription 24-68% ↓ AMR	26% - 49% ↓ hospital-acquired infections	48% ↓ hospital-acquired infections	22% ↓ antibiotic consumption

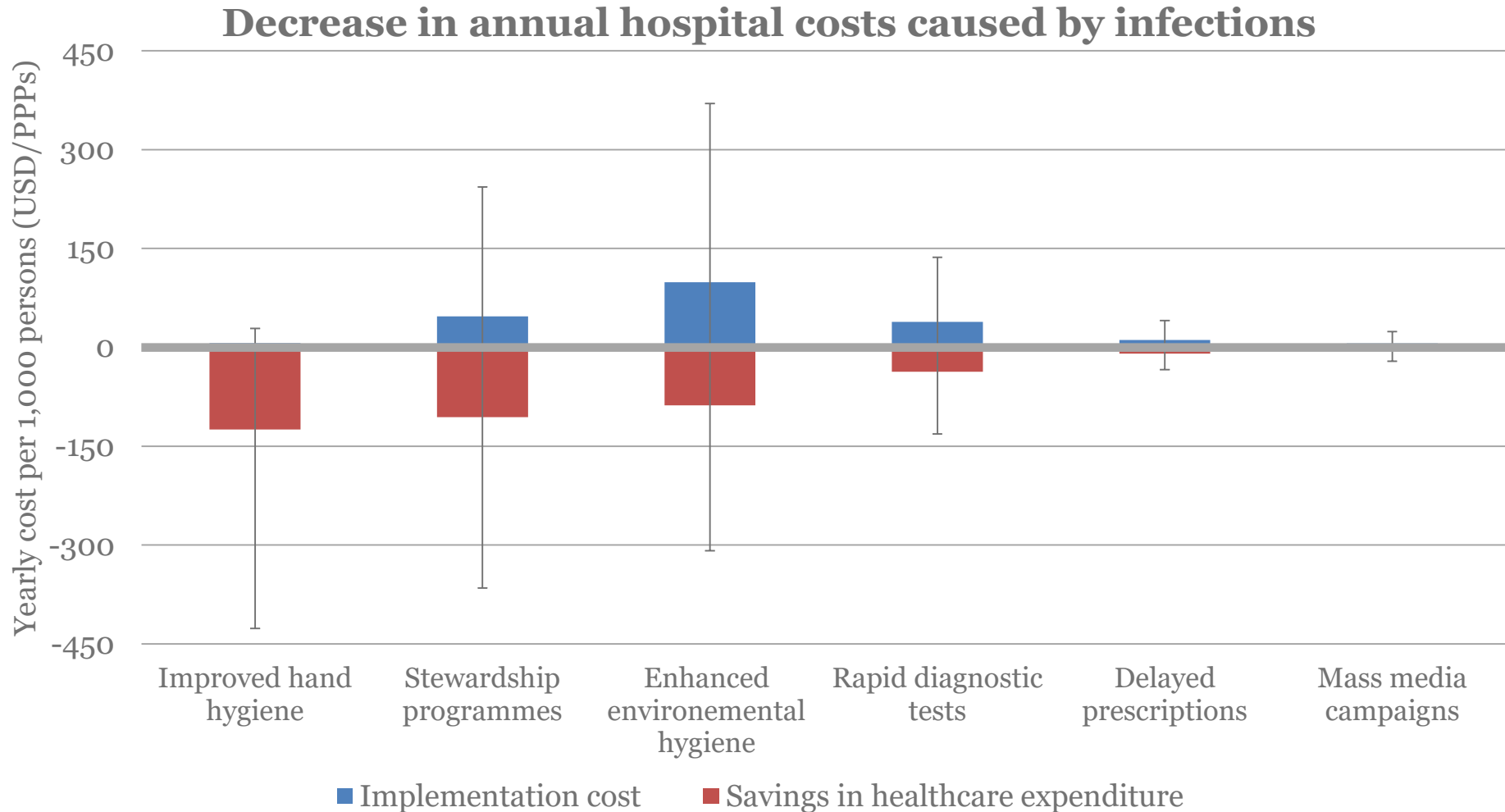


Public Health Policies to Tackle AMR Save Lives...





... And Decrease Healthcare Expenditure

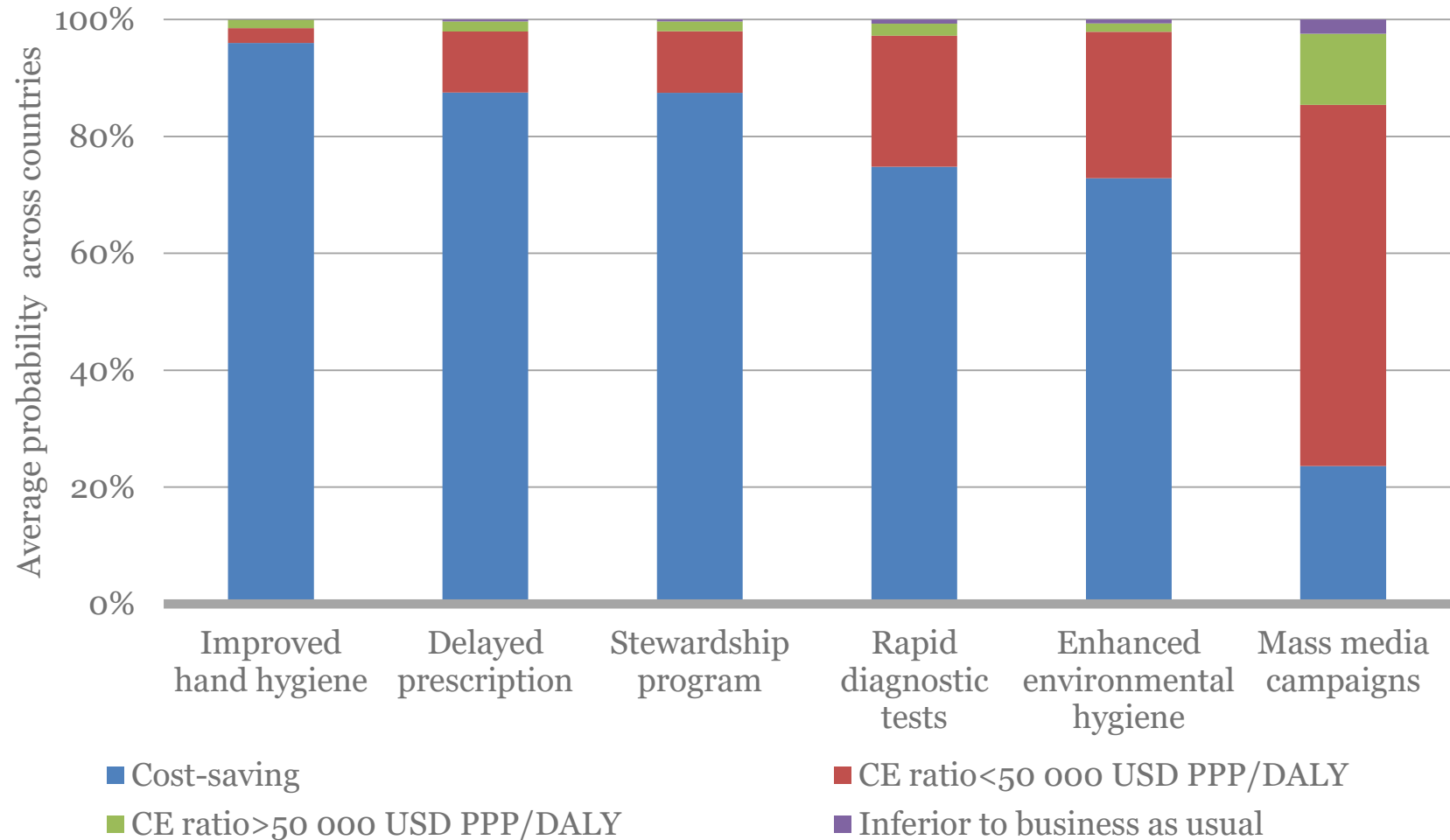


Note: columns show the median value across 33 OECD and EU countries; whiskers show min and max values

Source: OECD. Stemming the Superbug Tide: just a few dollars more. 2018. [oe.cd/amr-2018](https://www.oecd.org/amr-2018)



Tackling AMR is a Very Good Investment for OECD and EU Countries





Effects of individual AMR control policies in Slovenia

	Lives saved per year	Costs per year (million)	Return per dollar invested
Improving hand hygiene is one of the most effective strategies to prevent hospital-acquired infections	64	-\$2.7	\$1.9
Stewardship programmes aim to increase awareness and to rationalise prescription practices among health care personnel	57	-\$0.9	\$1.3
Enhanced environmental hygiene encompasses the decontamination, disinfection, cleaning and sterilisation of hospital environments and equipment	58	\$2.5	\$0.9
Delayed antimicrobial prescribing avoids unnecessary consumption of antimicrobials in outpatient and primary care settings	16	\$0.04	\$0.8
Mass media campaigns raise public awareness about the dangers associated with inappropriate antimicrobial prescription	9	\$0.01	\$0.9
Rapid diagnostic tests determine, within hours, whether an antimicrobial treatment should be initiated and which should be used	25	\$1.4	-\$0.6



A 4-Pronged Approach is Needed to Steam the Superbug Tide

Stewardship programmes
to promote prudent use of antibiotics and end decades of over-prescription



Enhanced hygiene in healthcare settings
to minimize cross-patient transmission of resistant and susceptible infections

‘mixed-intervention’
package

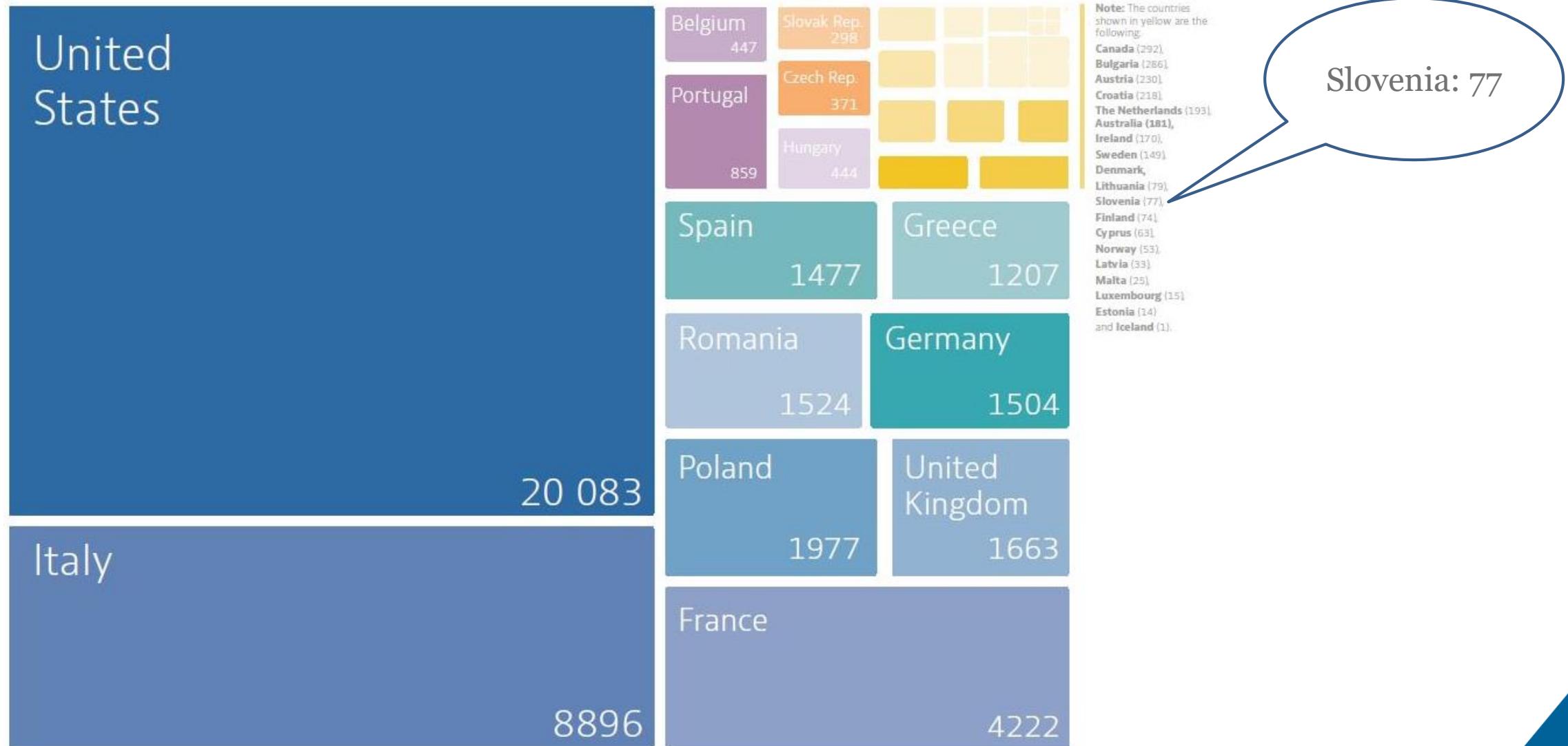
Mass media campaigns
to make people aware of the risks associated with imprudent use of antibiotics



Rapid diagnostic tests
to detect whether an infection requires antibiotics or not, in primary care settings

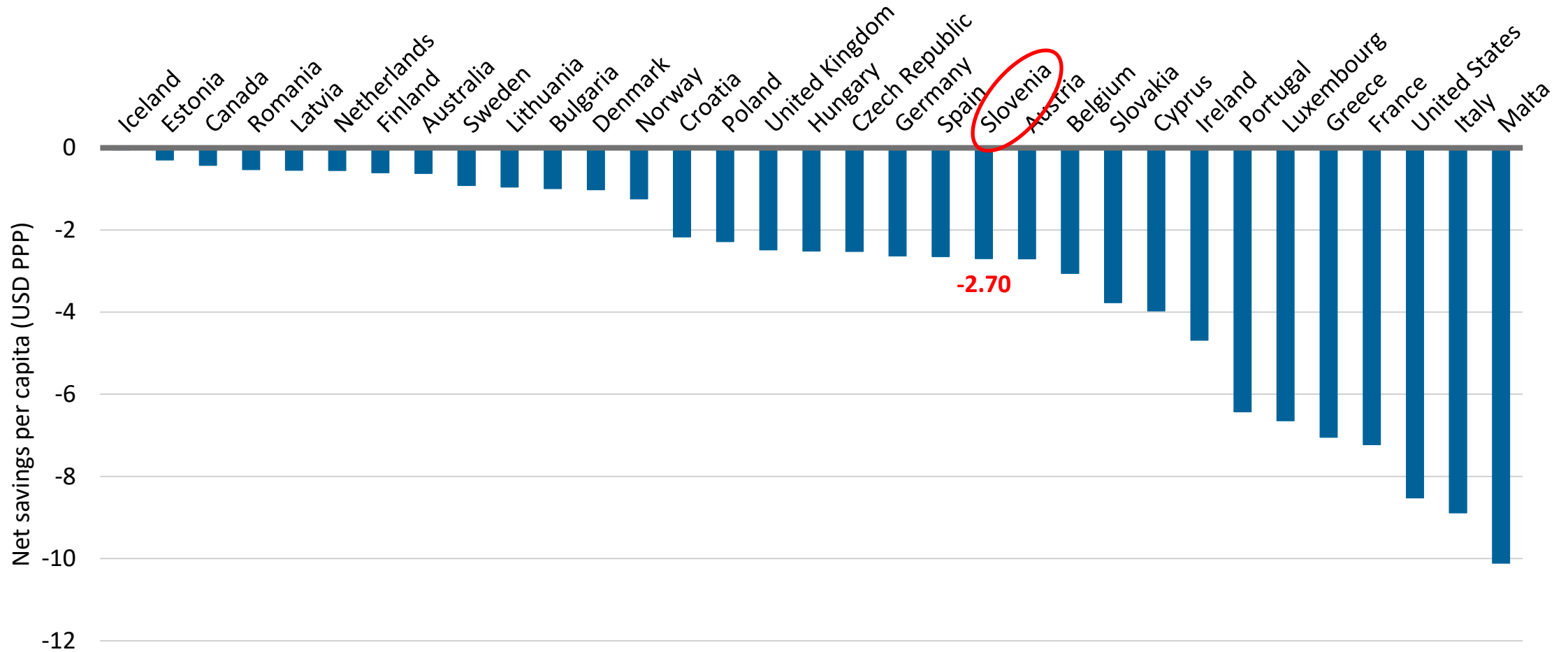


A Mixed Intervention Package Would Save up To 47000 Lives per Year in OECD and EU





A Mixed Intervention Package Would Decrease Healthcare Expenditure by 3 USD/Capita/Year





Key Policy Implications

- AMR is increasing in the majority of OECD countries and beyond
- The projected rise in resistance to 2nd and 3rd line antibiotics is particularly worrisome
- Interventions to increase hygiene show the most positive effects but do not address some of the key determinants of AMR
- Public health interventions to tackle AMR are a cost-effective (and very often cost-saving) investment in OECD countries
- Combining interventions in a comprehensive public health package would provide better results