

# Improving antibiotic use in primary care: from **individuals** to **systems**

Oliver Dyar

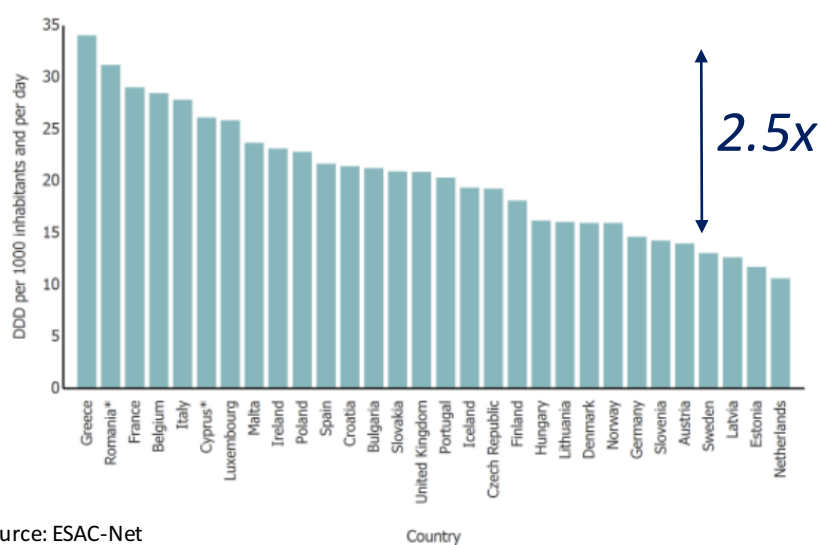


## A **global** challenge









### Consumption in the community (2014)

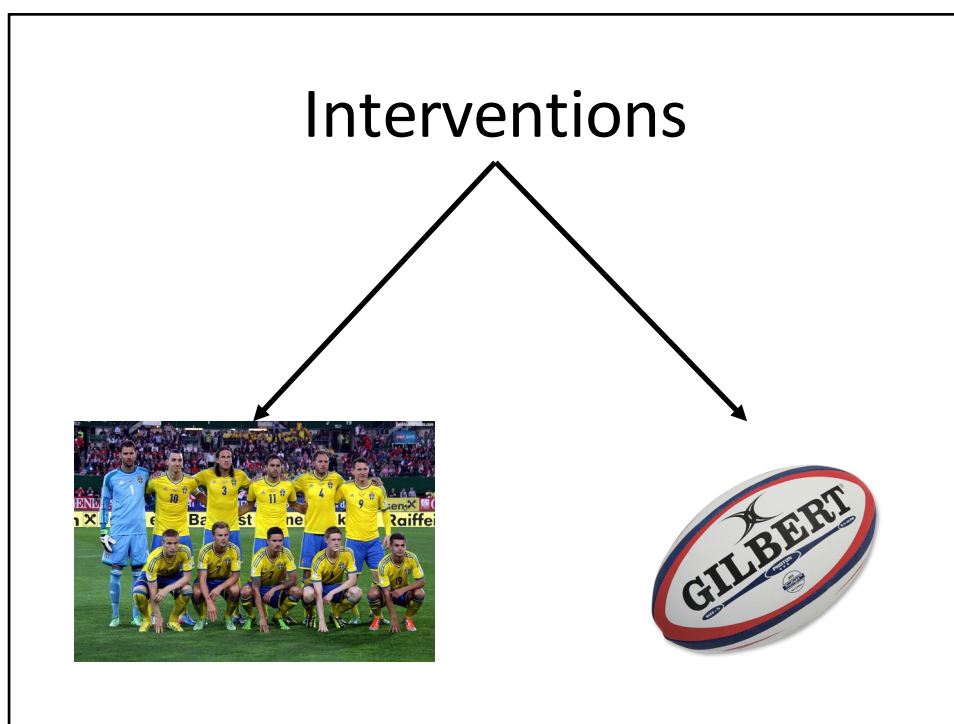




			
	China	UK	Sweden
Population	1 357 m	64 m	9.6 m
Healthcare budget / capita	€ 650	€ 3 008	€ 4 649
Doctors (per 1,000)	1.9	2.8	3.9
Organization of healthcare	Central and regional	Central	Regional



	China	UK	Sweden
Time with patient	5-50 minutes	5-10 minutes	15-30 minutes
Lab tests	No	At hospital	In clinic
Clinical guidelines	No	Yes	Yes

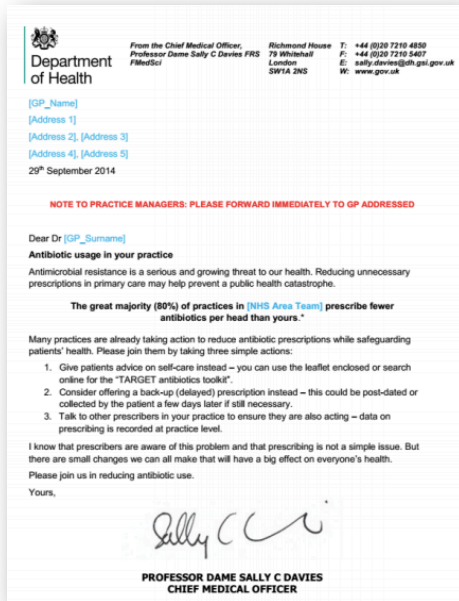


## Individual level

- |  |  |
|--|--|
| Education   | Public commitments   |
| Communication skills   | Point-of-care tests  |
| Guidelines  | Selective susceptibility reporting   |
| Decision support systems   | Quality indicators   |
| Delayed prescribing  | Audit and feedback  |
| Patient education materials  | Restrictive prescribing measures   |

Dyar OJ *et al.* Expert Review of Anti-infective Therapy, 14:4, 403-413 (2016)





3.3% fall in antibiotic use

€1.64 gain per prescription

€0.07 cost per prescription

Hallsworth M *et al.* Lancet, 387:10029, 1743-1752 (2016)

## System level

Over-the-counter availability

Pay-for-performance

Unit dispensing

Public reporting

Number available and price

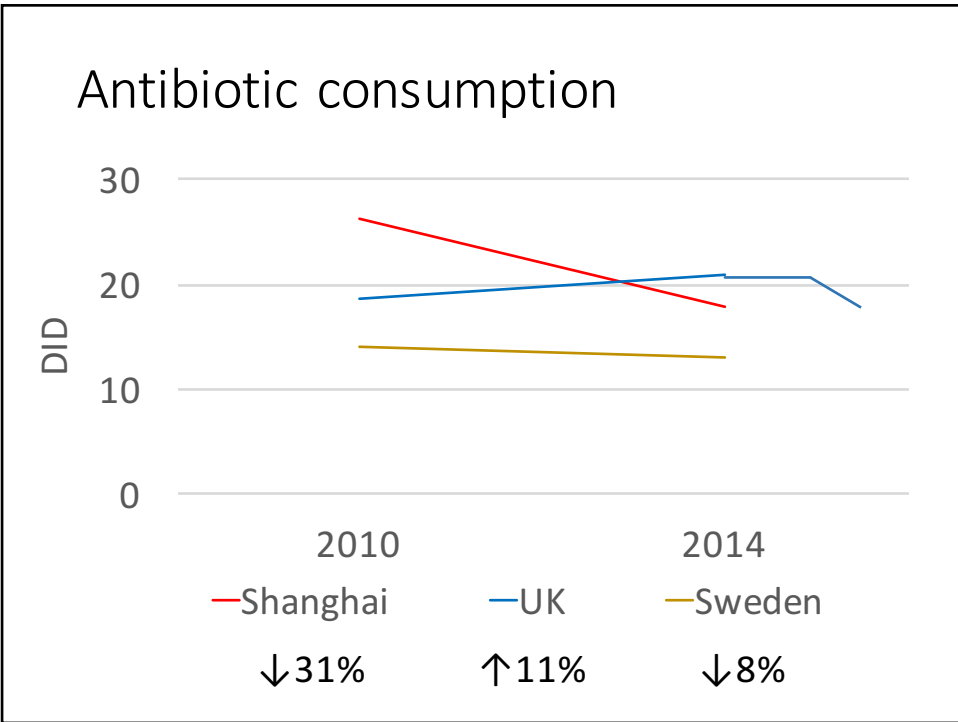
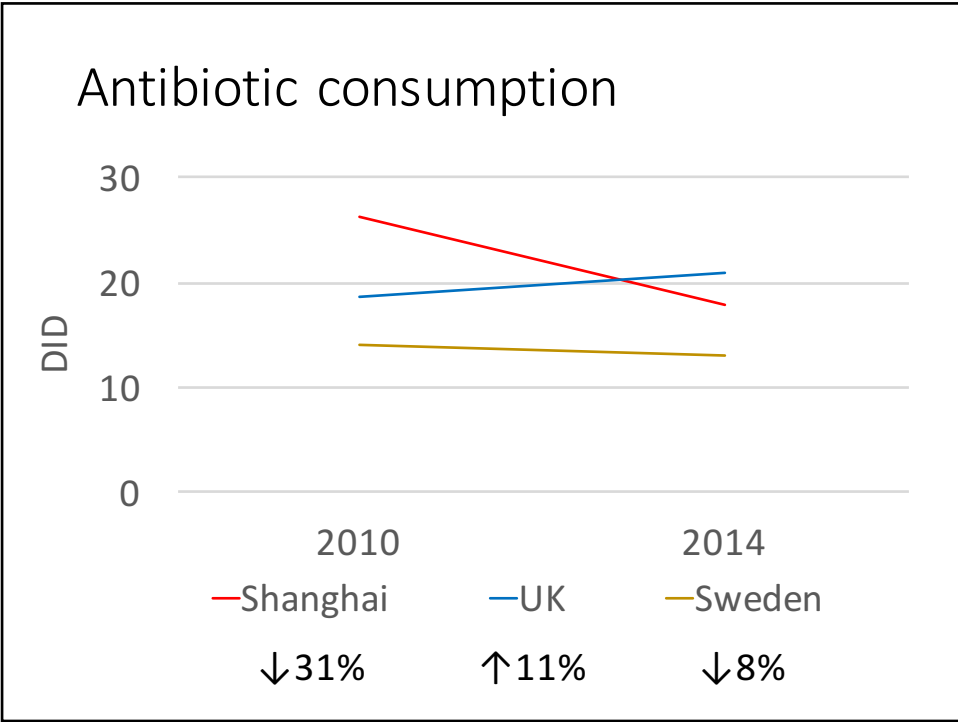
Sickness leave regulation

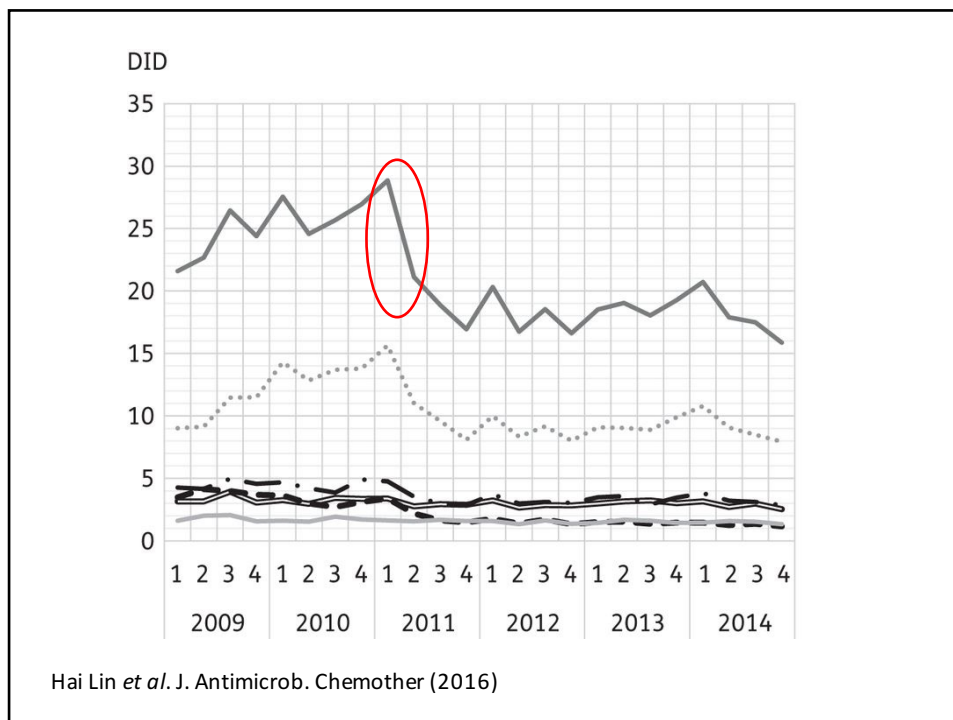
Separate prescribing and dispensing

Limiting advertising

Prescribers' remuneration

Dyar OJ *et al.* Expert Review of Anti-infective Therapy, 14:4, 403-413 (2016)





## Creating system-wide prioritisation



Targets by national government

Individual culpability

Zero mark-up in rural regions



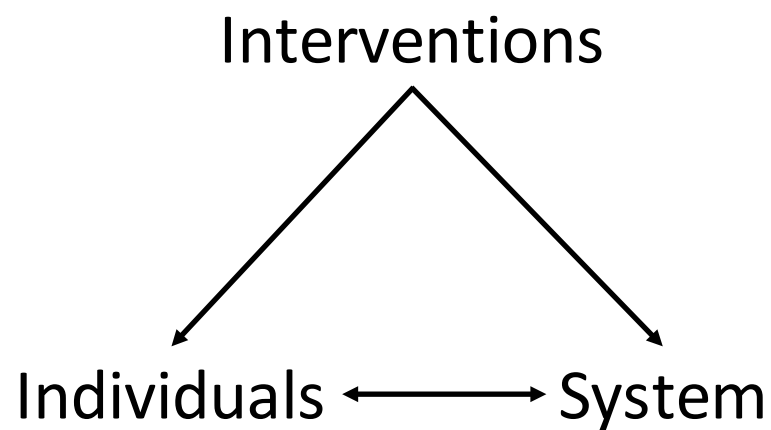
Targets by national government

Financial penalties

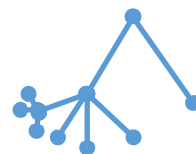
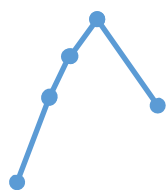


## Challenges of systems approaches

- No guarantee increase in quality
- Playing the new game



## Regional networks



## Regional networks in Sweden

**Strama**

Samverkan mot antibiotikaresistens



