Scottish Polypharmacy Guidance: Realistic Medicine Quality strategies for Prescribing

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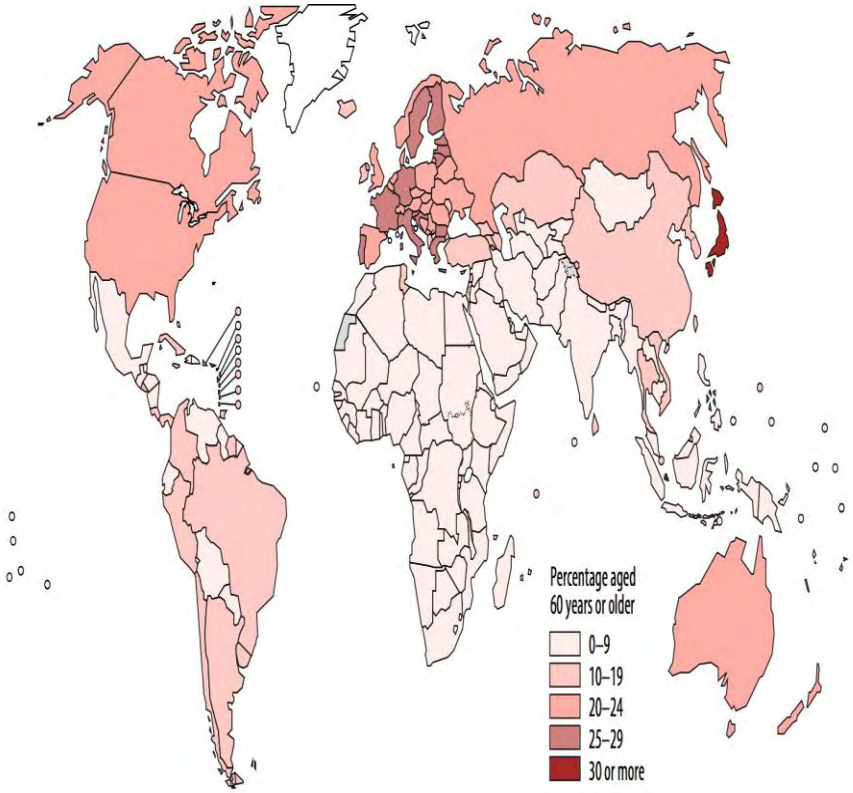
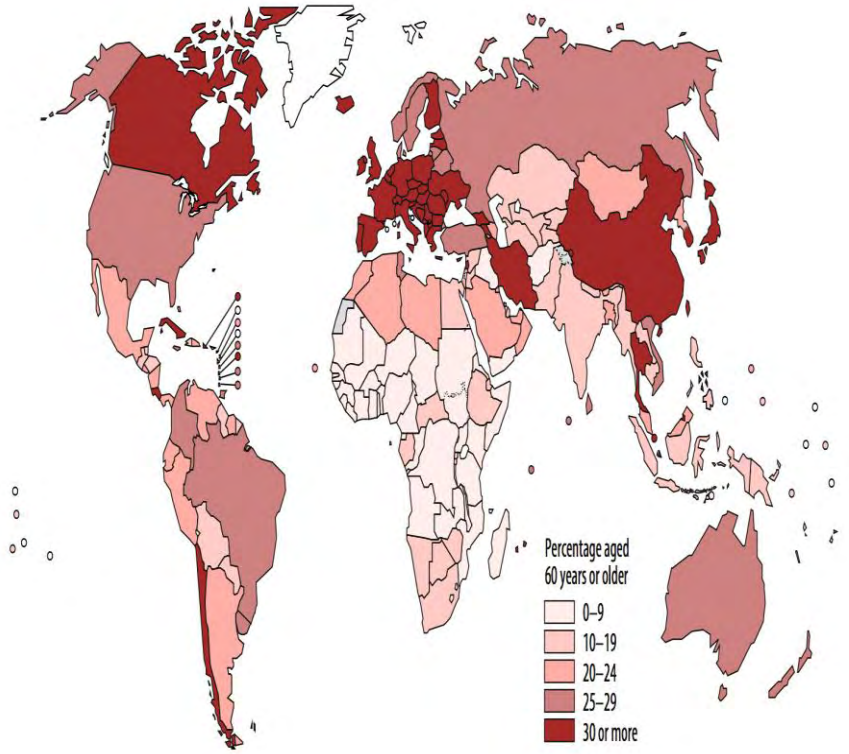
WHO polypharmacy Lead

Population in 2015 and projections in 2050 (WHO)

Survival at younger age & socioeconomic development





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What is ageing and healthy aging?

- Ageing is not a linear process

- Healthy aging

  " process of developing and maintaining functional ability which enables well being in old age"

  Intrinsic and environmental factors affect functional ability

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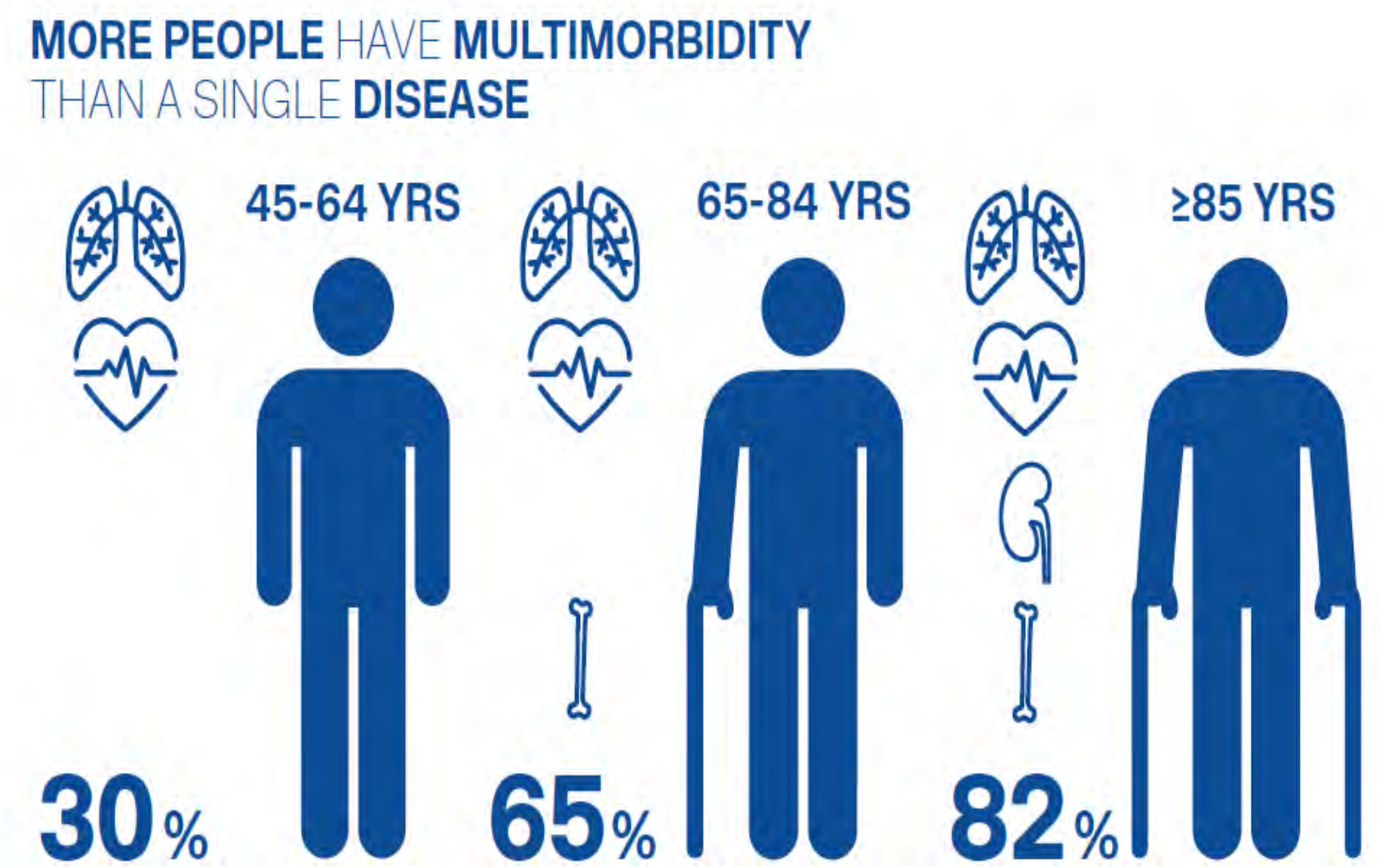
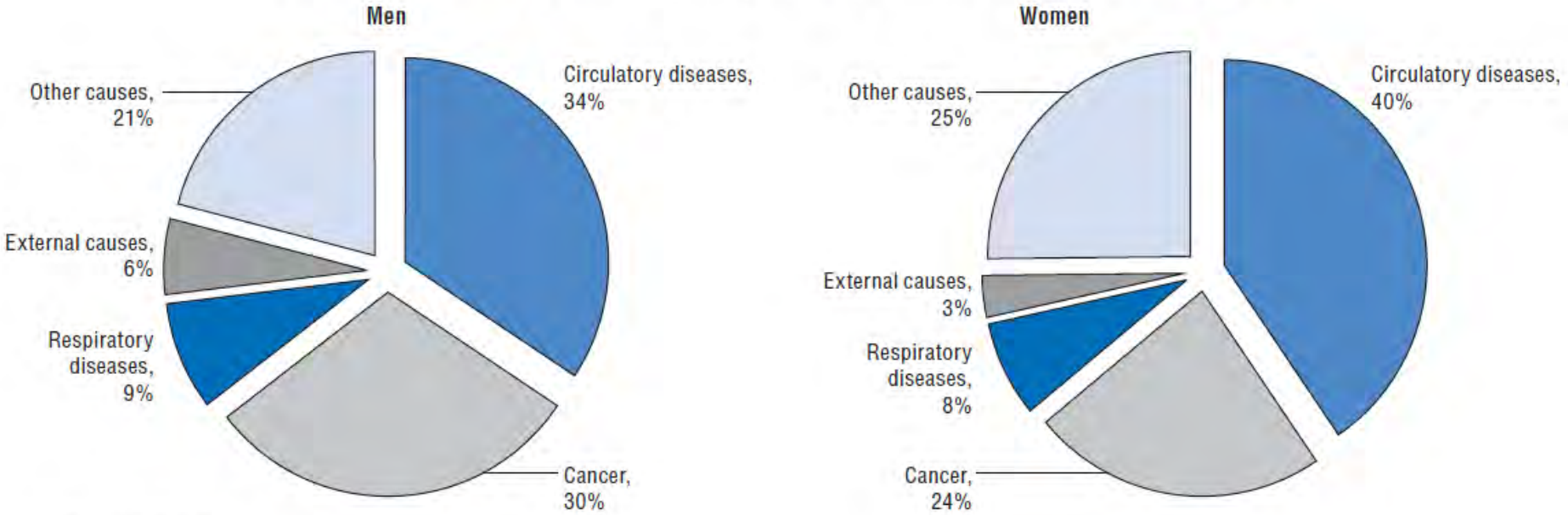
Multiple morbidity is common



Epidemiological transition

3.6. Main causes of deaths among men and women in EU countries, 2013



Source: Eurostat Database.

OECD/EU (2016), Health at a Glance: Europe 2016 – State of Health in the EU Cycle, OECD Publishing, Paris.
http://dx.doi.org/10.1787/9789264265592-en

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Multiple morbidity & health care system design

- Mental health can have an impact on patients ability to manage non communicable disease and treatment
- Deprivation
- Untreated conditions can lead to increase in morbidity e.g hypertension
- Consider design of health care system- person centered care- coordination of treatment by specialists? Integrated care

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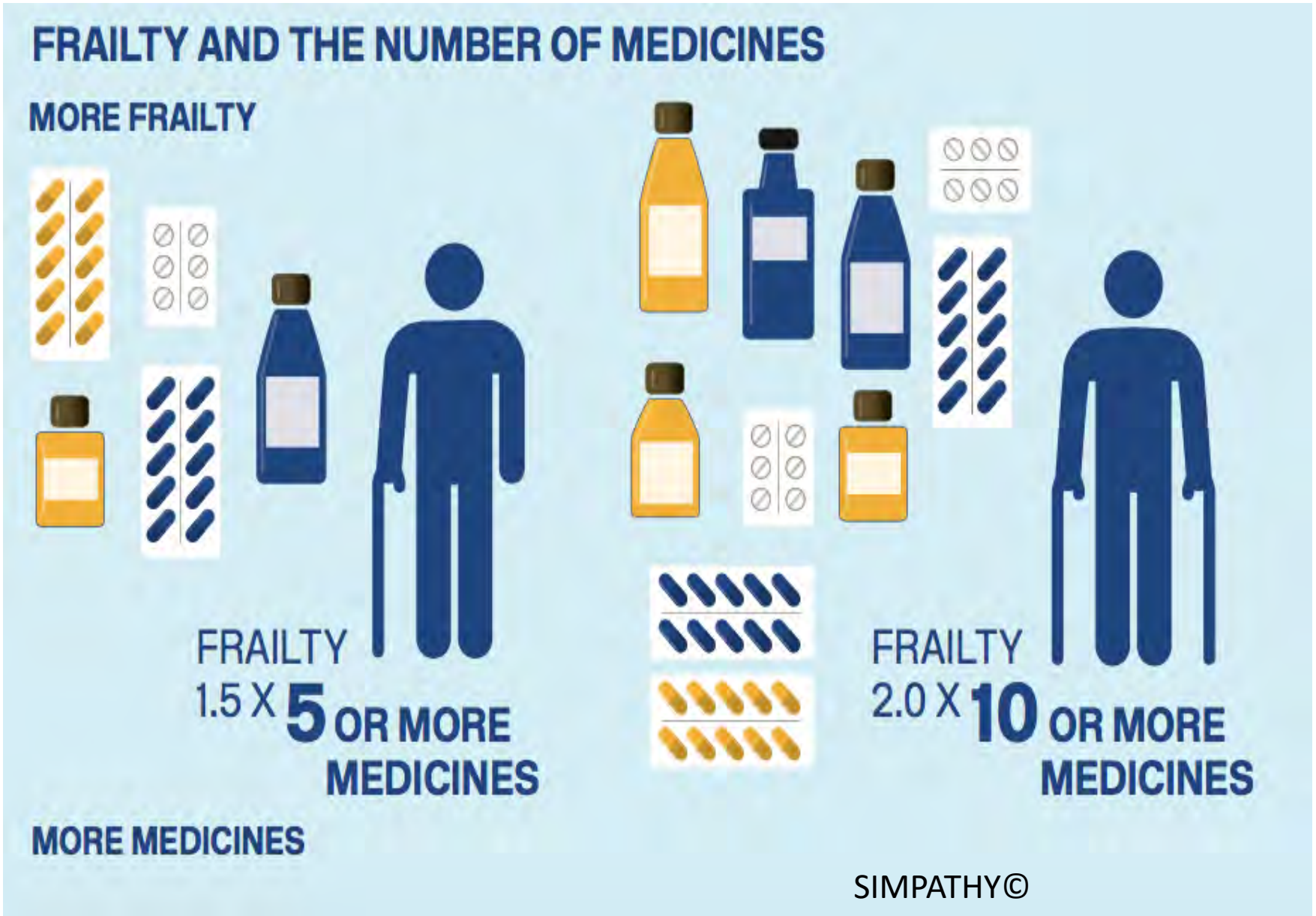
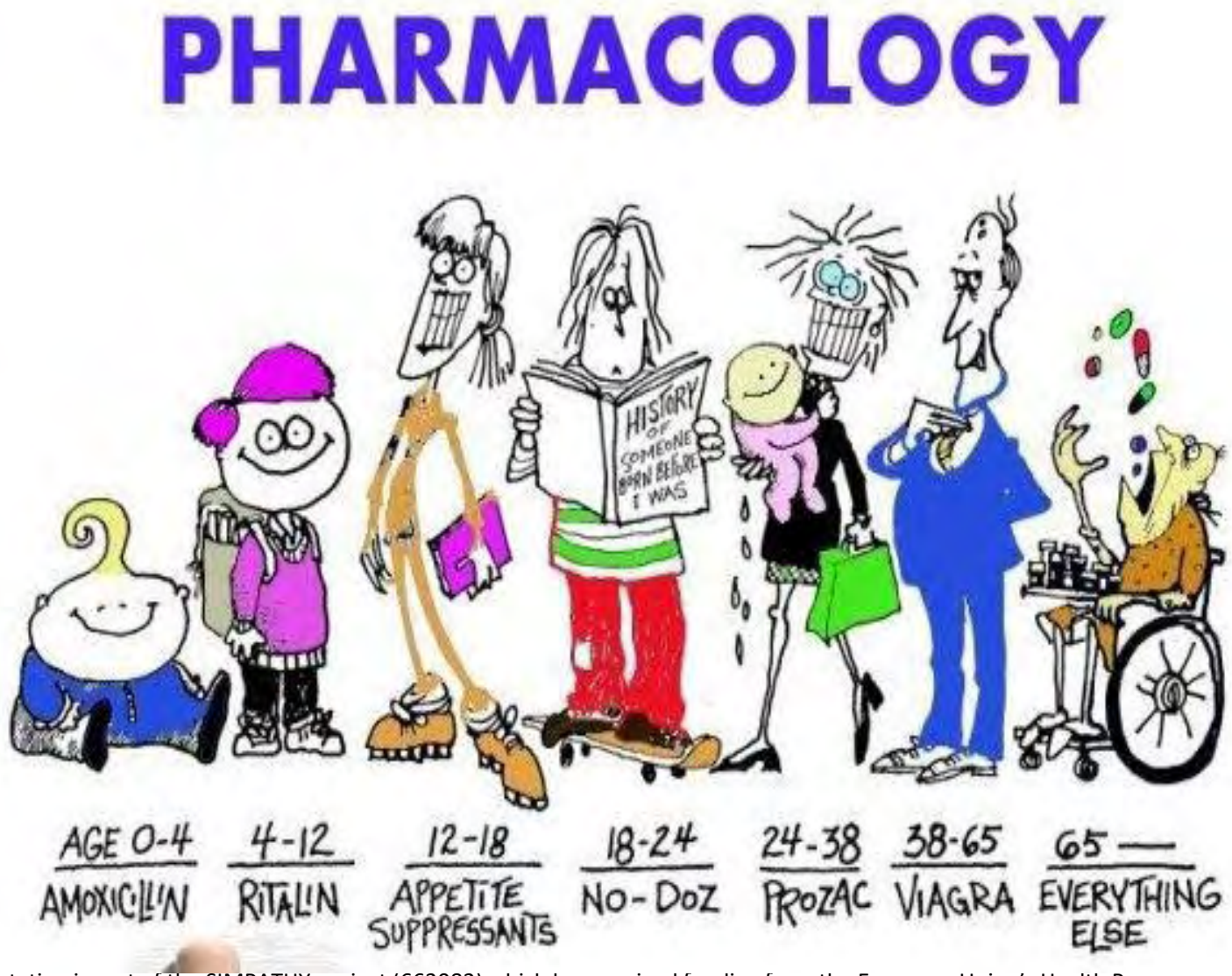
People: Impact of Frailty- renal & liver disease



Taking Medicines through life……



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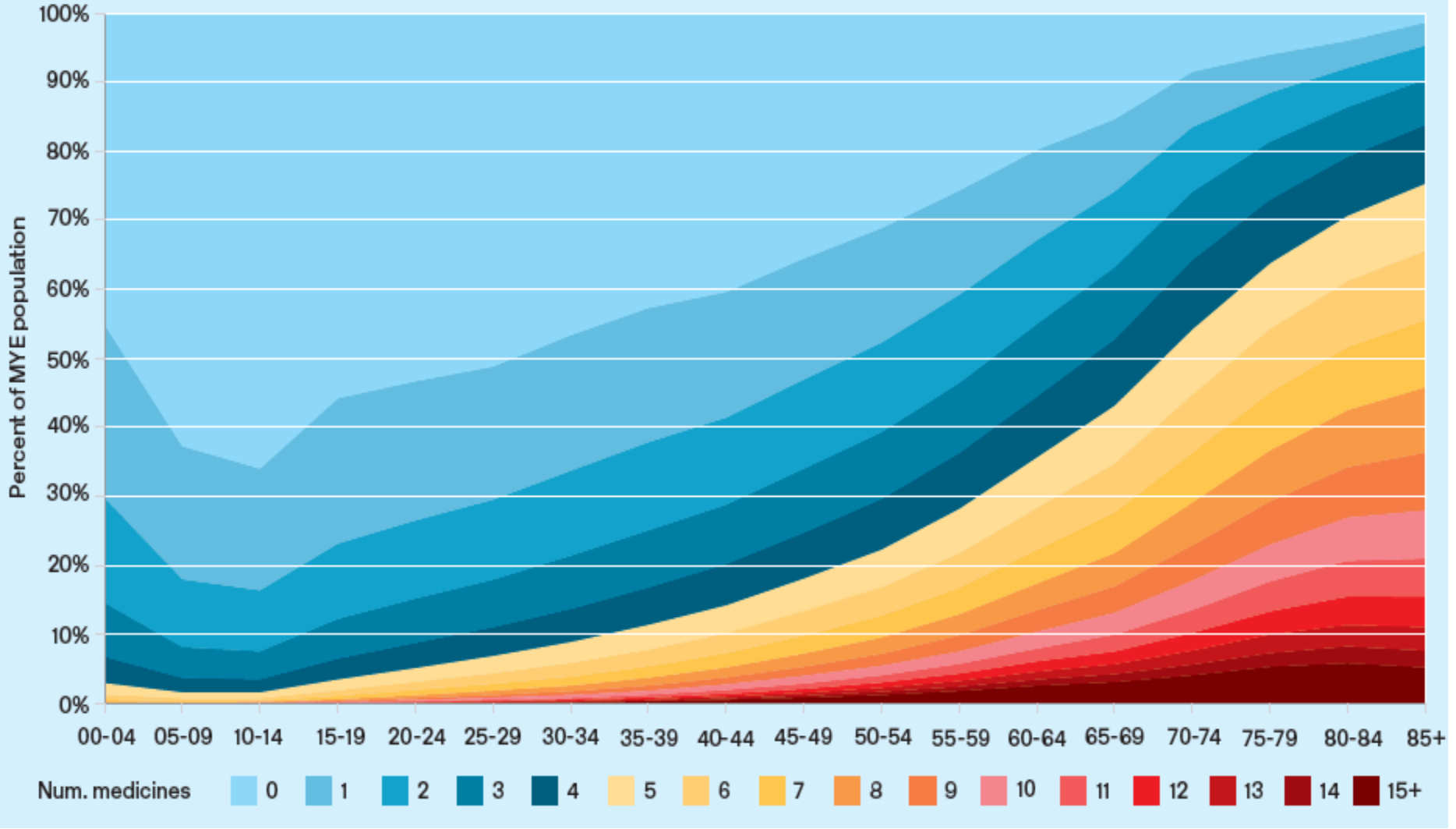
PERCENTAGE OF PEOPLE BY AGE GROUP ON MULTIPLE MEDICINES



What is Polypharmacy ?

- >4
- >10
- More that patient can handle
- ???

- More drugs than you need taking in to account
  - Side effects
  - Time to Benefit – Number needed to Treat
  - Adherence -50%
  - ++++++

- USA 8.2% in 2000 to 15% in 2011
- China 12-30%
- Indian 9%
- Australia >50 years 34%
- NZ 25% in 2005 to 32% in 2013
- Africa 25-29%
- Saudi 41%

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Polypharmacy Clinic in rural Uganda

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Definitions

- **Appropriate polypharmacy** is present, when all drugs are prescribed for the purpose of achieving specific therapeutic objectives that have been agreed with the patient
- **Inappropriate polypharmacy** is present, when one or more drugs are prescribed that are not or no longer needed

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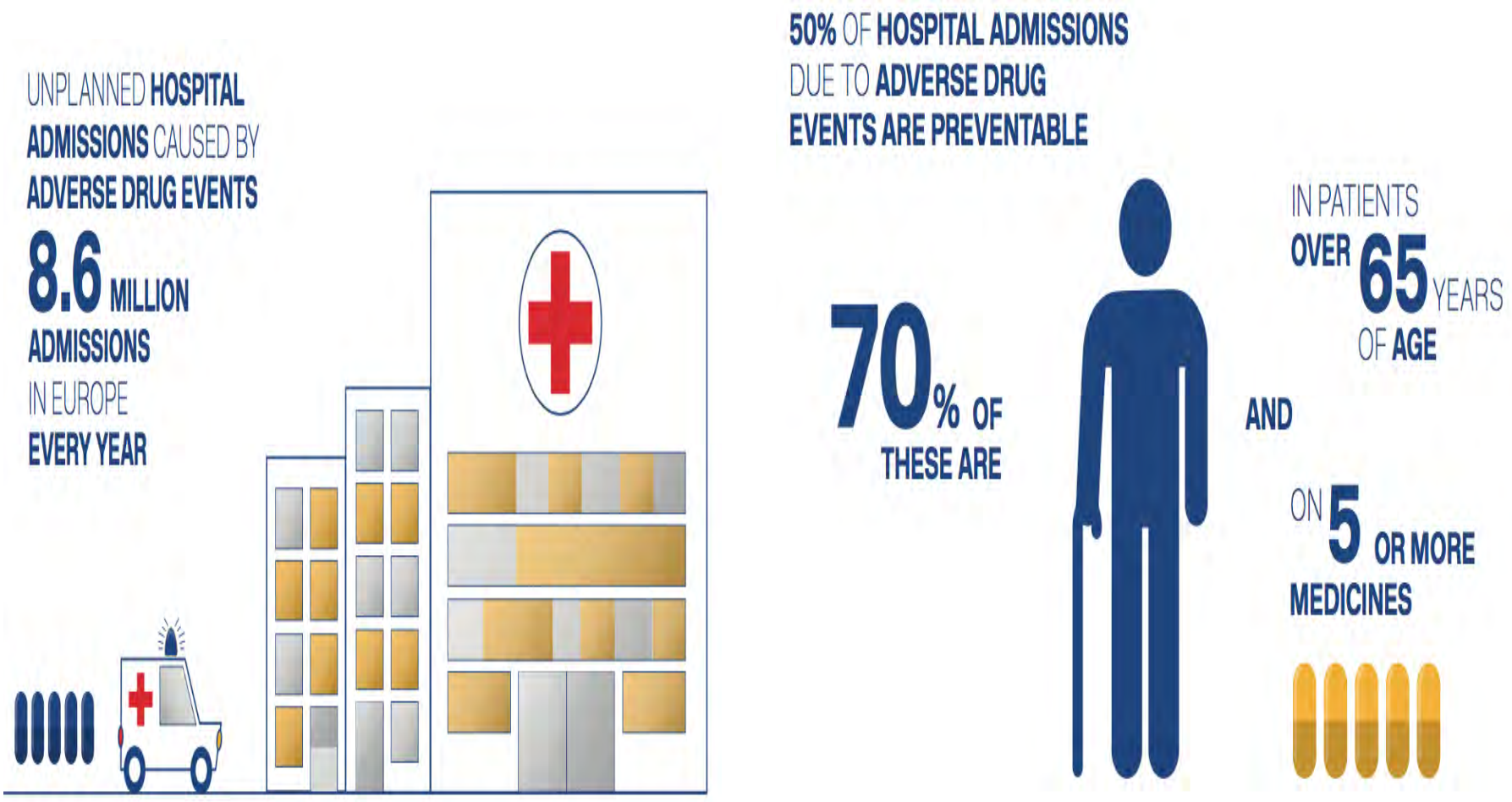
Urgency: Public health challenge :
address @initiation & @review of medication



186 countries: 4% of total avoidable costs due to polypharmacy. Total of 0.3% global health expenditure could be saved = $18bn

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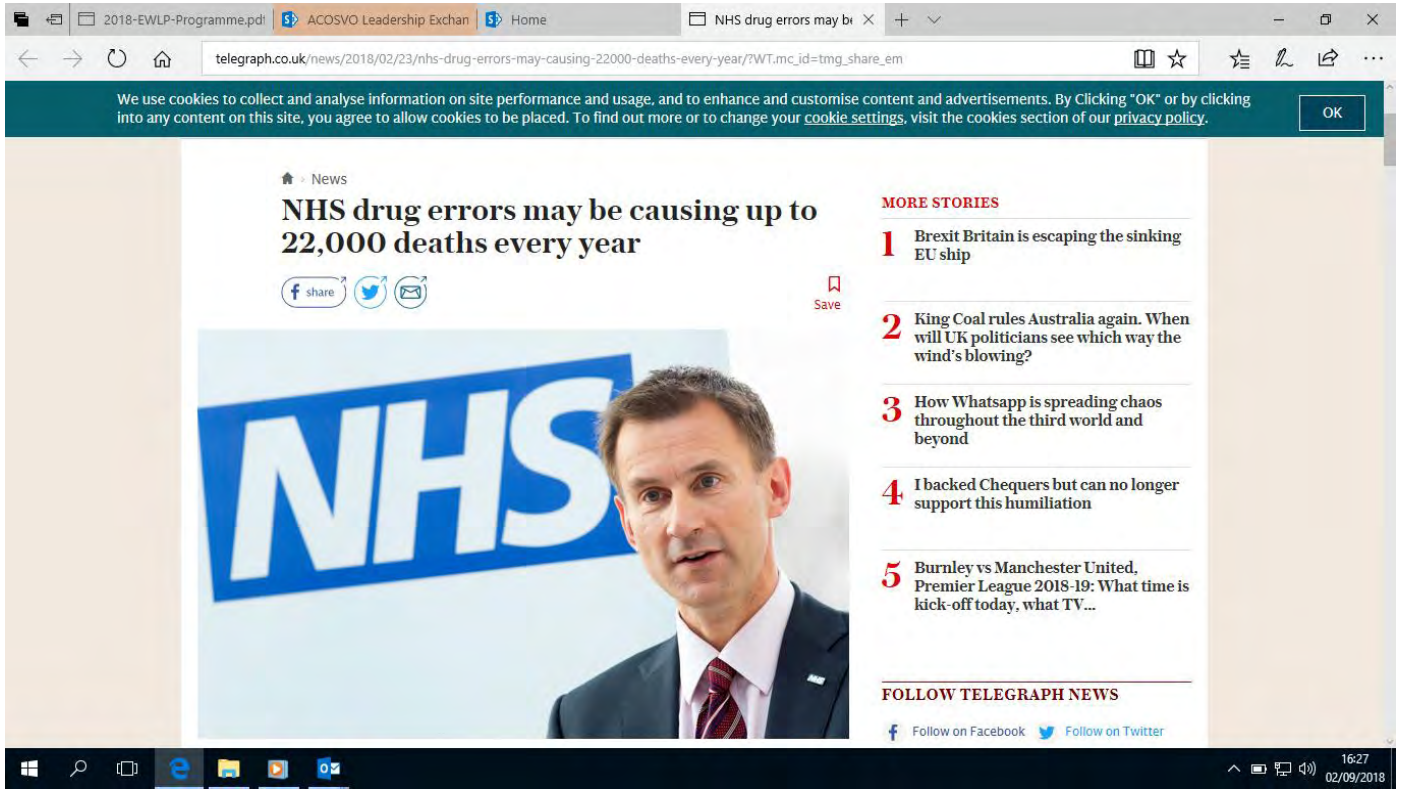
Medication Safety across The UK



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Scotland's Actions : EU commitment: Signing pledge to Global

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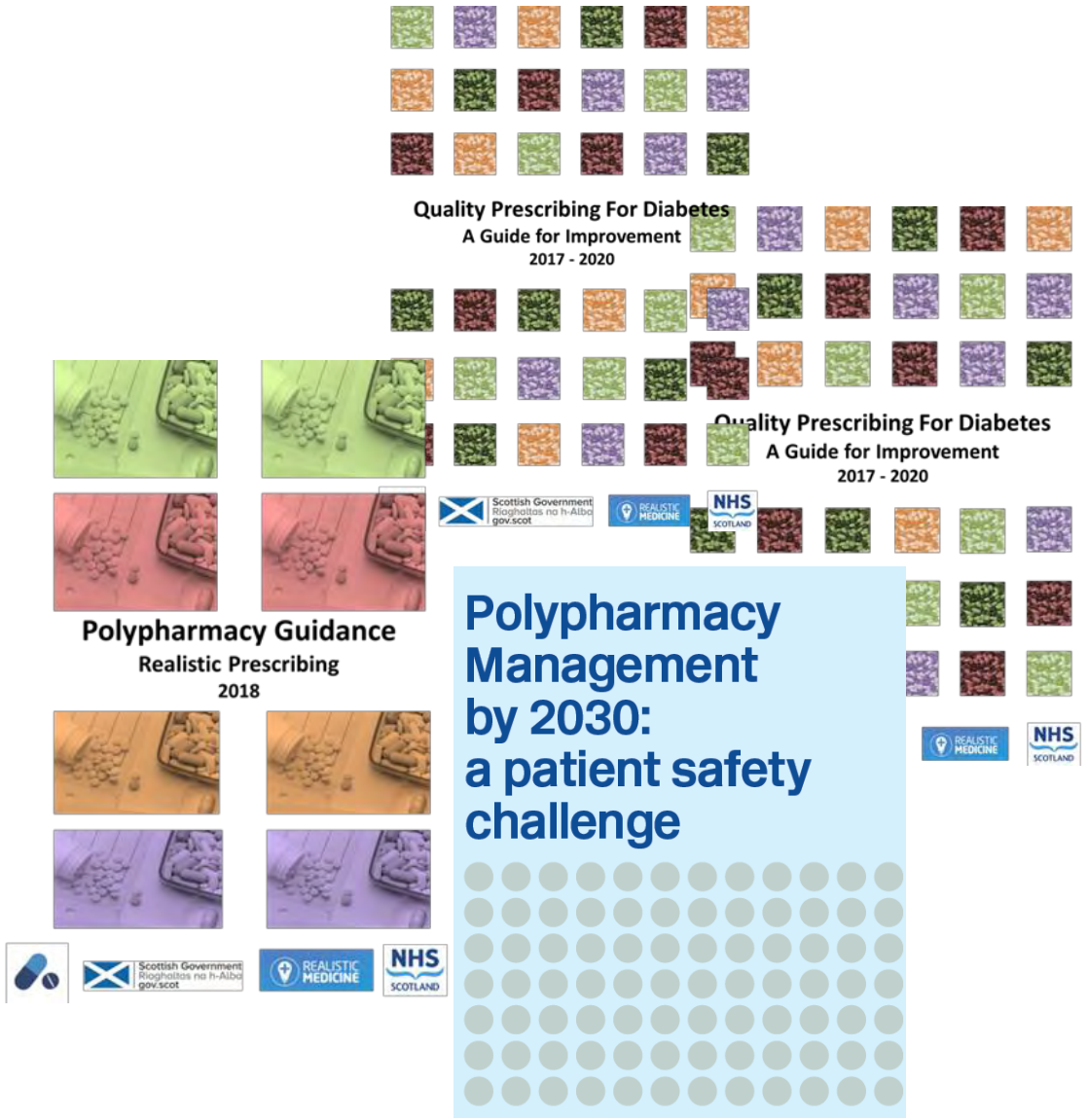
Action Undertaken to Global Challenge

Admissions

NSAIDs + aspirin	29.6%
Diuretics	27.3%
Warfarin *	10.5%
ACE	7.7
Antidepressants	7.1
Beta blockers	6.8
Opiates	6.0
Digoxin	2.9
Prednisolone	2.5
Clopidogrel	2.4

*Will include DOACS



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Scotland Actions

- **Scottish Patient Safety Programme**
- **Electronic prescribing**
- **Quality improvement in prescribing & Preventing Inappropriate prescribing**
- **Polypharmacy Guidance 2018** presents **18 polypharmacy prescribing indicators**
- **Twelve interface indicators**
- **Quality Prescribing for Chronic Pain 2018, Diabetes & Respiratory**
- **Patient identifier indicators**
- **Clinical decision support : Polypharmacy App & Patient Polypharmacy App**
- **Anticipatory Care App**
- **Data linkage for clinical outcomes.**
- **Education and training**

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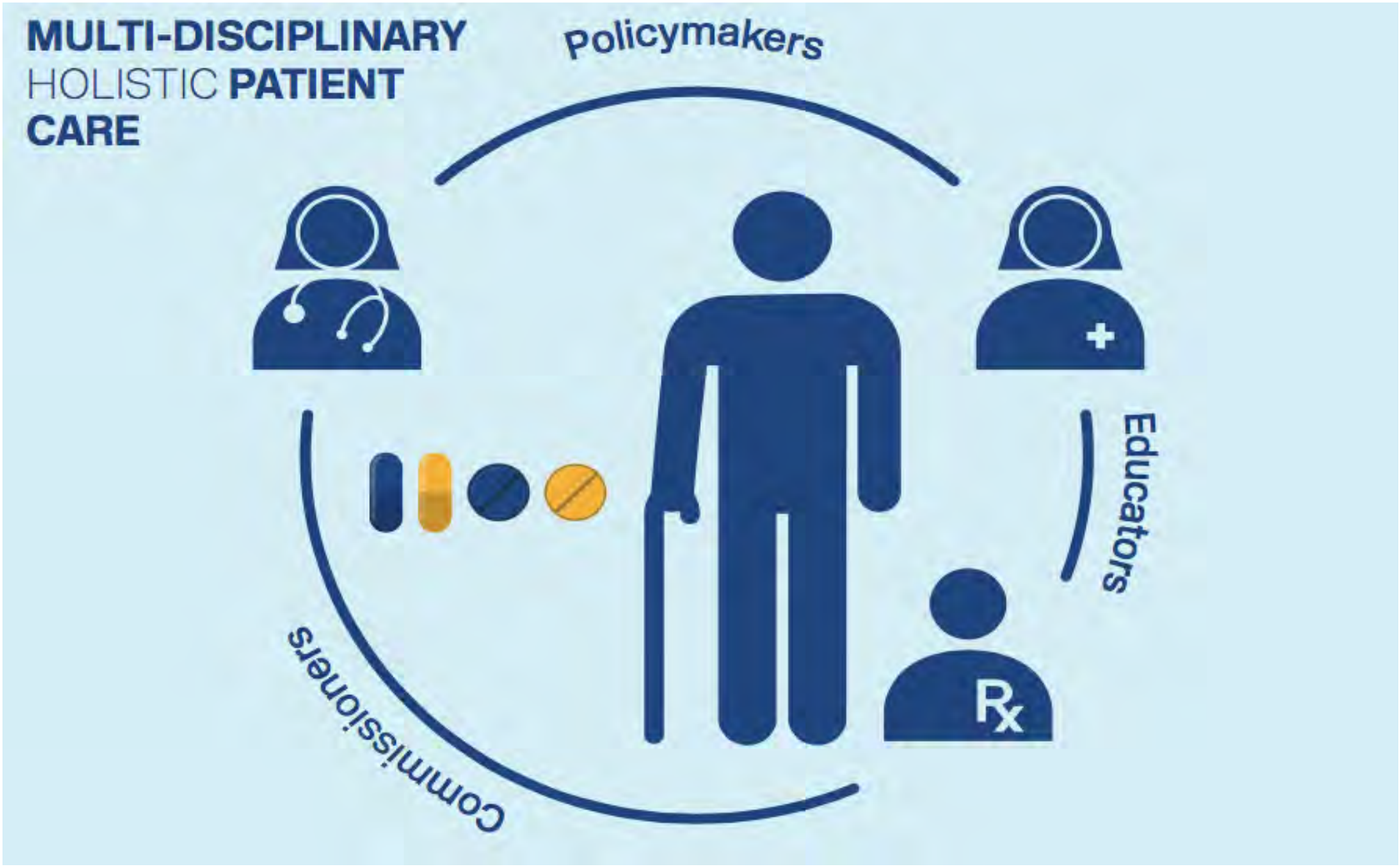
1. Multidisciplinary Leadership with Systems approach- Innovation =pharmacist in the team



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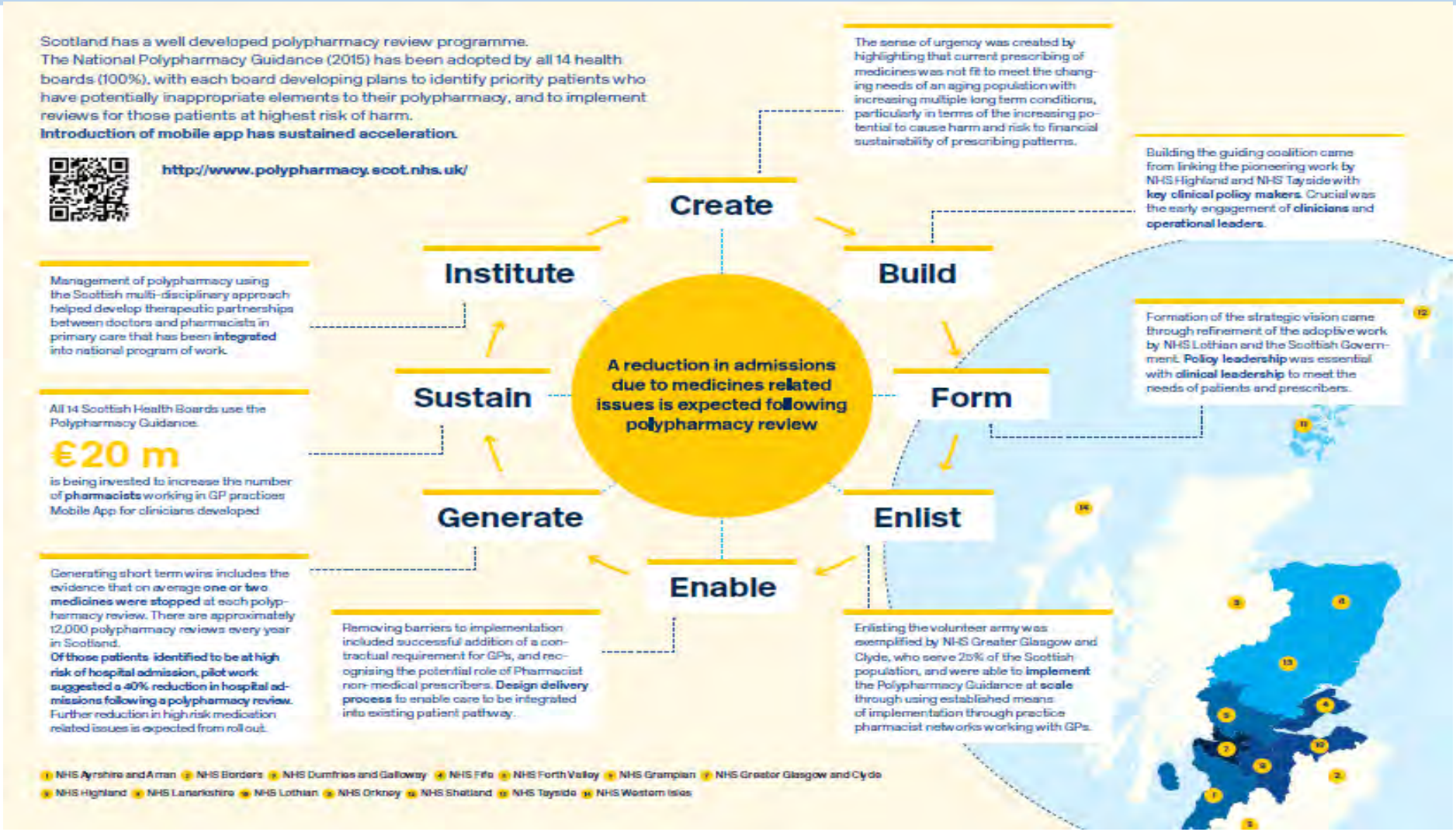
Scotland's Approach



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2. Culture that prioritises Safety &Quality

SIMPATHY

Central Hypothesis

Contribute to meeting the "quadruple aim" goals in health systems

*Berwick, D. M., Nolan, T. W., & Whittington, J. (2008), "The triple aim: care, health, and cost", Health Aff.(Millwood.), vol. 27, no. 3, pp. 759-769. ** Bodenheimer, T; Sinsky, C. From Triple to Quadruple Aim: Care of the Patient Requires Care of the Provider. Ann Fam Med 2014;12:573-576. doi: 10.1370/afm.1713.*

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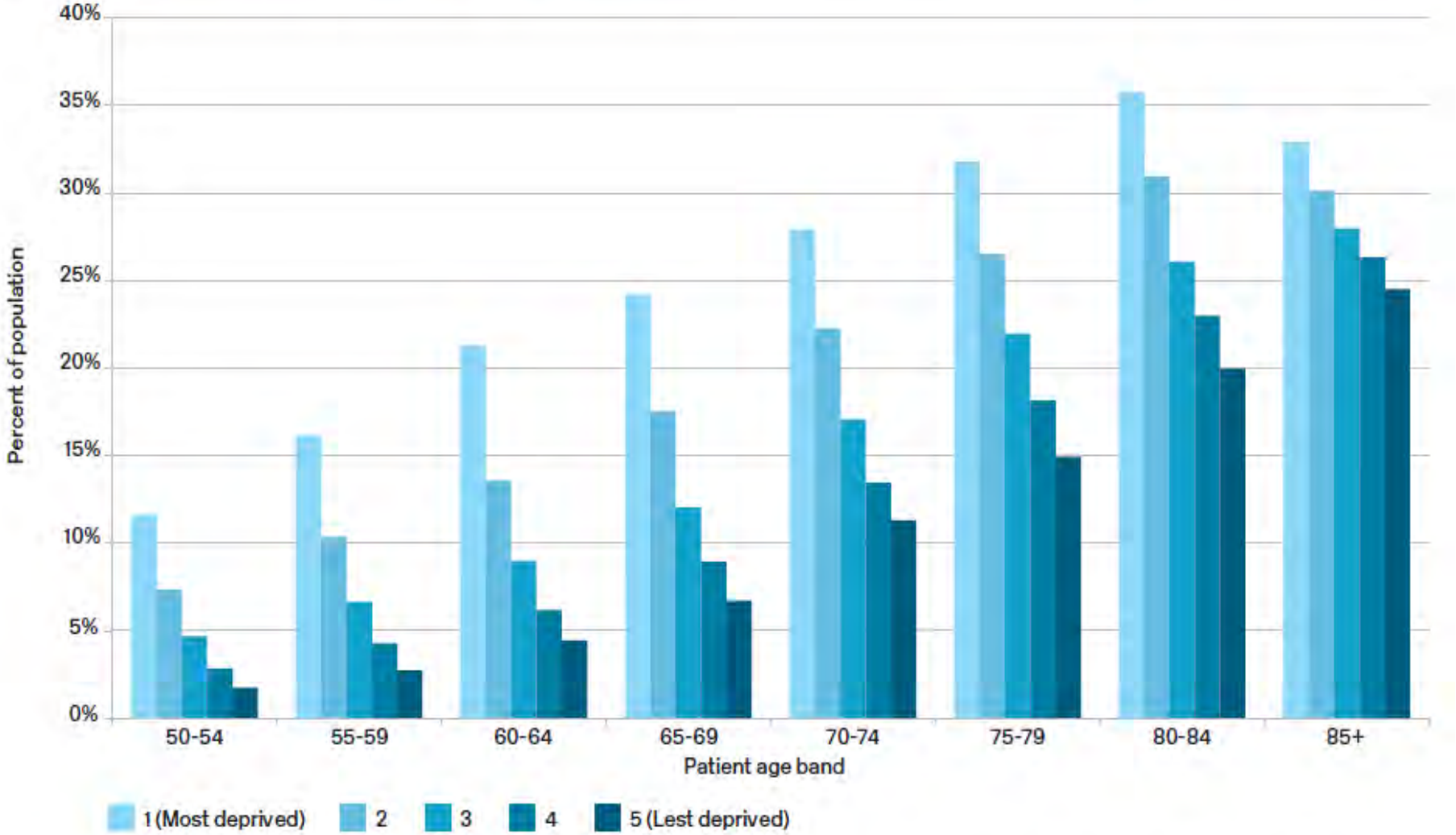
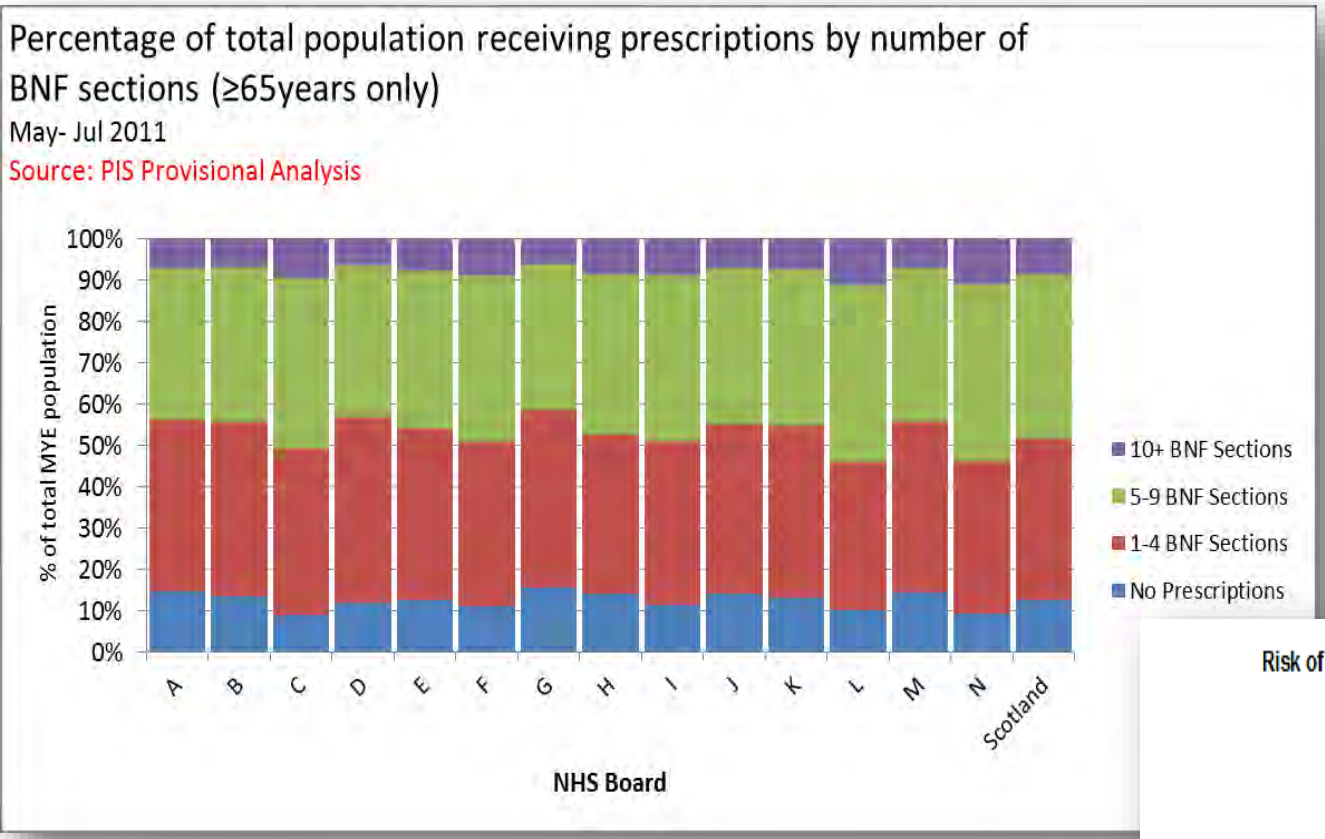
Addressing Health inequalities

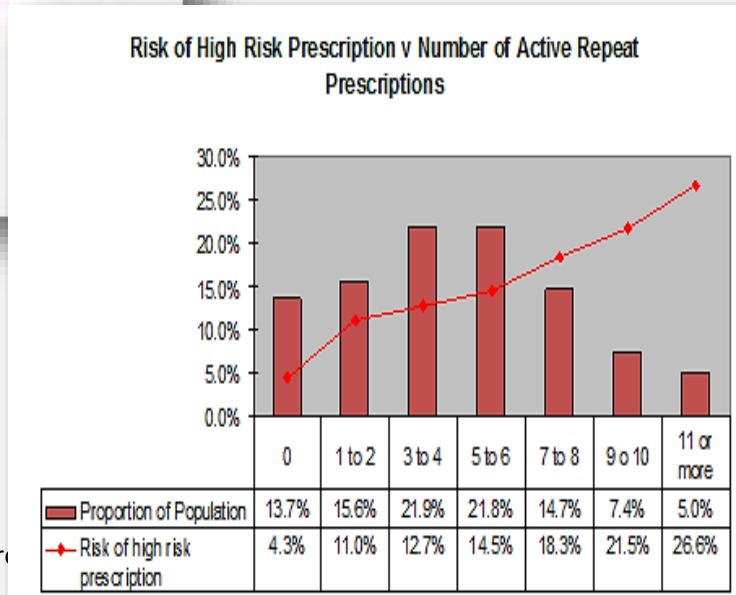
SIMPATHY

PERCENTAGE OF PATIENTS PRESCRIBED TEN OR MORE MEDICINES
BY AGE GROUP AND DEPRIVATION



Risk Stratification





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Why did you jump off a cliff?

Because the Guideline told me to.

The Scottish Government

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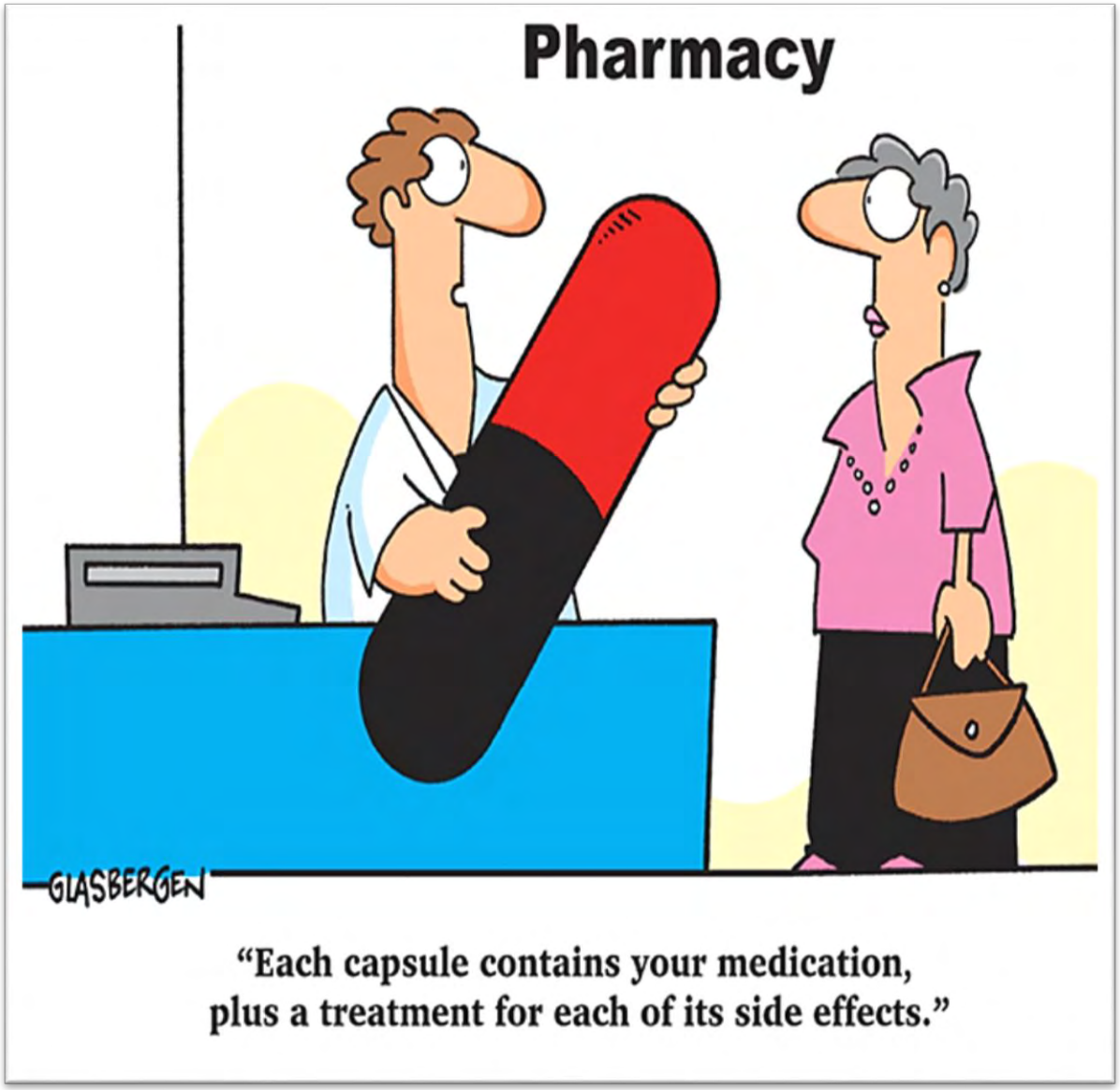
Is polypill the answer?....



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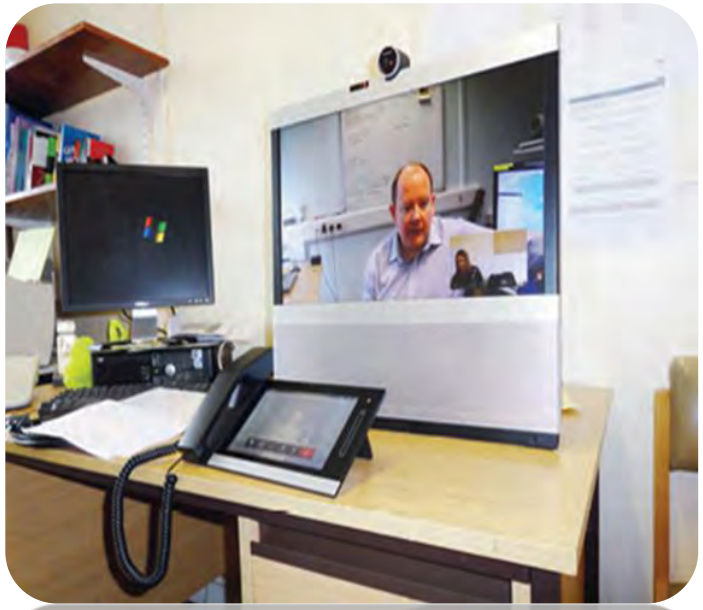
Person centred: Pharmacogenetics?



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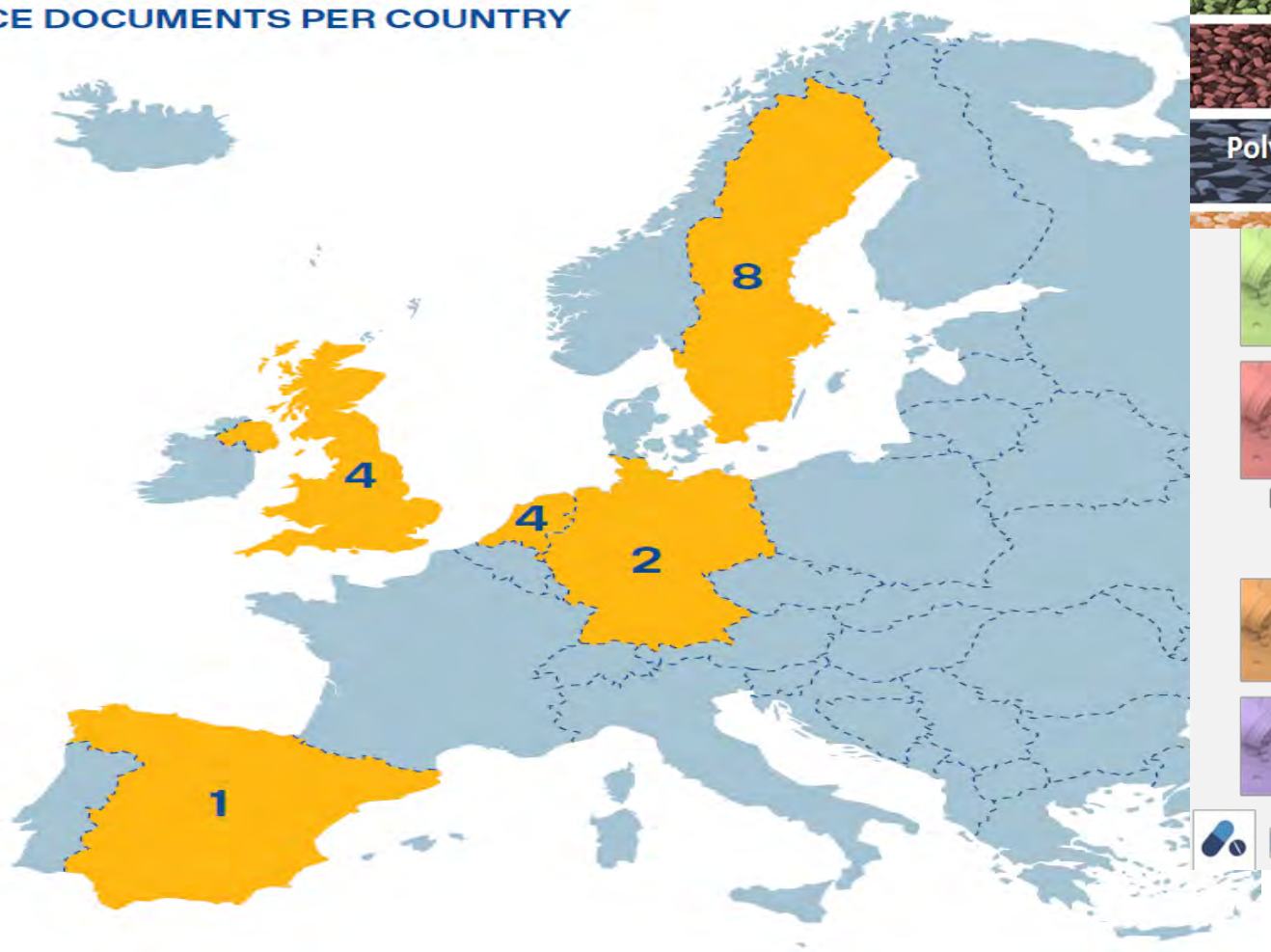
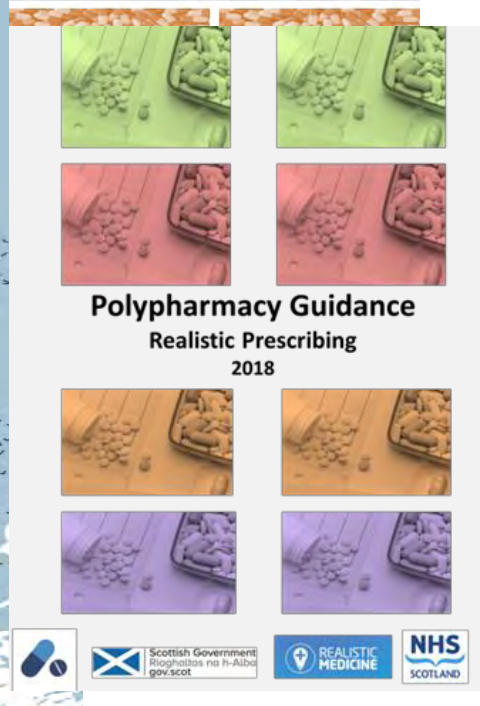
NUMBER OF POLYPHARMACY GUIDANCE DOCUMENTS PER COUNTRY





- **EU evaluation: 5 countries with guidance- 3 scored highly**
- **BEERS, STOP START**
- **Australian- deprescribing**

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http://www.polypharmacy.scot.nhs.uk

SIMPATHY

7 STEPS TO APPROPRIATE POLYPHARMACY

Step 1:

Identify objectives

Aims	1. What matters to the patient	**Review diagnoses and identify therapeutic objectives with respect to:** • Identify objectives of drug therapy • Management of existing health problems • Prevention of future health problems

http://www.polypharmacy.scot.nhs.uk

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Patients shared decision making : Patient advocate

Step 2 & Step 3

Identify essential and unnecessary treatment

Need	2.	Identify essential drug therapy	**Identify essential drugs (not to be stopped without specialist advice)** ➢ Drugs that have essential replacement functions (e.g. thyroxine) ➢ Drugs to prevent rapid symptomatic decline (e.g. drugs for Parkinson's disease, heart failure)
	3.	Does the patient take unnecessary drug therapy?	**Identify and review the (continued) need for drugs** ➢ with temporary indications ➢ with higher than usual maintenance doses ➢ with limited benefit in general for the indication they are used for ➢ with limited benefit in the patient under review (see Drug efficacy & applicability (NNT) table)

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Benefits vs harm

- The risk ratio (NNT/NNH) requires to be balanced for each individual patient.

- It may vary considerably in people with polypharmacy.

- It depends on absolute risk, life expectancy and vulnerability to adverse drug reactions (ADRs).

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Drug Effectiveness

- ……but how much ?

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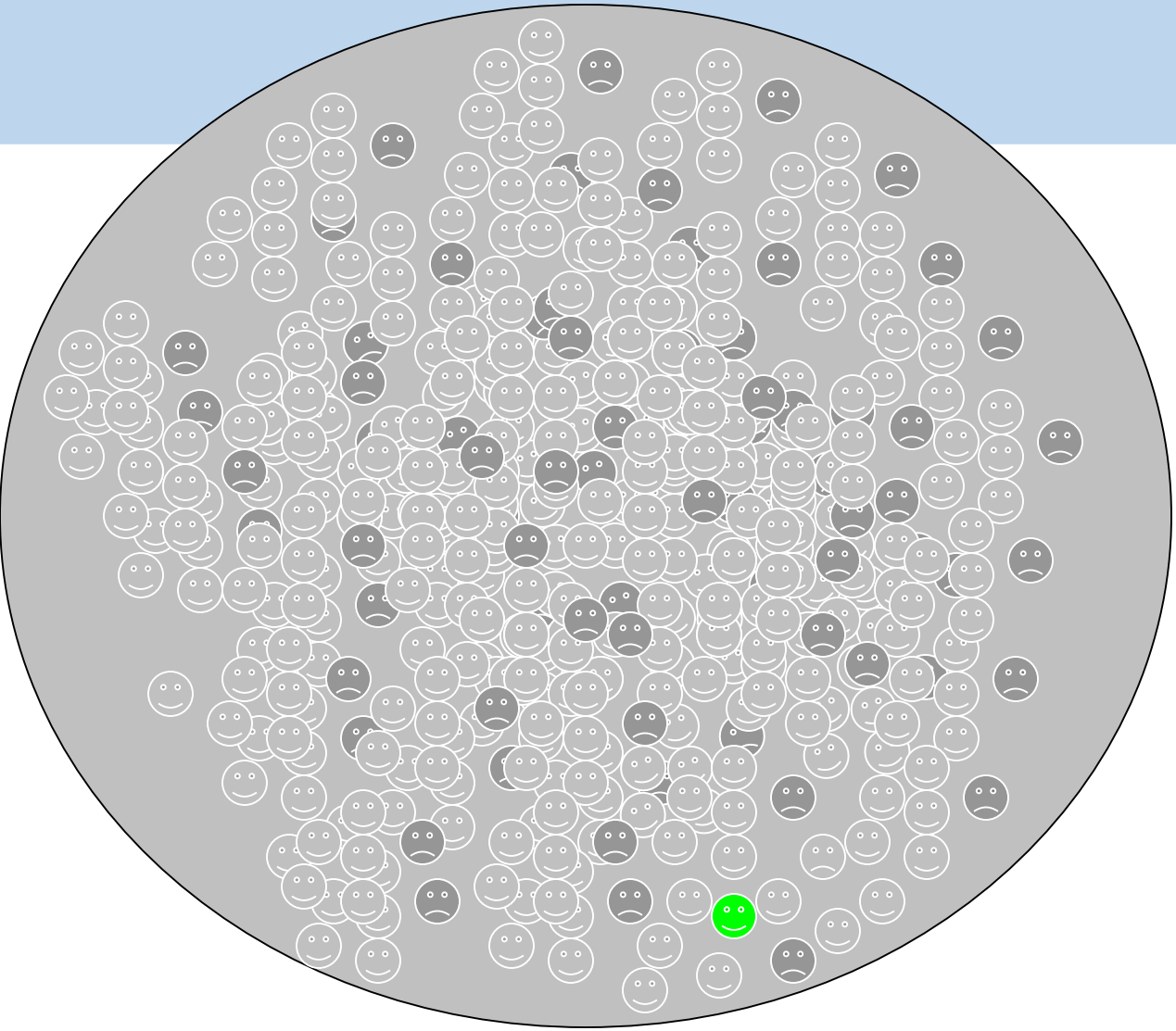

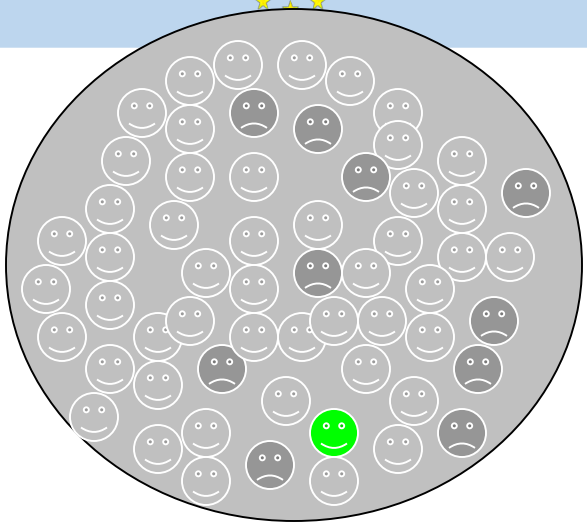

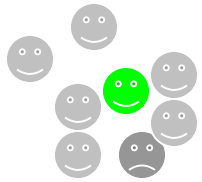

Develop and Share tools for implementation

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Step 4

Effectiveness

4. Are therapeutic objectives being achieved?

Identify the need for adding/intensifying drug therapy in order to achieve therapeutic objectives

- to achieve symptom control
- to achieve biochemical/clinical targets
- to prevent disease progression/exacerbation

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Step 5

Safety

5.

Does the patient have ADR or is at risk of ADRs?

Does the patient know what to do if they're ill?

Identify patient safety risks by checking for

- drug-disease interactions
- drug-drug interactions (see ADR table)
- robustness of monitoring mechanisms for high-risk drugs
- drug-drug and drug-disease interactions
- risk of accidental overdosing

Identify adverse drug effects by checking for

- specific symptoms/laboratory markers (e.g. hypokalaemia)
- cumulative adverse drug effects (see ADR table)
- drugs that may be used to treat ADRs caused by other drugs

Sick Day rule cards

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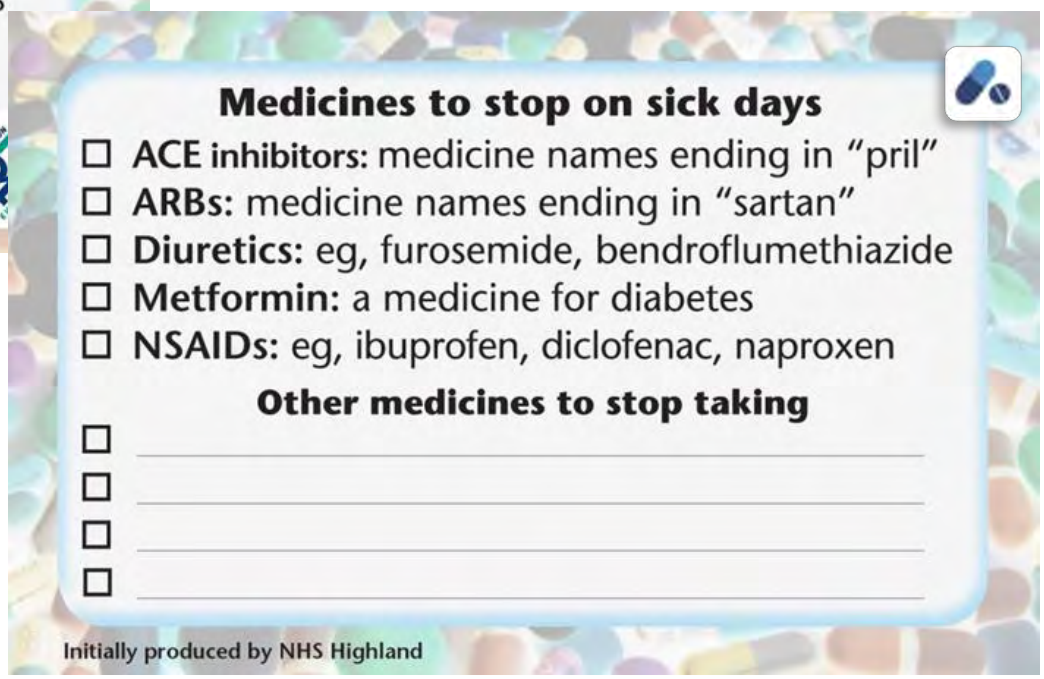
Empowering patients and carers'



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Step 6

Cost-effectiveness

6. Is drug therapy cost-effective?

Identify unnecessarily costly drug therapy by

- Consider more cost-effective alternatives (but balance against effectiveness, safety, convenience)

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Step 7

7. Is the patient willing and able to take drug therapy as intended?

Does the patient understand the outcomes of the review?

- Does the patient understand why they need to take their medication?
- Consider Teach back

Ensure drug therapy changes are tailored to patient preferences by

- Is the medication in a form the patient can take?
- Is the dosing schedule convenient?
- Consider what assistance the patient might have and when this is available
- Is the patient able to take medicines as intended?

Agree and Communicate Plan

- Discuss with the patient/carer/welfare proxy therapeutic objectives and treatment priorities
- Decide with the patient/carer/welfare proxies what medicines have an effect of sufficient magnitude to consider continuation or discontinuation
- Inform relevant healthcare and social care carers change in treatments across the care interfaces

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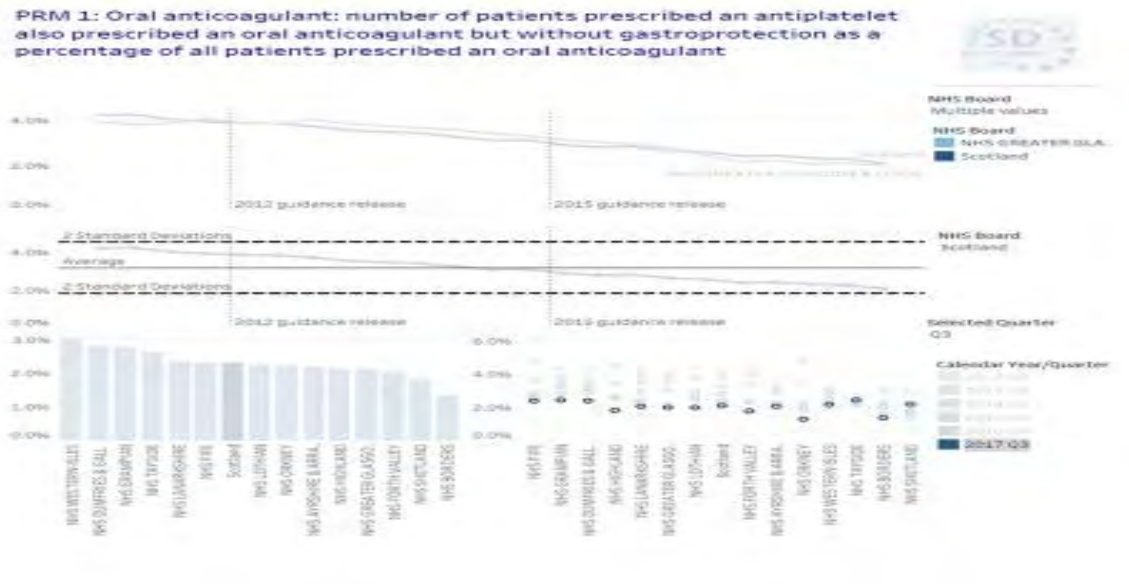
5. Bias to action: What has been successful?

- DQUIP study
- PINCER study
- USA
- Spanish
- Chinese: National Essential Medicines Scheme
- India
- America
- Australian/ Canadian deprescribing



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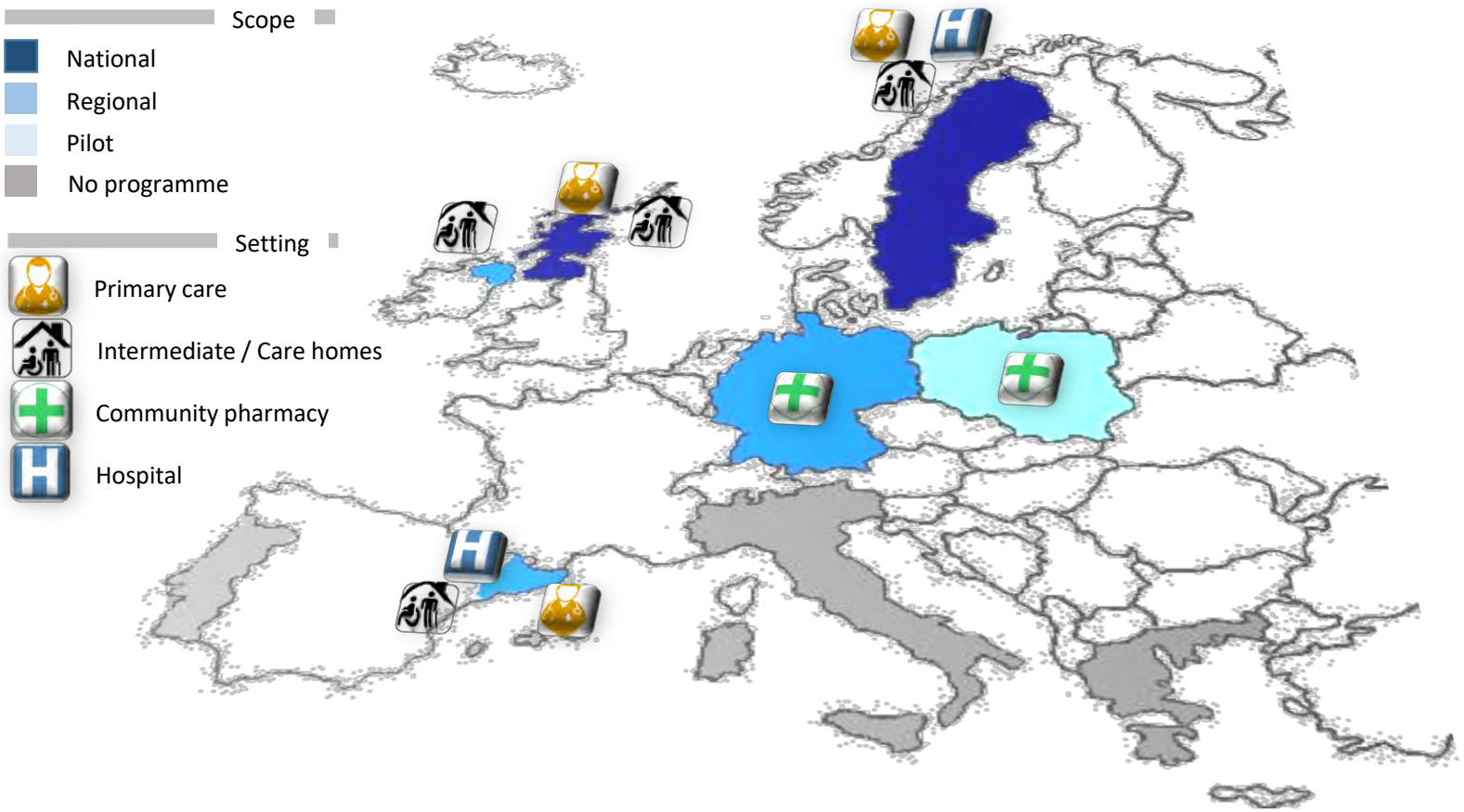
Programmes across the consortium



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6. Share Tools and guidance

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SIMPATHY

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