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RÉUNION INTERDISCIPLINAIRE DE
CHIMIOTHÉRAPIE ANTI-INFECTIEUSE

LUNDI 13 & MARDI 14
DÉCEMBRE 2021

PALAIS DES CONGRÈS • PARIS



Place des Sciences Humaines et Sociales dans nos pratiques

Dr Enrique Castro-Sánchez

Lecturer in Adult Nursing & Research Lead (Centre for Health Services Research), City, University of London
Infection Prevention and Control Clinical Fellow, NHS England & NHS Improvement

Declaration of interests

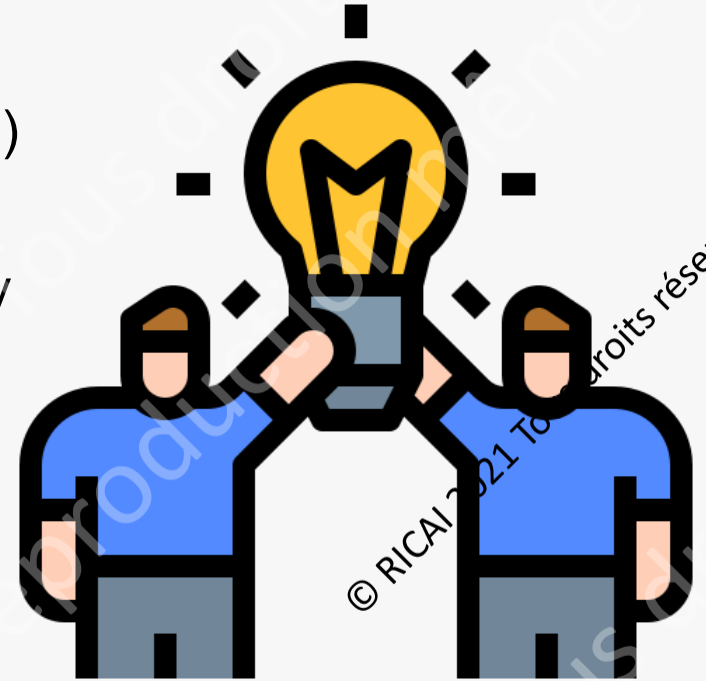
- **Views are mine and not necessarily of my employers or affiliated organisations:**

- City, University of London,
- NHS England/Improvement,
- Imperial College London (hon)
- National Institute for Health Research,
- World Health Organization
- Primary Care International
- Universitat Oberta de Catalunya

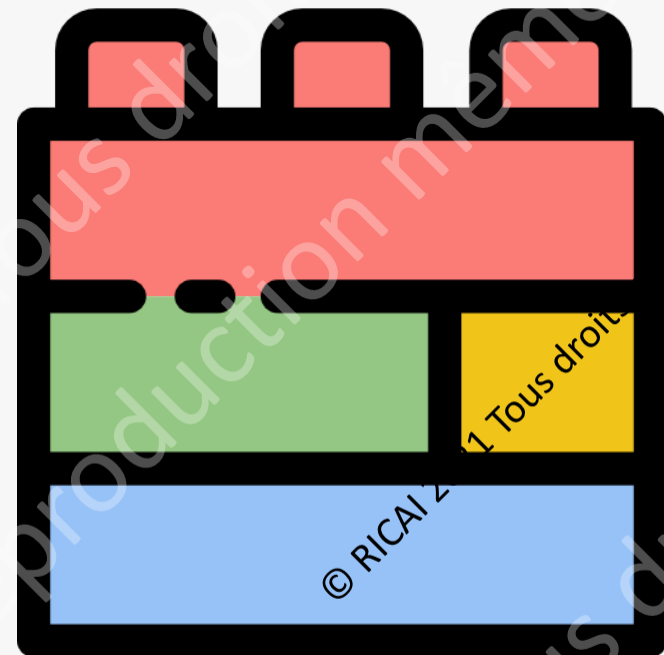
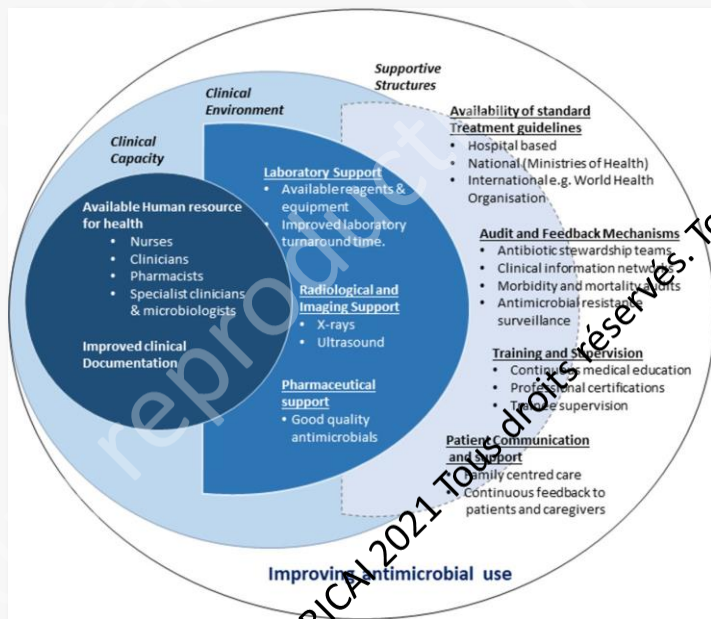
- **Funded by Wellcome Trust, NIHR, AHRC, ESRC, GCRF, BRC, Florence Nightingale Foundation**

“We will innovate our way out of drug resistance”

- Drug-resistance infections seen in terms of **deficits** (knowledge, skills, resources, etc...)
- Interventions to use antibiotics appropriately built in a **linear fashion** (“if we do X to address gap Y, then Z will improve”)
- **“Technocratic” approaches** (i.e., technology, innovations, new drugs) in AMR
 - “we will innovate our way out of this problem”



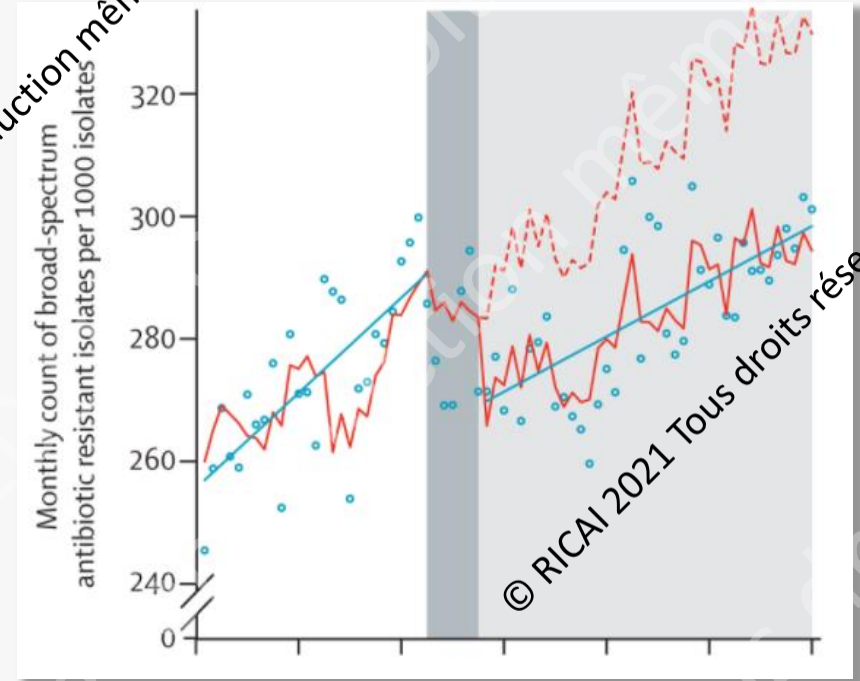
Drug-resistant infections, just a matter of addressing the deficits?



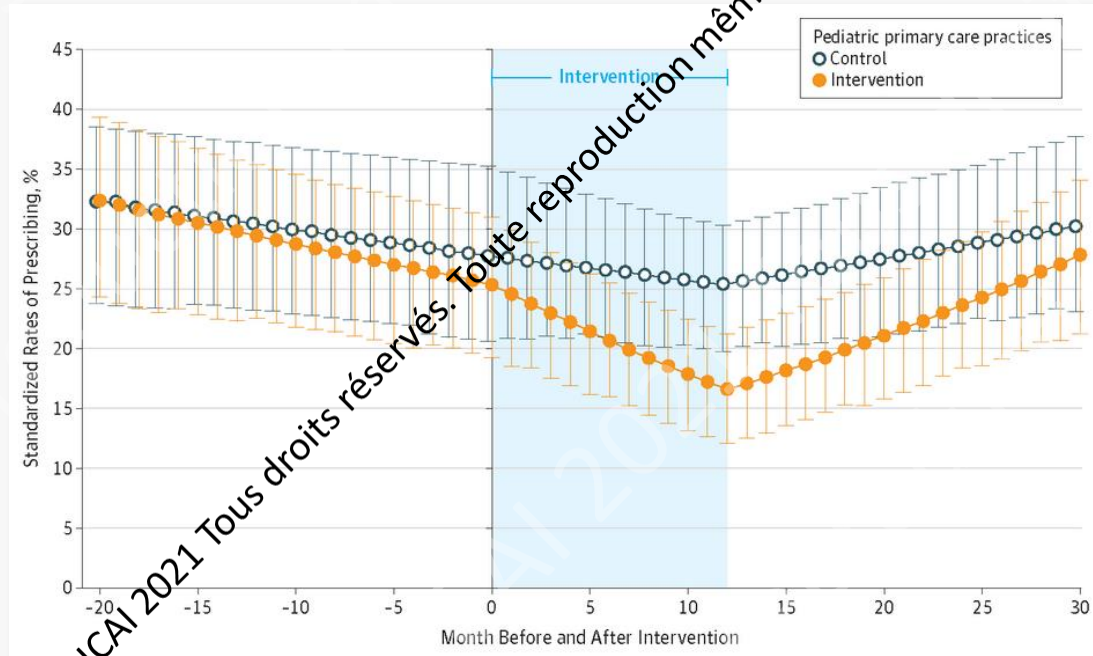
But addressing one deficit may not be enough...

■ A national antimicrobial stewardship intervention (NHS England Quality Premium) reduced *E. coli* resistance...

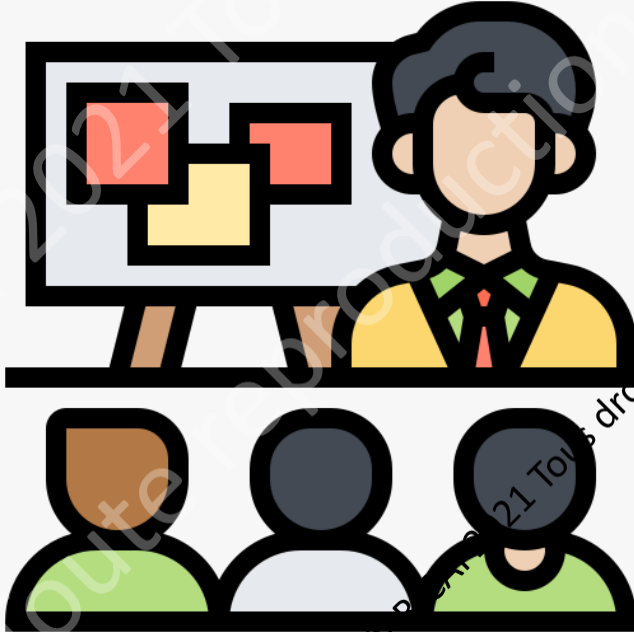
...but resistance remained on an upward trajectory...



...or even if enough, not for long enough



Education seems to make prescribers more knowledgeable but not more confident



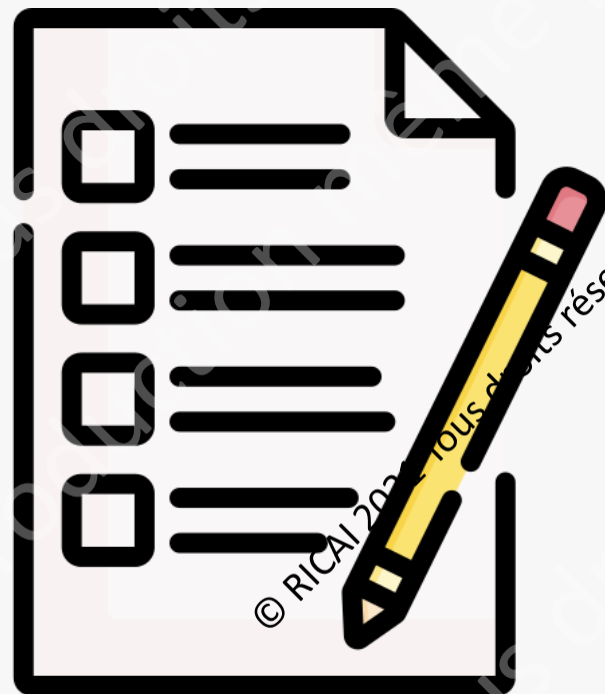
- Undergrad med students report gaps in skills, confidence, optimal behaviours
- Trainee doctors report **gaps in skills, confidence**, optimal **behaviours**

Guidelines may exist. But following them may be a different matter...

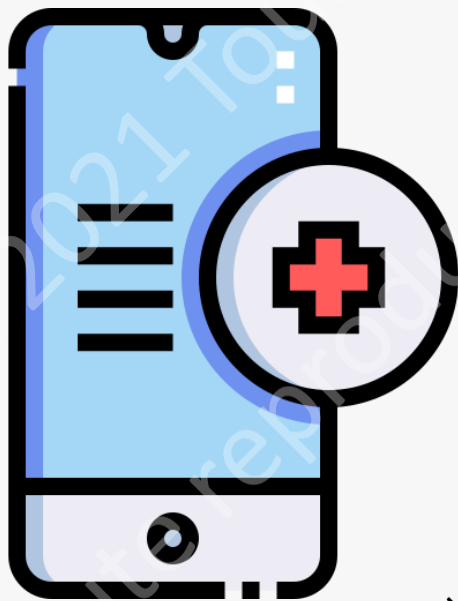
Diagnosis	2011		2019		P-value
	According to guidelines		According to guidelines		
	N	%	N	%	
Acute pharyngitis	16	32.0	16	26.2	0.504
Acute sinusitis	14	28.0	23	37.7	0.281
Acute middle ear infection	10	20.0	27	44.3	0.007
Acute bronchitis	13	26.0	29	47.5	0.134
Pneumonia	42	84.0	58	95.1	0.052
Acute cystitis	15	30.0	38	63.9	<0.001
Acute pyelonephritis	18	36.0	29	47.5	0.221
Total	128	34.6	221	51.8	<0.001

Bold values statistically significant $P < 0.05$

Radošević Quadranti et al, 2021, Family Practice, 38(3):259-264

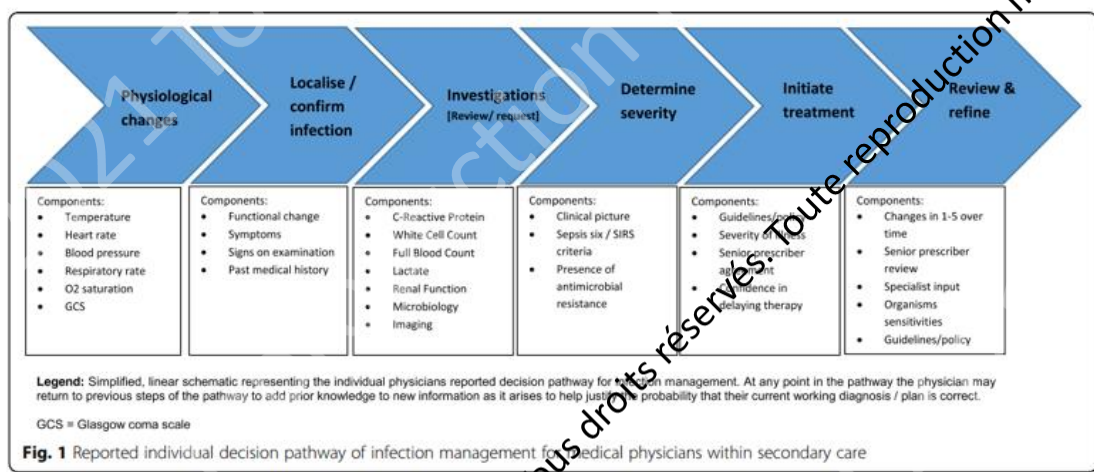


Decision-support & diagnostics? Often undecided...

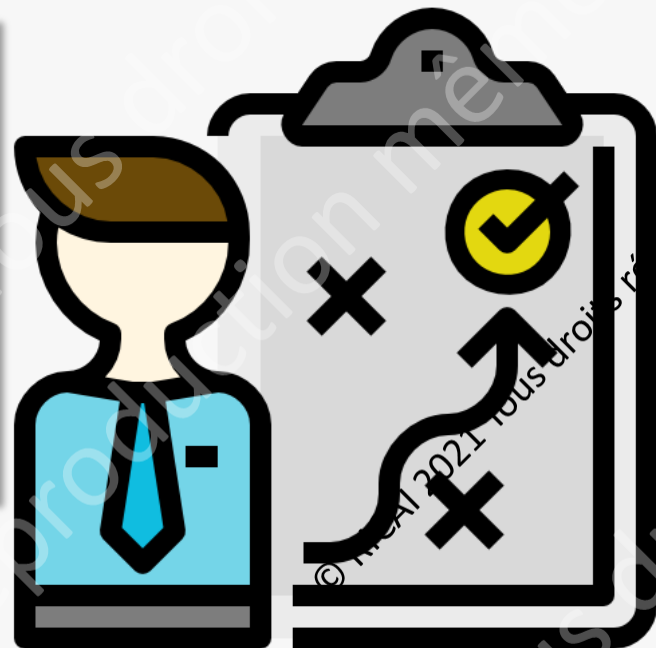


- **Strategies must align with clinical roles and experience**— useful only for those less experienced
- **‘Social tools’**— helpful for shared decision-making
- **Ambiguities**— when to use & impact
- **Context**— practical issues

Drug-resistant infections, imagined as a linear problem?



Provide data and **individualised** decision support at the point-of-prescribing to promote **better decisions** at each step of the physicians' decision-making pathway





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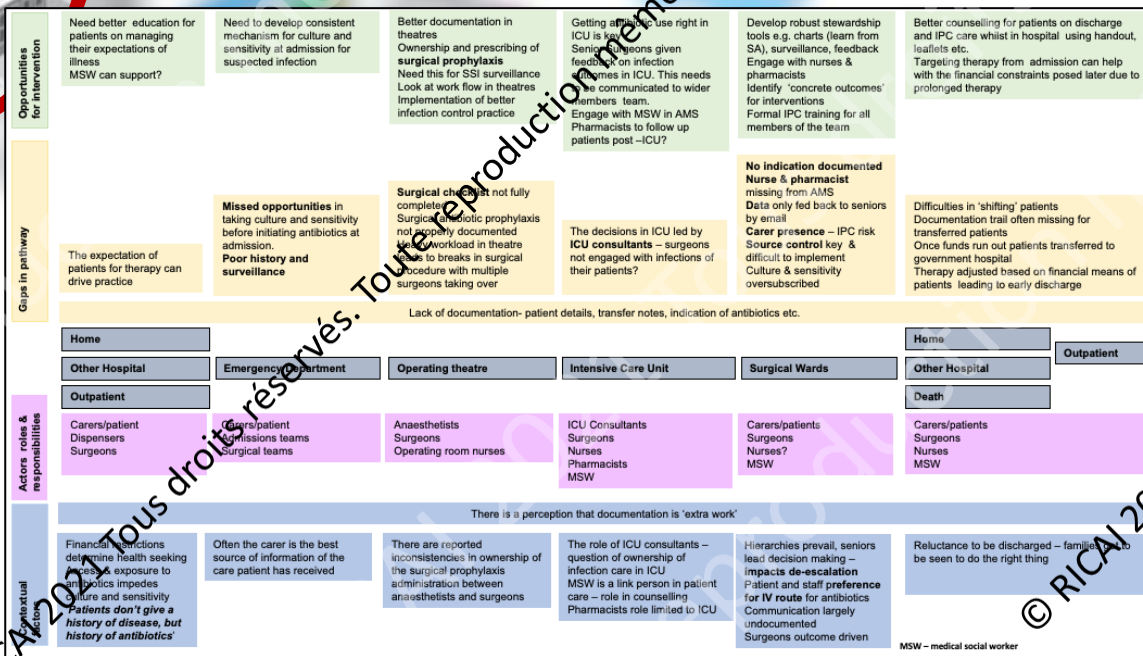
**Why don't
they
understand
what we tell
them to do?**

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**This is the most resistant
organism on Earth**

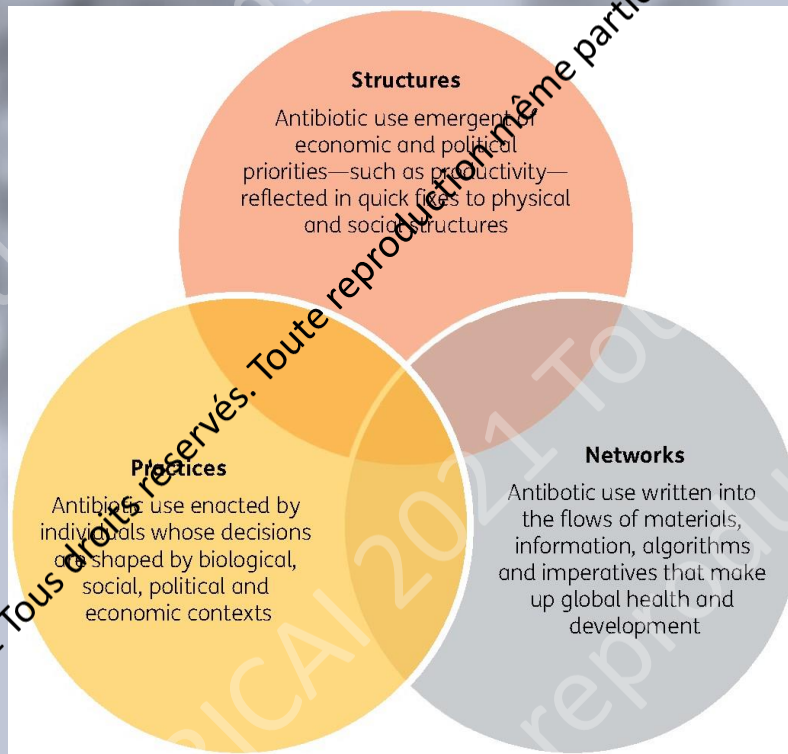
A hidden, messy, complex and unspoken world



MSW – medical social worker

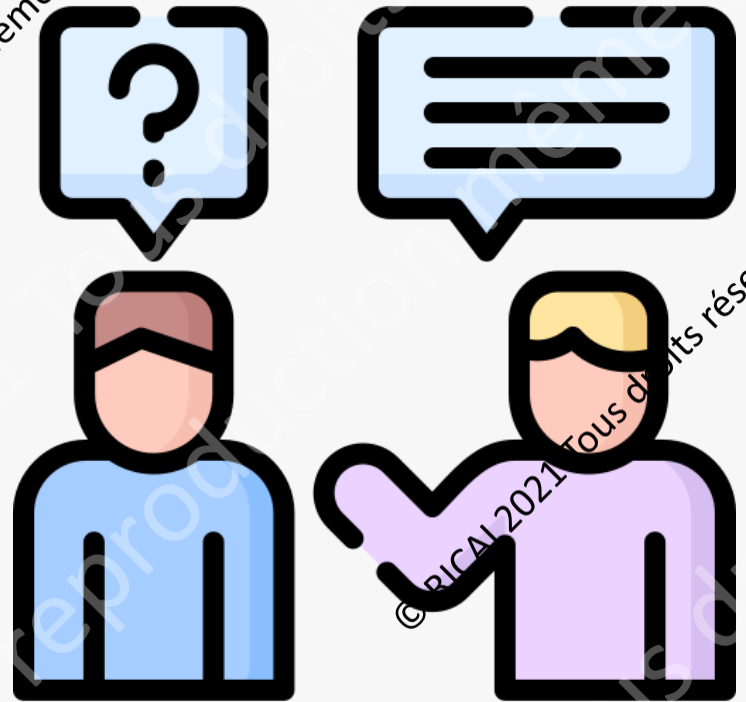


A hidden, messy, complex and unspoken world



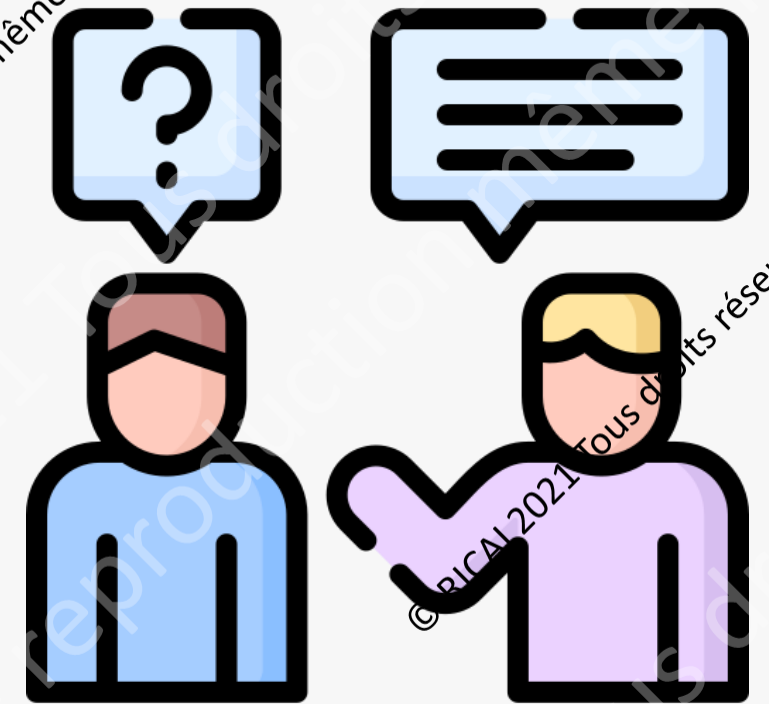
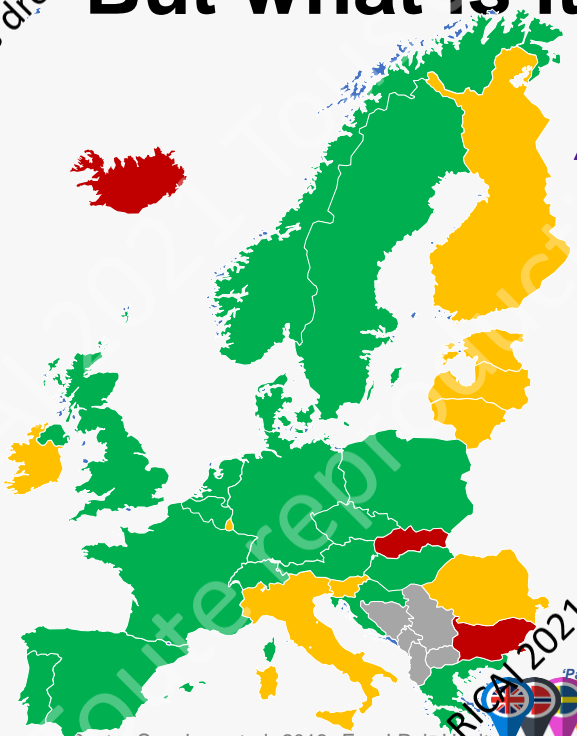
Applying social science to AMR: Micro level

“The guideline therefore recommends that prescribers take time to **discuss with patients** the likely nature of their condition, the benefits and harms of immediate antimicrobial prescribing, alternative options such as watchful waiting and/or delayed prescribing and why prescribing an antimicrobial may not be the best option for them”

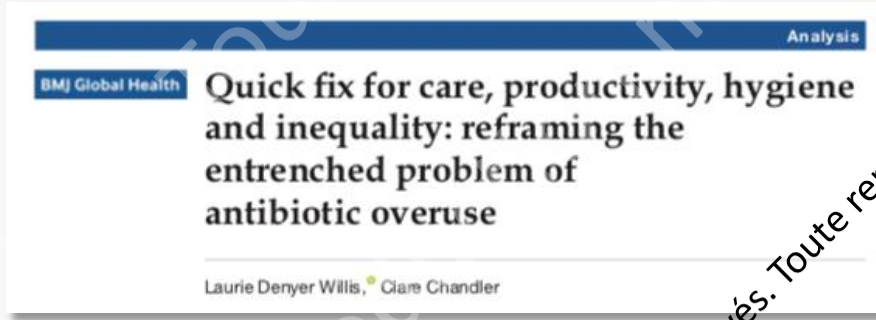


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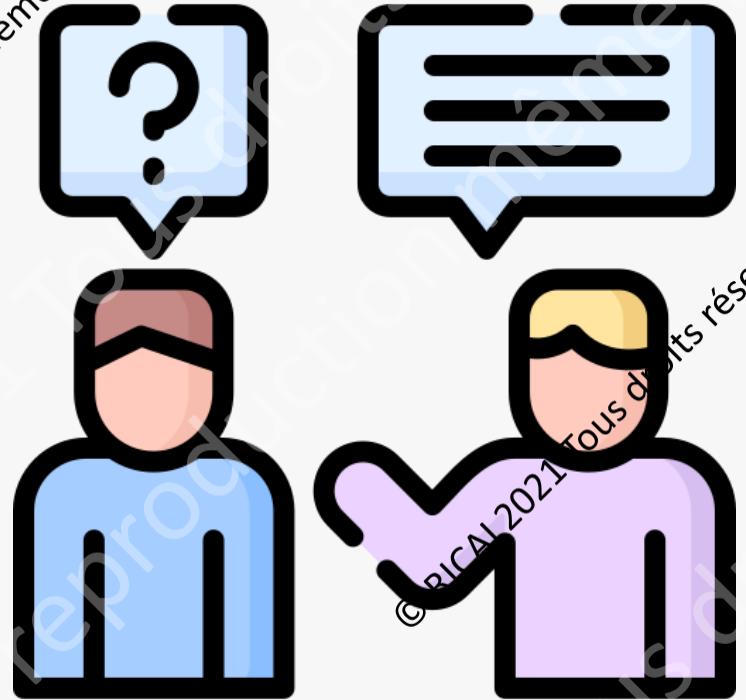
But what is it that you expect citizens to do?



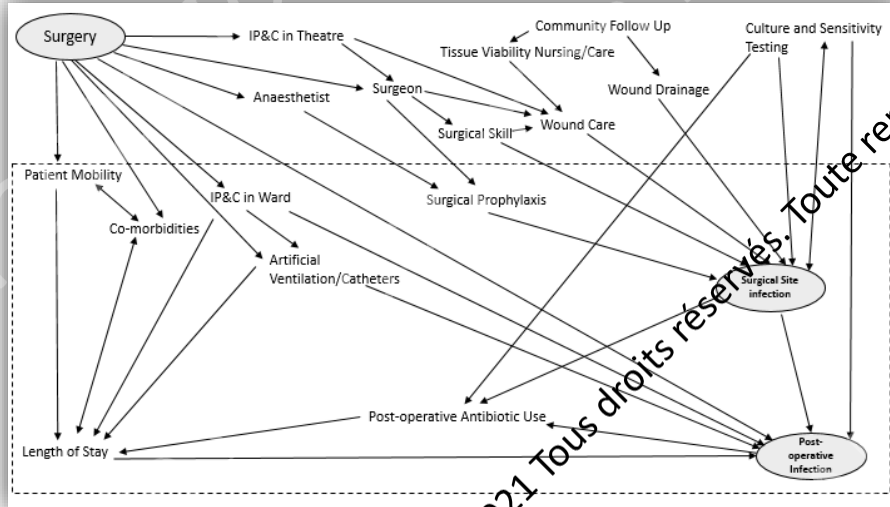
Applying social science to AMR: Micro level



- **Fix for care** in fractured health systems
- **Fix for productivity** at local and global scales, for humans, animals and crops
- **Fix for hygiene** in settings of minimised resources
- **Fix for inequality** driven by political, economic



Applying social science to AMR: Meso level



■ ‘Antibiotic prescribing’ as “behaviour” - not linear, but **complex, dynamic social process**, influenced by many determinants

■ ‘Unwritten rules’ influence antibiotic prescribing behaviours

■ **Clinical autonomy** and hierarchies within clinical peer specialties overrule policies and guidelines

Applying social science to AMR: Meso level

MAJOR ARTICLE

Behavior Change Strategies to Influence Antimicrobial Prescribing in Acute Care: A Systematic Review

Esmita Charani,¹ Rachel Edwards,¹ Nick Sevdalis,² Banos Alexandrou,³ Eleanor Sibley,⁴ David Mullett,⁴ Bryony Dean Franklin,^{5,6} and Alison Holmes¹

¹The National Centre for Infection Prevention and Management, Department of Surgery and Cancer and Centre for Patient Safety and Service Quality,

Imperial College Healthcare NHS Trust, United Kingdom

MAJOR ARTICLE

Understanding the Determinants of Antimicrobial Prescribing Within Hospitals: The Role of “Prescribing Etiquette”

E. Charani,¹ E. Castro-Sanchez,¹ N. Sevdalis,^{2,3} F. Vassiliou,¹ L. Drumright,¹ N. Shah,¹ and A. Holmes¹

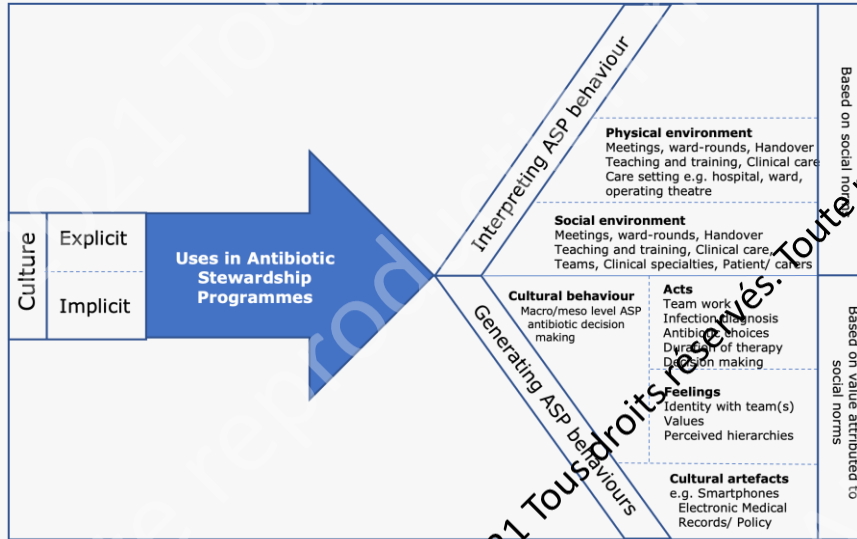
¹The National Centre for Infection Prevention and Management, Hammersmith Hospital, and ²Department of Surgery and Cancer, and ³Imperial Centre for Patient Safety and Service Quality, St Mary's Hospital, Imperial College London, United Kingdom

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Applying social science to AMR: Meso level

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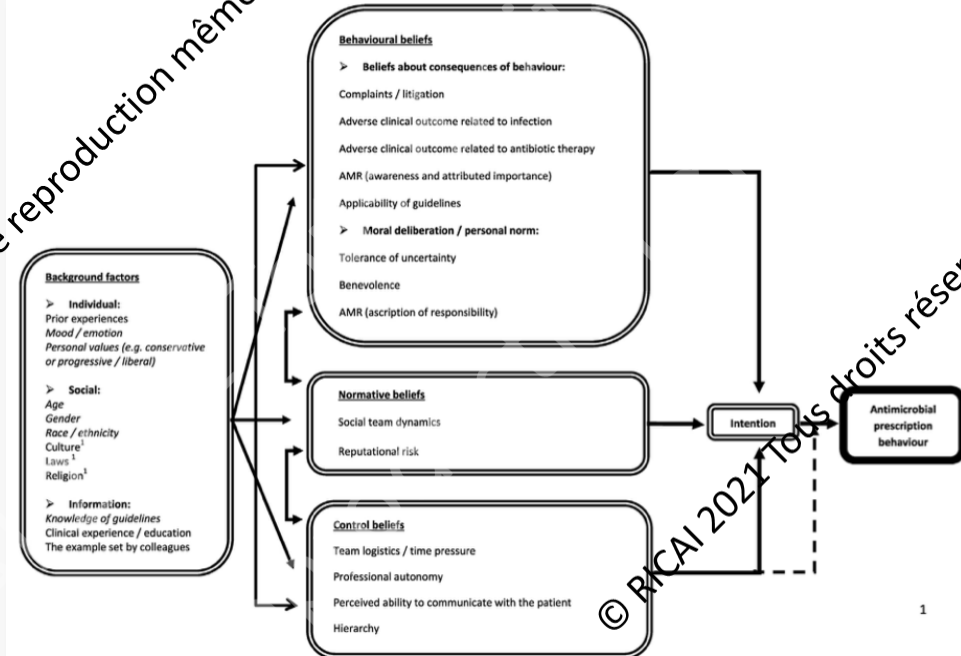
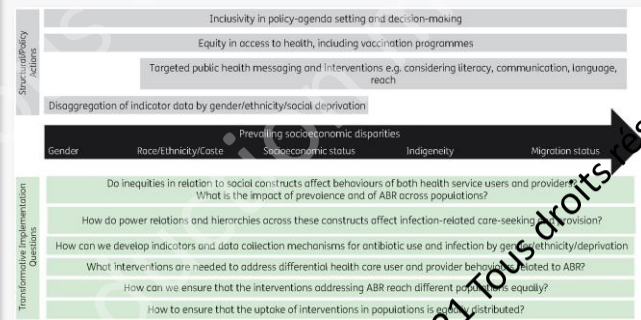
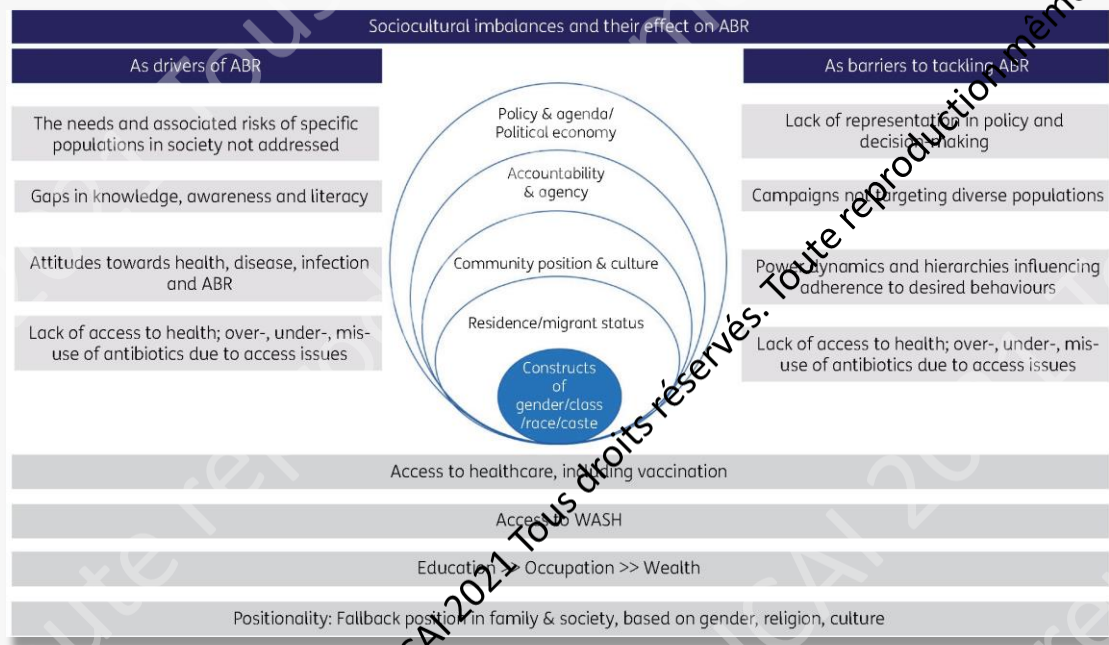
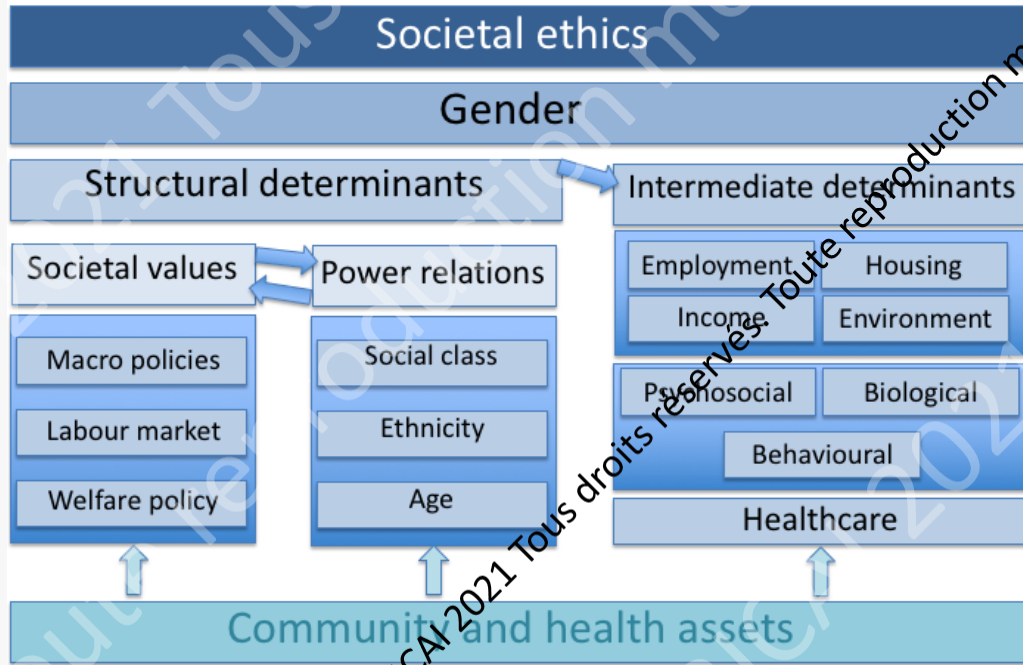


Fig. 3. The theoretical framework of antimicrobial prescription behaviour.

Applying social science to AMR: Macro level



Applying social science to AMR: Planetary level



- Consider how best **explore, exploit, embed** social and human sciences in **interdisciplinary** clinical, research, education, policy **practice**

The right social behavioural lens for your clinical practice and research



- Political, economic, social, technological, environmental, legislative, industrial context to deliver tailored approaches
- Cannot transplant interventions (high to low income, hospital to care homes, one professional group to other...)
- Foster engagement and ownership

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Dr Enrique Castro-Sánchez

RGN PhD MPH BSc DipTropNurs PgDip PgCert DLGHTM FHEA FEANS

Lecturer in Adult Nursing & Research Lead (Centre for Health Services Research), City University of London

Infection Prevention and Control Clinical Fellow, NHS England & NHS Improvement

Hon Lecturer, Imperial College London

Enrique.Castro-Sanchez@city.ac.uk

@castrocloud

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