

# Ús optimitzat dels antibiòtics des del vessant de l'Atenció Primària

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**80%**

**OF ALL ANTIBIOTICS ARE  
USED ON FARM ANIMALS**

# Antibiòtics i Atenció Primària

- On som?

- Resistències de *Streptococcus pyogenes* a penicil·lines?

# Resistencias: Penicilina



*Streptococcus pyogenes* o estreptococo  
 $\beta$ -hemolítico del grupo A (EBHGA)

0 %

No se ha descrito **nunca** una cepa  
resistente a la penicilina

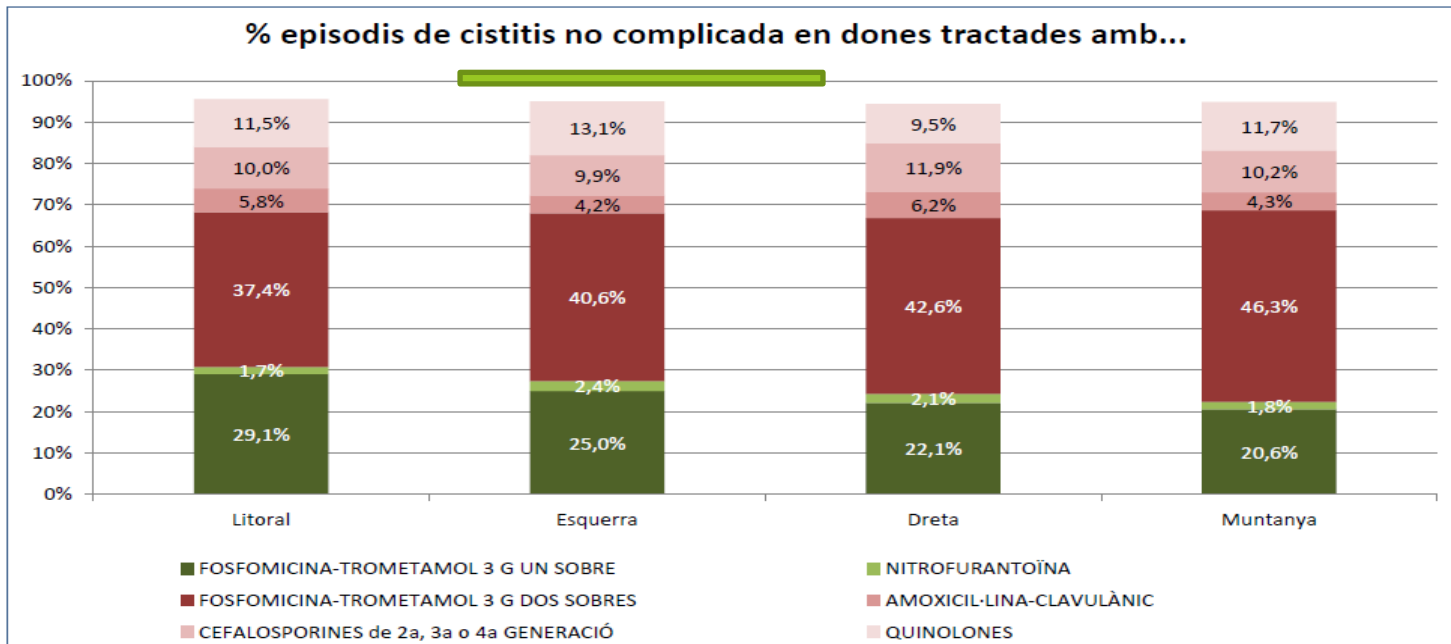
- En cistitis simple està indicat Fosmomicina 1 sobre o 2 sobres?

**Només un 26% de les prescripcions d'antibiòtics en cistitis no complicada de tota l'AP-BCN es consideren adequades (fosfomicina 3 g 1 sobre i nitrofurantoïna 100 mg durant 5 dies).**

## Indicadors d'adequació de la prescripció: CNC

Període: gen-des 2020

Nivell d'agregació: SAP



- Quin és l'antibiòtic d'elecció en la Pneumònia?



# Anàlisi de dades segon trimestre 2021

## Pneumònia

Pneumònia bacteriana no especificada

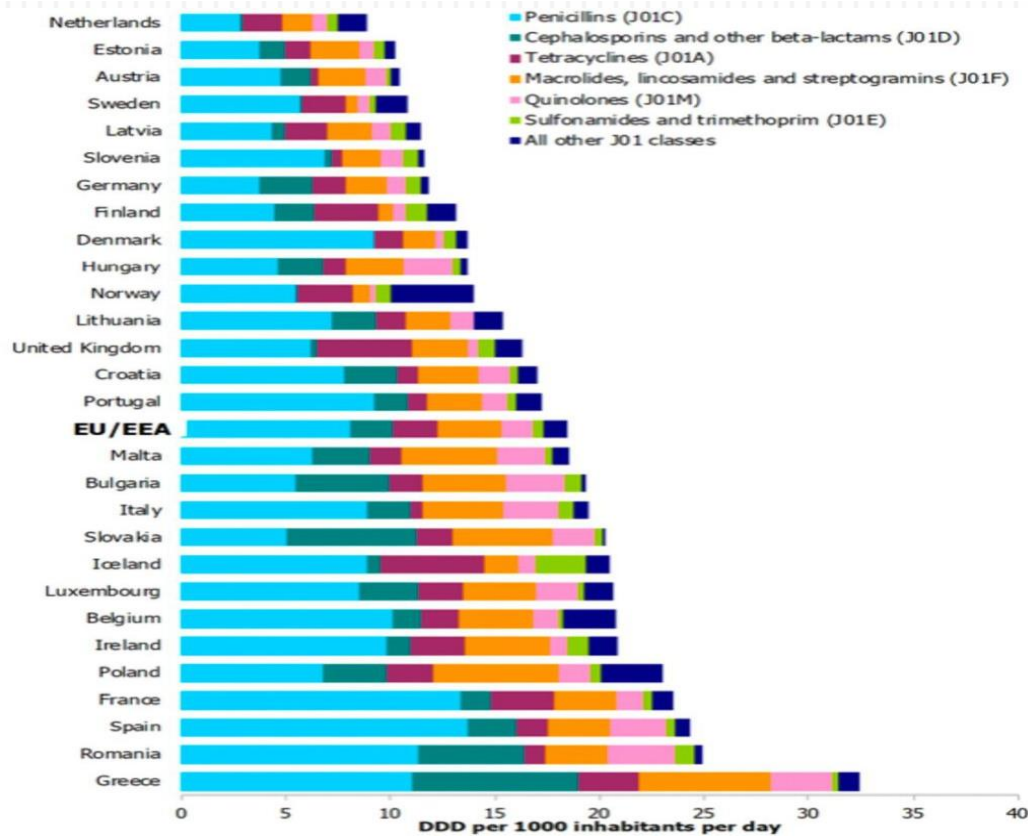
Pneumònia causada per microorganismes no especificada

Pneumònia per *Streptococc*

*Pneumònia lobar causada per microorganisme no especificat*

ANTIBIÒTIC	Prescripcions	%	Residències	MACA
Amoxicilina + Ac Clav	713	27,1	31	15
Levofloxacino	687	26,1	21	13
Amoxicilina	587	22,3	5	1
Azitromicina	322	12,3	4	1
Cefditoreno	71	2,7	5	3
Moxifloxacino	44	1,7	0	1
Cefixima	42	1,6	3	2
Cefuroxima	38	1,4	2	1
Ciprofloxacino	31	1,2	2	1
Sulfametoxazol y trimetoprima	28	1,1	0	0
Claritromicina	27	1,0	0	0
Clindamicina	20	0,8	2	3
Doxiciclina	8	0,3	0	0
Ceftriaxona	4	0,2	4	0
Eritromicina	2	0,1	0	0
Josamicina	2	0,1	0	0
Cefotaxima	1	0,0	0	0
Fosfomicina	1	0,0	0	0
Total general	2628		79	41

# Consumption of antibiotics for systemic use (ATC group J01) in EU/EEA countries in 2018 (expressed as DDD per 1000 inhabitants per day)



- Què estem fent?

# DHD de penicil·lines prescrites

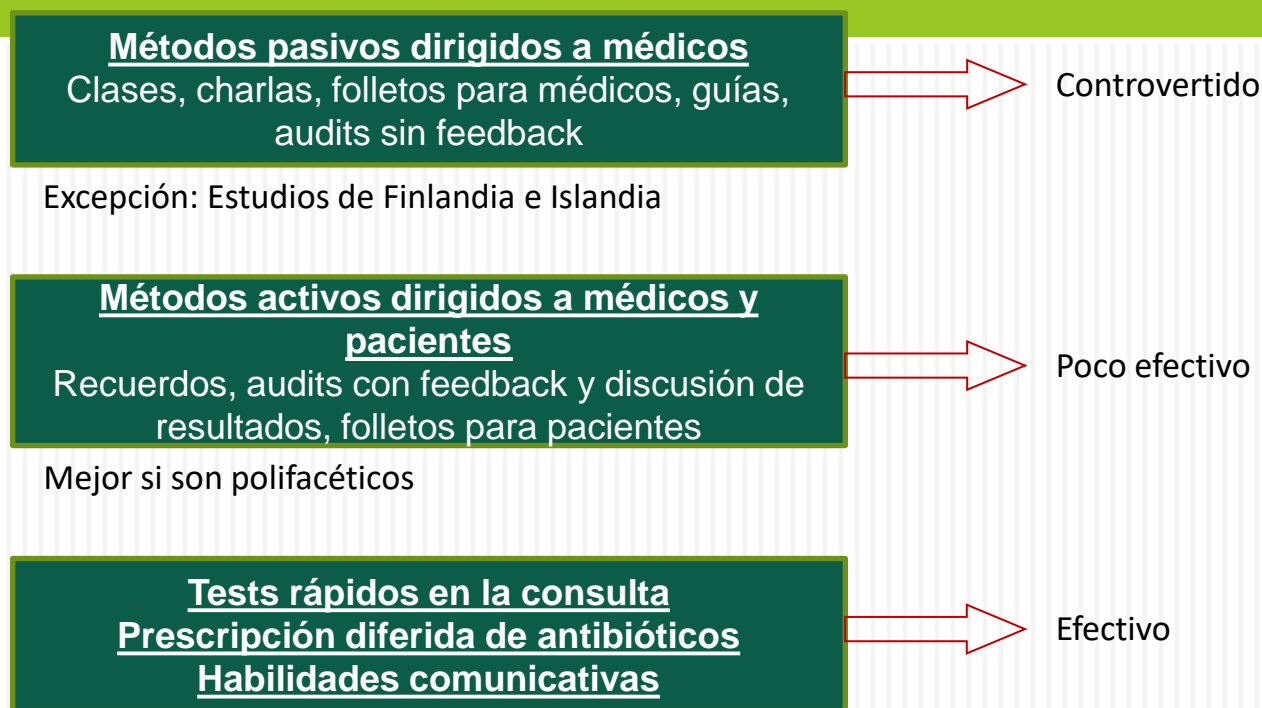
ANTIBIÒTIC	DHD 2019	DHD 2020	DHD 2021
<b>AMOXICIL·LINA TRIHIDRAT</b>	2,3	2,1	2,0
<b>AMOXICIL·LINA+CLAVULANIC</b>	2,6	2,5	2,6

Font: aplicació de farmàcia de l'ICS

# Antibiòtics i Atenció Primària

- Com podem millorar?

# ¿Podemos modificar los hábitos de los médicos de atención primaria en cuanto a prescripción antibiótica?



# Proves de Diagnòstic Ràpid

15

## Streptococo A



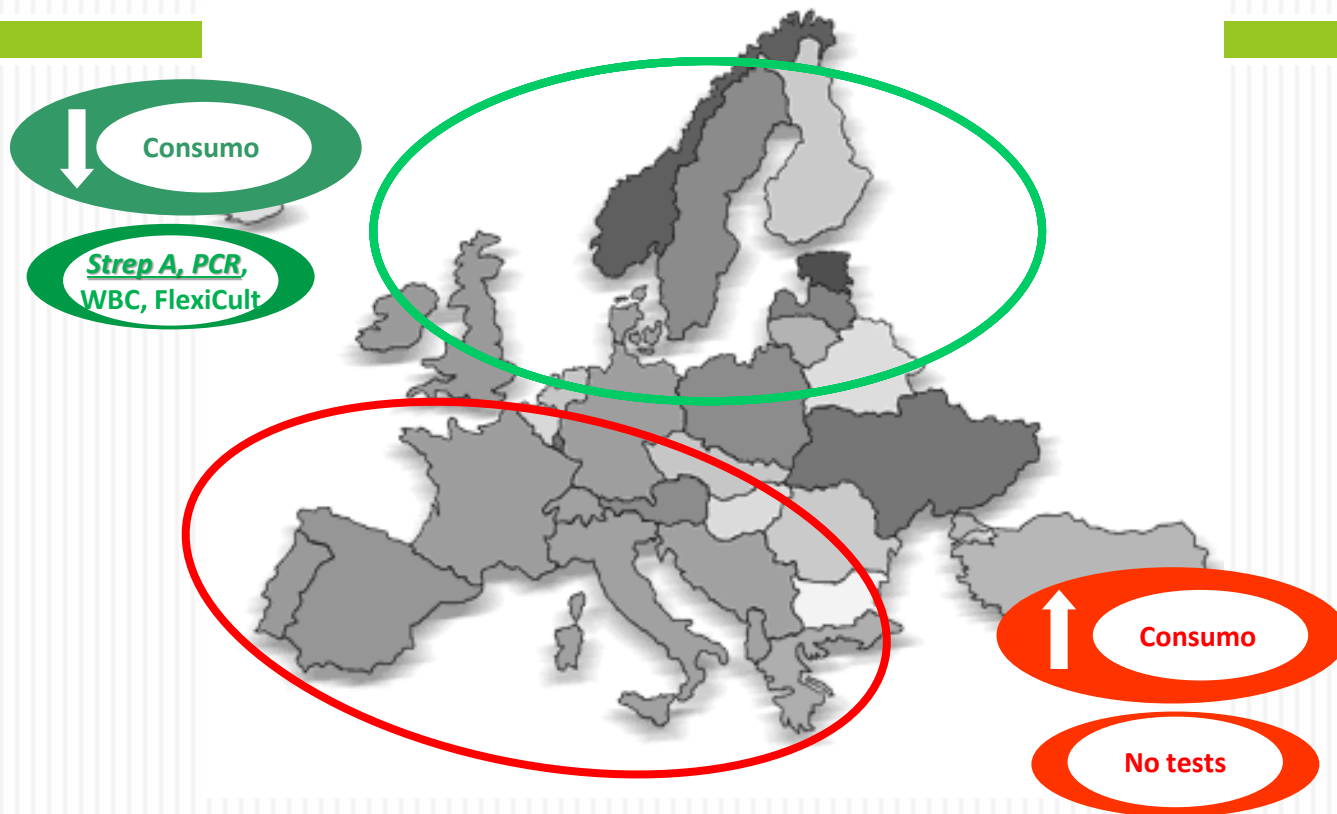
## Tira reactiva orina



## Proteina C Reactiva

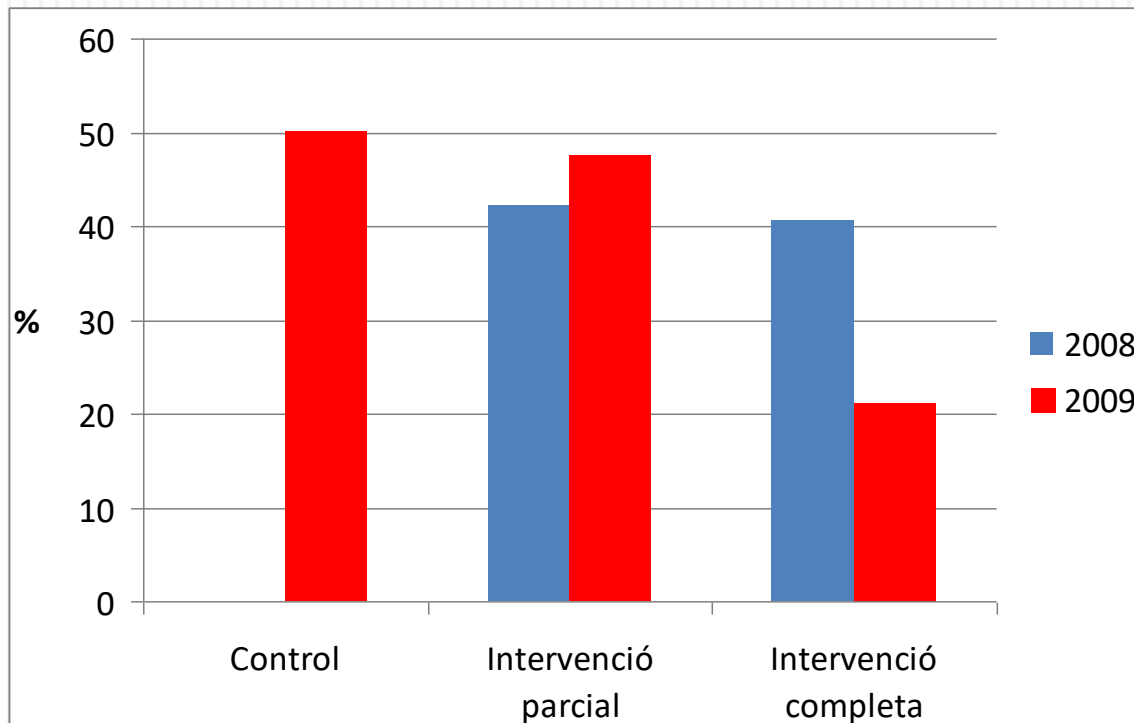


## Correlación negativa entre consumo & resistencia y uso de tests rápidos



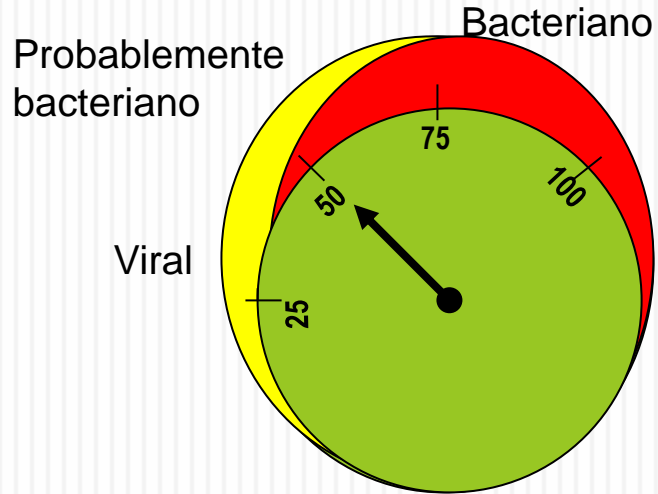


## Porcentaje de prescripción antibiótica en la amigdalitis aguda según grupo (n: 2.153). Estudio Happy Audit



# ¿Bronquitis aguda o neumonía?

## Diagnóstico más probable según valores de los reactantes de fase aguda



Proteína C reactiva (mg/l)

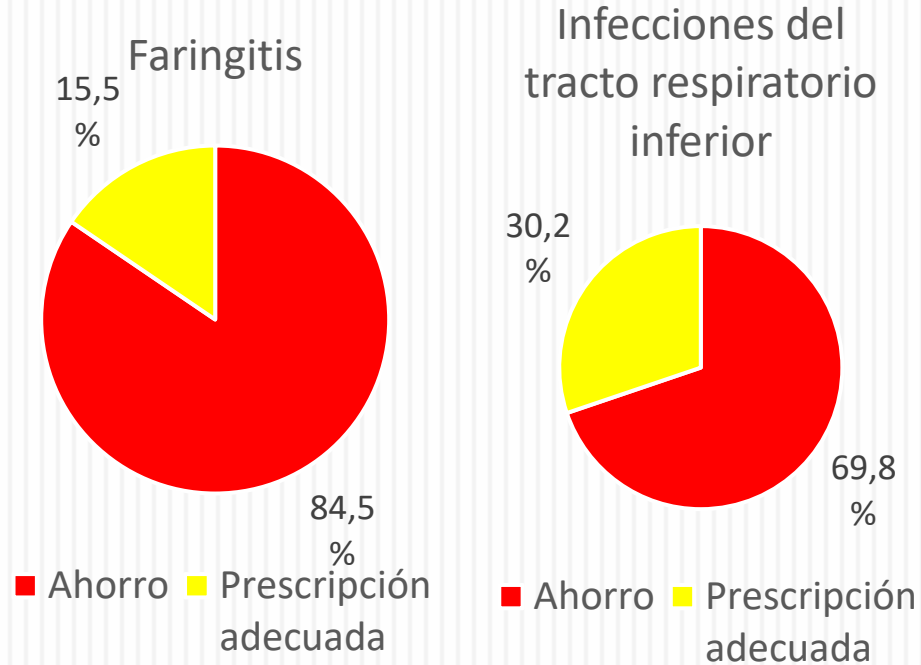
- < 20            bronquitis
- 20 – 100        duda
- > 100        neumonía

# Prescripció antibiòtica en les infeccions del tracte respiratori inferior segons nivell de PCR obtingut.

Grup Intervenció Completa 2009 – Estudi Happy Audit

Utilització de PCR	Prescripció antibiòtica. n (%)
<b>No ús de PCR</b>	2.992 / 4.840 (61,8)
<b>Ús de PCR:</b>	
- 0 – 10 mg/L	35 / 253 (13,8) 75% casos
- 11 – 20 mg/L	16 / 28 (57,1) 15% casos
- > 20 mg/L	168 / 213 (78,9) 10% casos
- Valor no escrit	20 / 51 (51,0)
- Total	239 / 545 (43,9)

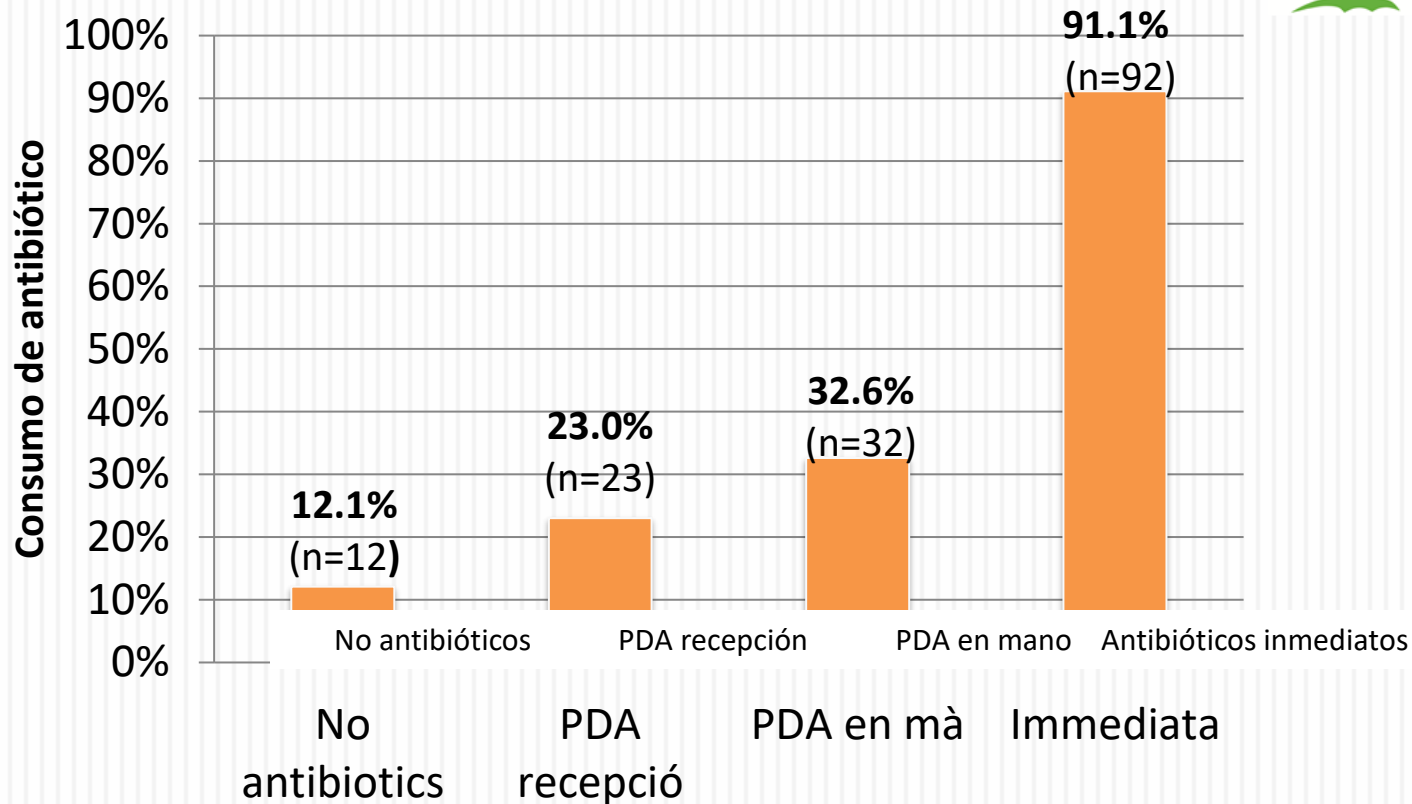
## Ahorro estimado de antibióticos en las faringitis e infecciones del tracto respiratorio (basado en el estudio Happy Audit 3, 2015)



# Prescripció Diferida Antibiòtics



## Resultados: Consumo de antibióticos



Estrategia

# Habilitats Comunicatives en prescripció d'antibiòtics



## Effects of internet-based training on antibiotic prescribing rates for acute respiratory-tract infections: a multinational, cluster, randomised, factorial, controlled trial

Paul Little, Beth Stuart, Nick Francis, Elaine Douglas, Sarah Tonkin-Crine, Sibyl Arthiers, Jochen W.L. Cats, Hanne Melbye, Miriam Sontje, Michael Moore, Samuel Coenen, Chris Butler, Kereszta Hood, Mark Kelly, Maciek Godyski-Cwikla, Artur Mierzecki, Antoni Torres, Carl Lox, Melanie Davies, Mark Mullee, Gilly O'Reilly, Alike van der Velden, Adam WA Graahy, Harman Goossens, Theo Verhey, Lucy Yardley, on behalf of the GRACE consortium

### Summary

**Background** High-volume prescribing of antibiotics in primary care is a major driver of antibiotic resistance. Education of physicians and patients can lower prescribing levels, but it frequently relies on highly trained staff. We assessed whether internet-based training methods could alter prescribing practices in multiple health-care systems.

**Methods** After a baseline audit in October to December, 2010, primary-care practices in six European countries were cluster randomised to usual care, training in the use of a C-reactive protein (CRP) test at point of care, in enhanced communication skills, or in both CRP and enhanced communication. Patients were recruited from February to May, 2011. This trial is registered, number ISRCTN99871214.

**Results** The baseline audit, done in 259 practices, provided data for 6771 patients with lower-respiratory-tract infections (3742 [55·3%] and upper-respiratory-tract infections (1416 [20·9%], of whom 5355 (79·1%) were prescribed antibiotics. After randomisation, 246 practices were included and 4264 patients were recruited. The antibiotic prescribing rate was lower with CRP training than without (33% vs 48%, adjusted risk ratio 0·54, 95% CI 0·42–0·69) and with enhanced communication training than without (36% vs 45%, 0·69, 0·54–0·87). The combined intervention was associated with the greatest reduction in prescribing rate (CRP risk ratio 0·53, 95% CI 0·36–0·74, p<0·0001; enhanced communication 0·68, 0·50–0·89, p=0·003; combined 0·38, 0·25–0·55, p<0·0001).

**Interpretation** Internet training achieved important reductions in antibiotic prescribing for respiratory-tract infections across language and cultural boundaries.

**Funding** European Commission Framework Programme 6, National Institute for Health Research, Research Foundation Flanders.

### Introduction

Physicians prescribe antibiotics for many patients with acute uncomplicated lower-respiratory-tract infections, which are among the most common acute presentations in primary care.<sup>1,2</sup> Most of these infections are viral, and evidence from systematic reviews<sup>3</sup> and other studies<sup>4,5</sup> suggest only slight benefit is achieved from the prescription of antibiotics. Thus, rationalisation of antibiotic use in the treatment of lower-respiratory-tract infections in primary care is a priority in the prevention of antibiotic resistance.<sup>6,7</sup>

C-reactive protein (CRP) has predictive value for pneumonia,<sup>8,9</sup> in the IMPACT study,<sup>10</sup> training of physicians in CRP testing lowered the rate of antibiotic prescribing by 20%. These findings were supported in a later study.<sup>11</sup> The usefulness of training in consultation skills requires clarification<sup>12</sup> because there is limited evidence for effects on symptom control<sup>13,14</sup> and whether a particular approach to training can be used in different settings.

Interactive workshops for health-care professionals and education of patients are likely to lower the rate of

antibiotic prescribing.<sup>15,16</sup> The IMPACT study<sup>10</sup> showed that the training of physicians in advanced communication skills by seminar role-playing and peer feedback on consultation transcripts reduced antibiotic prescribing rates by 20%. The STAR programme involves five stages of web-based training in advanced communication skills that include recording of reactions to scenarios, sharing of accounts of clinical experience, and expert-led face-to-face seminars. This approach led to a 4% reduction in global antibiotic use over 1 year in practices across Wales.<sup>17</sup> Nevertheless, because such outreach interventions are generally performed by small groups of highly trained staff based at research centres of excellence, the generalisability of delivery and the potential effects on real-world practice are questionable. Novel techniques are, therefore, needed to lead to changes at national and international levels. Internet training has the advantage that it can be disseminated widely at low cost and does not require highly trained outreach facilitators to be on site. In one study of internet training for general practitioners, the use of an interactive booklet for consultations with children attending for



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- Ensayo clínico aleatorio.
- 259 consultas con 6.771 pacientes con infecciones del tracto respiratorio inferior.
- Variable de resultado principal: prescripción antibiótica.



### Resultado del estudio GRACE-INTRO. Prescripción antibiótica en la visita inicial

		Comunicación	
		Sí	No
PCR	Sí	(Comunicación + PCR) <b>33%</b>	(PCR) <b>37%</b>
	No	(Comunicación) <b>43%</b>	(Consulta habitual) <b>62%</b>

## RESISTÈNCIES ???

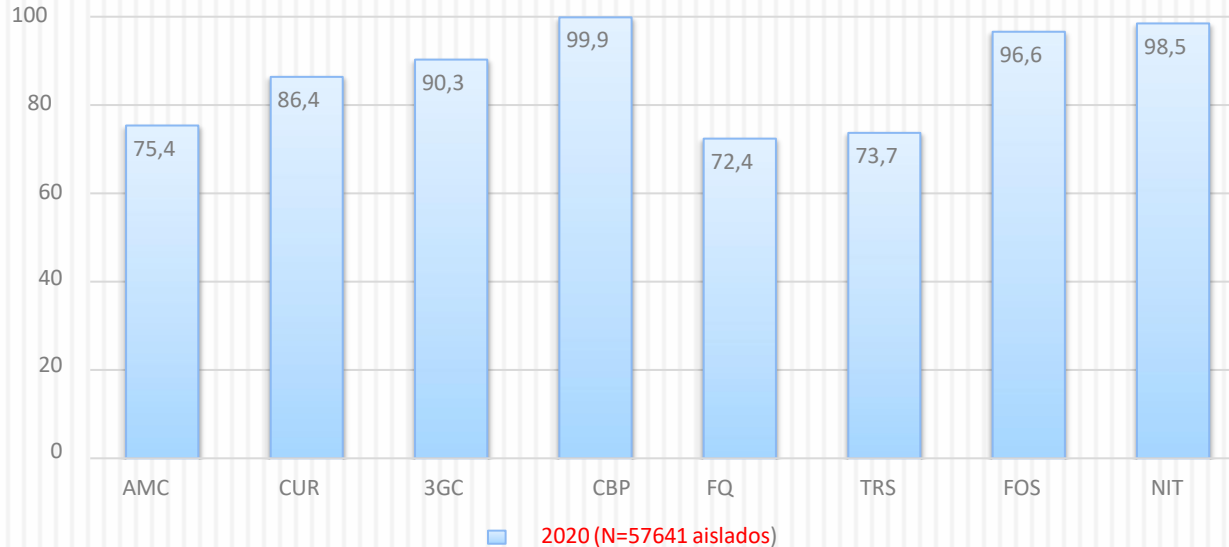
On som?

# Resistència antibiòtica adults

## Infecció urinària comunitària

% Sensibilitat

*Escherichia Coli*



AMC: amoxicil·lina-àc. clavulànic; CUR: cefuroxíma; 3GC: cefalosporines de tercera generació; CBP: carbapenèmics; FQ: fluoroquinolones; TRS: cotrimoxazole; FOS: fosfomicina; NIT: nitrofurantonia BLEE: beta-lactamasa d'espectre estès

# Resistència antibiòtica adults

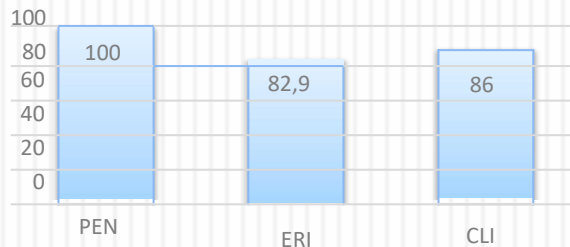
## Infecció respiratòria

*Streptococcus pyogenes*

% Sensibles  
(S+I)

100  
80  
60  
40  
20  
0

% Sensibles



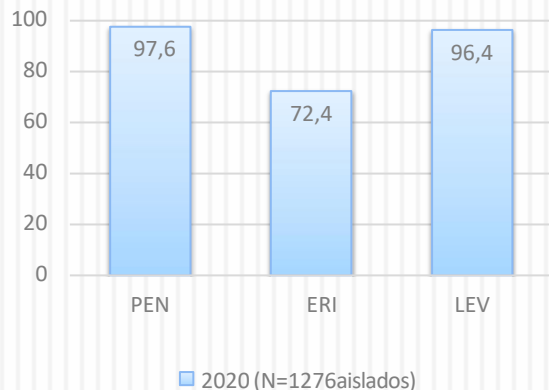
2020 (N=254 aïllats)

PEN: penicil·lina; ERI: eritromicina; LEV: levofloxacina; CLI: clindamicina; AMP: ampicil·lina; AMC: amoxicil·lina-àc.clavulànic; FQ: fluoroquinolones

# Resistència antibiòtica adults

## Infecció respiratòria

% Sensibles



*S. pneumoniae*

# Conclusions

- Sobre diagnòstic d'infeccions bacterianes**
- Sobretractament amb antibiòtics**
- Utilitzar pautes curtes en infecció comunitària**



**Moltes Gràcies**

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