

XXVI Jornada Malalties infeccioses a l'Atenció Primària-2025

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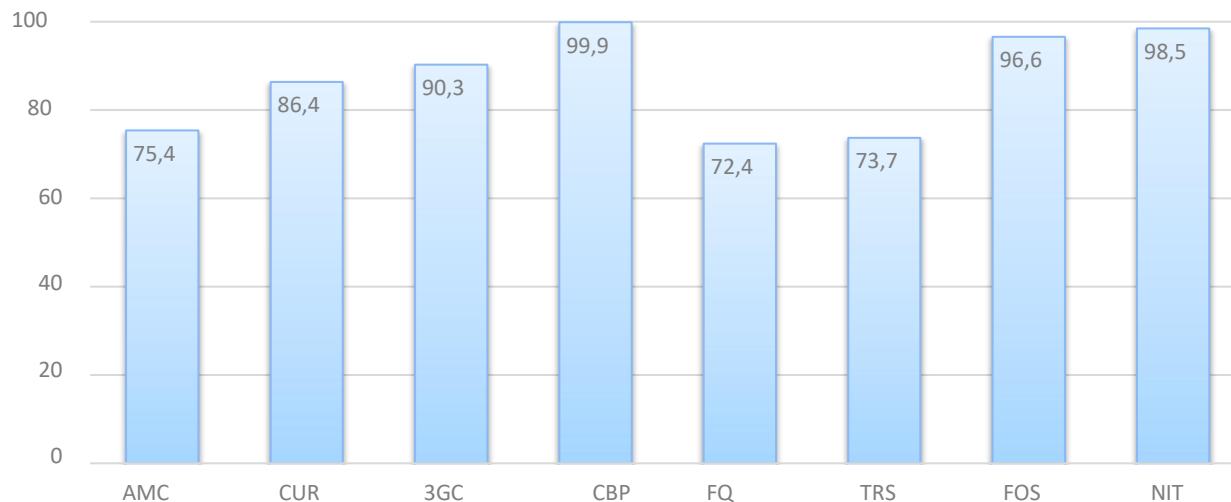
RESISTÈNCIES ???

Resistència antibiòtica adults

Infecció urinària comunitària

% Sensibilidad

Escherichia Coli



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

Resistència antibiòtica adults

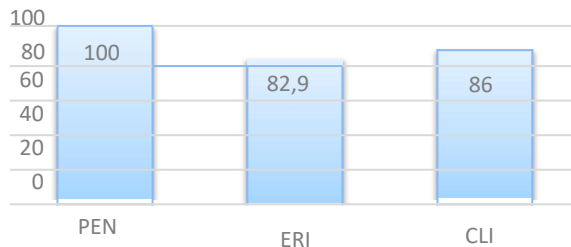
Infecció respiratòria

Streptococcus pyogenes

% Sensibles
(S+I)

100
80
60
40
20
0

% Sensibles



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

Resistencias: Penicilina



Streptococcus pyogenes o estreptococo
 β -hemolítico del grupo A (EBHGA)

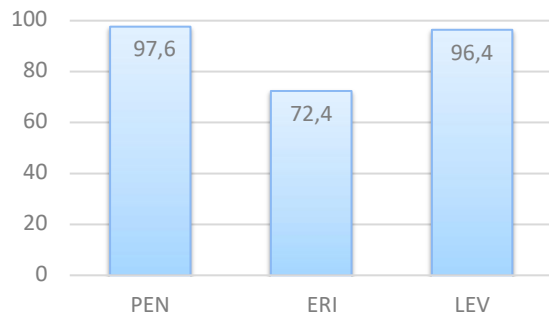
0 %

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

Resistència antibiòtica adults

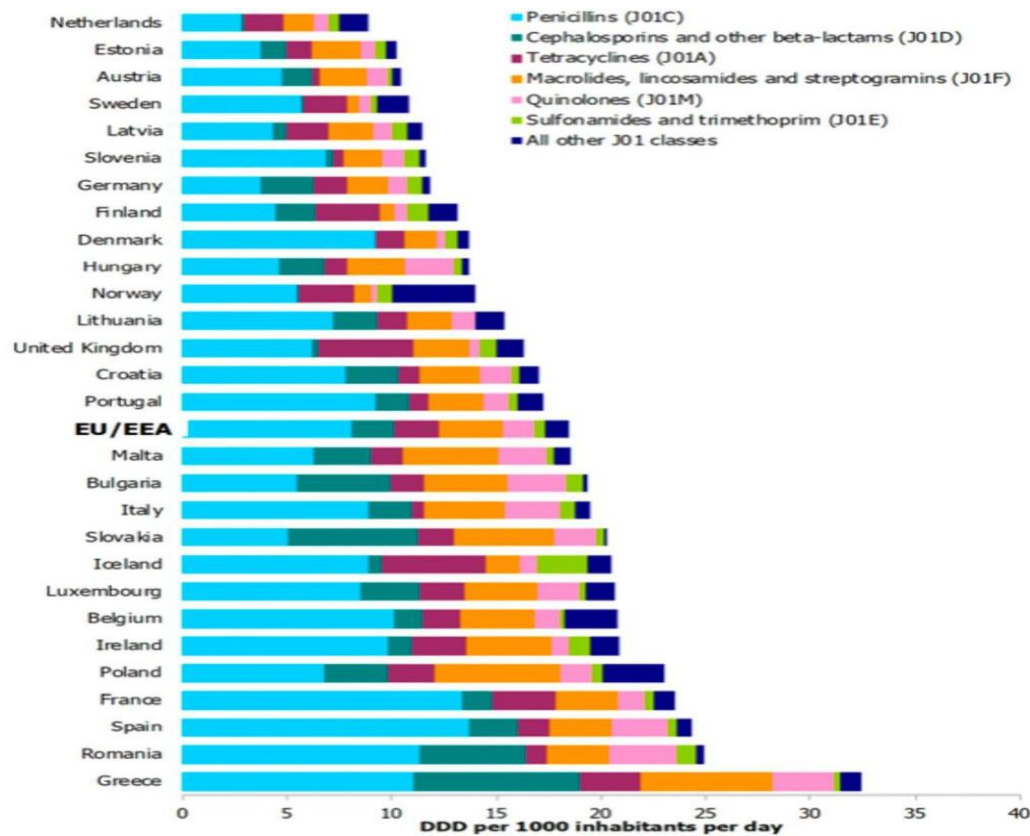
Infecció respiratòria

% Sensibles



S. pneumoniae

Consumption of antibiotics for systemic use (ATC group J01) in EU/EEA countries in 2022 (expressed as DDD per 1000 inhabitants per day)



■ QUÈ ESTEM FENT?

DHD de penicil·lines prescrites

ANTIBIÒTIC	DHD 2021	DHD 2022	DHD 2023
AMOXICIL·LINA TRIHIDRAT	2,3	2,1	2,0
AMOXICIL·LINA+CLAVULANIC	2,4	2,2	1,9

Font: aplicació de farmàcia de l'ICS

□ COM PODEM MILLORAR?

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

Métodos pasivos dirigidos a médicos

Clases, charlas, folletos para médicos, guías,
audits sin feedback



Controvertido

Excepción: Estudios de Finlandia e Islandia

Métodos activos dirigidos a médicos y pacientes

Recuerdos, audits con feedback y discusión de
resultados, folletos para pacientes



Poco efectivo

Mejor si son polifacéticos

Tests rápidos en la consulta Prescripción diferida de antibióticos Habilidades comunicativas



Efectivo

Proves de Diagnòstic Ràpid

12

Streptococo A



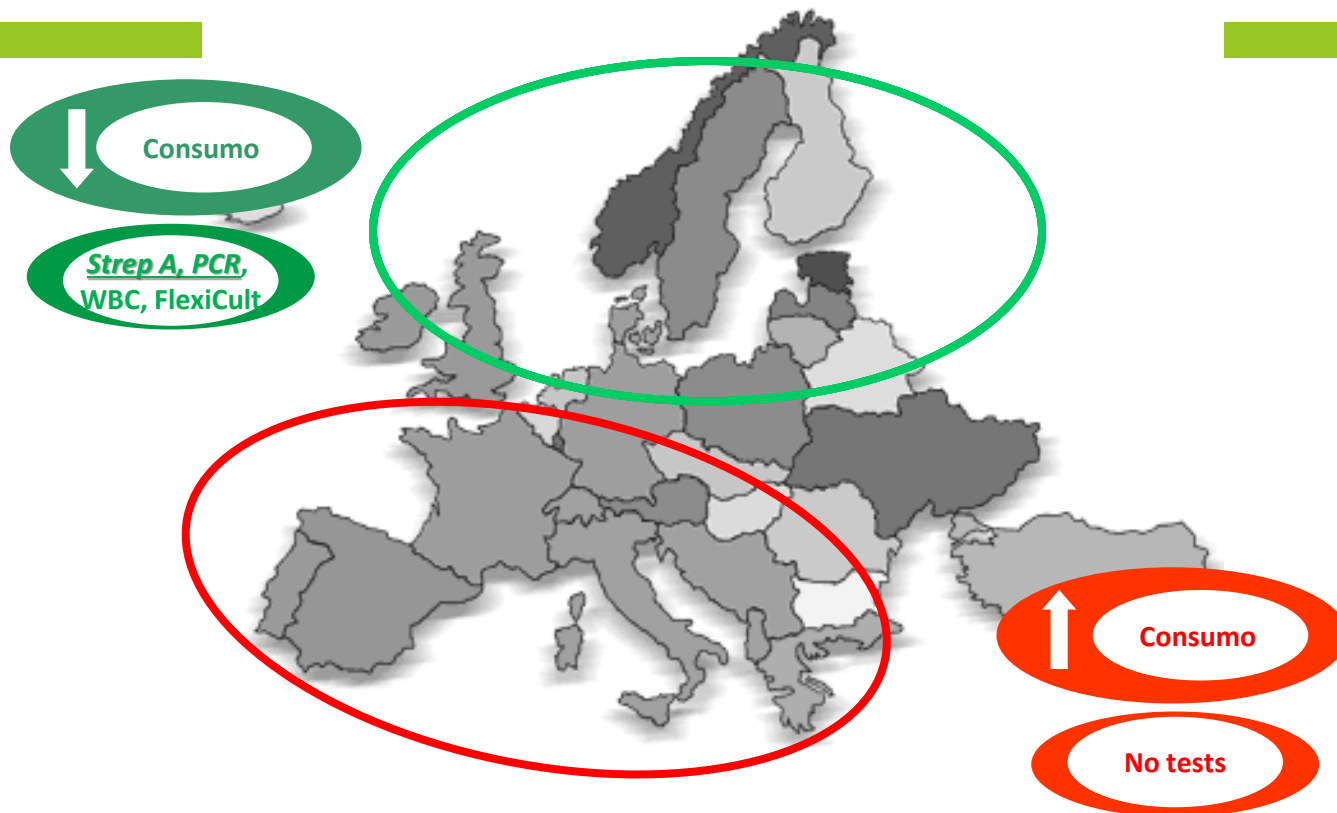
Tira reactiva orina



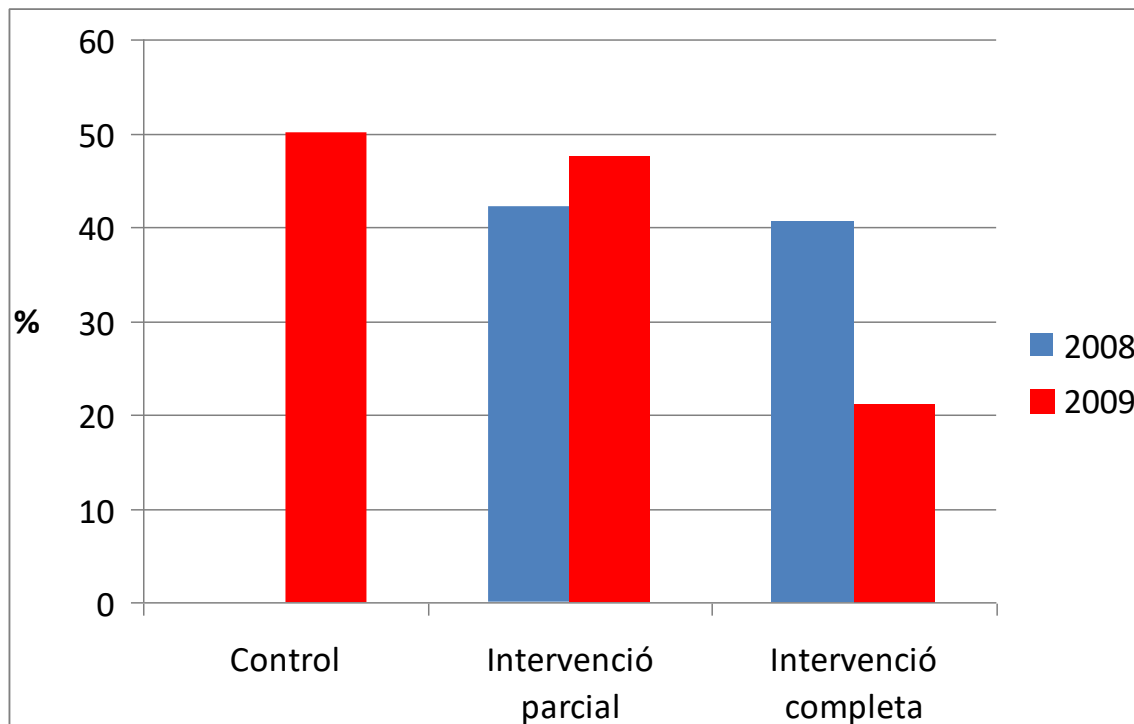
Proteïna C Reactiva



Correlación negativa entre consumo & resistencia y uso de tests rápidos

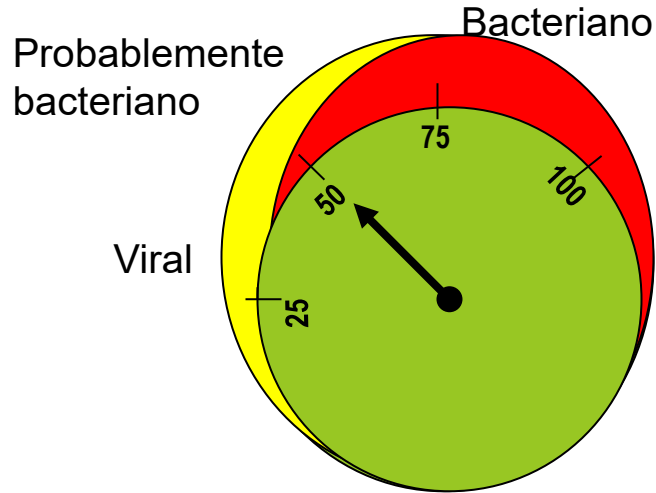


Porcentaje de prescripción antibiótica en la amigdalitis aguda según grupo (n: 2.153). Estudio Happy Audit



¿Bronquitis aguda o neumonía?

Diagnóstico más probable según valores de los reactantes de fase aguda



Proteína C reactiva (mg/l)

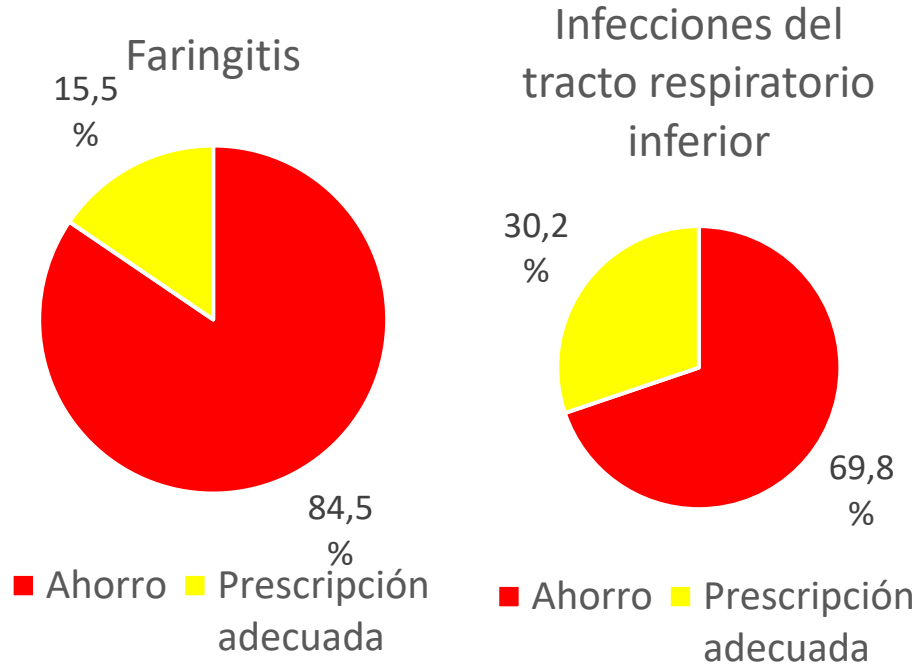
- < 20 bronquitis
- 20 – 100 duda
- > 100 neumonía

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 (%)
No ús de PCR	2.992 / 4.840 (61,8)
Ús de PCR:	
- 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)

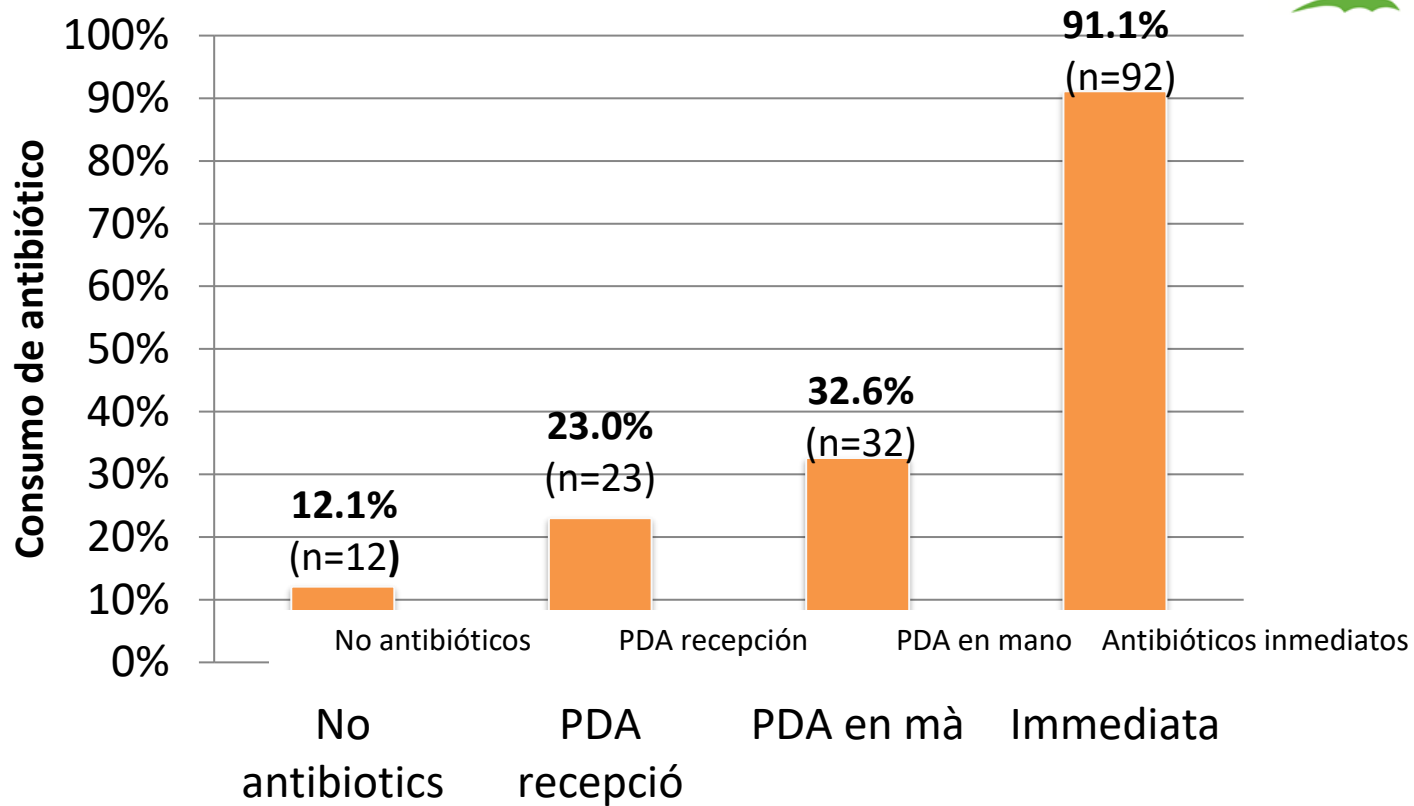
Ahorro estimado de antibióticos en las faringitis e infecciones del tracto respiratorio (basado en el estudio Happy Audit 3, 2015)



Prescripció Diferida Antibiòtics



Resultados: Consumo de antibióticos



Estrategia

Desprescripción

- ☐ **Desprescripción de antibióticos es una estrategia nueva en que el médico recomienda al paciente que termine el curso antes del tiempo acordado porque continuar el tratamiento es perjudicial y causa más daño que beneficio**
- ☐ **Pero...!**
- ☐ **Durante décadas los médicos han dicho, y los pacientes han aprendido, que siempre hay que completar un curso de antibióticos**
- ☐ **Hecho o mito ?**

You have just filled
a prescription for an
antibiotic...



READ THIS IMPORTANT INFORMATION

- ☒ Take it exactly as your medical expert tells you
- ☒ Do not skip doses
- ☒ Do not share it with others
- ☒ Finish the prescription even if you feel better
- ☒ Do not save it for later

Why is this checklist so important?

Using an antibiotic the wrong way can make infections stronger and harder to treat. You can prevent this problem by getting smart about antibiotics.

Take antibiotics the right way.



For more information call
1-800-311-3435 or visit
www.cdc.gov/getsmart

Patient information leaflet (PIL)
Folleto de información para el paciente



- Información de la farmacia:
- Has recibido una receta de un antibiótico.
- **Tómelo exactamente como le indicó su médico**
- **No te saltes ninguna pastilla**
- **No lo compartas con otros**
- **Complete siempre el tratamiento incluso si se siente mejor**
- **No guarde la receta para su uso posterior**
- **Verdadero o falso?**

Do I have to Finish my Antibiotics even if I feel better?



Medically reviewed by [Carmen Pope, BPharm](#). Last updated on March 26, 2023.



Melody L. Berg
 PharmD, BCPS, MPH

So, you were feeling sick and decided to see your doctor. You described a series of questions about how you were feeling, and at the end of the appointment, wrote you a prescription to take to your pharmacy. Your doctor might have prescribed an [antibiotic](#) depending

Buzón lector del medico: Si me siento mejor después de unos días, ¿debo continuar y realizar todo el curso de antibióticos?

If I feel better, do I really have to finish my antibiotic?

Yes! Sometimes, you may start feeling better after just a few days of taking your antibiotic. It is very common to start having less pain or discomfort when you are not feeling sick. However, if you stop your antibiotic too soon, you may get sick again if you stop your antibiotic too soon.

**Sí, siempre tiene que continuar y tomar todo el tratamiento
 Es posible que queden bacterias en el cuerpo y que te enfermes nuevamente si dejas de tomarlo demasiado pronto**

Another problem that can happen is antibiotic resistance. Antibiotic resistance happens when the medicine no longer works because the bacteria have become resistant to the medicine. In the future, taking that antibiotic may not work for you, and may not help you to get better.

Si interrumpes el tratamiento demasiado pronto, las bacterias pueden volverse resistentes

Sempre es te que continuar un tractament antibiòtic fins al final?

□ **Verdad o Falso?**

Sempre es te que continuar un tractament antibiòtic fins al final?

□ **Verdader o Falso?**

Un tratamiento corto e intenso conduce a un menor riesgo de resistencia

- **Estudios de portadores de neumococos resistentes muestran que una dosis alta en un tratamiento corto produce menos resistencia que una dosis más baja durante largo tiempo**

Guillemot D, Carbon C, Balkau B, et al. Low dosage and long treatment duration of beta-lactam: risk factors for carriage of penicillin-resistant *Streptococcus pneumoniae*. JAMA 1998;279:365–70

Schrag SJ, Peña C, Fernández J, et al. Effect of short-course, high-dose amoxicillin therapy on resistant pneumococcal carriage: a randomized trial. JAMA 2001;286:49–56.



ANALYSIS

The antibiotic course has had its day

With little evidence that failing to complete a prescribed antibiotic course contributes to resistance, it's time for policy makers, educators, and doctors to drop this message, say **Llewelyn and colleagues**

Martin J Llewelyn *professor of infectious diseases*^{1 2}, Jennifer M Fitzmaurice *professor in infection*², Elizabeth Darwin *project manager*³, Sarah Tonkin-Crispin *senior research fellow*⁴, Cliff Gorton *retired building surveyor*⁵, John Paul *consultant in microbiology*⁶, David Brown *professor of infectious diseases*⁷, Lucy Yardley *professor of health psychology*⁸, and Ann Sarah Walker *professor of infectious diseases and microbiology*⁹, Ann Sarah Walker *professor of infectious diseases and epidemiology*³

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Antibiotics are vital to modern medicine and antibiotic resistance is a global, urgent threat to human health. The relation between antibiotic exposure and antibiotic resistance is unambiguous both at the population level¹ and in individual patients.²

publicly and actively state that this was not evidence-based and is incorrect.

Origins of the idea

No hay evidencia de mayor resistencia si se acorta un tratamiento con antibióticos

Conclusions

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



Moltes Gràcies

Jose M Cots: jcy23465@comb.cat

□ On som?



80%

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

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

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

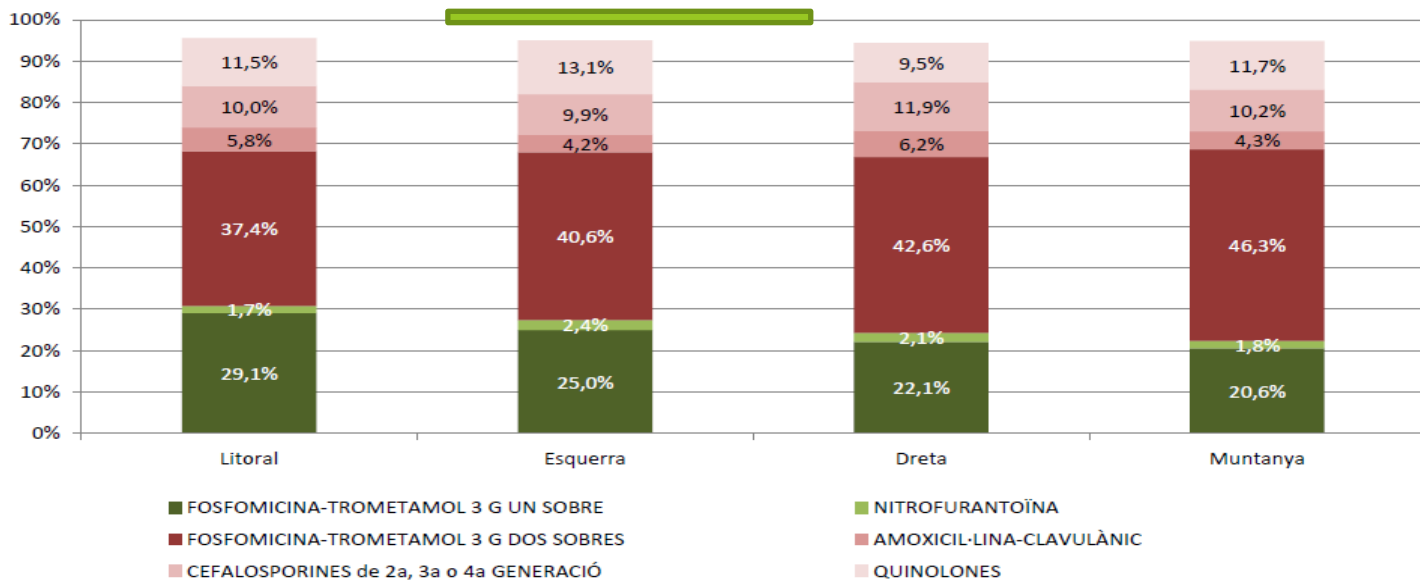
Només un 26% de les prescripcions d'antibiòtics en cistitis no complicada de tota l'AP-BCN es consideren adequades (fosfomicina 3 g 1 sobre i nitrofurantoïna 100 mg durant 5 dies).

Indicadors d'adequació de la prescripció: CNC

Període: gen-des 2020

Nivell d'agregació: SAP

% episodis de cistitis no complicada en dones tractades amb...



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

Anàlisi de dades segon trimestre 2021

35

Pneumònia bacteriana no especificada

Pneumònia causada per microorganismes no especificada

Pneumònia per *Streptococc*

Pneumònia lobar causada per microorganisme no especificat

Pneumònia

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

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 Anthoni, Jochen W.L. Cals, Hanne Maltby, Miriam Santet, Michael Moore, Samuel Coenen, Chris Butler, Kenneth Hood, Mark Kelly, Maciek Godczyk-Cwikla, Artur Mierzecki, Antoni Torres, Carl Llor, Melanie Davies, Mark Mullee, Gilly O'Reilly, Alike van der Velden, Adam W.A. Garaghty, Herman Goossens, Theo Verheij, 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.^{1–3} Most of these infections are viral, and evidence from systematic reviews⁴ and other studies^{5,6} 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.⁷

C-reactive protein (CRP) has predictive value for pneumonia.^{8,9} In the IMPACT study,¹⁰ training of physicians in CRP testing lowered the rate of antibiotic prescribing by 20%. These findings were supported in a later study.¹¹ The usefulness of training in consultation skills requires clarification¹² because there is limited evidence for effects on symptom control^{13,14} 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.^{15,16} The IMPACT study¹⁰ 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.¹⁷ 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) 33%	(PCR) 37%
	No	(Comunicación) 43%	(Consulta habitual) 62%