

II Jornada PROA hospitalari a Catalunya

Paper d'Infermeria en el PROA

La infermera de PROA

Maria López Sánchez
Infermera Control Infecció i PROA
Hospital Universitari Mútua Terrassa



Antecedents i estat del tema



Bibliografia

Infectious Diseases Society of America and the Society for Healthcare Epidemiology of America Guidelines for Developing an Institutional Program to Enhance Antimicrobial Stewardship

Timothy H. Dellit,¹ Robert C. Owens,² John E. McGowan, Jr.,³ Dale N. Gerding,⁴ Robert A. Weinstein,⁵ John P. Burke,⁶ W. Charles Huskins,⁷ David L. Paterson,⁸ Neil O. Fishman,⁹ Christopher F. Carpenter,¹⁰ P. J. Brennan,⁹ Marianne Billeter,¹¹ and Thomas M. Hooton¹²

Clinical Infectious Diseases 2007;44:159–77

Recommendations

- Core members of a multidisciplinary antimicrobial stewardship team include an infectious diseases physician and a clinical pharmacist with infectious diseases training (A-II) who should be compensated for their time (A-III), with the inclusion of a clinical microbiologist, an information system specialist, an infection control professional, and hospital epidemiologist being optimal (A-III). Because antimicrobial stewardship, an important component of patient safety, is considered to be a medical staff function, the program is usually directed by an infectious diseases physician or codirected by an infectious diseases physician and a clinical pharmacist with infectious diseases training (A-III).



Bibliografia



Policy Statement on Antimicrobial Stewardship by the Society for Healthcare Epidemiology of America (SHEA), the Infectious Diseases Society of America (IDSA), and the Pediatric Infectious Diseases Society (PIDS)

Author(s): Society for Healthcare Epidemiology of America, Infectious Diseases Society of America and Pediatric Infectious Diseases Society

Source: *Infection Control and Hospital Epidemiology*, Vol. 33, No. 4, Special Topic Issue: Antimicrobial Stewardship (April 2012), pp. 322-327

Published by: Cambridge University Press on behalf of The Society for Healthcare Epidemiology of America

Stable URL: <http://www.jstor.org/stable/10.1086/665010>

Accessed: 21-11-2016 10:32 UTC

IDSA and SHEA “Guidelines for Developing an Institutional Program to Enhance Antimicrobial Stewardship.”³³ Minimum requirements for the program should include:

A. Creation of a multidisciplinary interprofessional antimicrobial stewardship team that is physician directed or supervised. At a minimum, 1 or more members of the team should have training in antimicrobial stewardship. The number of team members may vary on the basis of the size and complexity of the facility. Team members should include but are not limited to:

- A physician.
- A pharmacist.
- A clinical microbiologist.
- An infection preventionist.



Bibliografía

Enferm Infecc Microbiol Clin. 2012;30(1):22.e1-22.e23



Enfermedades Infecciosas y Microbiología Clínica

www.elsevier.es/eimc



Documento de consenso

Programas de optimización de uso de antimicrobianos (PROA) en hospitales españoles: documento de consenso GEIH-SEIMC, SEFH y SEMPSPH^{☆,☆☆}

Jesús Rodríguez-Baño^{a,*}, José Ramón Paño-Pardo^{b,*}, Luis Alvarez-Rocha^c, Ángel Asensio^d, Esther Calbo^e, Emilia Cercenado^f, José Miguel Cisneros^g, Javier Cobo^h, Olga Delgadoⁱ, José Garnacho-Montero^j, Santiago Grau^k, Juan Pablo Horcajada^l, Ana Hornero^m, Javier Murillas-Angoitiaⁿ, Antonio Olivero^o, Belén Padilla^f, Juan Pasquau^p, Miquel Pujol^m, Patricia Ruiz-Garbajosa^q, Rafael San Juan^r y Rafael Sierra^s

Equipo de antibióticos

La creación de un equipo de profesionales encargado de llevar a cabo las tareas del PROA es una estrategia fundamental para el éxito del programa, y así lo recomienda la IDSA junto con otras sociedades científicas²⁸, basándose en los numerosos trabajos científicos que muestran la utilidad de esta estrategia³⁵⁻⁴¹. Los criterios básicos para la composición de este equipo según estas recomendaciones son los siguientes: *a)* debe ser multidisciplinario y un número de miembros reducido; *b)* el núcleo imprescindible debe estar formado por un infectólogo o clínico experto en enfermedades infecciosas, un farmacéutico clínico experto en antimicrobianos, y un microbiólogo experto en resistencia en antimicrobianos, y *c)* además, cada centro considerará añadir los profesionales de las disciplinas que estime necesarios, considerando que el criterio de selección necesario debe ser el liderazgo profesional en el diagnóstico y tratamiento de las enfermedades infecciosas⁴²⁻⁴⁶. Dada la importancia estratégica de las unidades de cuidados intensivos (UCI) en el consumo de antimicrobianos, debe considerarse siempre la inclusión de un especialista en medicina intensiva en el equipo. Este equipo debe trabajar de manera coordinada con el equipo multidisciplinario de control de infecciones, por lo que debe valorarse la inclusión de un especialista en medicina preventiva. Las tareas de coordinación del equipo las realizará idealmente el clínico experto en enfermedades infecciosas. Sería de interés el diseño de mapas de competencias para los profesionales que puedan integrarse en el equipo de antibióticos, que permita la elección de sus miembros



Bibliografia

July 2012 Update Antibiotic Stewardship Drivers and Change Package



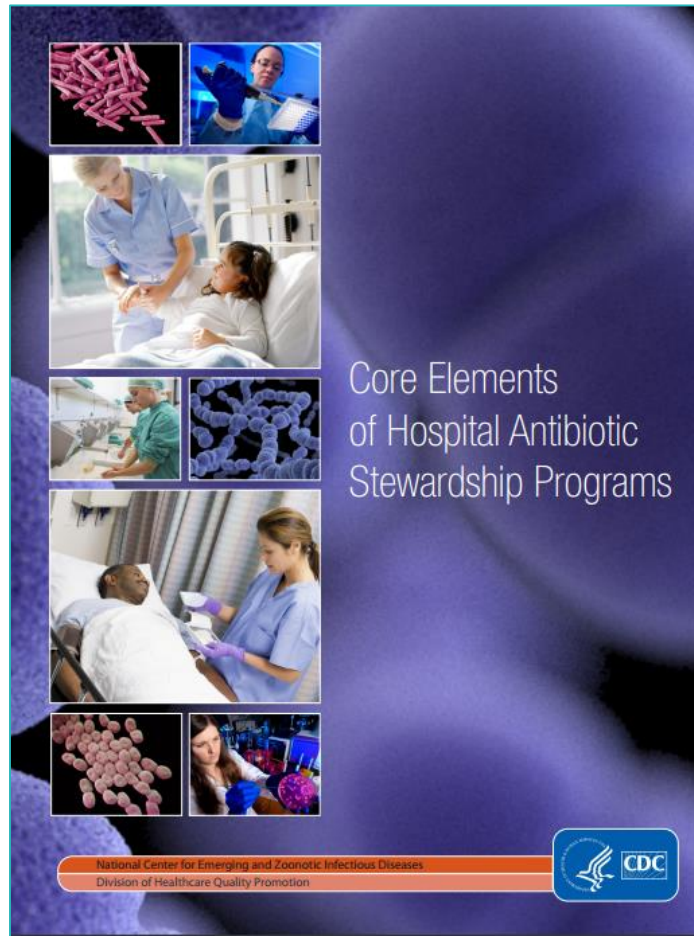
Antibiotic Stewardship Driver Diagram and Change Package

Bring disciplines together to improve communication and collaboration about improving antibiotic use, including, as appropriate:

- Infection preventionists;
- Hospitalists;
- Intensivists;
- Emergency department physicians;
- Microbiologists;
- Pharmacists;
- Nurses; and
- Infectious disease experts.



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- **Nurses** can assure that cultures are performed before starting antibiotics. In addition, nurses review medications as part of their routine duties and can prompt discussions of antibiotic treatment, indication, and duration.^{46, 47}



Bibliografia

Clinical Infectious Diseases

INVITED ARTICLE

CLINICAL PRACTICE: Ellie J. C. Goldstein, Section Editor



The Critical Role of the Staff Nurse in Antimicrobial Stewardship—Unrecognized, but Already There

Richard N. Olans,¹ Rita D. Olans,² and Alfred DeMaria Jr³

Table 1. Overlap of Nursing Activities With Function Attribution in Current Antimicrobial Stewardship Models

	Nursing	Microbiology	Case Management	Pharmacy	Infectious Diseases	Infection Control	Inpatient Physician	Administration
Patient admission								
Triage and appropriate isolation	•					•		
Accurate allergy history	•			•	•		•	
Early and appropriate cultures	•				•		•	
Timely antibiotic initiation	•				•		•	•
Medication reconciliation	•			•			•	
Daily(24 h) clinical progress monitoring								
Progress monitor and report	•		•		•		•	
Preliminary micro results and antibiotic adjustment	•	•		•	•		•	
Antibiotic dosing and de-escalation	•			•	•		•	
Patient safety & quality monitoring								
Adverse events	•			•	•		•	
Change in patient condition	•				•		•	
Final culture report and antibiotic adjustment	•	•		•	•	•	•	
Antibiotic resistance identification	•	•			•	•	•	
Clinical progress/patient education/discharge								
IV to PO antibiotic, outpatient antibiotic therapy	•		•	•	•		•	
Patient education	•				•	•	•	
Length of stay	•		•		•		•	•
Outpatient management, long-term care, readmission	•		•		•	•		•



Bibliografia

Covering more Territory to Fight Resistance: Considering Nurses' Role in Antimicrobial Stewardship

R Edwards^{(1),*}, LN Drumright⁽¹⁾, M Kiernan^{(2),(3)}, and A Holmes^{(1),(4)}

J Infect Prev. 2011 January ; 12(1): 6–10. doi:10.1177/1757177410389627.

Elements clau d'infermeria

- Presència en múltiples nivells a l'entorn clínic
- Responsable de la revisió i administració del tractament
- 24/7 a peu de llit

Beneficis

- D'EV a VO
- Al·lèrgies i efectes secundaris
- Seguiment dels nivells terapèutics
- Especificitat del tractament
- Durada del tractament
- Via d'administració
- Profilaxi quirúrgica
- Moment d'administració



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WHITE PAPER



Redefining the Antibiotic Stewardship Team:

Recommendations from the American Nurses Association/Centers for Disease Control and Prevention Workgroup on the Role of Registered Nurses in Hospital Antibiotic Stewardship Practices

Effective Date: 2017

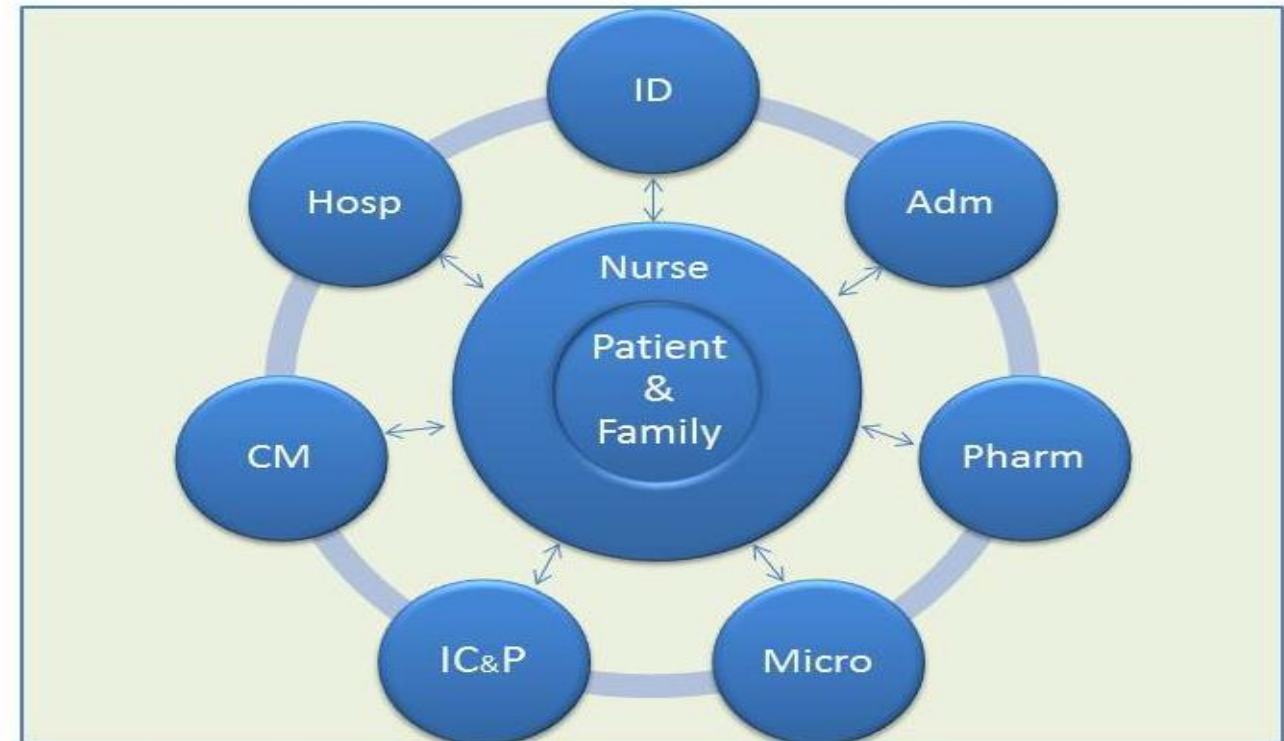


Fig 1: Workflow Communication

ID-Infectious Disease Adm-Administration Pharm-Pharmacy Micro-Microbiology
IC&P-Infection Control/Prevention CM-Case Management Hosp-Hospitalist



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Effective Date: 2017

Table 1: Antimicrobial Stewardship Functions Performed by Nurses

Stewardship Activity or Task	CDC Core Stewardship Element	Role Responsible in Current ASP Models	Unrecognized Nurse Role in Stewardship Functions
Appropriate triage and isolation	Accountability Drug Expertise Education	Infection Preventionist	The nurse initially assesses the source of infection and identifies appropriate precautions. Consultation may come subsequently from the infection preventionist.
Accurate antibiotic allergy history	Accountability Drug Expertise Education	Pharmacist	The nurse takes the allergy history, performs medication reconciliation, and records this in the medical record.
Early and appropriate cultures	Accountability Drug Expertise Tracking	Hospitalist/Microbiologist	The nurse obtains the cultures before starting antibiotics and sends the cultures to the microbiology laboratory. The nurse monitors the culture results and reports results to the physician.
Timely antibiotic initiation	Drug Expertise Action Tracking	Hospitalist Infectious Disease Specialist or Preventionist Pharmacist	The nurse receives the orders, reviews dose/time for accuracy, checks for allergy, and administers and records the antibiotics.



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Effective Date: 2017

Table 2: Clinical Progress & Patient Safety Monitoring

Stewardship Activity or Task	CDC Core Stewardship Element	Role Responsible in Current ASP Models	Unrecognized Nurse Role in Stewardship Functions
Progress reporting	Drug Expertise Action Tracking	Hospitalist Infectious Disease Specialist	The nurse cares for the patient 24/7, and monitors and communicates daily patient progress.
Antibiotic adjustment based on microbiology reports	Drug Expertise Action Tracking	Hospitalist Infectious Disease Specialist Microbiologist	Laboratory and radiology reports "chase" the patient and are typically received first by the bedside nurse. Results are coordinated by the nurse and communicated to treating physicians.
Antibiotic dosing, culture and sensitivity reporting, and de-escalation	Drug Expertise Action Tracking Education	Infectious Disease Specialist Microbiologist Pharmacist	The nurse updates clinical and laboratory renal function results, drug levels, and preliminary/final microbiology results.
Adverse events	Action Tracking Education	Hospitalist Pharmacist	The nurse monitors and reports to the physician and pharmacist any adverse events including diarrhea.
Antibiotic orders	Drug Expertise Action Tracking Education	Hospitalist Infectious Disease Specialist	The nurse reviews the patient's clinical status and changes in medications.
Antibiotic resistance	Drug Expertise Action Tracking Education	Infectious Disease Specialist Hospitalist Microbiologist	The nurse reviews culture and sensitivity results, and reports bug/drug mismatches, time outs, and antibiotic de-escalation.
Superinfection / resistant infection	Action Tracking Education	Infectious Disease Specialist Infection Preventionist Microbiologist	The nurse monitors patient response and initiates appropriate changes in isolation precautions.



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Effective Date: 2017

Table 3: Discharge

Stewardship Activity or Task	CDC Core Stewardship Element	Role Responsible in Current ASP Models	Unrecognized Nurse Role in Stewardship Functions
Transition IV-to-PO antibiotic, outpatient antibiotic therapy	Drug Expertise Action Tracking Education	Case Management Infectious Disease Specialist Pharmacist	The nurse monitors clinical progress and the patient's capacity to take oral medications.
Length of stay	Action Tracking Education	Administration Case Management Infectious Disease Specialist	The nurse monitors the patient's progress 24/7.
Patient education, medication reconciliation	Drug Expertise Action Education	Hospitalist Infectious Disease Specialist Pharmacist	The nurse continuously educates the patient and family, and performs discharge teaching.
Outpatient visiting nurse association (VNA)/skilled nursing facility (SNF)/long-term care facility (LTCF) transition management, re-admission to hospital	Action Tracking Education	Administration Case Management Infection Preventionist	The nurse communicates the patient's diagnosis, management, and medications to the nurse at the VNA/ SNF/LTCF.

Adapted with permission from Olans RD, et al. (2017). Good nursing is good antibiotic stewardship. *American Journal of Nursing*, 117(8), 58-63.



Bibliografia

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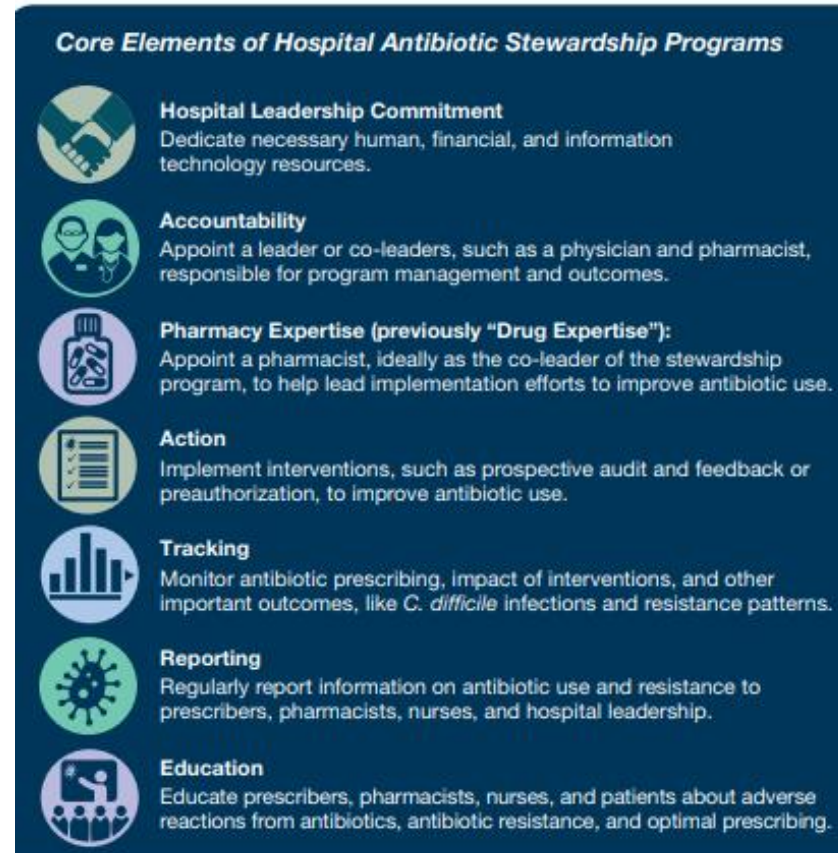
**Redefining the Antibiotic Stewardship Team:
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Antibiotic Stewardship Practices**
Effective Date: 2017

Quins recursos d'educació i formació es necessiten per ajudar les infermeres a exercir aquestes funcions?

- Educació i capacitació sobre com obtenir cultius i interpretar-ne els resultats.
- Educació sobre infecció versus colonització.
- Conceptes bàsics per distingir la bacteriúria asimptomàtica de la infecció del tracte urinari i la colonització de la infecció activa.
- Reconèixer i respondre sospites d'infeccions per C. difficile
- Conceptes bàsics per interpretar l'antibiograma hospitalari.
- Informació general sobre espectres antimicrobians.
- Informació sobre criteris de canvi de IV-PO.
- Capacitació sobre com prendre un historial d'al·lèrgies.
- Interaccions i incompatibilitats d'antibiòtics.
- Reaccions adverses comunes als antibiòtics.



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Hospital Leadership Commitment

Support from the senior leadership of the hospital, especially the chief medical officer, chief nursing officer, and director of pharmacy, is critical to the success of antibiotic stewardship programs. A lack of necessary resources is commonly cited as the top barrier to success by stewardship programs. Hospital leadership can play a critical role in helping the stewardship program get the resources needed to accomplish its goals.

Nurses: There is growing recognition of the importance of engaging nurses in hospital stewardship efforts ⁽²⁷⁻²⁹⁾. Nurses can play an especially important role in:

- Optimizing testing, or diagnostic stewardship. For example, nurses can inform decisions about whether or not a patient has symptoms that might justify a urine culture.
- Assuring that cultures are performed correctly before starting antibiotics.
- Prompting discussions of antibiotic treatment, indication, and duration.
- Improving the evaluation of penicillin allergies.



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Pharmacy Expertise (previously “Drug Expertise”)

Highly effective hospital antibiotic stewardship programs have strong engagement of pharmacists, either as a leader or co-leader of the program [36, 37]. It is important to identify a pharmacist who is empowered to lead

Assessing penicillin allergy: About 15% of hospitalized patients report an allergy to penicillin [68]. However, less than 1% of the US population has a serious penicillin allergy that would preclude treatment with a beta-lactam antibiotic [69]. There are several effective approaches to properly assess penicillin allergies, including history and physical examination, challenge doses, and skin testing [69, 71]. Nurses may be able to play an important role in improving penicillin allergy assessments [27].



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Action

Antibiotic stewardship interventions improve patient outcomes ^(7, 8).
An initial assessment of antibiotic prescribing can help identify potential targets for interventions.

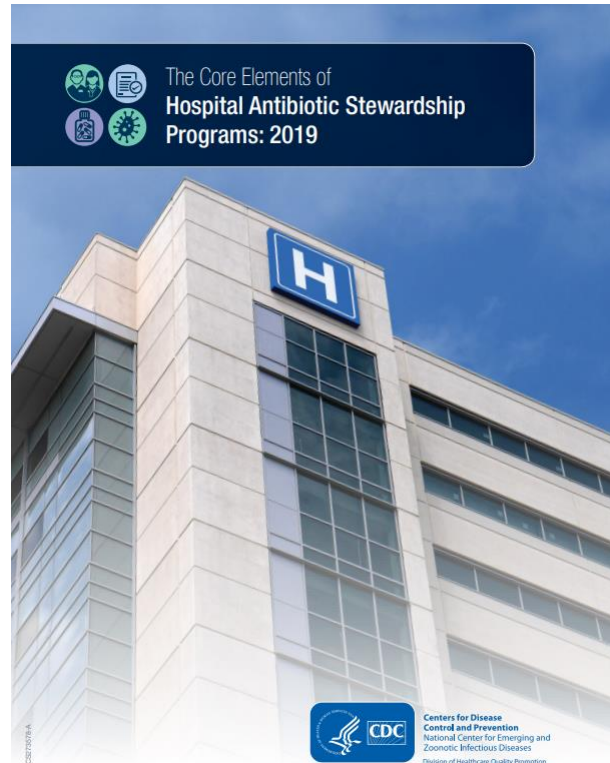
Nursing-based interventions

Bedside nurses often initiate the following interventions:

- **Optimizing microbiology cultures:** Knowing proper techniques to reduce contamination and indications for when to obtain cultures, especially urine cultures ⁽²⁷⁾.
- **Intravenous to oral transitions:** Nurses are most aware of when patients are able to tolerate oral medications and can initiate discussions on switching to oral antibiotics.
- **Prompting antibiotic reviews ("timeouts"):** Nurses often know how long a patient has been receiving an antibiotic and when laboratory results become available. They can play a key role in prompting reevaluations of therapy at specified times, such as after 2 days of treatment and/or when culture results are available ⁽²⁸⁾.



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Reporting

Antibiotic stewardship programs should provide regular updates to prescribers, pharmacists, nurses, and leadership on process and outcome measures that address both national and local issues, including antibiotic resistance. Antibiotic resistance information should be prepared in collaboration with the hospital's microbiology lab and infection control and healthcare epidemiology department. The local or state health department's healthcare infection control and antibiotic resistance program is also an important resource for local information on antibiotic resistant threats⁽⁹⁾. Summary information on antibiotic use and resistance along with antibiotic stewardship program work should be shared regularly with hospital leadership and the hospital board.

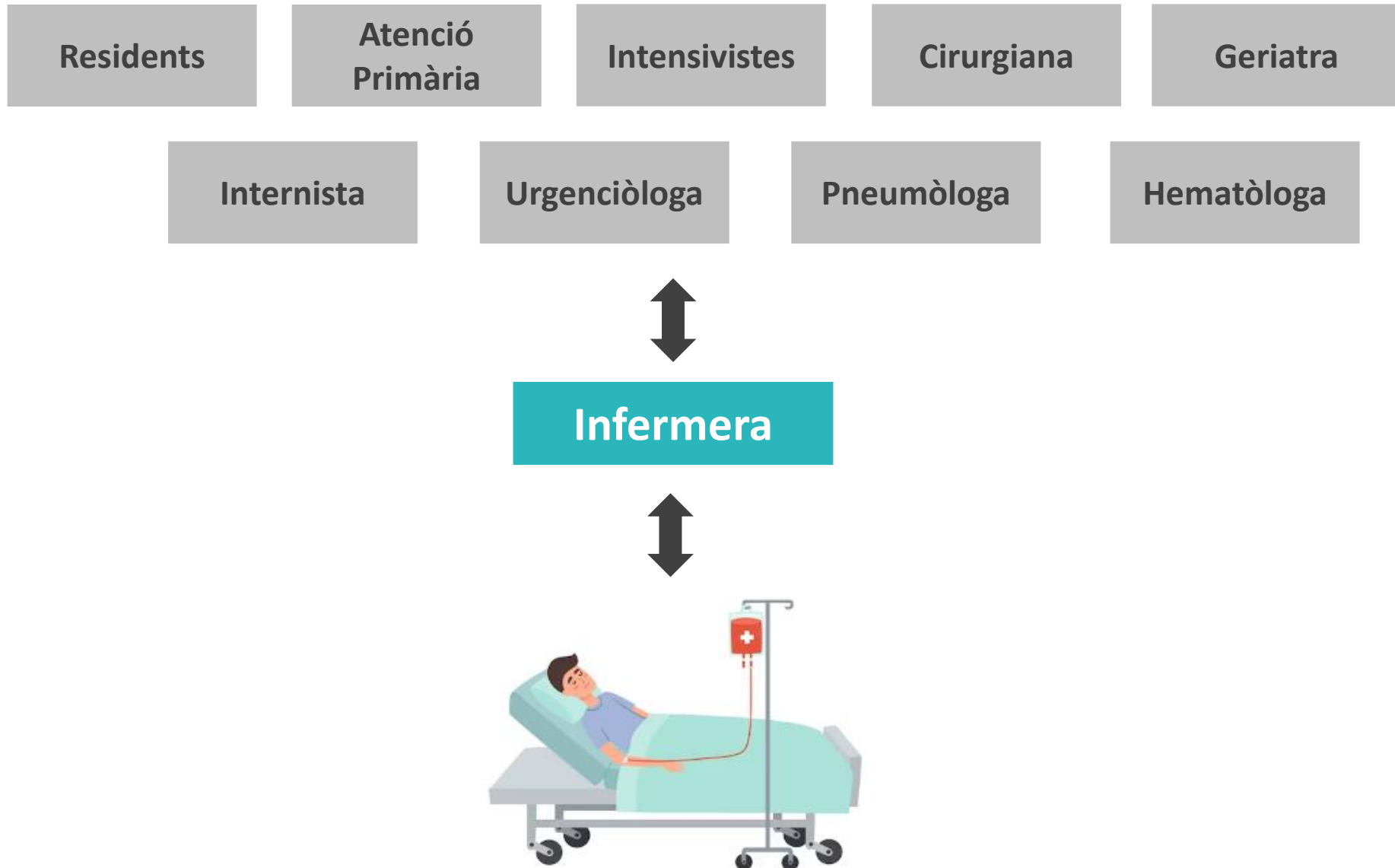


Education

Education is a key component of comprehensive efforts to improve hospital antibiotic use; however, education alone is not an effective stewardship intervention⁽¹⁶⁾. There are many options for providing education on antibiotic use such as didactic presentations, which can be done in formal and informal settings, messaging through posters, flyers and newsletters, or electronic communication to staff groups.



La infermera de PROA





La nostra experiència



CROS-D2



Mútua Terrassa
ASSISTENCIAL

LA PRESCRIPCIÓ ANTIMICROBIANA EN 3 TEMPS

CROS-D₂

METGES

Dia 0

- Cultivar abans d'iniciar ANTIBIOTERÀPIA (ATB).
 - Hemocultius.
 - Lloc de la infecció.
- Iniciar ATB EMPÍRICA segons guies PROA.



Dia 3

- Valorar pas a via Oral.
 - Estabilitat clínica?*
 - Puc canviar l'ATB a via oral?



Dia 5

- Hi ha INFECCIÓ?
 - No → Suspendre ATB.
 - Sí → Dirigir ATB segons els resultats dels cultius.



→

- Planificar la Durada de l'ATB en funció de la síndrome clínica.



INFERMERES

- Cultivar abans d'iniciar l'ATB.
 - Hemocultius: 2 extraccions.
 - Mostra lloc de la infecció.
- Realitzar administració de l'ATB immediatament després de la seva prescripció.

Abans de canviar la via venosa:
consultar el pas de l'ATB a via Oral.

Preguntar Si ha De continuar l'ATB i ...

... la seva Durada.

* ESTABILITAT CLÍNICA si:
• T° ≤ 37,8°C
• FC ≤ 100 lpm
• FR ≤ 24 rpm
• TA sistòlica ≥ 90 mmHg
• SatO2 basal ≥ 90%
• Estat mental no alterat (respecte a basal)



Procediments i recollida de mostres

Com realitzar correctament l'extracció d'hemocultius



1 Feu higiene de mans.

2 Netegeu els taps dels pots amb **Clorhexidina alcohòlica** i deixeu-los assecar.

3 Seleccioneu el llocs de punció.

4 Desinfecteu la pell amb **Clorhexidina alcohòlica** i deixeu-la assecar.

5 Punció sense tornar a palpar la zona. Cal fer **2 extraccions** de sang. Volum 10 mL per pot.

6 Agiteu suaument els pots.

7 Porteu els pots al **LABORATORI**.

Enganxeu l'etiqueta als pots sense tancar el codi de barres i en vertical.

1a extracció **2a extracció**

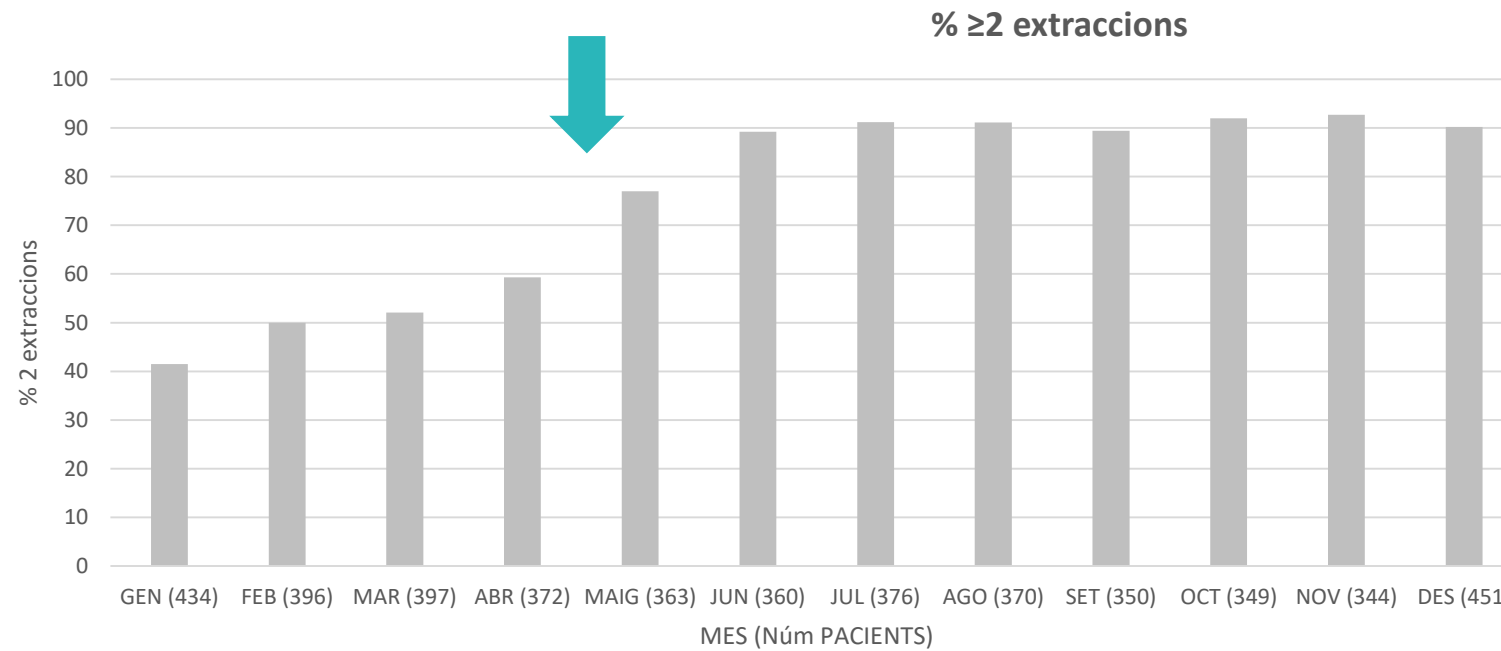
Xeringa
1r Anaerobi
2n Aerobi

Palometa
1r Aerobi
2n Anaerobi

! No tapeu els pots amb cotó o esparadrap.



Hemocultius – 2 extraccions



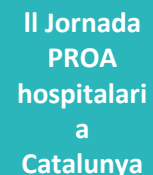


Objectiu

Població a estudi

Variables a estudi

- Indicació de profilaxi ATB
- Administració de l'ATB
- Tipus i dosi ATB
- Hora d'administració
- Repetició de dosi si IQ >3h





Compliment profilaxis ATB quirúrgica

	n=172	n=170	n=203	n=287	n=287
Administració de l'antibiòtic (%)	98,8	99,4	99	96,1	100
Antibiòtic segons protocol (%)	97,6	99,4	99	97,4	100
Dosi (%)	100	100	100	97,4	99,6
Hora d'administració (%)	88,8	92,9	94,6	89,42	83,8
Repetir dosi si IQ >3h (%)	100	93,1	98,7	96,2	96,4
Compliment del bundle* (%)	98,8	91,20	94,1	90,2	94,8



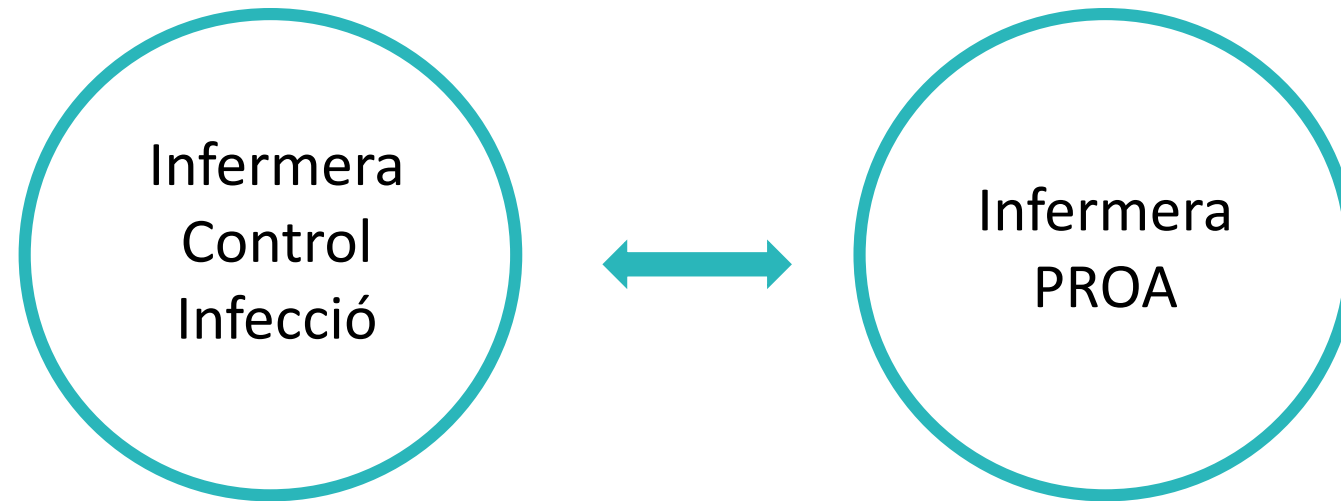
Compliment profilaxis ATB quirúrgica

	N=232	N=231	N=256	N=287	N=176
Total pacients SENSE indicació de profilaxi Compliment (%)	58/60 (96,7%)	60/60 (100%)	53/53 (100%)	60/60 (100%)	24/24 (100%)
Total pacient AMB indicació de profilaxi Compliment del bundle (%)	143/172 (83,2%)	156/171 (91,2%)	191/203 (94,1%)	199/227 (87,7%)	101/152 (66,5%)
Compliment global %	201/232 86,6%	216/231 93,5%	244/256 95,3%	259/287 90,2%	125/176 71%



La infermera de PROA

Experiència H. Universitari Mútua Terrassa





Idees principals



Conclusions – Idees principals

-Les infermeres participen activament en l'ús d'antibiòtics. Això és una oportunitat per fer intervencions transversals.

-S'han identificat alguns aspectes de millora en la pràctica assistencial en el maneig d'antimicrobians que requereixen intervencions formatives motivacionals.

-Hi ha dos àmbits específics de la interacció Control d'Infecció i PROA:

- BMR

- Profilaxi antibiòtica

-La infermera de l'equip PROA és l'interlocutor nat de les infermeres assistencials. És coneixedora de la professió i experta en maneig i resistència a antimicrobians, està en la posició ideal per promoure la implicació d'infermeria com a part activa del maneig antimicrobià mitjançant una col·laboració multidisciplinària.



Moltes gràcies