

AMS: whose business?

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Objectives

- Explore and discuss the professionals and profiles acting in AMS
- Discuss the most appropriate composition of AMS teams in hospitals, and their tasks
- Discuss the different roles and tasks of professionals in community AMS

Whose business?

- Society
- Healthcare managers
- Institution managers/directors
- Prescriptors, nurses
- ID/CM/Pharmacists

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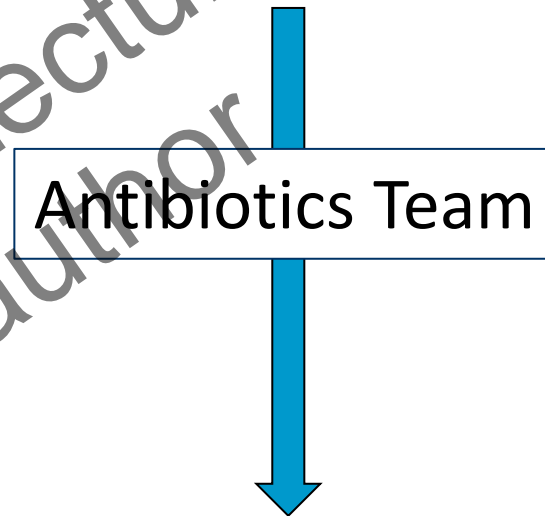
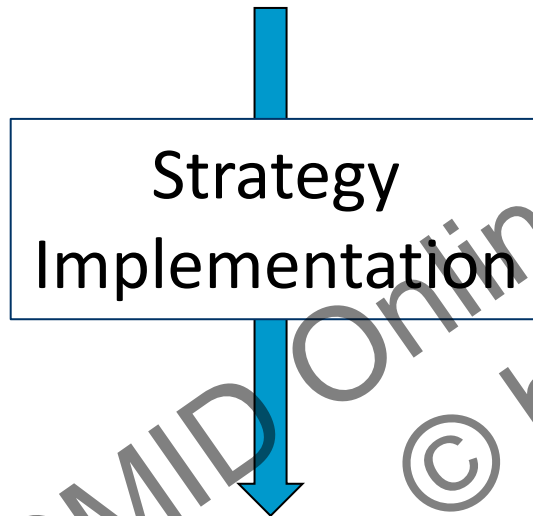
AMS in hospitals: why a team?

- Rationale
- Evidence

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Objectives

Antibiotics Committee



Outcome

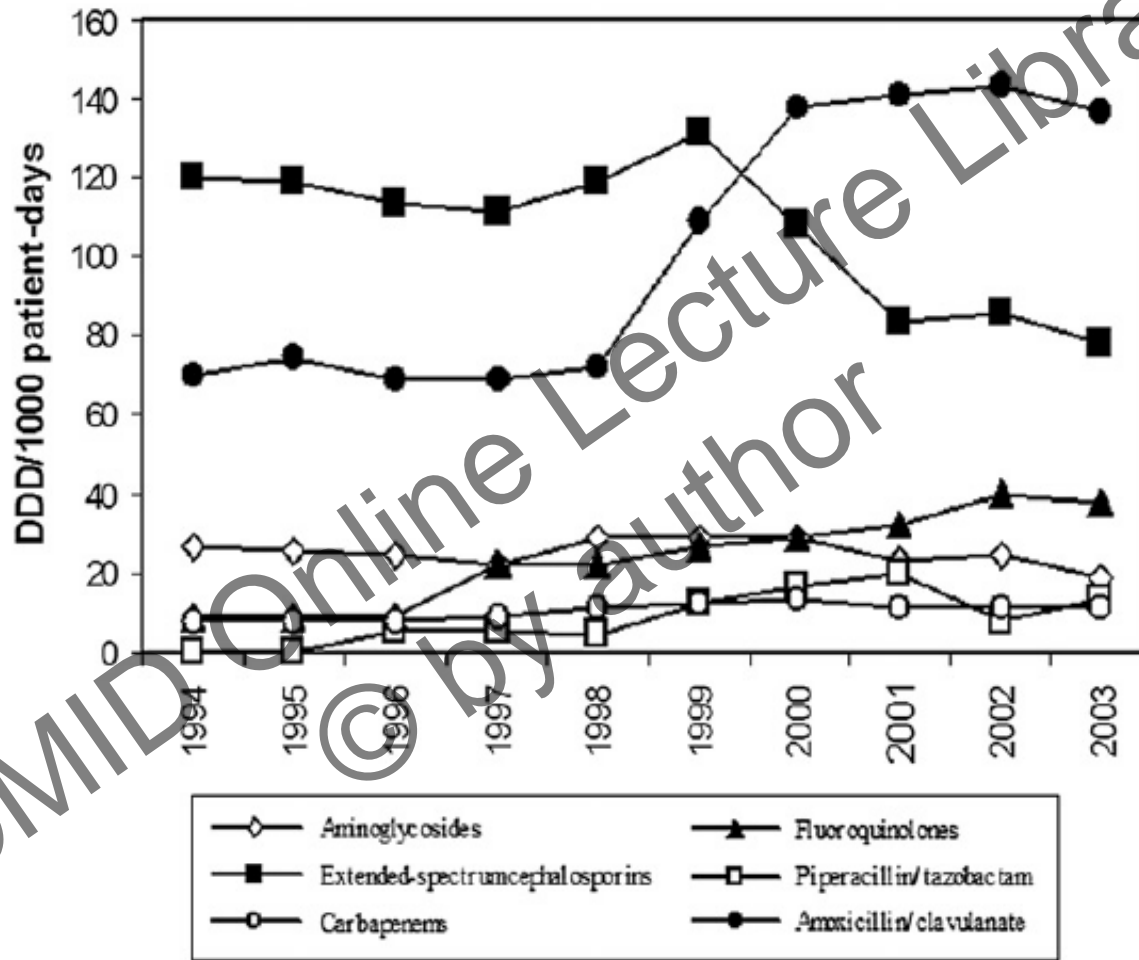
Patient

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Antimicrobial stewardship

- Objective: to improve antimicrobial use in order to
 - Improve clinical results
 - Contribute to avoid/control antimicrobial resistance
 - at the lowest cost possible
- Strategy
 - Quality-improvement process
- Implementation
 - Specific objectives
 - Surveillance
 - Prescription tools, education, Interventions
- **AMS PROGRAM!!!!**

- Infection and Antibiotics Committee
 - Fact: ESBLs on the rise (community/endemic)
 - Objectives: reduction/control of ESBLs
- Infection control team
- Antibiotic team
 - Within AMS program...
 - Specific objective: reduction in cephs consumption
 - Risk: increase in quinolones
 - Implementation
 - Protocols, education
 - Audits on cephs prescriptions in ED and IM
 - Promotion of amox/clav use



Antimicrobial stewardship activities

■ Data/indicators

- Antimicrobial resistance
- Antibiotic consumption
- Quality of prescriptions
- Clinical outcomes

■ Activities

- Formulary
- Local guidelines
- Education, promotion
- Prescriptions approval
- Audits, rounds
- Reports

AMS team members??



Interventions to improve antibiotic prescribing practices for hospital inpatients (Review)

Davey P, Brown E, Charani E, Fenelon L, Gould IM, Holmes A, Ramsay CR, Wiffen PJ, Wilcox M



2013

Of the 95 interventions, 37 (39%) were designed and delivered by a multidisciplinary team, 31 (33%) by specialist physicians (Infectious Diseases or Microbiology), 19 (20%) by pharmacists and 8 (8%) by department physicians (e.g. Department of Medicine or Surgery). The proportion of interventions that involved a multidisciplinary team is much higher in studies published from 2003 (11/21, 52%), compared with those published before 2003 (26/74, 35%).

this type of intervention going back over a decade. In particular, successful interventions that are led by clinical teams may be easier to sustain and spread than interventions based on review and recommendation of change, which are inherently person-dependent

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

Clin Infect Dis 2007

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

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 anti-

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-Angoitiⁿ, Antonio Olivero^o, Belén Padilla^f, Juan Pasquau^p, Miquel Pujol^m, Patricia Ruiz-Garbajosa^q, Rafael San Juan^r y Rafael Sierra^s

Enferm Infecc Microbiol Clin 2012

■ Basic

- AMS team and members

■ Advanced

- AMS team: functions, activities, meetings and reports

■ Excellent

- AMS team: competences maps, accreditation

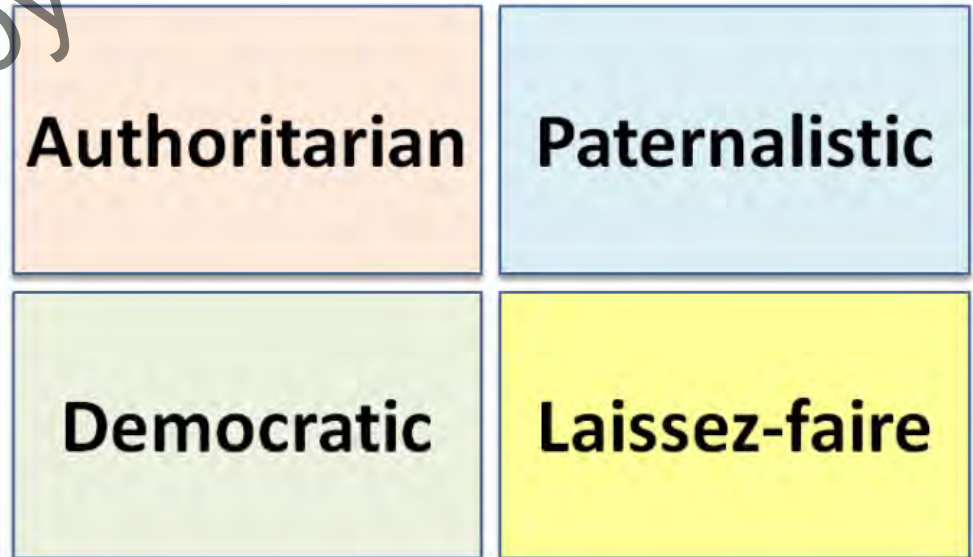
Knowledge, skills, abilities?

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Knowledge, skills, abilities?

- Clinical training in IDs & antibiotic use
- Antimicrobial resistance
- Prescription procedures
- Consumption measurement
- Drug administration
- Hospital epidemiology
- Behavioral sciences
- Strategic view
- Clinical leadership
- ...

- Know what
- Know how
- Leadership model



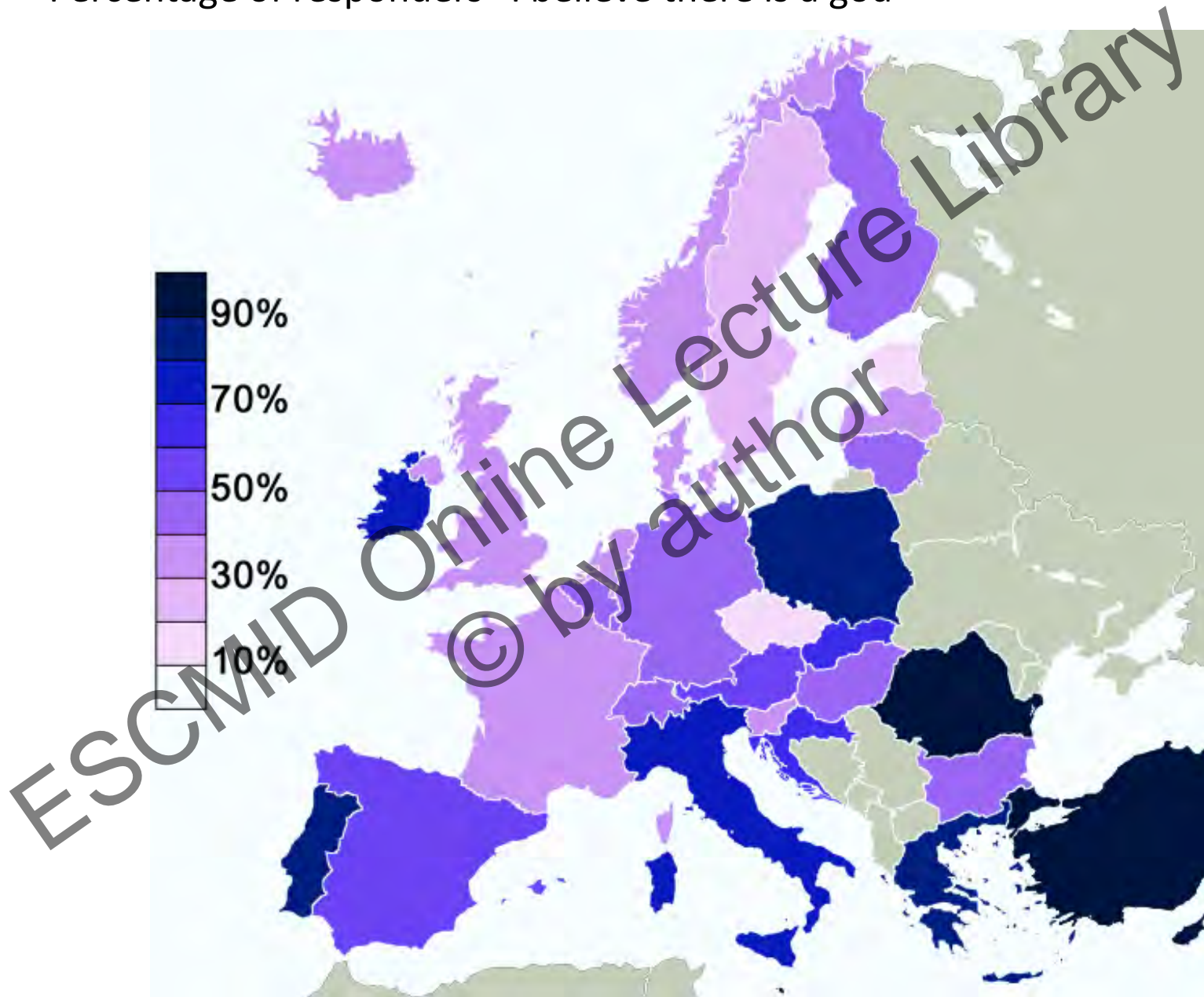
Behavior Change Strategies to Influence Antimicrobial Prescribing in Acute Care: A Systematic Review

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

Clinical Infectious Diseases 2011;53(7):651–662

| Recommendation | Descriptor |
|--------------------------------|---|
| Conduct primary research | Engage in multidisciplinary primary research. Include expertise from social and behavioral sciences [41] to identify the key behavioral determinants of antimicrobial prescribing in the target audience in whom a change in behavior is desired. |
| Tailor interventions | Use data from primary research to identify key behavioral determinants and tailor interventions to (1) address identified barriers and (2) enhance the facilitators of the desired behavior change. |
| Evaluate intervention outcomes | Evaluate the effectiveness of interventions to bring about prescribing behavior change. |
| Address sustainability | Monitor the long-term adoption and implementation of the intervention and recognize the importance of building sustainability into the intervention model. |

Percentage of responders "I believe there is a god"



Source: Eurobarometer, 2005

Is there an ideal antibiotic team composition fitting all hospitals?

- Institutional implication
- Resources
- Tradition
- Prescribers education and determinants

Factors influencing the team composition...

- Local leadership
- Hospital type/size
- Resources
- Aims / objectives

The “perfect team” for one hospital may not be so for others...

Support

- Administrative support
- IT support
- Management support

- Core team
- Coordinated with IC activities
- External allies (unit leaders)

Who should be in the team?

Please vote...

- ID specialist
- Microbiologist
- Pharmacist
- Pediatrician
- Intensive care specialist
- Hospital epidemiologist
- Surgeon
- Nurse
- Others...

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Hospital Universitario Virgen Macarena AMS team

- Teaching, 900-bedded
- All medical and surgical specialties
- Very active infection control program
- Written AMS program
 - Objectives, indicators
 - Formulary, local guidelines
 - Multifaceted interventions

Hospital Universitario Virgen Macarena AMS team

- Coordinator: ID (also coordinates IC)
- Members (part time except*):
 - 1 ID* (clinical leader), 1 CM, 2 pharmacists, 1 paediatrician, 1 intensive care specialist, 1 nurse
- Support: Quality Unit



| Member | Tasks |
|--------------------|--|
| ID | <ul style="list-style-type: none"> Coordination Clinical outcomes Audits, approvals Reports, feed back |
| ICU, paediatrician | <ul style="list-style-type: none"> Quality data Clinical outcomes Audits |
| CM | <ul style="list-style-type: none"> Resistance data |
| Pharmacist | <ul style="list-style-type: none"> Consumption, cost Prescription alerts |
| Nurse | <ul style="list-style-type: none"> Drug administration issues |
| All | <ul style="list-style-type: none"> Quality data Formulary Protocols, education |

Hospital Universitario Virgen Macarena AMS team

- Formal meetings every second week
 - Data review
 - Formulary, protocols changes
- Specific members meets as frequently as needed for routine tasks
- Report to
 - Hospital Infections Committee
 - Regional authorities
 - Units, wards

Conclusions

- AMS in the hospital is the daily business of a multidisciplinary team
- Core “must always be” members (ID, CM, pharmacist, hospital epidemiologist) plus others and allies
- Composition and tasks depending on
 - Institutional objectives (AMS program)
 - Resources
 - Local leadership