

# ANTIMICROBIAL STEWARDSHIP : THINK GLOBALLY AND INTERDISCIPLINARILY

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# Brief background

- Topic of research
- Academic track
- Not easy to find an interdisciplinary research team in France
- ESCMID networking and international perspective
  - And particularly ESGAP

# 3 main strategies to curb resistance



All settings, all professionals

AMS



Infection control  
Environment



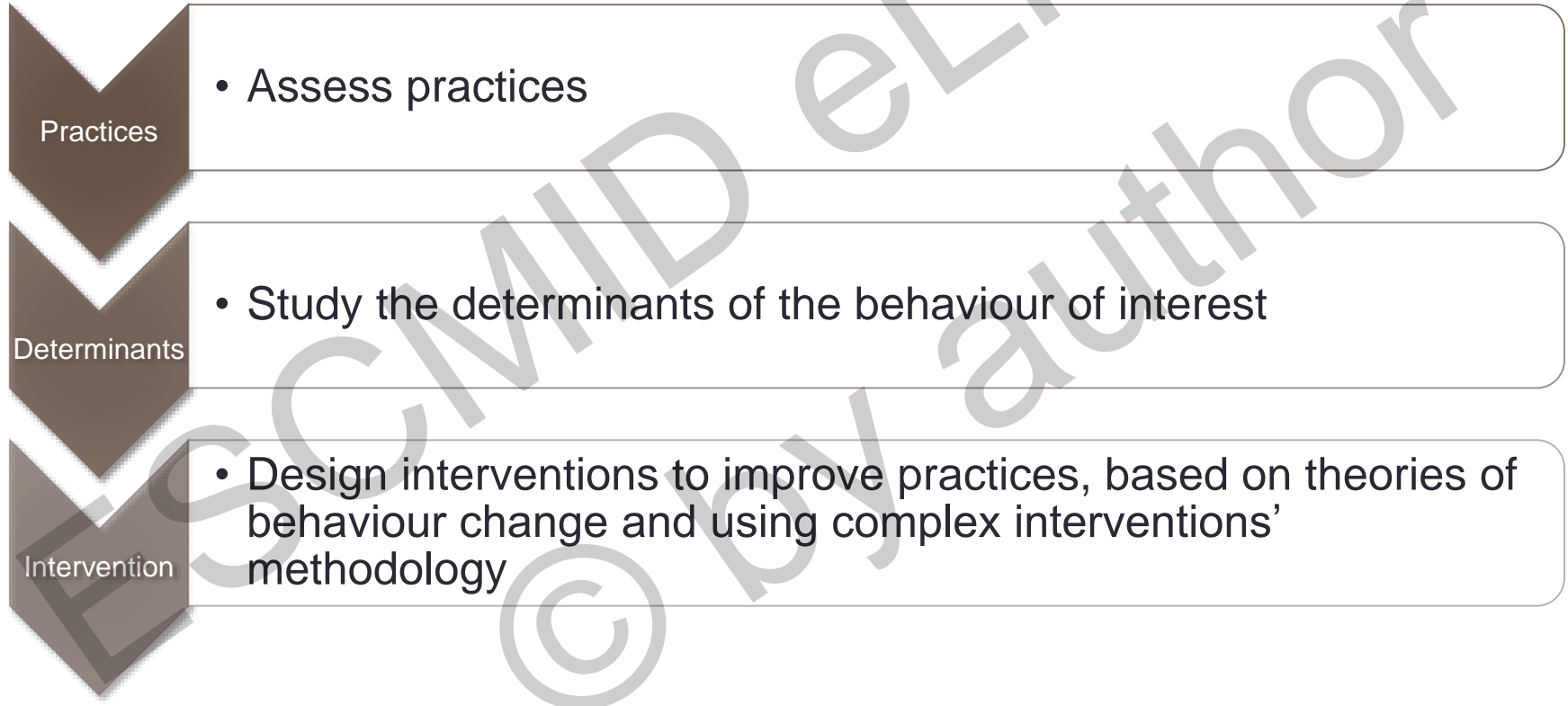
Vaccination

## One Health approach

# Stewardship is intrinsically interdisciplinary and global

- My research team in Nancy since 2015:
    - Medical doctors: infectious diseases, microbiology, public health, general practice
    - Pharmacists
    - Nurses
    - Sociologists
    - Psychologists
    - Law specialists
    - Biostatisticians
- Collaboration with dentists*
- Regional, national, international collaborations  
(researchers, professional organisations,  
health agencies)*

# Classic approach



# AMS IN HOSPITALS

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## Antibiotic misuse: a prospective clinical audit in a French university hospital

C. Pulcini • E. Cua • F. Lieutier • L. Landraud •  
P. Dellamonica • P. M. Roger

PRACTICAL DISEASE MANAGEMENT

De Manago Health Outcomes 2007; 15 (3): 151-163  
1173-8790/07/0003-0151/044/95/0  
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## Design, Measurement, and Evaluation of an Education Strategy in the Hospital Setting to Combat Antimicrobial Resistance

Theoretical Considerations and a Practical Example

Céline Pulcini,<sup>1</sup> Sally Crofts,<sup>2</sup> Diane Campbell<sup>2</sup> and Peter Davey<sup>1</sup>

*Journal of Antimicrobial Chemotherapy* (2008) **61**, 1384–1388

doi:10.1093/jac/dkn113

Advance Access publication 26 March 2008

JAC

## Design of a 'day 3 bundle' to improve the reassessment of inpatient empirical antibiotic prescriptions

Céline Pulcini<sup>1,2\*</sup>, Sylviane Defres<sup>3</sup>, Ila Aggarwal<sup>3</sup>, Dilip Nathwani<sup>3</sup> and Peter Davey<sup>2,3</sup>



Disponible en ligne sur  
ScienceDirect  
www.sciencedirect.com

Elsevier Masson France  
EM|consulte  
www.em-consulte.com

Médecine et maladies infectieuses 41 (2011) 546–552

Médecine et  
maladies infectieuses

Referents for anti-infectious agents

Impact of an intervention designed to improve the documentation of the reassessment of antibiotic therapies in an intensive care unit

*Impact d'une intervention visant à améliorer la documentation de la réévaluation des antibiothérapies en réanimation*

C. Pulcini<sup>a,\*,b,c</sup>, J. Dellamonica<sup>b,d</sup>, G. Bernardin<sup>b,d</sup>, N. Molinari<sup>e</sup>, A. Sotto<sup>c,f</sup>



Infection (2013) 41:621–628  
DOI 10.1007/s15010-013-0431-1

CLINICAL AND EPIDEMIOLOGICAL STUDY

## A 6-year antifungal stewardship programme in a teaching hospital

V. Mondain · F. Lieutier · L. Hasseine ·  
M. Gari-Toussaint · M. Poiree · C. Lions ·  
C. Pulcini

*J Antimicrob Chemother* 2014; **69**: 2857–2863  
doi:10.1093/jac/dku191 Advance Access publication 4 June 2014

Journal of  
Antimicrobial  
Chemotherapy

## Impact of a computerized decision support system on compliance with guidelines on antibiotics prescribed for urinary tract infections in emergency departments: a multicentre prospective before-and-after controlled interventional study

Elisa Demonchy<sup>1,2</sup>, Jean-Charles Dufour<sup>3,4</sup>, Jean Gaudart<sup>3,4</sup>, Emmanuel Cervetti<sup>5</sup>, Pierre Michelet<sup>6</sup>, Nicolas Poussard<sup>7</sup>, Jacques Levraut<sup>1,8</sup> and Céline Pulcini<sup>1,2,4\*</sup>

# AMS IN PRIMARY CARE

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Eur J Clin Microbiol Infect Dis (2013) 32:325–332  
DOI 10.1007/s10096-012-1743-2

ARTICLE

## Approaching the quality of antibiotic prescriptions in primary care using reimbursement data

C. Pulcini · C. Lions · B. Ventelou · P. Verger

Eur J Clin Microbiol Infect Dis (2013) 32:929–935  
DOI 10.1007/s10096-013-1828-6

ARTICLE

## Indicators show differences in antibiotic use between general practitioners and paediatricians

C. Pulcini · C. Lions · B. Ventelou · P. Verger



**Perceptions and attitudes of French general practitioners towards rapid antigen diagnostic tests in acute pharyngitis using a randomized case vignette study**

Céline Pulcini<sup>1–3\*</sup>, Laure Pauvif<sup>3–5</sup>, Alain Paraponaris<sup>3–5</sup>, Pierre Verger<sup>3–5</sup> and Bruno Ventelou<sup>3–6</sup>

**BMJ Open**

**Cross-sectional survey: risk-averse French GPs use more rapid-antigen diagnostic tests in tonsillitis in children**

Audrey Michel-Lepage, Bruno Ventelou, Antoine Nebout, et al.

*BMJ Open* 2013 3:  
doi: 10.1136/bmjopen-2013-003540

EXPERT REVIEW OF ANTI-INFECTIVE THERAPY, 2016  
VOL. 14, NO. 4, 403–413  
<http://dx.doi.org/10.1586/14787210.2016.1151353>



Taylor & Francis  
Taylor & Francis Group

REVIEW

## How can we improve antibiotic prescribing in primary care?

Oliver J. Dyar<sup>a</sup>, Bojana Beović<sup>b</sup>, Vera Vlahović-Palčevski<sup>c</sup>, Theo Verheij<sup>d</sup> and Céline Pulcini<sup>e</sup> on behalf of ESGAP (the ESCMID [European Society of Clinical Microbiology and Infectious Diseases] Study Group for Antibiotic Policies)

# AMS IN LTCF

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# AMS in LTCFs

REVIEW

## Strategies and challenges of antimicrobial stewardship in long-term care facilities

O. J. Dyar<sup>1</sup>, L. Pagani<sup>2</sup> and C. Pulcini<sup>3,4</sup>

*Clin Microbiol Infect* 2015; **21**: 10–19

# CROSS-CUTTING THEMES

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# Education

ORIGINAL ARTICLE

INFECTIOUS DISEASES

Junior doctors' knowledge and perceptions of antibiotic resistance and prescribing: a survey in France and Scotland

C. Pulcini<sup>1,2</sup>, F. Williams<sup>1</sup>, N. Molinari<sup>3</sup>, P. Davey<sup>3,4</sup> and D. Nathwani<sup>5</sup>

*Clin Microbiol Infect* 2011; 17: 80–87

Virulence 4:2, 192–202; February 15, 2013; © 2013 Landes Bioscience

## How to educate prescribers in antimicrobial stewardship practices

Céline Pulcini<sup>1,2</sup> and Inge C. Gyssens<sup>3,4\*</sup>

*J Antimicrob Chemother* 2014; 69: 842–846  
doi:10.1093/jac/dkt440 Advance Access publication 4 November 2013

Journal of  
Antimicrobial  
Chemotherapy

European medical students: a first multicentre study of knowledge, attitudes and perceptions of antibiotic prescribing and antibiotic resistance

Oliver J. Dyar<sup>3</sup>, Céline Pulcini<sup>1,2,\*</sup>, Philip Howard<sup>4</sup> and Dilip Nathwani<sup>5</sup> on behalf of ESGAP†  
(the ESCMID Study Group for Antibiotic Policies)

# Selective reporting

Eur J Clin Microbiol Infect Dis (2013) 32:627–636  
DOI 10.1007/s10096-012-1786-4

ARTICLE

## Selective reporting of antibiotic susceptibility data improves the appropriateness of intended antibiotic prescriptions in urinary tract infections: a case-vignette randomised study

C. Coupat · C. Pradier · N. Degand · P. Hoffiger · C. Pulcini

International Journal of Antimicrobial Agents 49 (2017) 162–166

Contents lists available at ScienceDirect



International Journal of Antimicrobial Agents

Journal homepage: [www.elsevier.com/locate/ijantimicag](http://www.elsevier.com/locate/ijantimicag)



Selective reporting of antibiotic susceptibility test results in European countries: an ESCMID cross-sectional survey

Céline Pulcini <sup>1,2,\*</sup>, Gianpiero Tebano <sup>3</sup>, Nico T. Mutters <sup>4</sup>, Evelina Tacconelli <sup>4,5</sup>,  
Emmanuelle Cambau <sup>4,6</sup>, Gunnar Kahlmeter <sup>7</sup>, Vincent Jarlier <sup>4</sup> on behalf of the EUCIC-  
ESGAP-EUCAST Selective Reporting Working Group <sup>1</sup>



# CONCLUSIONS

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# Research is not enough to change practice...

- Communication strategy:
  - With the public
  - And with health agencies

# What I have learned

- Having fun, working with nice people and doing something (perceived as) useful makes research efforts sustainable (for me)
- Networking and sharing are key
  - Global and international approach
  - Interdisciplinary contacts are extremely enriching
- The ESCMID and ECCMID offer fantastic opportunities

# Interested in AMS... Join ESGAP !



The screenshot shows the ESCMID website with a navigation bar at the top containing links for Home, Contact, Sitemap, and Forum. Below the navigation bar are social media icons for Facebook, Twitter, LinkedIn, and YouTube, and a 'Follow ESCMID' button. The main content area is divided into several sections:

- Navigation Bar:** Includes links for Dates & Events, News & Media, Research & Projects, ESCMID Library, Profession & Career, and Membership & Organization.
- Research & Projects:** A yellow banner with the text 'Research & Projects'.
- ESCMIID Conferences:** A section for conference information.
- Study Groups:** A list of study groups including 'Antibiotic Policies', 'Presentations & Publications', 'ABC Calc (AMC Tool)', 'Executive Committee', 'Mission & Objectives', 'Links', 'Statutes & Membership', 'Newsletters', and 'ESGAP membership application'.
- ESCMIID Study Group for Antibiotic Policies - ESGAP:** A section featuring a group photo of members and a 'News & Activities' sub-section. The news item is dated '14 September 2015' and titled 'September ESGAP Newsletter published'. It lists activities such as 'Do antibiotics matter to you?', 'News from ESGAP', 'European Antibiotic awareness Day', 'ESGAP sessions at the next ECCMIID', 'OVLC', 'European Day during the WAAW', and 'Announcements'.
- ESCMIID Newsletter Sign Up:** A form for signing up for the newsletter, including an email field and a 'Sign Up' button.
- Exchange on Antimicrobial Stewardship:** A section with a globe icon and the text 'A new knowledge and networking resource from ESGAP!'.
- Become an ESGAP member:** A section with the text 'Apply now!'.

# Thanks for your attention !

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