



Pr M. DUPON  
Service de Maladies Infectieuses et Maladies Tropicales  
Hôpital Pellegrin - Tripode  
33076 Bordeaux Cedex



## Déclaration de liens d'intérêts de 2010 à 2013

- Intérêts financiers  
néant
- Liens durables ou permanents  
secrétaire général CMIT, Membre du CA de la SPILF
- Interventions ponctuelles
  - Essais cliniques, travaux scientifiques (coinvestigateur) : PHRC national spondylodiscite 2DTS, essais et cohortes ANRS (VIH)
  - Travaux scientifiques (investigateur principal) : Etude Tissos (Sidaction et laboratoires Gilead), étude Tahiva (Sidaction), conseil scientifique Cohorte Aquitaine
  - Activité de conseil : laboratoire Tibotec-Janssen (VIH),
  - Action de formation, intervention orale, modération lors de congrès, réunions : laboratoires MSD, SPILF, CMIT, laboratoires Gilead, Tibotec-Janssen-Cilag, Roche, Astra-Zeneca
- Intérêts indirects  
invitations à des congrès nationaux ou internationaux : laboratoires BMS, Gilead, Boehringer Ingelheim, VIV, MSD, Roche, Sanofi Aventis, Pfizer, Abott, Astellas, Astra-zeneca

**Pas de conflits d'intérêts pour cette présentation**



## Données sur le traitement des endocardites

- Informations multiples, mal ordonnées, non gradées, redondantes, émanant le plus souvent d'une seule équipe



## Recommandations pour la pratique clinique

- Une solution

- **Les RPC sont des recommandations médicales et professionnelles qui peuvent être utilisées pour établir des références médicales, c'est-à-dire des "standards de pratique" déterminant ce qu'il est approprié et/ou inapproprié de faire, lors de la mise en oeuvre de stratégies préventives, diagnostiques et/ou thérapeutiques dans des situations cliniques données ».**

HAS

# Plan national d'alerte sur les antibiotiques 2011-16

## ■ Action 1 - Rationaliser les protocoles et les référentiels de prescription des antibiotiques

**Description de l'action :**

L'action consiste à recenser, regrouper, actualiser ou élaborer des recommandations par spécialité médicale (en curatif et en prophylactique), validées scientifiquement et incluant :

- la durée de l'antibiothérapie ou de l'antibioprophylaxie ;
- les modalités d'utilisation des antibiotiques, notamment les plus sélectionnants ;
- une adaptation pour les publics cibles présentant un risque élevé d'infections (enfants, personnes âgées...) ;
- des arbres décisionnels destinés à faciliter l'appropriation des recommandations.

Ces recommandations seront réunies dans des protocoles (guides d'action) et des référentiels nationaux, appelés à être ensuite déclinés par les établissements de santé dans le cadre de la mise en œuvre territoriale du plan, pilotée par les ARS, et auprès des médecins prescripteurs (ville et hôpital), en liaison avec la Cnamts.

## ■ Action 2 – Améliorer l'application des protocoles et les référentiels de prescription des antibiotiques

**Sous-action 2 :** Recenser les logiciels d'aide à la prescription des antibiotiques existants. Parmi eux, promouvoir l'utilisation, en ville et à l'hôpital (cf. action n° 7), des logiciels actualisés régulièrement et répondant à des critères de bonne utilisation des antibiotiques.



# ICATB2 : cahier des charges et répartition des points

Actions		Description	Points	Répartition des points			
				Prévention	Surveillance		
Actions	Prévention	ATBA1	Il existe une liste d'antibiotiques « ciblés » dans l'établissement	100	18	4	
		ATBA2	Il existe un protocole sur l'antibiothérapie de 1 <sup>ère</sup> intention des principaux sites d'infection actualisé			4	
		ATBA3	Toute antibiothérapie poursuivie plus d'une semaine doit être argumentée dans le dossier patient			5	
		ATBA4	Les modalités de contrôle/réévaluation sont déterminées par l'établissement			3	
		ATBA5	Des tests d'orientation diagnostique sont présents dans les services d'urgence			2	
	Surveillance	ATBA6	Il existe une surveillance de la consommation des antibiotiques en doses définies journalières DDJ rapportée à l'activité		46	10	2
		ATBA7	Cette surveillance se fait dans le cadre d'un réseau				2
		ATBA8	Les données de surveillance de la consommation sont confrontées à celles de la résistance aux antibiotiques				2
		ATBA9	Les résultats de la surveillance de la consommation d'antibiotiques sont restitués à toutes les disciplines participantes				2
		ATBA 10	Les résultats de la surveillance de la consommation d'antibiotiques sont présentés en CME				2
	Evaluation-audit	ATBA11a	Evaluation du respect de la molécule recommandée		18	3	2
		ATBA11b	Evaluation de la posologie de l'antibiotique				2
		ATBA11c	Evaluation de la durée de l'antibiothérapie				2
	ATBA11d	Evaluation de la réévaluation, réadaptation de traitement (désescalade en cas d'antibiothérapie probabiliste etc)			3		
	ATBA12	Les résultats des évaluations sont restitués à toutes les disciplines participantes			5		
	ATBA13	Les résultats des évaluations sont restitués à la CME			4		


## Guidelines International Network: Toward International Standards for Clinical Practice Guidelines

Amir Qaseem, MD, PhD, MHA; Frède Forland, MD, DPH; Fergus Macbeth, MD; Günter Obenschläger, MD, PharmD, PhD; Sue Phillips, PhD; and Malin van der West, PhD, FF, for the Board of Trustees of the Guidelines International Network\*

Ann Intern Med. 2012;156:525-531.

*Table. Key Components of High-Quality and Trustworthy Guidelines*

Component	Description
Composition of guideline development group	A guideline development panel should include diverse and relevant stakeholders, such as health professionals, methodologists, experts on a topic, and patients.
Decision-making process	A guideline should describe the process used to reach consensus among the panel members and, if applicable, approval by the sponsoring organization. This process should be established before the start of guideline development.
Conflicts of interest	A guideline should include disclosure of the financial and nonfinancial conflicts of interest for members of the guideline development group. The guideline should also describe how any identified conflicts were recorded and resolved.
Scope of a guideline	A guideline should specify its objective(s) and scope.
Methods	A guideline should clearly describe the methods used for the guideline development in detail.
Evidence reviews	Guideline developers should use systematic evidence review methods to identify and evaluate evidence related to the guideline topic.
Guideline recommendations	A guideline recommendation should be clearly stated and based on scientific evidence of benefits, harms, and, if possible, costs.
Rating of evidence and recommendations	A guideline should use a rating system to communicate the quality and reliability of both the evidence and the strength of its recommendations.
Peer review and stakeholder consultations	Review by external stakeholders should be conducted before guideline publication.
Guideline expiration and updating	A guideline should include an expiration date and/or describe the process that the guideline groups will use to update recommendations.
Financial support and sponsoring organization	A guideline should disclose financial support for the development of both the evidence review as well as the guideline recommendations.

Pas encore parfait mais est-ce possible ?? (trop lourd, trop cher, trop long?) 

# Gradation

Table 1. Applying Classification of Recommendations and Level of Evidence

		SIZE OF TREATMENT EFFECT →			
		CLASS I Benefit >>> Risk Procedure/Treatment SHOULD be performed/administered	CLASS IIa Benefit >> Risk Additional studies with focused objectives needed <b>IT IS REASONABLE</b> to perform procedure/administer treatment	CLASS IIb Benefit ≥ Risk Additional studies with broad objectives needed rigidly data would be helpful Procedure/Treatment <b>MAY BE CONSIDERED</b>	CLASS III Risk ≥ Benefit Procedure/Treatment should <b>NOT</b> be performed/administered <b>SINCE IT IS NOT HELPFUL AND MAY BE HARMFUL</b>
ESTIMATE OF CERTAINTY (PRECISION) OF TREATMENT EFFECT	LEVEL A Multiple populations included? Data derived from multiple randomized clinical trials or meta-analysis	<ul style="list-style-type: none"> <li>Recommendation that procedure or treatment is useful/effective</li> <li>Sufficient evidence from multiple randomized trials or meta-analysis</li> </ul>	<ul style="list-style-type: none"> <li>Recommendation in favor of treatment or procedure being useful/effective</li> <li>Some conflicting evidence from multiple randomized trials or meta-analysis</li> </ul>	<ul style="list-style-type: none"> <li>Recommendation's usefulness/efficacy less well established</li> <li>Greater conflicting evidence from multiple randomized trials or meta-analysis</li> </ul>	<ul style="list-style-type: none"> <li>Recommendation that procedure or treatment is not useful/effective and may be harmful</li> <li>Sufficient evidence from multiple randomized trials or meta-analysis</li> </ul>
	LEVEL B Limited population included? Data derived from a single randomized trial or nonrandomized studies	<ul style="list-style-type: none"> <li>Recommendation that procedure or treatment is useful/effective</li> <li>Evidence from single randomized trial or nonrandomized studies</li> </ul>	<ul style="list-style-type: none"> <li>Recommendation in favor of treatment or procedure being useful/effective</li> <li>Some conflicting evidence from single randomized trial or nonrandomized studies</li> </ul>	<ul style="list-style-type: none"> <li>Recommendation's usefulness/efficacy less well established</li> <li>Greater conflicting evidence from single randomized trial or nonrandomized studies</li> </ul>	<ul style="list-style-type: none"> <li>Recommendation that procedure or treatment is not useful/effective and may be harmful</li> <li>Evidence from single randomized trial or nonrandomized studies</li> </ul>
	LEVEL C Very limited population included? Data represent expert opinion or reports, case studies, or standard of care	<ul style="list-style-type: none"> <li>Recommendation that procedure or treatment is useful/effective</li> <li>Only expert opinion, case studies, or standard of care</li> </ul>	<ul style="list-style-type: none"> <li>Recommendation in favor of treatment or procedure being useful/effective</li> <li>Only diverging expert opinion, case studies, or standard of care</li> </ul>	<ul style="list-style-type: none"> <li>Recommendation's usefulness/efficacy less well established</li> <li>Only diverging expert opinion, case studies, or standard of care</li> </ul>	<ul style="list-style-type: none"> <li>Recommendation that procedure or treatment is not useful/effective and may be harmful</li> <li>Only expert opinion, case studies, or standard of care</li> </ul>
Suggested phrases for writing recommendations/		should be recommended is indicated is contraindicated	It reasonable can be useful/effective/beneficial It probably recommended is indicated	might be considered might be reasonable usefulness/beneficial is uncertain/contraindicated or not well established	is not recommended should not is not useful/effective/beneficial may be harmful



## Conséquence du non-respect des guidelines

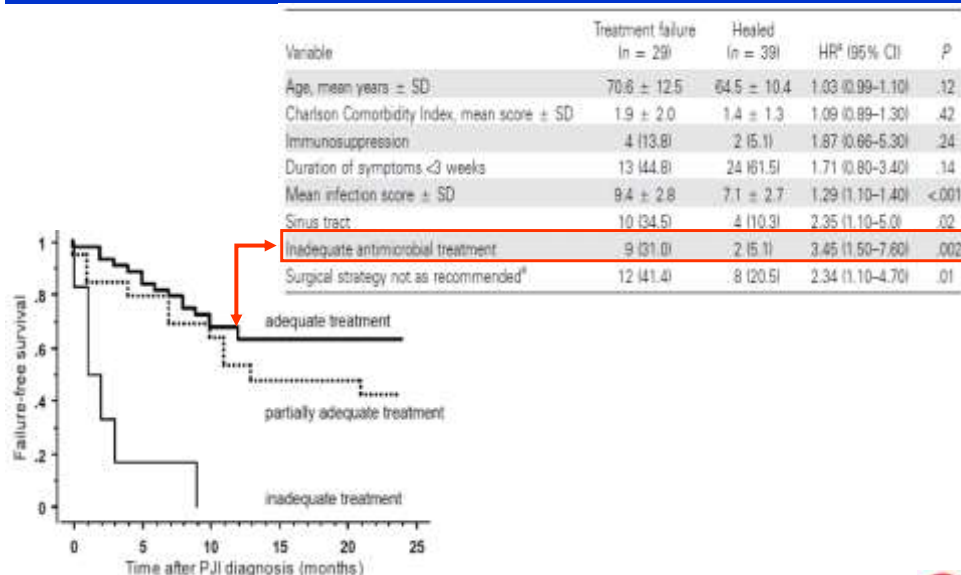
- Neutropénie fébrile (IDSA 2011) : utilisation des vancomycine et facteurs de croissance neutrophiles (*Wright J. Jama Intern Med 2013;173:559-69*)
- L'utilisation immédiate des guidelines permet de diminuer le transfert vers des structures de suite et la mortalité de façon significative pour les patients à faible risque

Variable	Low-Risk Patients		High-Risk Patients	
	Nonroutine Discharge (n = 882)	Death (n = 273)	Nonroutine Discharge (n = 619)	Death (n = 555)
Treatment				
Guideline-based antibiotics	0.77 (0.65-0.92) <sup>a</sup>	0.63 (0.42-0.95) <sup>a</sup>	1.02 (0.80-1.31)	0.80 (0.59-1.09)
Vancomycin	1.39 (1.17-1.65) <sup>a</sup>	1.70 (1.12-2.59) <sup>a</sup>	1.69 (1.38-2.08) <sup>a</sup>	0.98 (0.76-1.27)
Granulocyte colony-stimulating factor	1.15 (0.97-1.35)	1.64 (1.08-2.50) <sup>a</sup>	1.09 (0.90-1.34)	0.89 (0.69-1.16)

Deviations From Guideline-Based Therapy for Febrile Neutropenia in Cancer Patients and Their Effect on Outcomes



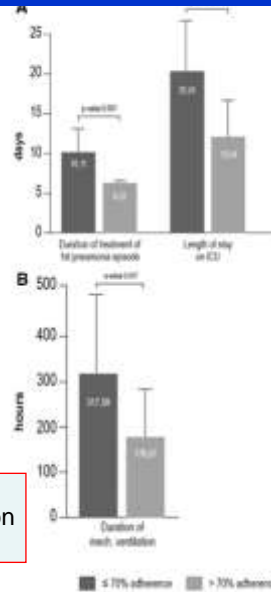
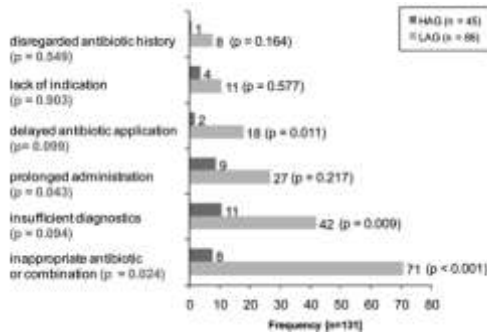
## Non respect des recommandations



Betsch L. Treatment of Joint Prosthesis Infection in Accordance with Current Recommendations Improves Outcome. *Clin Infect Dis* 2008; 46:1221-30



# Impact de l'adhérence à un protocole de prise en charge de pneumonies en réanimation



Étude prospective monocentrique 5 USI, 3 mois  
 Procédures diagnostiques et thérapeutiques  
 prédéterminées. 524 patients, 131 pneumonies  
 Observance protocole :  $\ge 70\%$  des mesures respectées

Le respect de la procédure est associé à une durée plus courte de traitement, une durée plus courte de la ventilation mécanique, et un séjour plus court en réanimation

Irit Nachtigall. Impact of adherence to standard operating procedures for pneumonia on outcome of intensive care unit patients. Crit Care Med 2009; 37:159-166

## Quelles recommandations?

**ESC GUIDELINES**

Guidelines on the prevention, diagnosis, and treatment of infective endocarditis (new version 2009)

The Task Force on the Prevention, Diagnosis, and Treatment of Infective Endocarditis of the European Society of Cardiology (ESC)

Endorsed by the European Society of Clinical Microbiology and Infectious Diseases (ESCMID) and by the International Society of Chemotherapy (ISC) for Infection and Cancer

Authors/Task Force Members: Gilbert Habib (Chairperson), France; Bruno Hainke (France), Pilar Tomas (Spain), Francis Tenay (France), Bernard Pons (France), Isabel Vazquez (Spain), Pradyumn Mehta (India), Michael de Lencastre (Portugal), Mik Tsim (Sweden), John Lekakis (Greece), Maria Loutfy (Hungary), Ludwig Müller (Austria), Christoph K. Naber (Germany), Petros Nikolopoulos (UK), Anton Moris (Germany), Jose Luis Zamora (Spain)

J Antimicrob Chemother. 2010; 63: 265-289  
 doi:10.1093/acq/cqk456 Advance Access publication 14 November 2010

**Circulation**

ACC/AHA 2006 Guidelines Update on Valvular Heart Disease: Focused Update on Infective Endocarditis: A Report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines (Endorsed by the Society of Cardiovascular Anesthetists, Society for Cardiovascular Angiography and Interventions, and Society of Intensive Care Medicine)

Ball A, Nishimura A, Carabello DA, P. Tajik, Michael D. Freed, Brian W. Lytle, Patrick T. O'Gara, Robert A. O'Rourke and Prerna M. Shah

Circulation. 2008; 118:1032-1097. originally published online July 18, 2008

**Circulation**

Update on Cardiovascular Implantable Electronic Device Infections and Their Management: A Scientific Statement From the American Heart Association

Larry M. Baddour, Andrew E. Epstein, Christopher C. Erickson, Bradley P. Knight, Marlene E. Levinson, Peter B. Lockhart, Frederick A. Mamas, Eric J. Olsson, Walter P. Wilson, Lee B. Bernstein, Ann J. Boggs, N. A. Mark Estes III, Michael Gewirtz, Jane W. Newburger, George B. Siskin, Kathryn A. Taubert, Council on Cardiovascular Surgery and Anesthesia, Council on Cardiovascular Nursing, Council on Clinical Cardiology and the Interdisciplinary Council on Quality of Care and Outcomes Research

Circulation. 2010; 121:470-477. originally published online January 4, 2010

**Journal of Antimicrobial Chemotherapy**

Guidelines for the diagnosis and antibiotic treatment of endocarditis in adults: a report of the Working Party of the British Society for Antimicrobial Chemotherapy

F. Kati Gaudel, David W. Denning, Tim S. J. Elliott, Juliet Fowles, John D. Perry, Bernard D. Phillips, Anneke A. T. Smeets, Michael J. Sorel and Richard W. Welton

**IDSA GUIDELINES**

Clinical Practice Guidelines by the Infectious Diseases Society of America for the Treatment of Methicillin-Resistant *Staphylococcus Aureus* Infections in Adults and Children

Collette Lin, Arnold Sison, Sara E. Coopers, Robert S. Owen, Don K. Priddy, Rachel J. Evers, Shelton L. Kaplan, Adolf W. Karchner, Donald F. Linds, Barbara E. Murray, Michael J. Rybak, David A. Tenover and Nancy E. Chalkley

**infektion.net**

Vårdprogram för infektiös endokardit reviderad version 2012

## Pourquoi les recommandations sont optimales

- Les recommandations sont multidisciplinaires
- Les conflits d'intérêt sont déclarés
- Les recommandations sont gradées
- Les recommandations récentes ne sont pas obsolètes; elles sont prudentes en cas de traitement en cours d'évaluation
- Les recommandations sont complètes
- Les recommandations constituent un socle de référence qui peut être discuté et adapté à une situation individuelle; elles ne sont pas un dogme d'école



## Caractère multidisciplinaire et international

### Guidelines on the prevention, diagnosis, and treatment of infective endocarditis (new version 2009)

Multidisciplinarité imparfaite

#### The Task Force on the Prevention, Diagnosis, and Treatment of Infective Endocarditis of the European Society of Cardiology (ESC)

Endorsed by the European Society of Clinical Microbiology and Infectious Diseases (ESCMID) and by the International Society of Chemotherapy (ISC) for Infection and Cancer

Authors/Task Force Members: Gilbert Habib (Chairperson) (France)<sup>\*</sup>, Bruno Hoen (France), Pilar Tornos (Spain), Franck Thuny (France), Bernard Prendergast (UK), Isidre Vilacosta (Spain), Philippe Moreillon (Switzerland), Manuel de Jesus Antunes (Portugal), Ulf Thilen (Sweden), John Lekakis (Greece), Maria Lengyel (Hungary), Ludwig Müller (Austria), Christoph K. Naber (Germany), Petros Nihoyannopoulos (UK), Anton Moritz (Germany), Jose Luis Zamorano (Spain)

ESC Committee for Practice Guidelines (CPG): Alec Vahanian (Chairperson) (France), Angelo Auricchio (Switzerland), Jeroen Bax (The Netherlands), Claudio Ceconi (Italy), Veronica Dean (France), Gerassimos Filippatos (Greece), Christian Funck-Brentano (France), Richard Hobbs (UK), Peter Kearney (Ireland), Theresa McDonagh (UK), Keith McGregor (France), Bogdan A. Popescu (Romania), Zeljko Reiner (Croatia), Udo Sechtem (Germany), Per Anton Simes (Norway), Michal Tendera (Poland), Panos Vardas (Greece), Petr Widimsky (Czech Republic)

Document Reviewers: Alec Vahanian (CPG Review Coordinator) (France), Rio Aguilar (Spain), Maria Grazia Bongiorno (Italy), Michael Borger (Germany), Eric Butchart (UK), Nicolas Danchin (France), Francois Delahaye (France), Raimund Erbel (Germany), Damian Franzen (Germany), Kate Gould (UK), Roger Hall (UK), Christian Hassager (Denmark), Keld Kjeldsen (Denmark), Richard McManus (UK), José M. Miró (Spain), Ales Mokracsek (Czech Republic), Raphael Rosenhek (Austria), José A. San Román Calvar (Spain), Petar Seferovic (Serbia), Christine Selton-Suty (France), Miguel Sousa Uva (Portugal), Rita Trinchero (Italy), Guy van Camp (Belgium)



# Déclaration conflit d'intérêt

## Reviewer Disclosures

Reviewer	Employment	Research Grant/Other Research Support	Speakers Bureau/ Honoraria	Ownership Interest	Consultant/ Advisory Board	Other
Alan L. Biano	Miami Medical Center	None	None	None	None	None
Blaze A. Carabelo	Veterans Affairs Medical Center	None	None	None	None	None
David L. Longworth	Tufts University School of Medicine	None	None	None	None	Drug and Safety Monitoring committee member of a pharmaceutical trial sponsored by Cubist
Patrick O'Gara	Harvard Medical School	None	None	None	None	None
Neal Kon	Wake Forest University School of Medicine	None	None	None	None	None
Bruce Lytle	The Cleveland Clinic Foundation	None	None	None	None	None

This table represents the relationships of reviewers that may be perceived as actual or reasonably perceived conflicts of interest as reported on the Reviewer Disclosure Questionnaire, which all reviewers are required to complete and submit.



# Les recommandations sont gradées

Circulation



Update on Cardiovascular Implantable Electronic Device Infections and Their Management / A Scientific Statement From the American Heart Association  
 Larry M. Baddour, Andrew T. Evans, Christopher T. Fricker, Bradley P. Sapp, Matthew E. Levin, Peter B. Lockhart, Frederick A. Mcessah, Eyo J. Okun, Wesley E. Wilson, Joe B. Brennan, Ann J. Belper, N.A. Mark Egan III, Michael Gewirtz, Jane W. Newburger, Louise R. Schone, Katherine A. Tibbitt, Council on Cardiovascular Surgery and Anesthesia, Council on Cardiovascular Nursing, Council on Clinical Cardiology and for Interdisciplinary Council on Quality of Care and Outcomes Research

Circulation. 2019;121:458-477. originally published online January 4, 2019.

Table 3. Summary of Recommendations

Recommendation	Class and Level of Evidence
<b>A. Recommendations for diagnosis of CIED infection and associated complications</b>	
1. All patients should have at least 2 sets of blood cultures drawn at the initial evaluation before prompt initiation of antimicrobial therapy for CIED infection.	IC
2. Generator-pocket tissue Gram stain and culture and lead-tip culture should be obtained when the CIED is explanted.	IC
3. Patients with suspected CIED infection who either have positive blood cultures or have negative blood cultures but have had recent antimicrobial therapy before blood cultures were obtained should undergo TEE for CIED infection or valvular endocarditis.	IC
4. All adults suspected of having CIED-related endocarditis should undergo TEE to evaluate the left-sided heart valves, even if transthoracic views have demonstrated lead-adherent masses. In pediatric patients with good views, TTE may be sufficient.	IB
5. Patients should seek evaluation for CIED infection by cardiologists or infectious disease specialists if they develop fever or bloodstream infection for which there is no initial explanation.	IIaC
6. Percutaneous aspiration of the generator pocket should not be performed as part of the diagnostic evaluation of CIED infection.	IIIc





## Pas de niveau de preuve élevé ??

- Impossibilité d'avoir des essais randomisés en double insu pour toutes les questions
- Nécessité de séries très importantes pour démontrer une différence
- Essais de non-infériorité
- Expérimentation animale ou in vitro non parfaitement transposable à l'homme
- On ne peut attendre...
- Des recommandations consensuelles multi-experts, multidisciplinaires sont utiles et peuvent être réévaluées en fonction des connaissances.



## Les recommandations sont complètes

<b>IE according to localization of infection and presence or absence of intracardiac material</b>	
<ul style="list-style-type: none"> <li>• Left-sided native valve IE</li> <li>• Left-sided prosthetic valve IE (PVE)               <ul style="list-style-type: none"> <li>- Early PVE &lt; 1 year after valve surgery</li> <li>- Late PVE &gt; 1 year after valve surgery</li> </ul> </li> <li>• Right-sided IE</li> <li>• Device-related IE (permanent pacemaker or cardioverter-defibrillator)</li> </ul>	
<b>IE according to the mode of acquisition<sup>1)</sup></b>	
• Health care-associated IE	IE developing in a patient hospitalized > 48 hours prior to the onset of signs / symptoms consistent with IE
• Nosocomial:	
• Non nosocomial:	Signs and / or symptoms of IE starting < 48 hours after admission in a patient with health care contact defined as: <ol style="list-style-type: none"> <li>1) home-based nursing or intravenous therapy, haemodialysis, or intravenous chemotherapy &lt; 30 days before the onset of IE; or</li> <li>2) hospitalized in an acute care facility &lt; 90 days before the onset of IE; or</li> <li>3) resident in a nursing home or long-term care facility</li> </ol>
• Community-acquired IE	Signs and / or symptoms of IE starting < 48 hours after admission in a patient not fulfilling the criteria for health care-associated infection
• Intravenous drug abuse-associated IE	IE in an active injection drug user without alternative source of infection
<b>Active IE</b>	
<ul style="list-style-type: none"> <li>• IE with persistent fever and positive blood cultures, or</li> <li>• Active inflammatory morphology found at surgery, or</li> <li>• Patient still under antibiotic therapy, or</li> <li>• Histopathological evidence of active IE</li> </ul>	
<b>Recurrence</b>	
• Relapse:	Repeat episodes of IE caused by the same microorganism < 6 months after the initial episode
• Reinfection:	Infection with a different microorganism
	Repeat episode of IE caused by the same microorganism > 6 months after the initial episode

1. Infective endocarditis with positive blood cultures



# Les recommandations sont complètes

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## Les recommandations sont trop complètes ?

- Tableaux didactiques
- Textes courts
- Textes complet pour senior avec références



## Tableaux synthétiques pour faciliter l'utilisation optimales des antibiotiques

**Tabell: Rekommenderad daglig dosering av antibiotika vid endokardit**

	Total dos/dag (spridning)	Antal doser/dag
Penicillin G (PcG)	12 g (8-16 g)	4 (6 <sup>a</sup> )
Kloxacillin	12 g (8-16)	4 (6 <sup>a</sup> )
Ampicillin	12 g (8-16)	4 (6 <sup>a</sup> )
Cefotaxim	6 g (6-9)	3
Ceftriaxon	2-4 g	1
Aminoglykosid	3 mg/kg <sup>b</sup>	1-2
Vancomycin	45 mg/kg (30-60)	2-3
Rifampicin	600-900 mg	2
Daptomycin	6-10 mg/kg <sup>c</sup>	1

a I svåra fall av IE kan 6-dos regimen övervägas

b Vid IE orsakad av *S. aureus* rekommenderas dosering 5 mg/kg/dygn under de första 5 behandlingsdygnen.

c Vid högresidig endokardit orsakad av *S. aureus*, MRSA endokardit med MIC  $\geq 2$  för Vancomycin, alternativt vid pacemakerendokardit.



## un socle de recommandations qui peut être discuté et adapté à une situation individuelle sans dogme d'école

**Table 3.** Summary of treatment recommendations for staphylococcal endocarditis

Agent	Dose/route	Duration (weeks)	Comment
<b>NVE, methicillin-susceptible <i>Staphylococcus</i> spp.</b>			
Flucloxacillin	2 g every 4–6 h iv	4	Use q4h regimen if weight >85 kg.
<b>NVE, methicillin-resistant, vancomycin-susceptible (MIC ≤2 mg/L) rifampicin-susceptible <i>Staphylococcus</i> or penicillin allergy</b>			
Vancomycin AND	1 g iv q12h	4	or dose according to local guidelines. Modify dose according to renal function and maintain pre-dose level 15–20 mg/L.
Rifampicin	300–600 mg q12h po	4	Use lower dose of rifampicin if creatinine clearance <30 mL/min.
<b>NVE, methicillin-resistant, vancomycin-resistant (MIC &gt;2 mg/L), daptomycin-susceptible (MIC ≤1 mg/L) <i>Staphylococcus</i> spp. or patient unable to tolerate vancomycin</b>			
Daptomycin AND	6 mg/kg q24h iv	4	Monitor creatine phosphokinase weekly. Adjust dose according to renal function.
Rifampicin OR	300–600 mg q12h po	4	Use lower dose of rifampicin if creatinine clearance <30 mL/min.
Gentamicin	1 mg/kg iv, q12h	4	
<b>PVE, methicillin, rifampicin-susceptible <i>Staphylococcus</i> spp.</b>			
Flucloxacillin AND	2 g every 4–6 h iv	6	Use q4h regimen if weight >85 kg.
Rifampicin AND	300–600 mg q12h po	6	Use lower dose of rifampicin if creatinine clearance <30 mL/min.
Gentamicin	1 mg/kg iv, q12h	6	
<b>PVE, methicillin-resistant, vancomycin-susceptible (MIC ≤2 mg/L), <i>Staphylococcus</i> spp. or penicillin allergy</b>			
Vancomycin AND	1 g iv q12h	6	or dose according to local guidelines. Modify dose according to renal function and maintain pre-dose level 15–20 mg/L.
Rifampicin AND	300–600 mg q12h po	6	Use lower dose of rifampicin if creatinine clearance <30 mL/min.
Gentamicin	1 mg/kg q12h iv	≥2	Continue gentamicin for the full course if there are no signs or symptoms of toxicity.
<b>PVE, methicillin-resistant, vancomycin-resistant (MIC &gt;2 mg/L), daptomycin-susceptible (MIC ≤1 mg/L) <i>Staphylococcus</i> spp. or patient unable to tolerate vancomycin</b>			
Daptomycin AND	6 mg/kg q24h iv	6	Increase daptomycin dosing interval to 48 hourly if creatinine clearance <30 mL/min.
Rifampicin AND	300–600 mg q12h po	6	Use lower dose of rifampicin if creatinine clearance <30 mL/min.
Gentamicin	1 mg/kg q12h iv	≥2	Continue gentamicin for the full course if there are no signs or symptoms of toxicity.

NVE, native valve endocarditis; PVE, prosthetic valve endocarditis; iv, intravenously; po, orally; q12h, every 12 h; q24h, every 24 h.



## Propositions thérapeutiques gradées et cohérentes entre les différentes recommandations

**Tabell: Behandling av NVE orsakad av alfastreptokocker och *S. bovis***

MIC	Alternativ	Behandlingstid (veckor)	Evidens
≤ 0.125 mg/L okomplicerad <sup>1</sup>	PeG eller Ceftriaxon	2	A II
	och Aminoglykosid	2	
≤ 0.125 mg/L komplexerad	PeG eller Ceftriaxon	4	A II
		4	
>0.125 – ≤ 2 mg/L eller <i>Granulicatella</i> eller <i>Abiotrophia</i> och	PeG och Aminoglykosid	4	B II
		2	
Pe allergi typ I	Vancomycin och Aminoglykosid	4	B III
		2	
Pe allergi ej typ I	Cefotaxim och Aminoglykosid	4	
		2	
≥ 4 mg/L	Vancomycin	4	B III

<sup>1</sup> Inga tecken till komplikationer som septiska embolier, hjärtesvikt och extraabdominär infektion







## Pourquoi des différences?

- Différences rares et minimes (posologie)
  - Découlent
    - du manque d'études
    - De la date de mise à jour
- ➡ Nécessité actualisation et veille







## Dose de rifampicine

Recommandations	Posologie journalière
	900 mg en 3 fois
	1200 mg en 2 fois
	600 à 1200 mg en 2 fois 600 mg si CI créat <30ml/mn
	600 à 900 mg en 2 fois



## Dose de gentamicine

Recommandations	Posologie journalière
	3 mg/kg en 3 fois
	3 mg/kg en 2 ou 3 fois
	2 mg/kg en 2 fois
	3 mg/kg en 1 à 2 fois

## Y- a-t-il mieux ou différent?

- Réponse non
  - Données in vitro (CMI  $\neq$  CMEB)
  - Expérimentations animales : de la souris et au lapin à l'homme?
  - Séries historiques ou cohorte de patients avec un antibiotique : biais multiples, non randomisées
  - Compte-rendu congrès : pression médiatique, conflits d'intérêt

## Conclusion

- Recommandons les recommandations ! Let's promote guidelines !
- Les recommandations :
  - ne sont pas un recueil de recettes de cuisine applicables sans discernement
  - sont un socle de base solide à impact médico-légal
  - sont à adapter au contexte individuel avec les comorbidités, les données microbiologiques, la non observance, etc...
  - sont à actualiser avec des études récentes validées cliniquement
    - Miro JM. A New Era for Treating Enterococcus faecalis Endocarditis: Ampicillin Plus Short-Course Gentamicin or Ampicillin Plus Ceftriaxone: That Is the Question! *Circulation*. 2013 Apr 30;127(17):1763-6.
    - Fernández-hidalgo N *clin infect dis*. Ampicillin plus ceftriaxone is as effective as ampicillin plus gentamicin for treating enterococcus faecalis infective endocarditis. 2013 May;56(9):1261-8.
    - Dahl A. Enterococcus faecalis Infective Endocarditis: A Pilot Study of the Relationship Between Duration of Gentamicin Treatment and Outcome. *Circulation*. 2013 Apr 30;127(17):1810-7
    - Holmes NE. Vancomycin minimum inhibitory concentration, host comorbidities and mortality in Staphylococcus aureus bacteraemia. *Clin Microbiol Infect*. 2013 Feb 26.
- Justifier les modifications par rapport aux recommandations
- Intérêt des réunions de concertation multidisciplinaire et d'une actualisation



Appel aux détracteurs et sceptiques  
Ne tirer pas sur le pianiste !!

