Strategy on Antibiotic Resistance StAR

Symposium Antibiotic Resistance StAR
22nd November 2019

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Can guidelines influence practice?

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Transparency declaration

- I have received research grants from the Swiss National Science Foundation (SNF)

- I am a paid consultant to the World Health Organization (WHO)

Disclaimer

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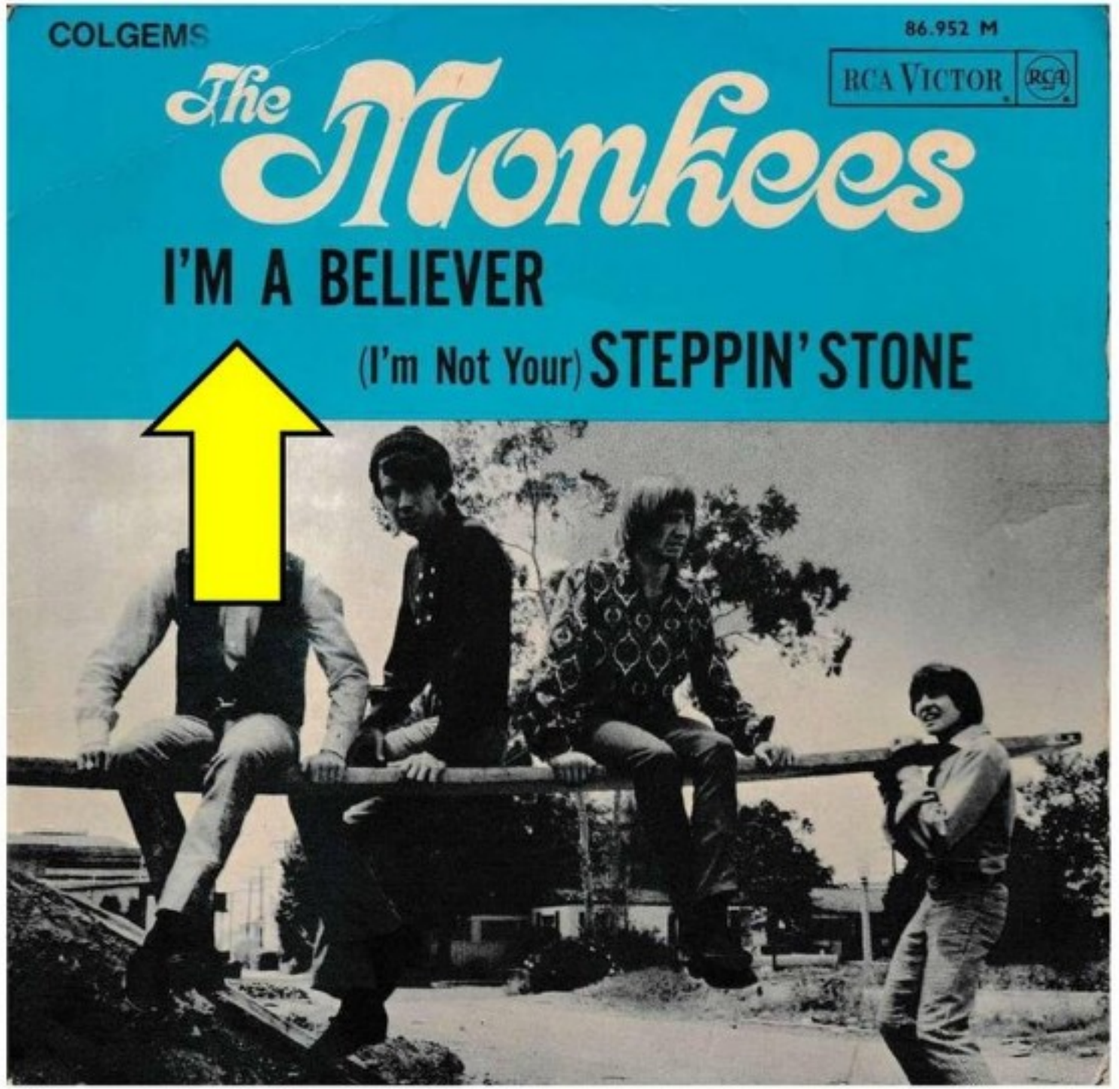

Antibiotika-«Guideline Digests» der Schweizerischen Gesellschaft für Infektiologie (SSI)

Entwicklung infektiologischer Guidelines – ein kontinuierlicher Prozess

Prof. Dr. med. Pietro Vernazza[a], Prof. Dr. med. Sarah Tschudin Sutter[b], PD Dr. med. Andreas Kronenberg[c], Dr. med. Christoph Hauser[d], PD Dr. med. Benedikt Huttner[e], PD Dr. med. Oriol Manuel[f], PD Dr. med. Stefan Kuster[g], Dr. med. Claude Scheidegger[h], Prof. Dr. med. Christoph Berger[i], Prof. Dr. med. Nicolas Müller[k] für die Schweizerische Gesellschaft für Infektiologie

SSI Guideline Subcommittee

https://www.escmid.org/membership_organization/about_escmid/organization/subcommittees/guideline_subcommittee/a

SCHWEIZERISCHES MEDIZIN-FORUM 2018;18(46):963–965

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Some terminology issues
"guideline ≠ guideline"

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- **Guidance document**
  - "any document aimed at giving advice" [in the field on infectious diseases, clinical microbiology and infection control]

- **Clinical Practice Guidelines**
  - a guidance document fulfilling **more rigorous criteria**
  - "statements … that include recommendations intended to optimize patient care that are **informed by a systematic review of evidence** and an **assessment of the benefits and harms** of alternative care options"

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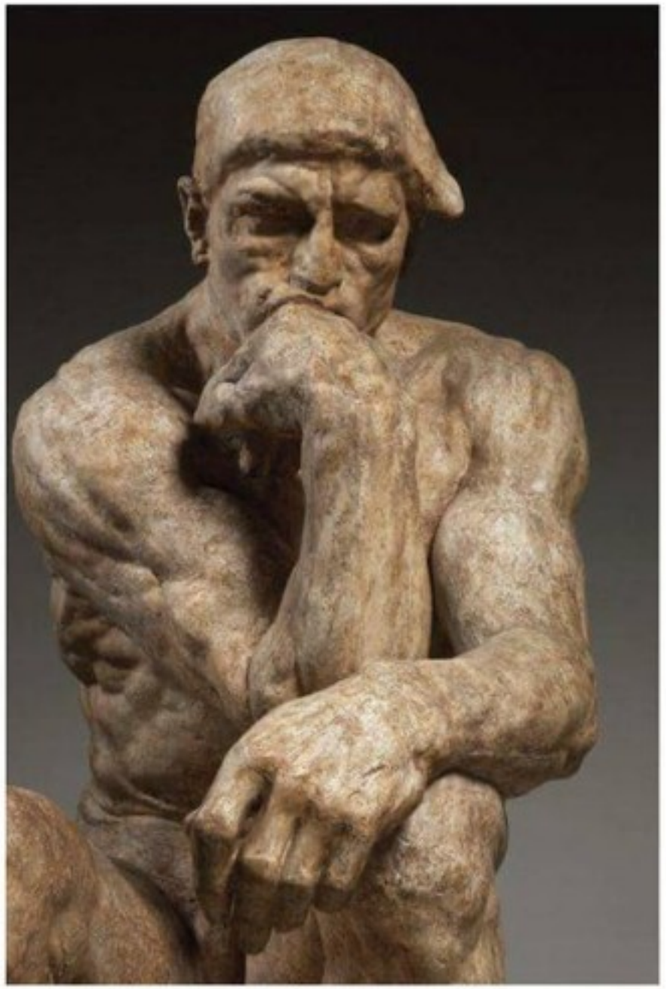
Some reflections

- Can guidelines influence practice ?



Can guidelines influence practice?

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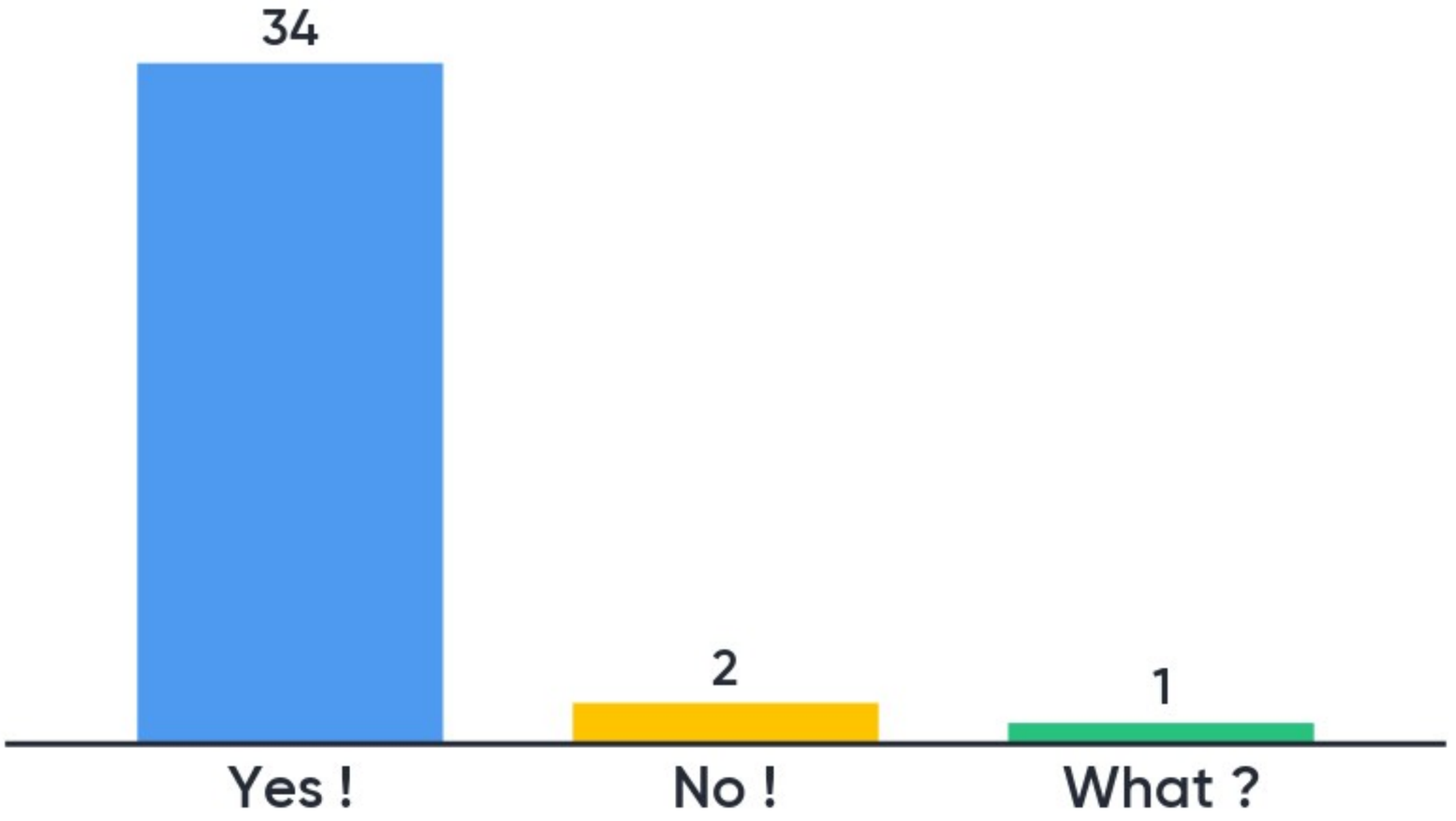

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Do you agree with the following statements?

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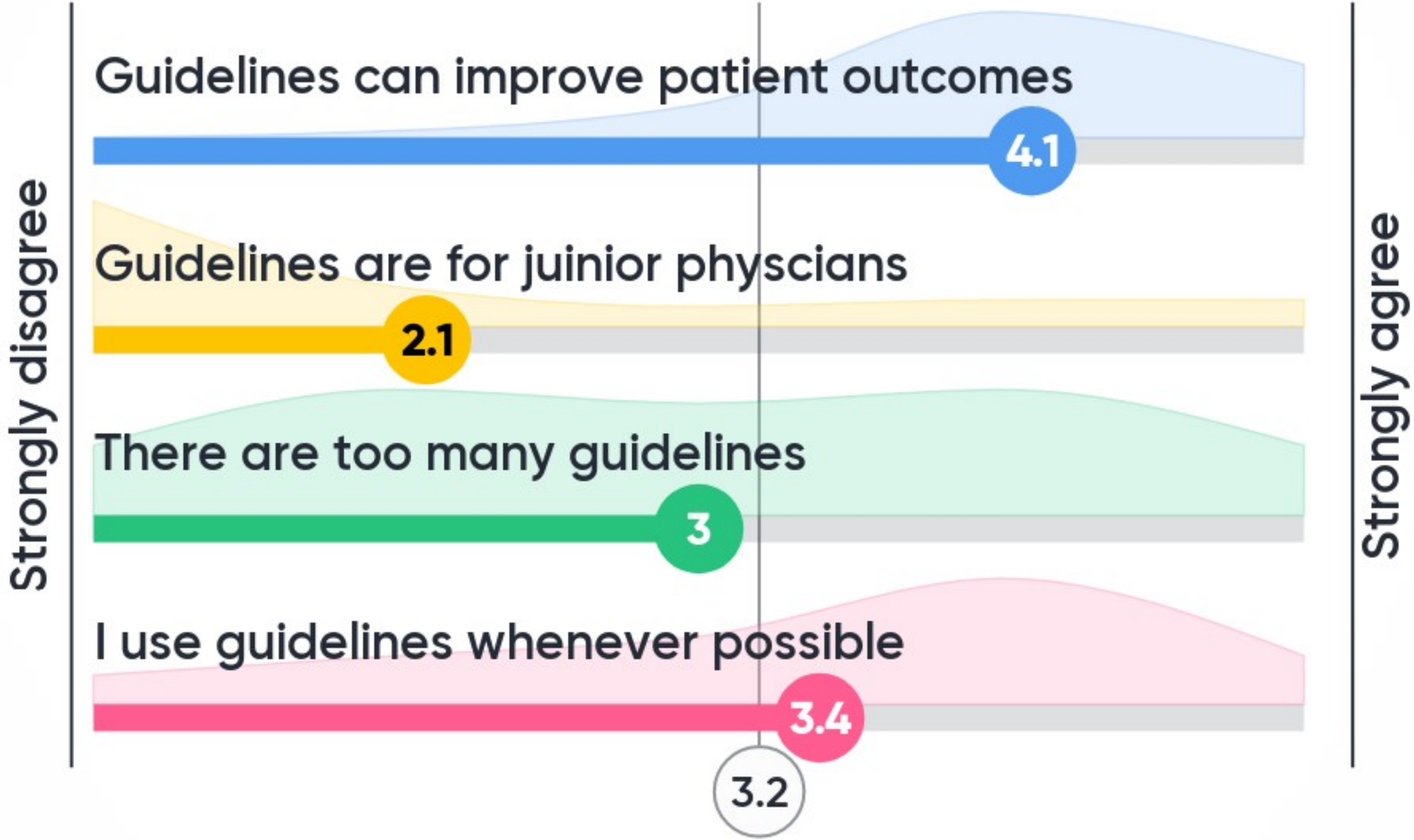

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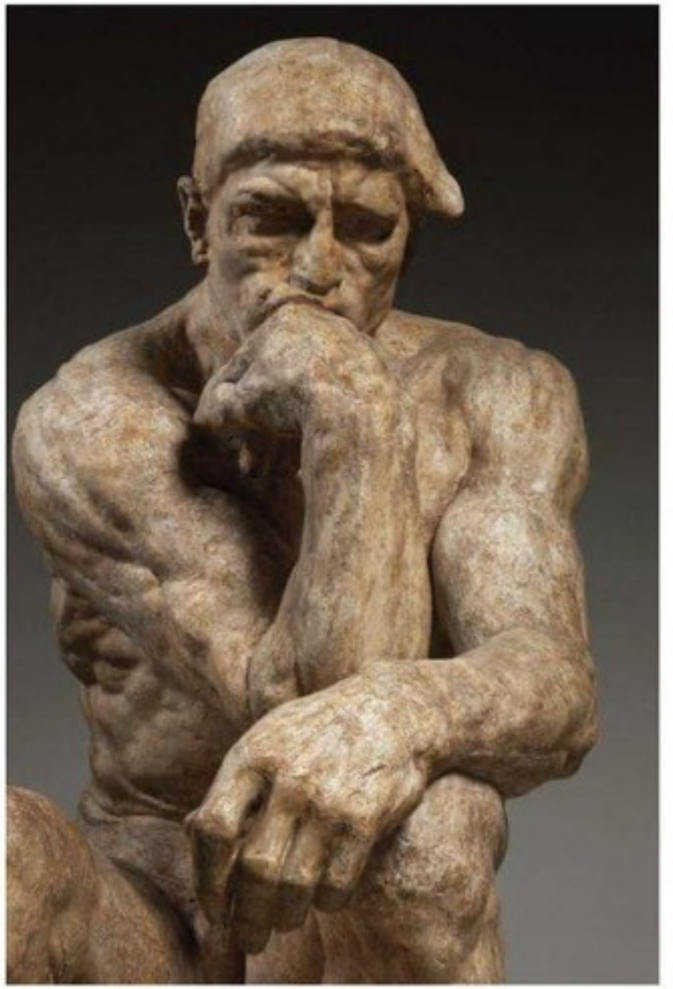
Some reflections

- Can antibiotics cure infections? **YES!**
  - … **if** the disease is caused by bacteria
  - … **if** the antibiotics are available
  - … **if** the bacteria are susceptible
  - … **if** the right dose and route is used
  - … **if** the immune system plays its role

A lot of "ifs" …



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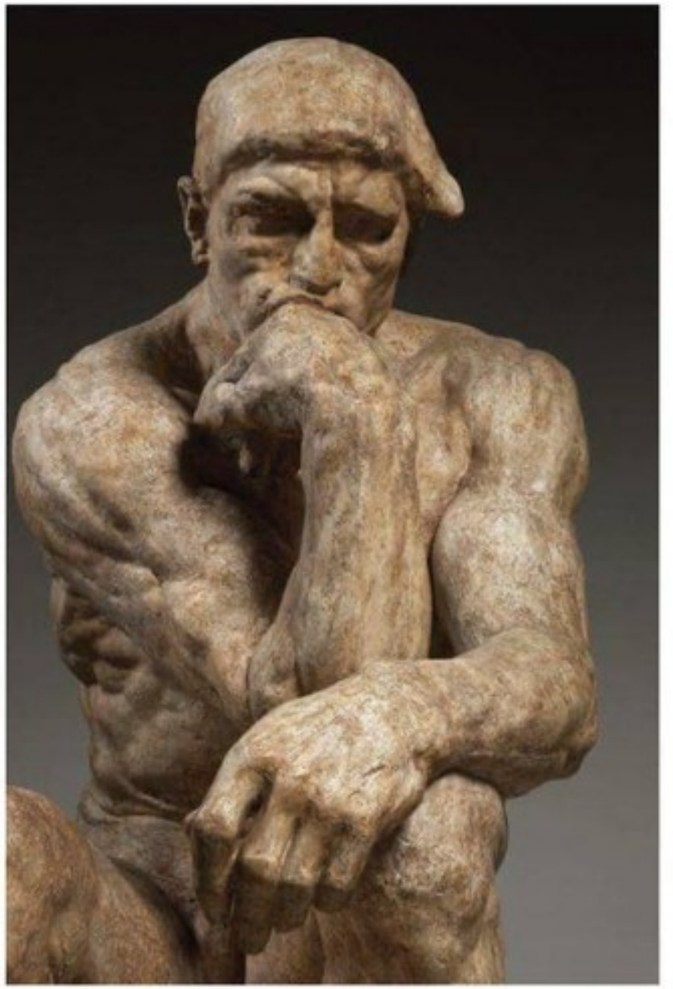
Some reflections

- Can guidelines influence practice ? **YES!**
  - … **if** they are used
  - … **if** physicians know about them
  - … **if** physicians trust the guidelines
  - … **if** they are user-friendly (neither too simple not too complicated)
  - …..



- What are barriers to the use of guidelines ?

Barriers to guideline implementation

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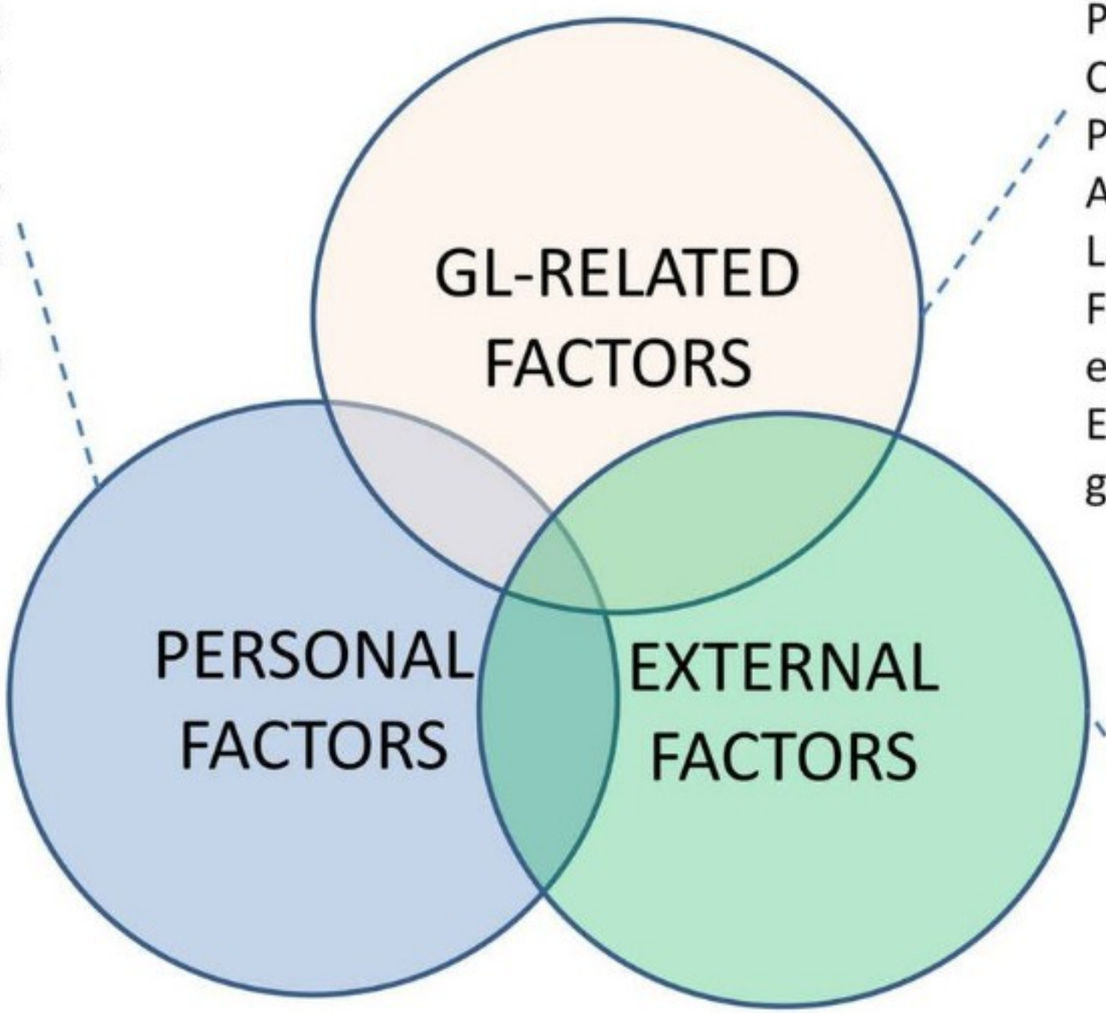

Lack of awareness
Lack of familiarity
Lack of agreement
Lack of self-efficacy
Lack of skills
Lack of learning culture
Lack of outcome expectancy
Lack of motivation

Lack of evidence
Plausibility of recommendations
Complexity (too theoretical)
Poor layout
Access to guideline
Lack of applicability
Focus on patients with single disease entities
Exclusion of patients with complex in guidelines disease entities

Organisational constraints
Lack of resources
Lack of collaboration
Social and clinical norms

Barrier 1: Physicians don’t know about guidelines (Lack of awareness and familiarity… and time)

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Barrier 1: Physicians don't know about guidelines

- Survey of 740 attending physicians and trainees in primary care and subspecialties at 3 US academic medical centers
  - Question regarding antibiotic prophylaxis for endoscopic procedures (10 case vignettes)
  - Median of 7 correct answers
- Likert score of 3 (range 1-5) for median self-reported familiarity with the current guideline
- Familiarity associated with more correct responses
  - … but only weakly (0.21; 95% CI, 0.08-0.34)

Guidelines can be difficult to find…

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Maladies transmissibles

Diagnostic et traitement de la syphilis: recommandations actualisées

QUINTESSENCE

- Après une infection par Treponema pallidum, la sérologie peut être négative au début, elle doit alors être répétée 2 à 4 semaines plus tard.
- En cas de soupçon d'une syphilis primaire, il faut demander une recherche des IgM spécifiques (EIA). Ce test est par faits positif avant la RPR/VDRL durant la phase précoce de la syphilis primaire.
- Dans les situations cliniques douteuses (herpès génital ou ulcérations anales/orales), il peut être indiqué de pratiquer un prélèvement au niveau d'une lésion, de façon à pouvoir mettre en évidence une infection par Treponema pallidum par une PCR.
- Les manifestations atypiques sont plus fréquentes qu'auparavant – p. ex. une lésion constituée d'ulcérations multiples d'une syphilis primaire ou la perte subite d'audition ou de vision comme symptôme principal d'une syphilis secondaire.
- Le traitement dépend du stade de la maladie et de la présence ou l'absence d'une atteinte du SNC.
- Il est difficile de se procurer de la benzathine-pénicilline en Suisse (elle ne peut être qu'importée). Le traitement par ce médicament standard dans le monde n'est pas remboursé par les caisses maladie en Suisse.
- La clinique par 4 du titre du VDRL ou du RPR signe le succès du traitement. Ceci nécessite généralement 6 à 12 mois pour la syphilis primaire ou secondaire et 12 à 24 mois pour la syphilis latente tardive.
- En raison des lacunes de déclaration, les données épidémiologiques concernant la syphilis en Suisse sont insuffisantes. Le système de déclaration a donc été révisé, le nouveau système est entré en vigueur le 1er janvier 2015.

Abréviations:
CIA: Chemiluminescent Immunoassay
CLIA: Chemiluminescent Immunoassay
EIA: Enzyme-linked Immunosorbent Assay
HSH: hommes ayant des rapports sexuels avec des hommes
LCR: liquide céphalo-rachidien
PL: ponction lombaire
RPR: Rapid Plasma Reagin
SNC: Système nerveux central
TPPA: Treponema pallidum Particle Agglutination
VDRL: Venereal Disease Research Laboratory

première fois depuis des années, le nombre de nouveaux diagnostics décrits était relativement stable [1]. L'office a introduit en 2015 une nouveauté importante: le médecin peut désormais noter expressément une réinfection sur sa déclaration complémentaire. Ce changement était devenu nécessaire, car les indications fournies par les laboratoires ne permettent pas toujours de faire clairement la différence entre une réinfection et une syphilis mal traitée. Toujours depuis 2011, on peut également déclarer une lésion primaire confirmée par PCR à un moment où la mise en évidence par des tests sérologiques n'était pas encore possible. Malgré les améliorations apportées dans le relevé, l'ampleur de l'épidémie de syphilis en Suisse est sans doute sous-estimée (raison des lacunes de déclaration, 60 % des 536 cas confirmés en 2013 concernaient des hommes ayant des rapports sexuels avec des hommes (HSH), dont un pourcentage non négligeable étaient positifs pour le VIH).

En Suisse, on recherche systématiquement la syphilis chez les donneurs de sang, ainsi que chez les donneurs d'organes, les femmes enceintes et les personnes qui présentent un risque élevé d'exposition (p. ex. celles qui ont de nombreux partenaires sexuels et les HSH, surtout porteurs du VIH). Idéalement, le dépistage chez les femmes enceintes devrait avoir lieu au premier trimestre et être répété au troisième si le risque d'infection est élevé. Quand le dépistage s'avère positif, il faut demander l'avis d'un spécialiste des maladies infectieuses ou d'un dermatologue. Une recherche du VIH doit être proposée chez tous les patients atteints de syphilis et complétée, le cas échéant, par la recherche de l'hépatite B, de la gonorrhée, des chlamydiae et des autres hépatites virales, après évaluation du profil de risque.

PRÉSENTATION CLINIQUE ET CHEMINEMENT DIAGNOSTIQUE

QUI ET COMMENT DÉPISTER?

Quand l'infection par Treponema pallidum remonte à moins d'un an, on parle, pour des raisons thérapeutiques, de **syphilis précoce**. En font partie la syphilis primaire, la syphilis secondaire et la syphilis latente précoce (forme asymptomatique). Si l'infection remonte à plus d'un an, il

En cas de soupçon de syphilis, le diagnostic repose principalement sur la clinique [2]. Dans la syphilis primaire, surtout dans la phase précoce, la mise en évidence de l'agent pathogène au niveau de la lésion par PCR

ESCMID medical guidelines

The ESCMID Medical Guidelines Portfolio is currently under the wing of **ESCMID Guidelines Director: Dr. Luigia Scudeller, Milano, Italy**

Contact through ESCMID office

The Guidelines below are provided for personal use only, and not for redistribution or commercial re-use.

ESCMID Guideline Manual

This document has two major aims:

(1) an outline of ways ESCMID guidelines can be proposed and developed;
(2) a guide for drafting group (DG) chairs and members for the guideline development process.

Medical Guideline Publications in 2019

The list of ESCMID medical guidelines published in 2019 is given below.

For a complete list of medical guideline publications published in 2018, have a look at the Publications page

Guidelines of the SSI

Guidelines Urinary Tract Infections (UTI) - May 2014:
- in German: ⭳ Behandlung von HWI in der Schweiz
- in French: ⭳ Traitement des IVU en Suisse

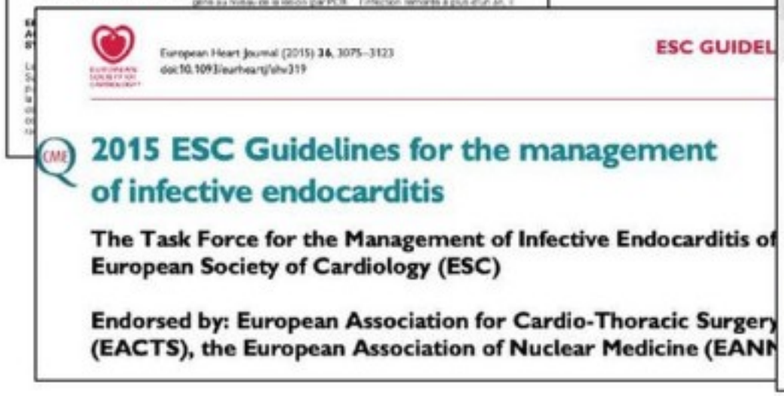
⭳ Recommendations for immunization of solid organ transplant (SOT) candidates and recipients
Background document EKIF - February 2014

⭳ Revidierte schweizerische Richtlinien für die Endokarditis-Prophylaxe
⭳ Révision des recommandations suisses pour la prophylaxie de l'endocardite infectieuse

⭳ Endokarditis-Prophylaxe für Kinder und Jugendliche
⭳ Prophylaxie des endocardites pour les enfants et les adolescents
⭳ Profilassi dell'endocardite per bambini e adolescenti

⭳ Endokarditis-Prophylaxe für Erwachsene
⭳ Proph
⭳ Profil

⭳ Mana
ERS/ES



European Heart Journal (2015) 36, 3075–3123
doi:10.1093/eurheartj/ehv319

ESC GUIDEL

2015 ESC Guidelines for the management of infective endocarditis

The Task Force for the Management of Infective Endocarditis of
European Society of Cardiology (ESC)

Endorsed by: European Association for Cardio-Thoracic Surgery
(EACTS), the European Association of Nuclear Medicine (EANN

République et canton de Genève

Recherche

A votre service Thèmes Publications Autorités

Accueil > Santé, soins et handicaps > Professionnels et institutions de santé

Recommandations aux médecins en cas de MRSA communautaire (C-MRSA)

1. L'essentiel en bref

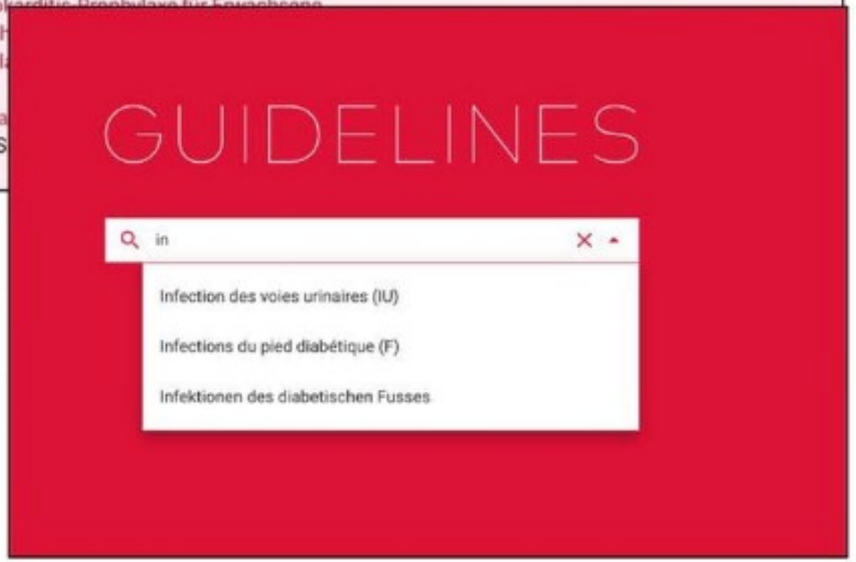
Dans le canton de Genève, une surveillance cantonale des infections à MRSA d'acquisition communautaire (C-MRSA) a été mise en place en 2002, suite à une alerte d'un laboratoire de ville rapportant un nombre élevé de cas.

La définition du C-MRSA retenue pour cette surveillance est la suivante:

Infection à MRSA isolée chez des patients n'ayant pas d'antécédents d'hospitalisation dans les 12 mois précédant l'infection.

Afin d'éviter la dissémination de ces souches pathogènes et résistantes aux antibiotiques, le groupe de travail cantonal C-MRSA de la direction générale de la santé a rédigé des recommandations pour les médecins et pour les patients.

Ces recommandations pour les médecins vous permettront de diagnostiquer et prendre en charge un patient infecté par du C-MRSA.



GUIDELINES

in

Infection des voies urinaires (IU)

Infections du pied diabétique (F)

Infektionen des diabetischen Fusses

https://ssi.guidelines.ch/
https://www.sginf.ch/guidelines/guidelines-of-the-ssi.html

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Special Communication

Standardized Best Practices and Individual Craft-Based Medicine

A Conversation About Quality

Lara Goitein, MD; Brent James, MD, MStat

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"…what will happen to physicians' capacity for critical thinking and originality? "

"… sometimes I can't help wondering if I'm contributing to **undermining individual excellence and professionalism** by joining the effort to standardize medicine through the use of protocols, algorithms, and order sets."

" **There is a totalitarian aspect to it that makes me uneasy**: like the villainous Borg in Star Trek, a collective "hive mind" that assimilates individuals, with the goal of achieving perfection."

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Barrier 1: Physicians don't know about guidelines

- Guidelines should be easily available / findable
- Ideally, there should be few different repositories for the guidelines
  - Example NICE in the UK
- Guidelines.ch is a step in the right direction
  - Still insufficiently known
  - Active promotion / education !
- Yes, guidelines may limit autonomy...
  - but so do traffic rules…

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Barrier 2: Physicians do not trust guidelines

a person's belief that another person or institution will act consistently with their expectations of positive behaviour.

OECD (2017), *OECD Guidelines on Measuring Trust*, OECD Publishing, Paris.
http://dx.doi.org/10.1787/9789264278219-en

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Factors negatively impacting trust: Conflicts of interest (CoI)

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https://medcitynews.com/2018/10/many-doctors-writing-clinical-practice-guidelines-receive-undisclosed-industry-payments-study-finds/?rf=1

Prevalence of Financial Conflicts of Interest Among Authors of Clinical Guidelines Related to High-Revenue Medications

- Analysis of CoI of authors of CPGs endorsed by a US national organization
  - published 2013-2017
  - Making recommendations on **top 10 revenue medications of 2016**

- Comparison with "Centers for Medicare &Medicaid Services Open Payments (CMS-OP)" website (https://openpaymentsdata.cms.gov)

- **49.4%** (79/160) declared **receipt of a payment**
  - **31.3% (50/160)** declaring receipt of payments from **companies marketing 1 of the 10 high-revenue medications**
  - An additional **25.6% (41/160) undisclosed payments** from companies marketing 1 of the 10 high-revenue medications
  - Median 522 USD (IQR 0 – 40'444)

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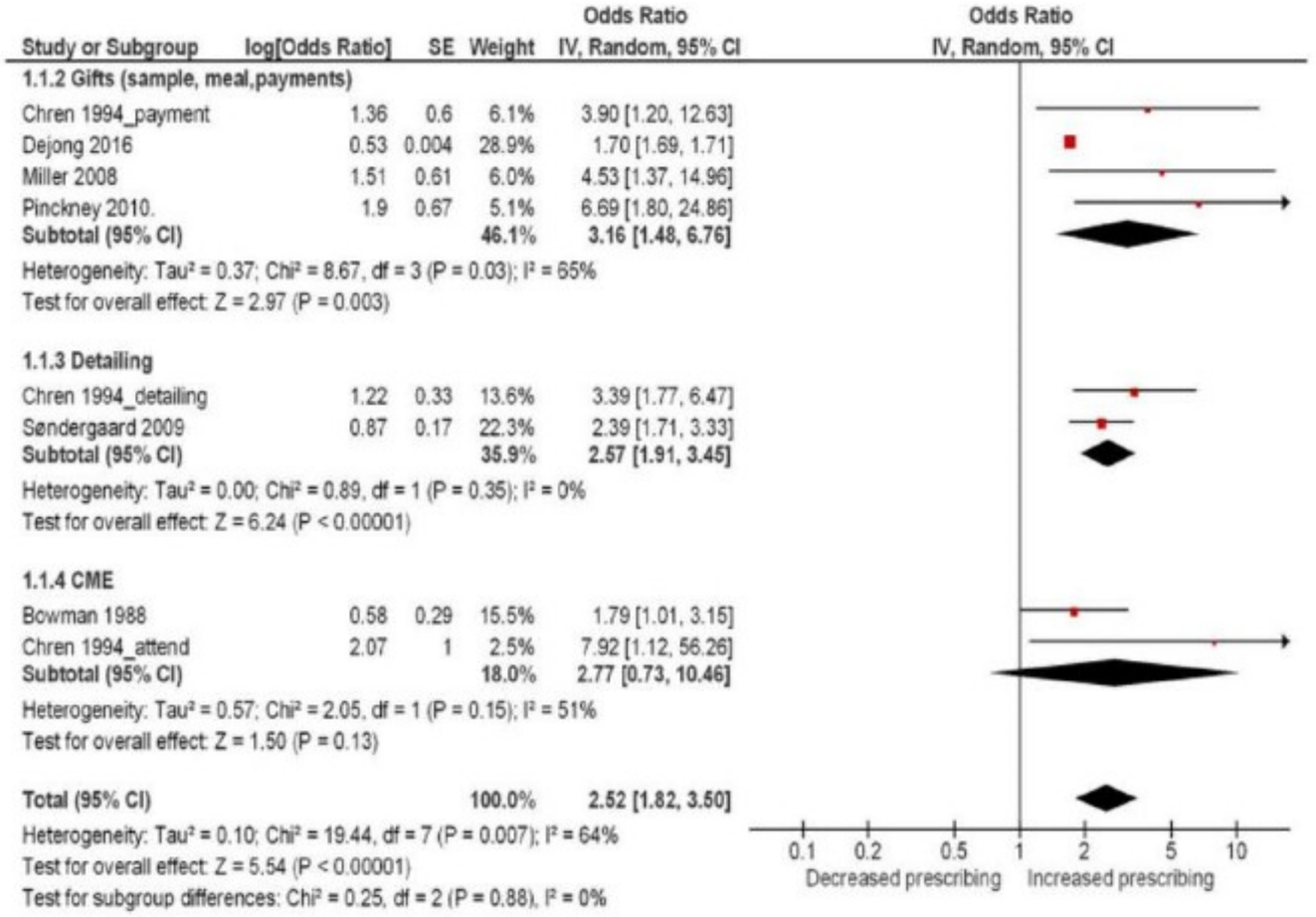
Association between physicians' interaction with pharmaceutical companies and their clinical practices: A systematic review and meta-analysis

- SR of 19 studies examining association between physicians' interactions with pharmaceutical companies and clinical practices
  - Examples of direct interactions:
    - invitation to a continuing medical education (CME) event
    - active presentation of industry-related information to the physician
    - provision of gifts
- 15/19 studies found association between interactions promoting a medication, and
  - inappropriately increased prescribing rates
  - lower prescribing quality
  - increased prescription costs



Indirect conflicts of interest

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RESEARCH AND REPORTING METHODS Annals of Internal Medicine

Guidelines International Network: Principles for Disclosure of Interests and Management of Conflicts in Guidelines

Holger J. Schünemann, MD, PhD, MSc; Lubna A. Al-Ansary, MBBS, MSc; Frode Forland, MD, DPH; Sonja Kersten, MSc; Jorma Komulainen, MD, PhD; Ina B. Kopp, MD; Fergus Macbeth, MA, DM; Susan M. Phillips, BSc (Hons), DPhil; Craig Robbins, MD, MPH; Philip van der Wees, PT, PhD; and Amir Qaseem, MD, PhD, MHA, for the Board of Trustees of the Guidelines International Network*

Table. Types and Examples of Conflicts of Interest in Guidelines

Type of Conflict	Domains*	Examples
Direct financial	Direct payments for service Stock options	Payments to participate in a study on an intervention that is subject to a recommendation Consultancy for a manufacturer of a relevant technology/intervention Payment for lectures and meeting attendance in support of a technology/intervention Paid board memberships, patent applications, and research grants† Honoraria and gifts
Indirect‡	Academic advancement Clinical revenue streams Community standing Scientific interest	Having published on a topic that expresses an opinion on the effectiveness of an intervention or doing research on a topic that could be affected by a recommendation§ Being an acknowledged expert in the intervention Gaining clinical income from the recommendation Leadership or board or committee memberships Involvement with an advocacy group that may gain from a guideline Writing or consulting for an educational company Personal convictions or positions‖

Schünemann et al. Ann Intern Med. 2015;163(7):548-553.

- **Principle 1:** CPG developers should make all possible efforts to **not include members with direct financial** or relevant indirect COIs
- **Principle 2:** The definition of COI and its management applies **to all members of a CPG** development group
- **Principle 3:** A CPG development group should use **standardized forms** for disclosure of interests.
- **Principle 4:** A CPG development group should **disclose interests publicly**
- **Principle 5:** All members of a CPG development group should declare and **update** any changes in interests at each meeting of the group and at regular intervals
- **Principle 6:** **Chairs** of g CPG development groups should have **no direct financial or relevant indirect COIs**
- **Principle 7:** Experts with relevant COIs and specific knowledge or expertise may be permitted to participate in discussion of individual topics, but there should be an **appropriate balance of opinion** among those sought to provide input.
- **Principle 8:** **No member** of the guideline development group **deciding** about the direction or strength of a recommendation should have a direct financial COI.
- **Principle 9:** An **oversight committee** should be responsible for developing and implementing rules related to COIs.

Circulation: Cardiovascular Quality and Outcomes

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CARDIOVASCULAR PERSPECTIVE

Professional Societies Should Abstain From Authorship of Guidelines and Disease Definition Statements

John P.A. Ioannidis, MD, DSc

Guidelines and other statements from professional societies have become increasingly influential. These documents shape how disease should be prevented and treated and what should come within the remit of medical care. Changes in definition of illness can easily increase overnight by millions the number of people who deserve specialist care. This has been seen repeatedly in conditions as diverse as hypertension, diabetes mellitus, composite cardiovascular risk, depression, rheumatoid arthritis, or gastroesophageal reflux.[1] Similarly, changes in prevention or treatment options may escalate overnight the required cost of care by billions of dollars.[2] Should the specialists of the respective field be the developers for such influential articles?

"An alternative approach … would be to avoid having specialists assume any major role in guidelines that pertain to their own fields."

Table. The Overwhelming Representation of Guideline Publications Among the Top-Cited Articles (Citation Counts Are Per Google Scholar) in a Sample of the Most-Cited Authors in Cardiovascular Medicine

Name of Author	Articles that have >2000 citations			Most-Cited Article Citations	Type
	Guidelines	Industry Trials	Other		
Abraham, William T	3	3	0	5355	Guideline
Achenbach, Stephan	7	0	0	8094	Guideline
Adams, Cynthia D	5	0	0	4115	Guideline
Albert, Nancy M	0	0	0	1551	Guideline
Angiolillo, Dominick J	0	0	0	1167	Industry trial
Anker, Stephan D	3	0	0	8094	Guideline
Antman, Elliott M	15	3	1*	6604	Guideline
Atar, Dan	7	1	0	6314	Guideline
Avezum, Alvaro	0	2	1*	10812	Other*
Fagard, Robert H	12	0	1*	8809	Guideline
Feldman, Ted E	1	1	0	3344	Industry trial
Filippatos, Gerasimos S	17	0	0	19293	Guideline
Fonarow, Gregg C	4	0	0	6295	Guideline
Fox, Keith AA	3	0	0	6604	Guideline
Fuster, Valentin	14	0	2	9997	Guideline
Halperin, Jonathan	8	1	0	6368	Industry trial
Harrington, Robert A	0	1	0	4953	Industry trial
Hochman, Judith S	5	0	1	4115	Guideline
Hohnloser, Stefan H	2	2	0	5686	Industry trial
Holmes, David R	0	2	1	5134	Industry trial
Huber, Kurt	5	0	0	4987	Guideline
Hunt, Sharon Ann	9	0	0	5101	Guideline
Husted, Steen E	1	1	0	4953	Industry trial
Wallentin, Lars C	4	3	0	8952	Industry trial
Wang, Thomas J	0	0	1	2347	Other
Webb, John G	0	2	1	4509	Industry trial
White, Harvey D	2	0	2	6604	Guideline
Widimsky, Petr	12	0	0	8802	Guideline
Wijns, William	9	0	0	8094	Guideline
Windecker, Stephan	15	0	0	8094	Guideline
Wiviott, Stephen D	0	4	0	5495	Industry trial
Wood, David A	1	0	0	8132	Guideline

Ioannidis. Circ Cardiovasc Qual Outcomes. 2018 Oct;11(10):e004889.

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Should professional societies abstain from authoring guidelines?

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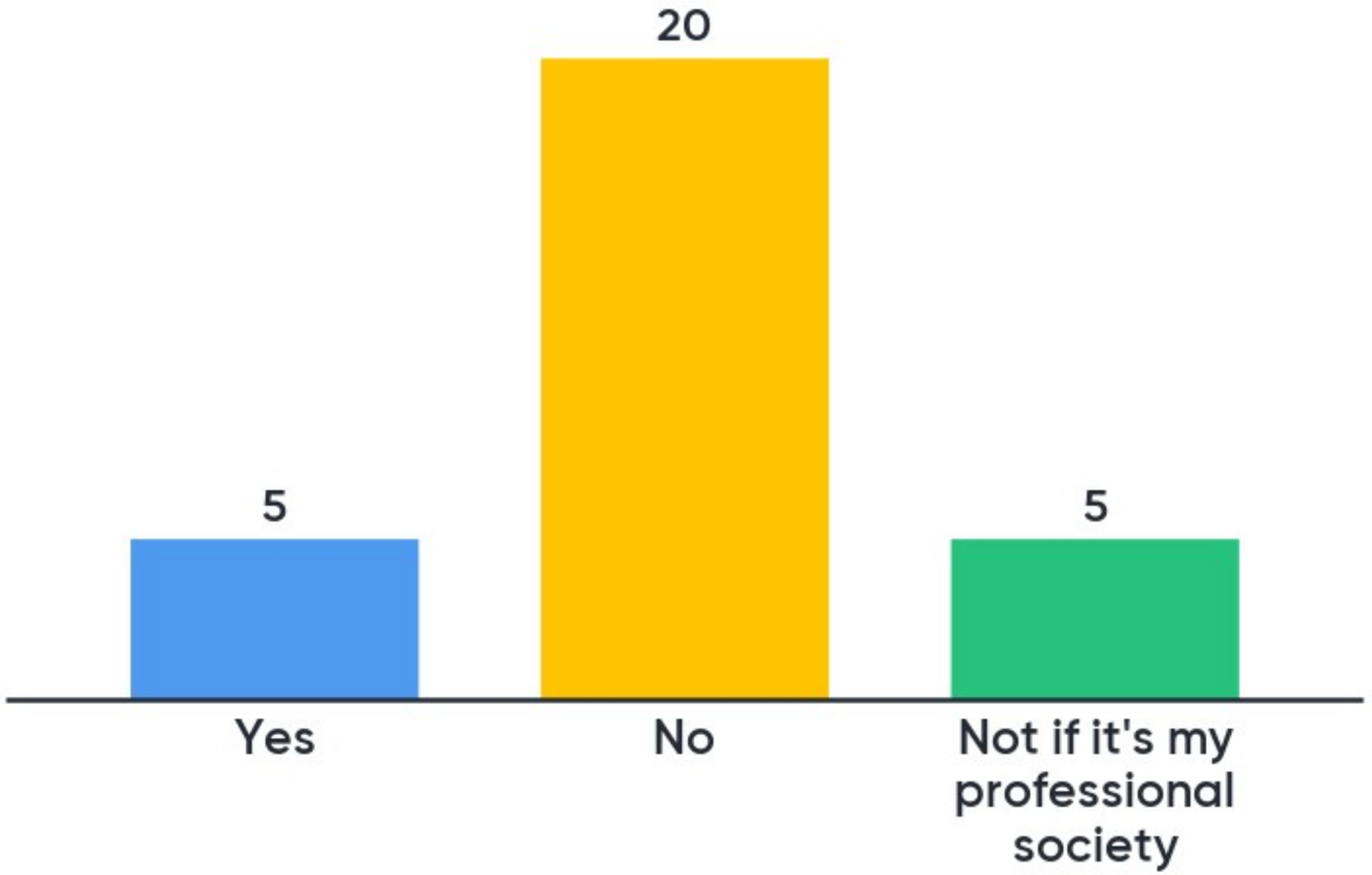

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Factors negatively impacting trust:
Conflicts of interests

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- Financial (direct and indirect) conflicts of interest are a pervasive problem in medicine
  - Voluntary disclosures practices remain clearly suboptimal
  - The optimal solution remains unclear
  - Stricter enforcement / control & threat of consequences?

- Non-financial conflicts of interest cannot be avoided
  - Need to be managed in a “fair, judicious, transparent manner”
  - No easy solution

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Factors negatively impacting trust:

Lack of evidence

“I have said it thrice:
What I tell you three times is true.”
Lewis Carroll, The Hunting of the Snark

Analysis of Overall Level of Evidence Behind Infectious Diseases Society of America Practice Guidelines (1994-2010)

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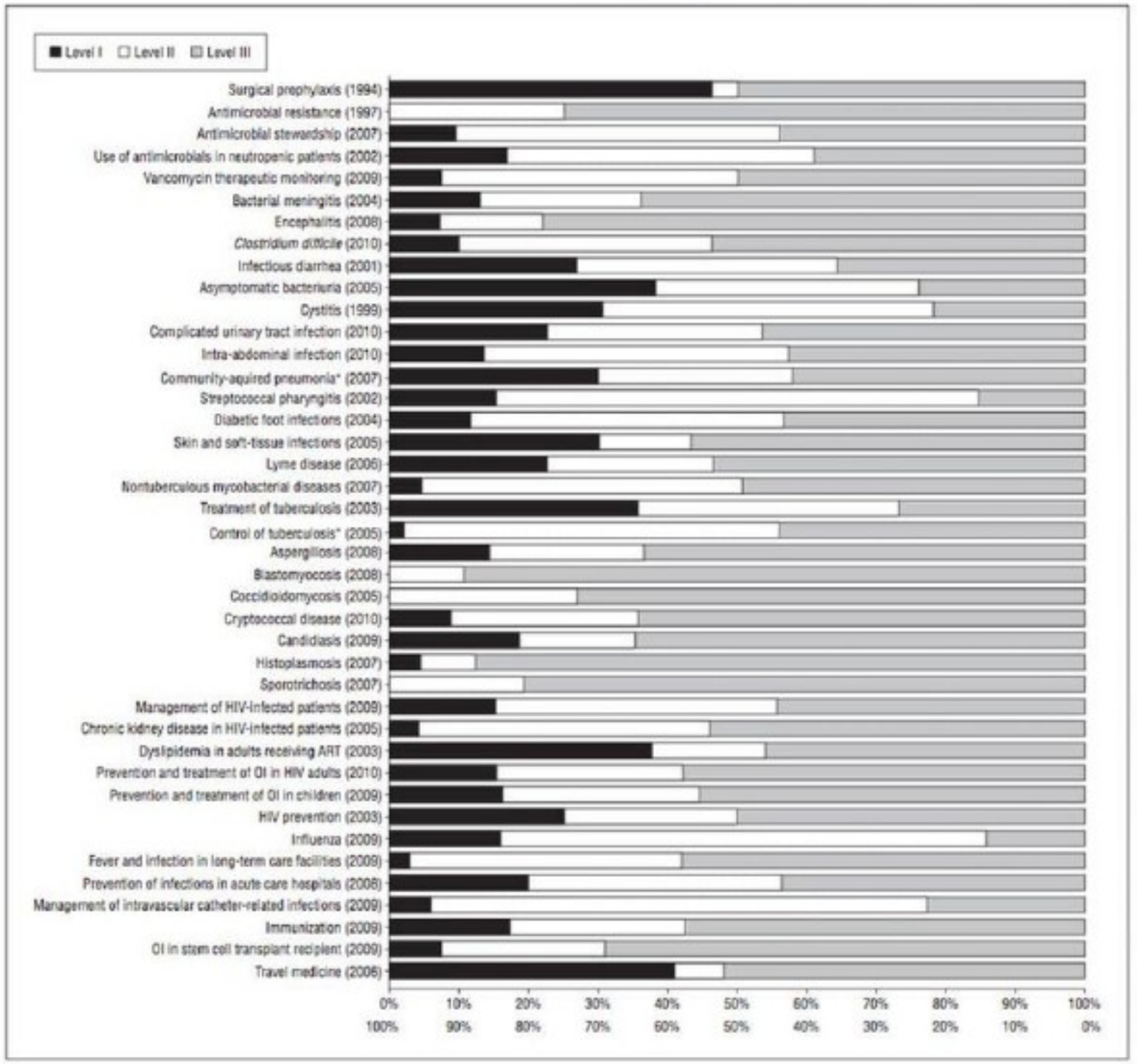

"Of the 4218 individual recommendations **only 14%** were supported by the strongest (**level I**) quality of evidence"

I: evidence from 1 properly randomized controlled trial

II: evidence from1 well-designed clinical trial, without randomization, from cohort or case-controlled analytical studies or from dramatic results from uncontrolled experiments

III: evidence from opinions of respected authorities based on clinical experience, descriptive studies, or reports of expert committees

Lee et Vielemeyer. Arch Intern Med. 2011 Jan 10;171(1):18-22.

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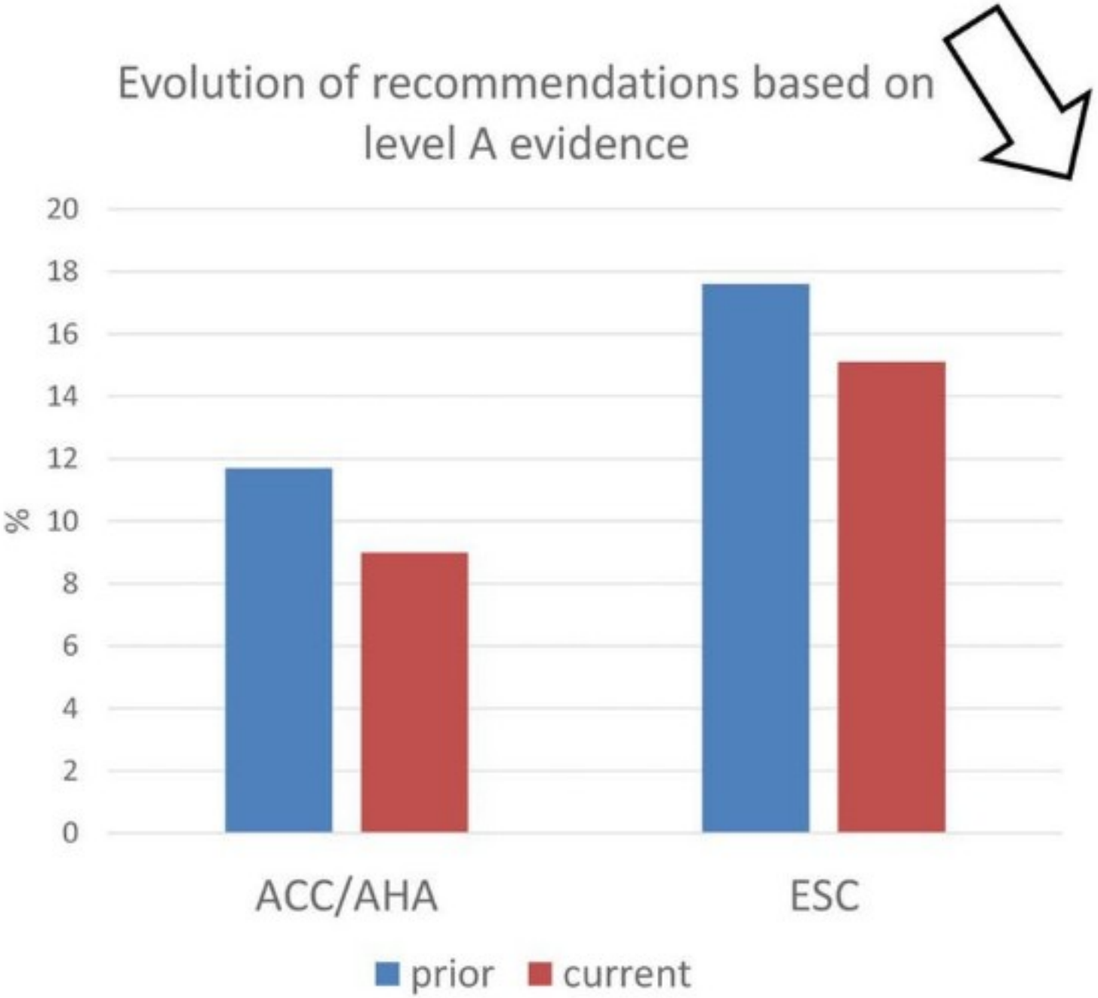
Levels of Evidence Supporting American College of Cardiology/American Heart Association and European Society of Cardiology Guidelines, 2008-2018

- Systematic review of 51 current guideline documents
  - American College of Cardiology/American Heart Association (ACC/AHA)
  - European Society of Cardiology (ESC)
- 6329 recommendations assessed
  - Level of evidence A (evidence from multiple RCTs)
  - ACC/AHA 8.5%
  - ESC 14.3%
- Class I, LOE C recommendations
  - ACC/AHA 37%
  - ESC 49%



Fanaroff et al. JAMA. 2019 Mar 19;321(11):1069-1080.

Factors negatively impacting trust:

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Guidelines do not assess evidence transparently

Factors Associated With High-Quality Guidelines for the Pharmacologic Management of Chronic Diseases in Primary Care
A Systematic Review

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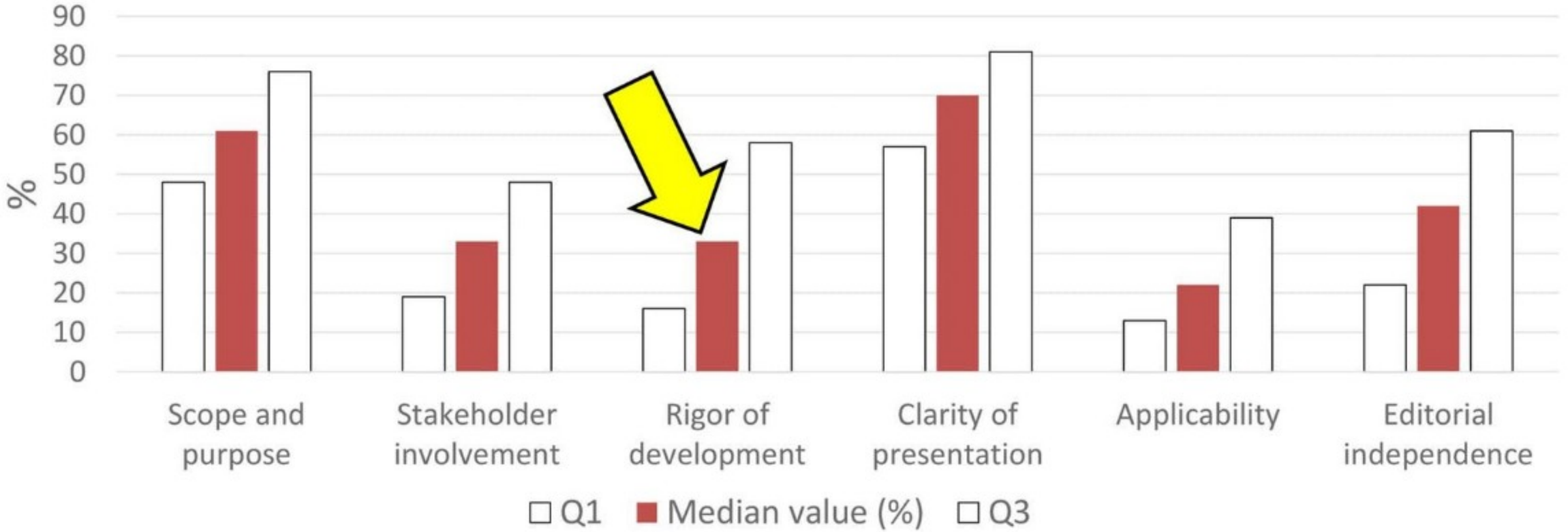
- Assessment of 421 CPGs
  - management of common noncommunicable diseases in primary care
  - published 2011-2017
  - written in English, Portuguese, Spanish

- CPG defined as *"any review (systematic or not) containing pharmacologic recommendations for the management of common NCDs in primary care"*

- Appraisal of Guidelines for Research and Evaluation Instrument, version II (AGREE-II) tool

- 322/421 (76.5%) rated as **low quality**

Characterization of Clinical Practice Guidelines Using the AGREE-II Instrument, Stratified Score Domains



- 36.1% used a systematic review to develop guidelines
- 17.6% reported a formal method for achieving consensus

Molino et al. JAMA Intern Med. 2019 Feb 18. doi: 10.1001/jamainternmed.2018.7529. [Epub ahead of print]

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Factors negatively impacting trust:
Lack of evidence

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- Lack of evidence is a problem
  - … and will remain a problem
  - more and better studies needed…

- Guidelines should be transparent how the evidence was assessed and how the evidence was used to formulate recommendations (GRADE)

Factors negatively impacting trust:

Lack of agreement among guidelines

Analysis of different recommendations from international guidelines for the management of acute pharyngitis in adults and children

Table III. Comparison among different guideline recommendations for the diagnosis and treatment of group A β-hemolytic streptococci pharyngitis.

Guideline	Screening	Diagnosis	Throat Culture if RADT Is Negative	When to Treat?
ACP-ASIM[11]	Centor score	Perform RADT only if Centor score is 2–3	Adults: no Children: yes	Centor score of 4 or RADT or throat culture positive
IDSA[9]	Clinical and epidemiological parameters	Perform throat culture or RADT in all patients at risk	Adults: no Children: yes	RADT or throat culture positive
ICSI[10]	Clinical and epidemiologic parameters	Perform throat culture or RADT in all patients at risk	Adults: yes Children: yes	RADT or throat culture positive
AHA,[8] AAP[2]	Clinical and epidemiologic parameters	Perform throat culture or RADT in all patients at risk	Adults: yes[8] Children: yes[2,8]	RADT or throat culture positive
United Kingdom[15]	Centor score	Clinical diagnosis if Centor score is ≥3	Not applicable	Centor score ≥3, presence of other clinical findings (see text)
Canada[12]	Clinical and epidemiologic parameters	Perform throat culture (not RADT) in all patients at risk	Not applicable	Throat culture positive
Scotland[16]	The Centor score should be used to assist the decision on whether to prescribe an antibiotic but cannot be relied on for a precise diagnosis	Throat swabs should not be conducted routinely. They may be used to establish etiology of recurrent severe episodes in adults when considering referral for tonsillectomy	Not applicable	Antibiotics should not be used routinely. In severe cases, in which the practitioner is concerned about the clinical condition of the patient, antibiotics should not be withheld

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Guidelines do not agree with each other…

- Not really surprising given the lack of evidence in many areas
- Even if there was perfect evidence, guideline may still defer
  - Differences in the subjective weight given to different outcomes

Vignette: You analyze the data in your hospital and realized that 10% of all patients hospitalized for upper UTI have an infection with an ESBL-producing organism.

Should you change your guidelines to recommend empiric carbapenem use for for all patients hospitalized with upper UTI?

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Factors negatively impacting trust:

"The authors of the guidelines do not apply the guidelines themselves"

How do you consider your driving skills compared to the average in this room?

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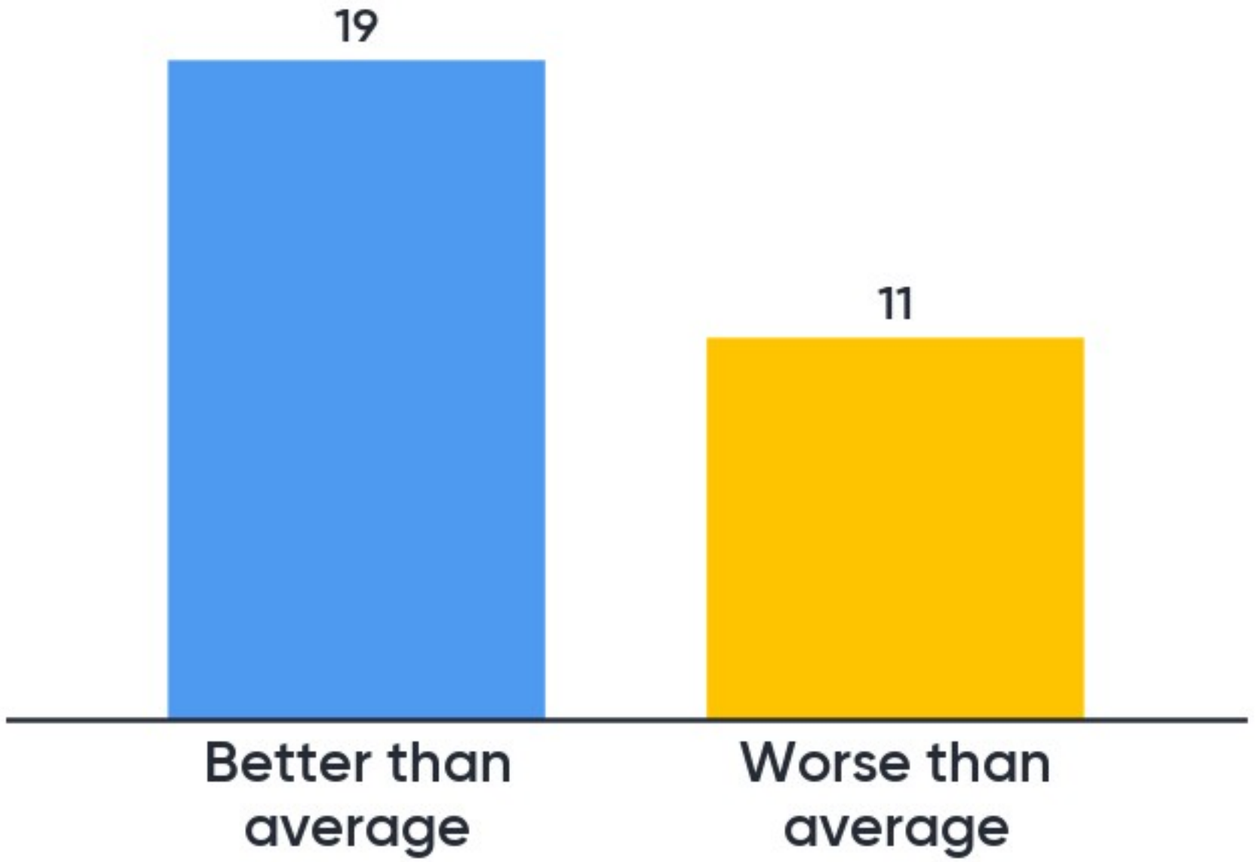

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International experts' practice in the antibiotic therapy of infective endocarditis is not following the guidelines

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- 13 international centers “specialized” in the management of IE
  - Selected according to their “reputation”, “clinical results”, original research publications and “quotations”
  - France (4), Italy, Sweden, Spain (3), Israel (2), Canada, USA

- Asked to outline actual practice in terms antibiotic treatment for IE in different situations

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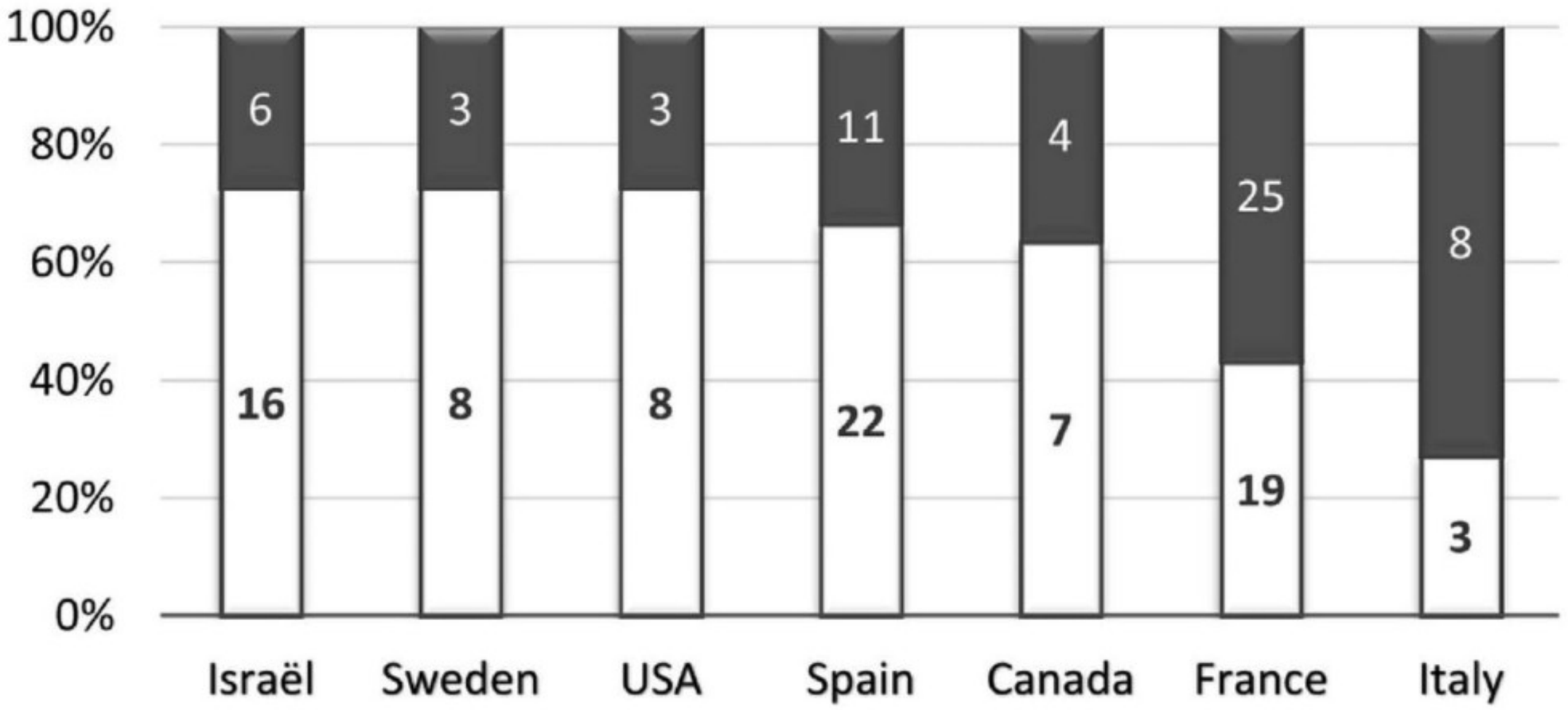
Experts do not follow their (own) recommendations



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Barrier 3: Guidelines do not apply to my patients

My patients are different!

Lack of representativeness of guidelines is a problem => more “pragmatic trials needed”

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- Participation of elderly adults in randomized controlled trials addressing antibiotic treatment of pneumonia.
- Systematic review of RCTs (n=43) and prospective observational studies (n=182) published since 2005 for pneumonia (CAP, HCAP, VAP)

	RCT	Observational	
Pneumonia Classification	Mean ± SD (n)		*P*-Value
CAP all trials[a]	54.0 ± 9.6 (23)	66.2 ± 8.1 (113)	<.001
CAP—ambulatory	45 ± 4.2 (2)	58.2 ± 17.5 (1)	NA
CAP—ambulatory/hospitalized	45.6 ± 1.6 (3)	63.7 ± 7.04 (11)	.001
CAP—hospitalized	55.0 ± 9.1 (16)	65.3 ± 8.2 (81)	.001
CAP—hospitalized, HCAP included	68.0 ± 3.5 (2)	65.3 ± 7.5 (20)	.62
Hospitalized, all	56.4 ± 9.5 (18)	66.2 ± 8.14 (101)	.001
HCAP	84.4 ± 2.2 (3)	71.5 ± 11 (9)	.08
HCAP and CAP—hospitalized included	77.9 ± 9.3 (5)	66.2 ± 8.3 (29)	.08
HAP/ventilator-acquired pneumonia	57.4 ± 9.3 (13)	62.9 ± 9.7 (61)	.06

Avni et al. J Am Geriatr Soc. 2015 Feb;63(2):233-43.

Failure to tale into account individual patient preferences

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van der Weijden *et al. Implementation Science* 2010, **5**:10
http://www.implementationscience.com/content/5/1/10

IMPLEMENTATION SCIENCE

STUDY PROTOCOL Open Access

How to integrate individual patient values and preferences in clinical practice guidelines? A research protocol

Trudy van der Weijden[1*], France Légaré[2], Antoine Boivin[3], Jako S Burgers[4], Haske van Veenendaal[4], Anne M Stiggelbout[5], Marjan Faber[3], Glyn Elwyn[6]

Arguments against guidelines

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"Guidelines do not take into account individual patient preferences" True, but…

- It's difficult
- Infectious disease: Tragedy of the commons
  - Potentially it would be in the interest of the individual to be treated with broad spectrum antibiotics….

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Individualization of guidelines

- RCTs assess the “average” treatment effect

- We have no way of making clear causal inferences for individual patients
  - We do not know the outcome of the counterfactual

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Arguments for guidelines

Does following guidelines harm patients?

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Effect on mortality of prescribing empirical antimicrobial therapy according to guidelines

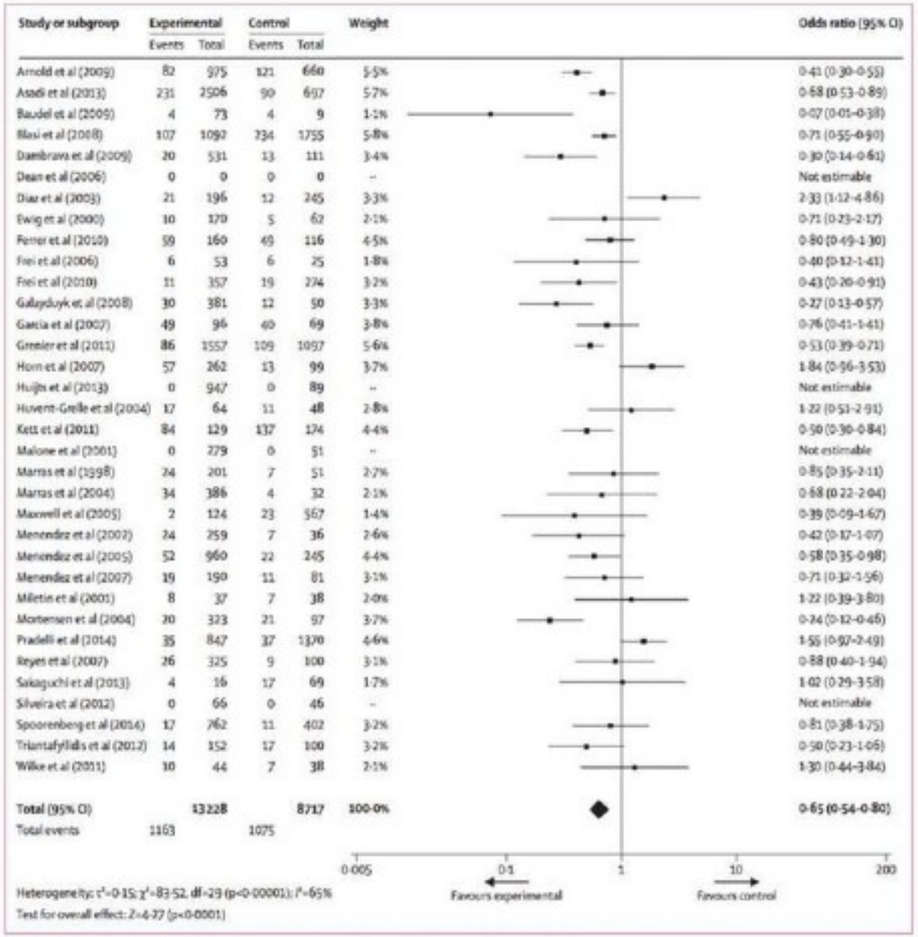

Figure 2: **Effect on mortality of prescribing empirical antimicrobial therapy according to guidelines**

Favors guidelines

Probably not

BIAS ALERT!

Schuts et al. Lancet Infect Dis. 2016 Jul;16(7):847-856.

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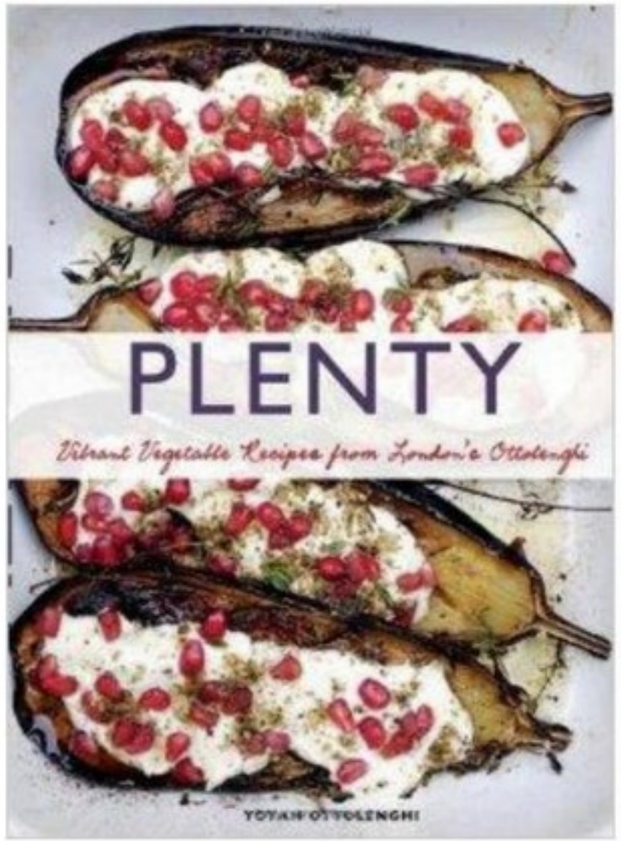
Guidelines reduce cognitive load

The cookbook approach

Not always a bad choice...



INGREDIENTS

2 large and long eggplants

1/3 cup olive oil

1 1/2 teaspoons lemon thyme leaves (regular thyme will do), plus a few whole sprigs to garnish

Maldon sea salt and black pepper

1 pomegranate

1 teaspoon za'atar

Sauce

9 tablespoons buttermilk

1/2 cup Greek yogurt

1 1/2 tablespoons olive oil, plus a drizzle to finish

1 small garlic clove, crushed

1 pinch salt

RECIPE PREPARATION

Preheat the oven to 350°F. Cut the eggplants in half lengthways, cutting straight through the green stalk (the stalk is for the look; don't eat it). Use a small sharp knife to make three or four parallel incisions in the cut side of each eggplant half, without cutting through to the skin. Repeat at a 45-degree angle to get a diamond-shaped pattern.

Place the eggplant halves, cut-side up, on a baking sheet lined with parchment paper. Brush them with olive oil—keep on brushing until all of the oil has been absorbed by the flesh. Sprinkle with the lemon thyme leaves and some salt and pepper. Roast for 35 to 40 minutes, at which point the flesh should be soft, flavorful, and nicely browned. Remove from the oven and let cool completely.

While the eggplants are in the oven, cut the pomegranate into two horizontally. Hold one half over a bowl, with the cut side against your palm, and use the back of a wooden spoon or a rolling pin to gently knock on the pomegranate skin. Continue beating with increasing power until the seeds start coming out naturally and falling through your fingers into the bowl. Once all are there, sift through the seeds and remove any bits of white skin or membrane.

To make the sauce, whisk together all of the ingredients. Taste for seasoning, then keel cold until needed.

To serve, spoon plenty of buttermilk sauce over the eggplant halves without covering the stalks. Sprinkle za'atar and plenty of pomegranate seeds on top and garnish with lemon thyme. Finish with a drizzle of olive oil.

https://www.bonappetit.com/recipe/eggplant-with-buttermilk-sauce

Guidelines have many issues

The solution….

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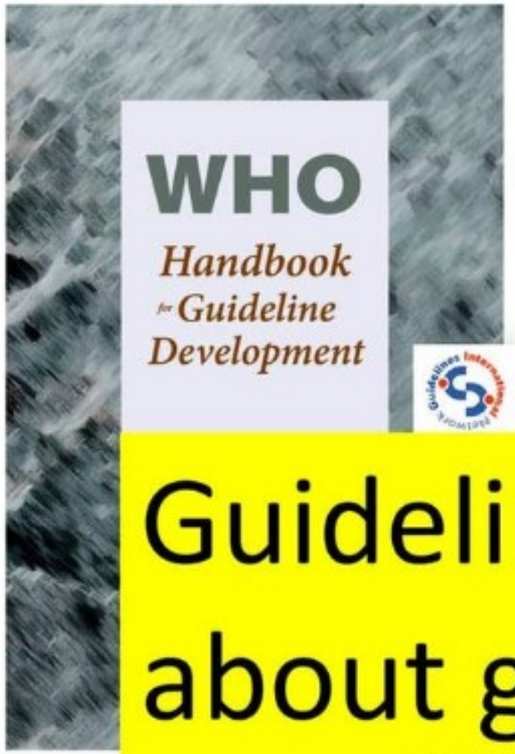
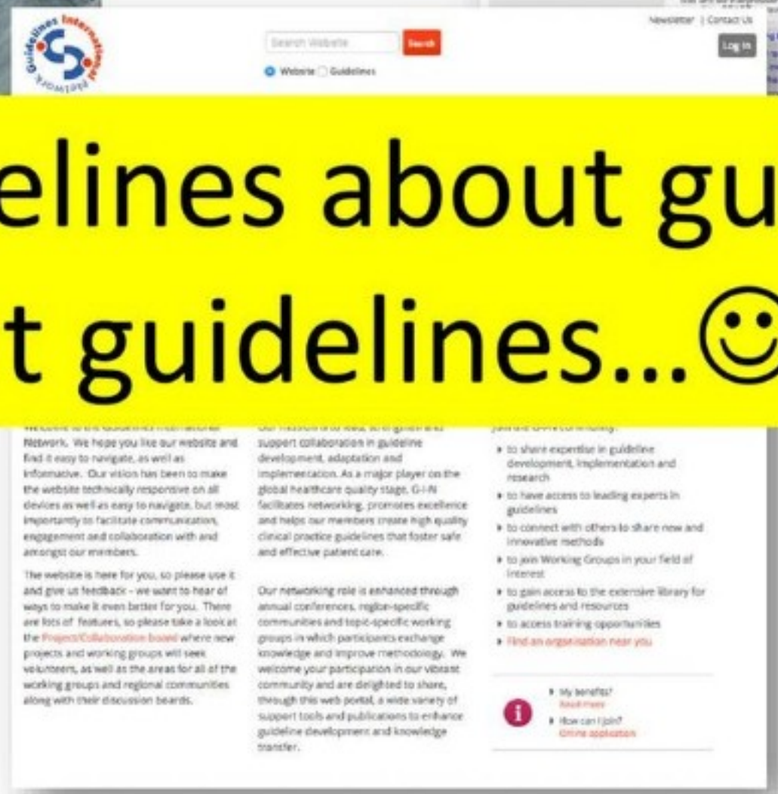
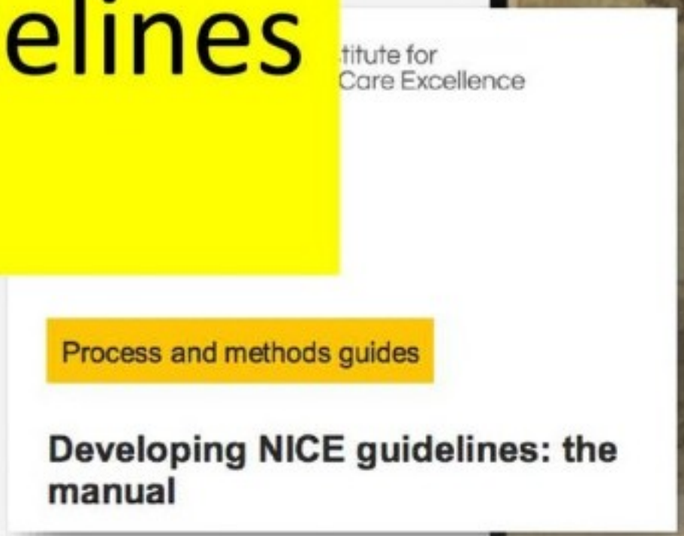




Guidelines about guidelines about guidelines…☺



http://www.who.int/hiv/topics/mtct/grc_handbook_mar2010_1.pdf
https://www.nice.org.uk/media/default/about/what-we-do/our-programmes/developing-nice-guidelines-the-manual.pdf
http://www.idsociety.org/Guidelines_Other/
http://www.g-i-n.net/

https://tarnovel.wordpress.com/2015/09/29/the-infinite-regression-of-shaming/

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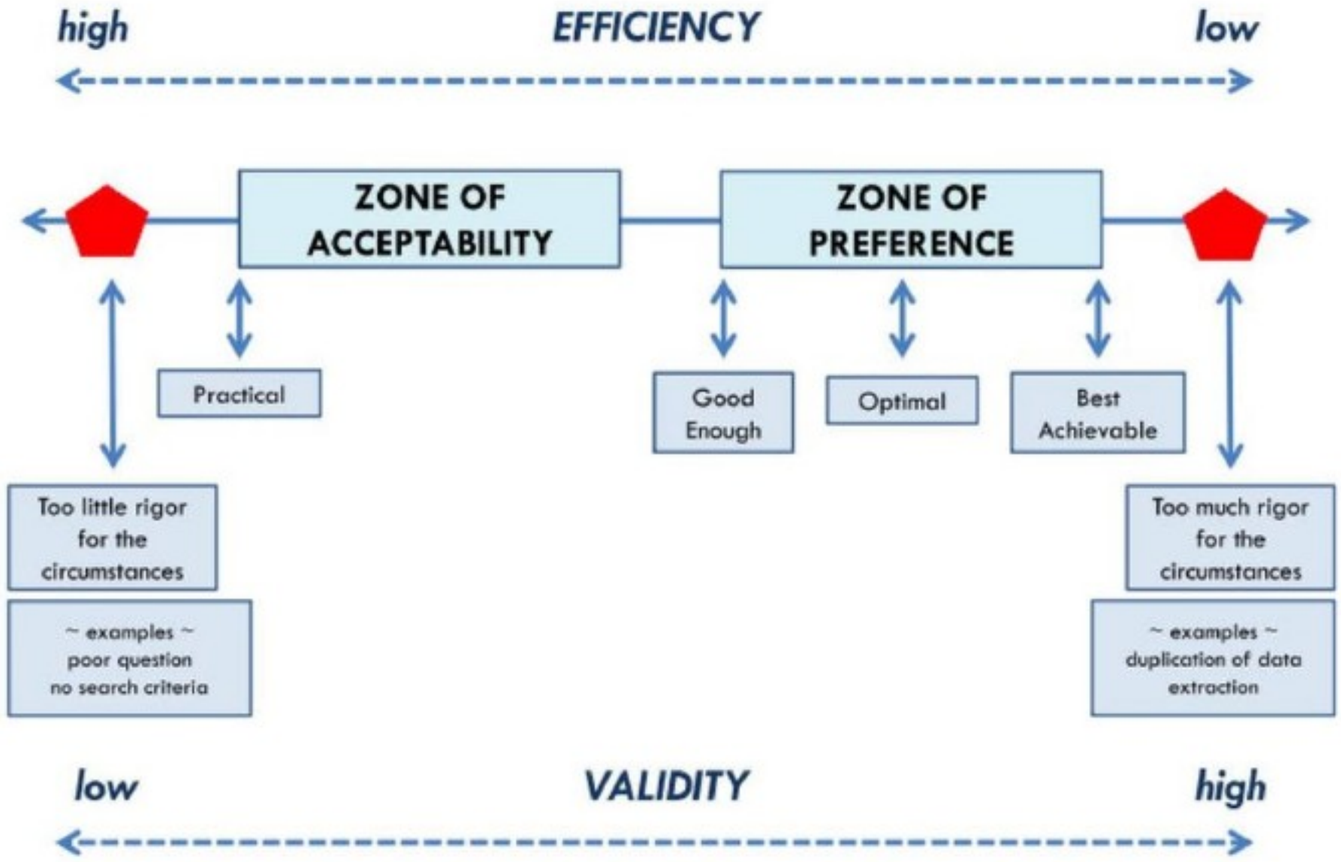
DEBATE Open Access

When is good, good enough? Methodological pragmatism for sustainable guideline development

George P Browman[1], Mark R Somerfield[2], Gary H Lyman[3,4] and Melissa C Brouwers[5*]

- Direct costs for guideline development up to 200 000 USD per guideline (US data)
- **Trade-off between validity and efficiency**
- *"…we simply do not know at what point increasing methodological rigor leads to appreciably more valid and implementable recommendations that, in turn, lead to better outcomes or more affordable care."*



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Guidelines: conclusions

- Guidelines / guidance documents are not a panaceum
  - They are still better than most alternatives to guide clinical decisions
- Transparency is key
  - Conflicts of interest, panel composition, methodology, evidence to decision framework etc.
- A clear definition (and enforcement) of procedures and methods to follow should allow increasing the quality (and acceptance) of GPC
- Guidelines need to be promoted and should be user-friendly and easily accessible
  - Electronic tools ?

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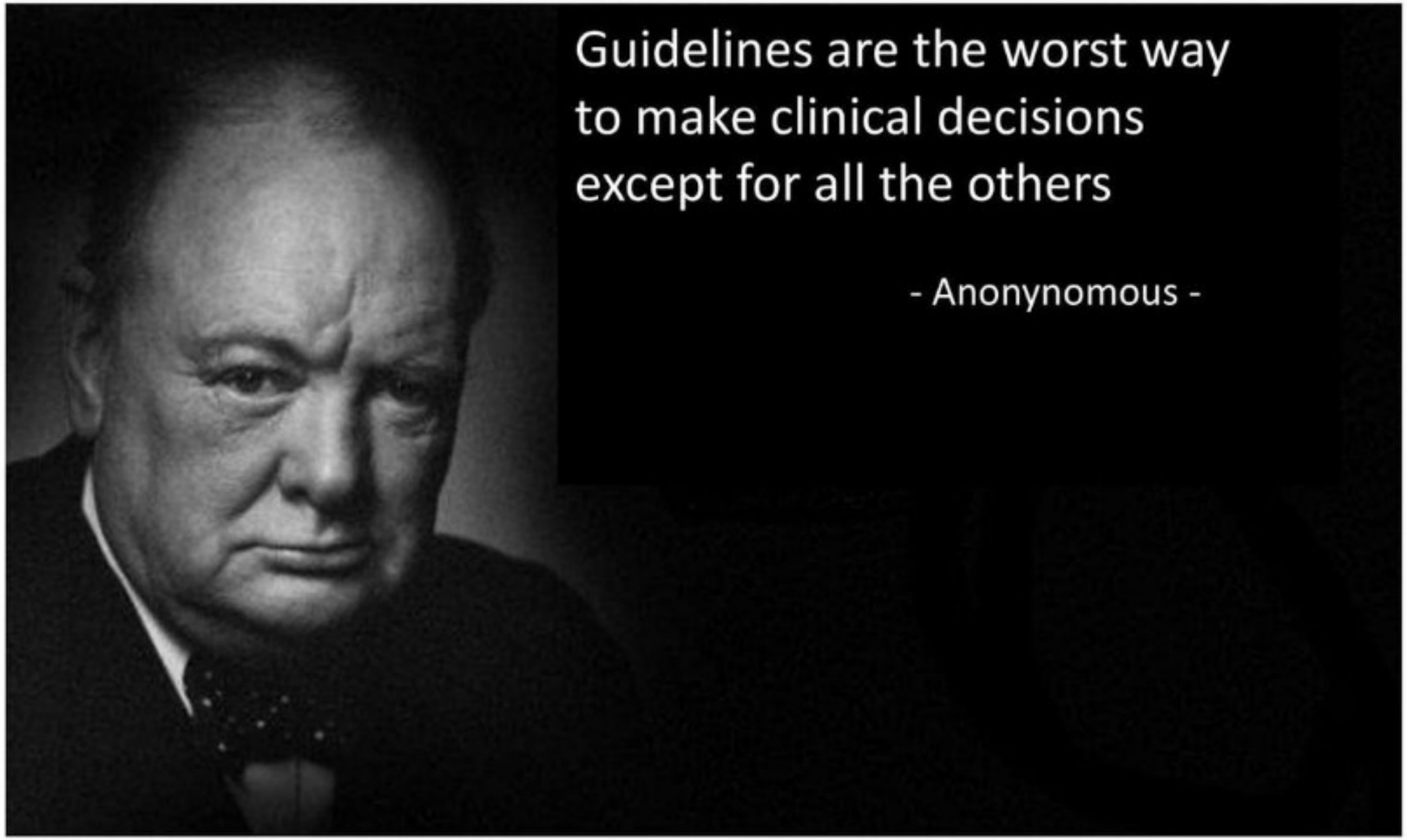
Thank you!



Comments - questions

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Programme

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Time	Subject	Speaker
09:00	Registration / coffee break	
09:30	Welcome address and introduction	**Prof. Andreas Widmer** Swissnoso **Prof. Nicolas Müller** Swiss Society for Infectious Diseases
09:45	Welcome address from the FOPH	**Pascal Strupler** Director-General Federal Office of Public Health (FOPH)
10:00	European perspective	**Prof. Petra Gastmeier** Charité Berlin
10:35	Carbapenemase producers in Switzerland	**Prof. Patrice Nordmann** NARA; University of Fribourg; INSERM
11:00	MDRO: molecular diagnostic tools	**Prof. Andrea Endimiani** University of Bern, Institute of Infectious Diseases
11:25	Coffee break	
11:45	The environment: an important source of MDRO	**Prof. Andreas Widmer** Swissnoso
12:15	ANRESIS: an update	**Prof. Andreas Kronenberg** ANRESIS
12:45	Lunch	
13:45	Raw meat-based diets for companion animals: a new threat for spreading of multidrug resistant Enterobacteriaceae	**Prof. Roger Stephan** Vetsuisse Faculty, University of Zurich
14:20	Antibiotic Stewardship in Swiss hospitals Inselspital Centre hospitalier universitaire vaudois Kantonsspital Luzern	**Dr. Julia Bielicki,** Swissnoso Dr. Nasstasja Wassilew PD Dr. Laurence Senn Dr. Beat Sonderegger
15:10	Management of health-care associated outbreaks – first national guidelines.	**Dr. Danielle Vuichard Gysin** Swissnoso
15:35	Can guidelines influence practice?	**Dr. Benedikt Huttner** Hôpitaux Universitaires de Genève
15:55	Sum-up and closing	**Prof. Andreas Widmer** Swissnoso **Prof. Nicolas Müller** Swiss Society for Infectious Diseases
16:15	Afternoon snack	