

# Le linee guida

# Trasformare le evidenze in comportamenti: le LINEE GUIDA

Raccomandazioni di comportamento clinico prodotte con metodi sistematici per assistere medici e pazienti nel decidere le modalità di assistenza più appropriate in specifiche circostanze cliniche, allo scopo di:

- ottimizzare l'efficacia e l'efficienza dei servizi sanitari
- ridurre le pratiche inappropriate
- migliorare le prestazioni

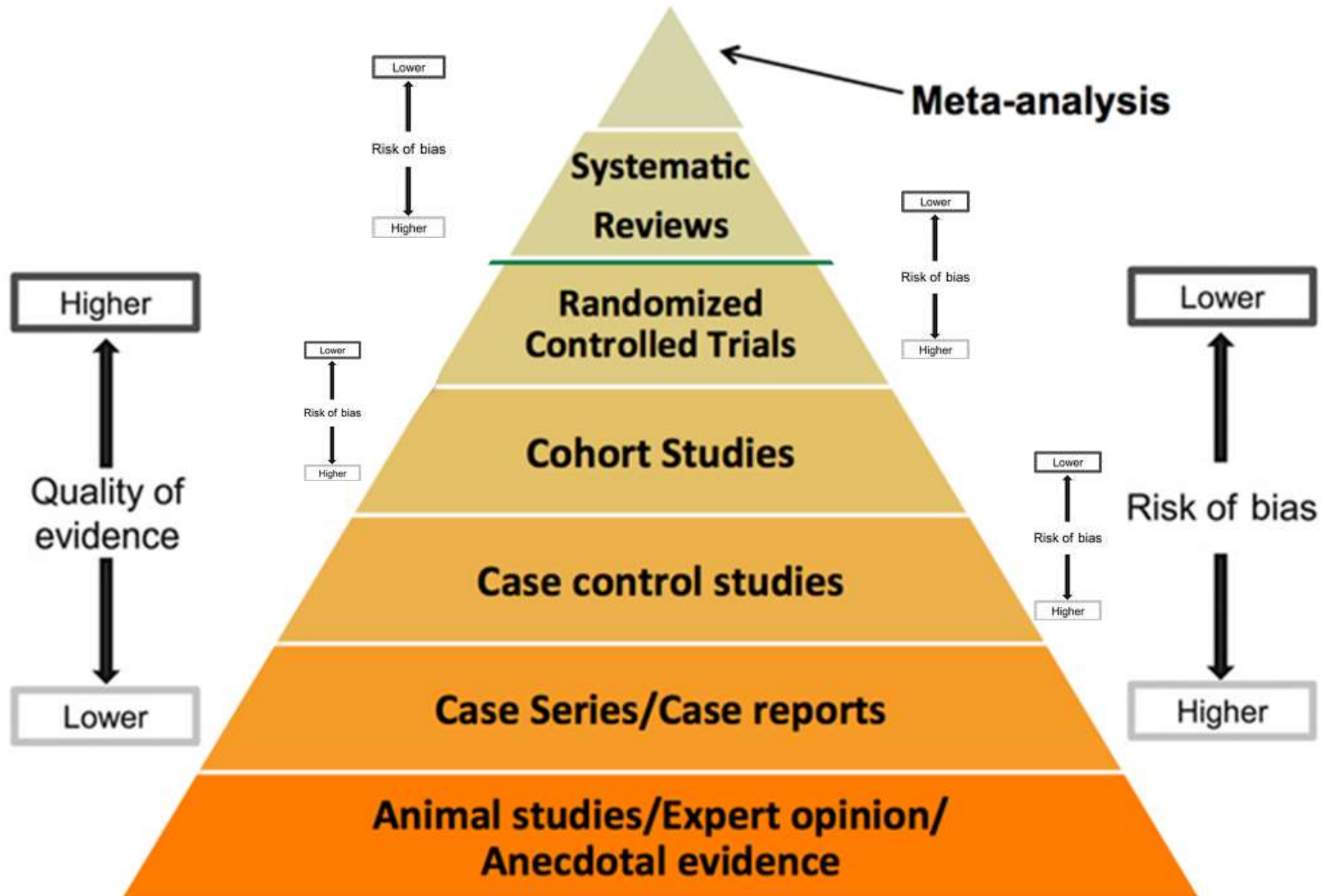
Institute of Medicine, 1990



# Trasformare le evidenze in comportamenti: le linee guida

- Le LG costituiscono lo strumento di governo clinico di riferimento per definire gli standard assistenziali su cui costruire indicatori idonei a valutare le performance di professionisti e organizzazioni sanitarie.
- La produzione ex-novo di LG da parte delle organizzazioni sanitarie è utopistica e spesso inutile
- Disponibile una fiorente produzione di LG nazionali e soprattutto internazionali.
- L'approccio più efficace ed efficiente per l'utilizzo delle LG prevede una loro ricerca sistematica, la selezione di una LG di riferimento e la costruzione del percorso assistenziale, previo adattamento locale della LG.

# Livello di evidenza: quanto posso fidarmi?



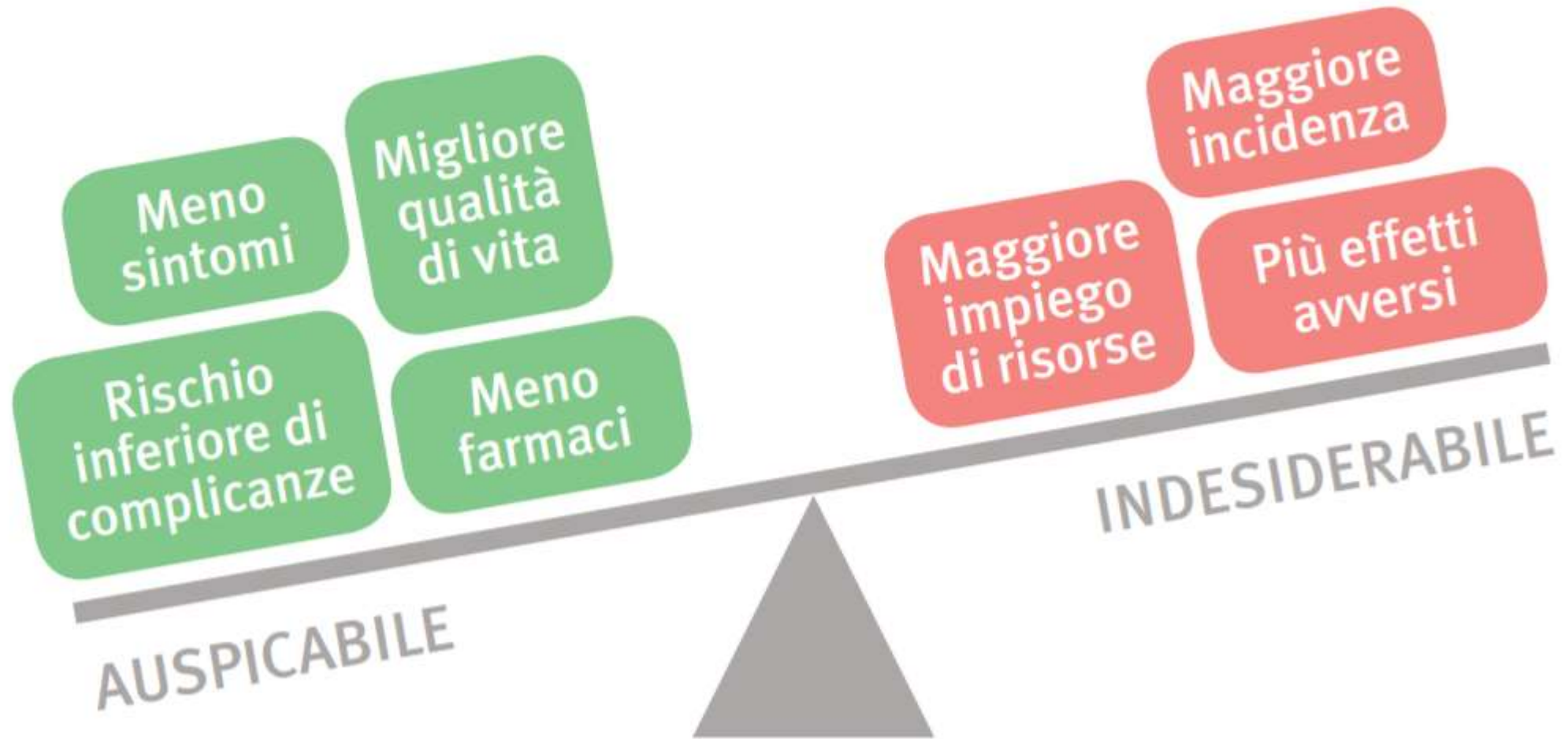
# Livello di evidenza: quanto posso fidarmi?

Table 1: Levels of Evidence

- Ia Evidence obtained from meta-analysis or systematic review of randomized controlled trials.
- Ib Evidence obtained from at least one randomized controlled trial.
- IIa Evidence obtained from at least one well-designed controlled study without randomization.
- IIb Evidence obtained from at least one other type of well-designed quasi-experimental study.
- III Evidence obtained from well-designed non-experimental descriptive studies, such as comparative studies, correlation studies and case studies.
- IV Evidence obtained from expert committee reports or opinions and/or clinical experiences of respected authorities.

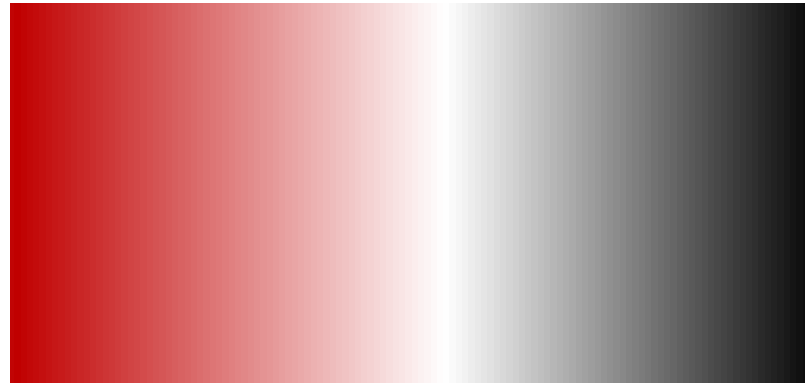
# Grado di raccomandazione: cosa mi consigli di fare?

## BILANCIO RISCHIO/BENEFICIO



## Forza della raccomandazione: cosa mi consigli di fare?

La forza di una raccomandazione riflette la misura in cui il panel che sviluppa le linee guida è sicuro che gli effetti desiderabili di un intervento superino gli effetti indesiderati, o viceversa, per l'intero gruppo di pazienti per i quali è prevista la raccomandazione.



# Forza della raccomandazione: cosa mi consigli di fare?

Table 2: Grades of Recommendation

A There is **good** evidence to recommend the clinical preventive action.

B There is **fair** evidence to recommend the clinical preventive action.

C The existing evidence is **conflicting** and does not allow making a recommendation for or against use of the clinical preventive action; however other factors may influence decision-making.

D There is **fair** evidence to recommend against the clinical preventive action.

E There is **good** evidence to recommend against the clinical preventive action.

I There is **insufficient** evidence (in quantity and/or quality) to make a recommendation, however other factors may influence decision-making.

# Quanto posso fidarmi di ciò che mi consigli di fare?

Quality or Level of Evidence	Grading/Strength of Recommendation
<i>BSH, 2010<sup>2</sup></i>	
<b>Ia</b> - Evidence obtained from meta-analysis of randomised controlled trials	<b>Grade A Evidence level Ia, Ib</b> - Recommendation based on at least one randomised controlled trial of good quality and consistency addressing specific recommendation
<b>Ib</b> - Evidence obtained from at least one randomised controlled trial	
<b>IIa</b> - Evidence obtained from at least one well-designed, non-randomised study, including phase II trials and case-control studies	<b>Grade B Evidence level IIa, IIb, III</b> – Recommendation based on well conducted studies but no randomised controlled trials on the topic of recommendation
<b>IIb</b> - Evidence obtained from at least one other type of well-designed, quasi-experimental study, i.e. studies without planned intervention, including observational studies	
<b>III</b> - Evidence obtained from well-designed, non-experimental descriptive studies. Evidence obtained from meta-analysis or randomised controlled trials or phase II studies which is published only in abstract form	<b>Grade C Evidence level IV</b> – Evidence from expert committee reports and/or clinical experiences of respected authorities
<b>IV</b> - Evidence obtained from expert committee reports or opinions and/or clinical experience of respected authorities	

# Quanto posso fidarmi di ciò che mi consigli di fare?






Levels of Evidence			
	<i>Intervention Studies</i>	<i>Diagnostic studies</i>	<i>Prognostic studies</i>
<b>Level 1</b>	Randomized trial(s) with clear-cut results and low risk of error OR systematic literature review or meta-analysis according to the Cochrane methodology or meeting at least 9 out of 11 quality criteria according to AMSTAR appraisal tool.	Systematic review of high quality (cross sectional) studies according to the quality assessment tools with consistently applied reference standard and blinding.	Systematic review of high quality (longitudinal) prospective cohort studies according to the quality assessment tools.
<b>Level 2</b>	Randomized trial(s) with uncertain results and moderate to high risk of error.	Individual high quality (cross sectional) studies according to the quality assessment tools with consistently applied reference standard and blinding among consecutive persons.	A prospective cohort study.
<b>Level 3</b>	Non randomized trial(s) with concurrent or contemporaneous controls.	Non-consecutive studies, or studies without consistently applied reference standards.	Analysis of prognostic factors amongst persons in a single arm of a randomized controlled trial.
<b>Level 4</b>	Non randomized trial(s) with historical controls.	Case-control studies, or poor/ non-independent reference standard.	Case-series or case-control studies, or poor quality prognostic cohort study, retrospective cohort study.
<b>Level 5</b>	Case series with no controls. Specify number of subjects.	Mechanism-based reasoning, study of diagnostic yield (no reference standard).	Not applicable.

# Quanto posso fidarmi di ciò che mi consigli di fare?

## Strengths of Evidence






- |          |   |
|----------|---|
| <b>A</b> | The recommendation is supported by direct scientific evidence from properly designed and implemented controlled trials on pressure ulcers in humans (or humans at risk for pressure ulcers), providing statistical results that consistently support the recommendation (Level 1 studies required). |
| <b>B</b> | The recommendation is supported by direct scientific evidence from properly designed and implemented clinical series on pressure ulcers in humans (or humans at risk for pressure ulcers) providing statistical results that consistently support the recommendation. (Level 2, 3, 4, 5 studies)    |
| <b>C</b> | The recommendation is supported by indirect evidence (e.g., studies in healthy humans, humans with other types of chronic wounds, animal models) and/or expert opinion  |

## Strengths of Recommendation






- |   |  |
|---|--|
|    | Strong positive recommendation: definitely do it       |
|   | Weak positive recommendation: probably do it           |
|  | No specific recommendation                             |
|  | Weak negative recommendation: probably don't do it     |
|  | Strong negative recommendation: definitely don't do it |

# Quanto posso fidarmi di ciò che mi consigli di fare?

Levels of Evidence			
	<i>Intervention Studies</i>	<i>Diagnostic studies</i>	<i>Prognostic studies</i>
<b>Level 1</b>	Randomized trial(s) with clear-cut results and low risk of error OR systematic literature review or meta-analysis according to the Cochrane methodology or meeting at least 9 out of 11 quality criteria according to AMSTAR appraisal tool.	Systematic review of high quality (cross sectional) studies according to the quality assessment tools with consistently applied reference standard and blinding.	Systematic review of high quality (longitudinal) prospective cohort studies according to the quality assessment tools.
<b>Level 2</b>	Randomized trial(s) with uncertain results and moderate to high risk of error.	Individual high quality (cross sectional) studies according to the quality assessment tools with consistently applied reference standard and blinding among consecutive persons.	A prospective cohort study.
<b>Level 3</b>	Non randomized trial(s) with concurrent or contemporaneous controls.	Non-consecutive studies, or studies without consistently applied reference standards.	Analysis of prognostic factors amongst persons in a single arm of a randomized controlled trial.
<b>Level 4</b>	Non randomized trial(s) with historical controls.	Case-control studies, or poor/ non-independent reference standard.	Case-series or case-control studies, or poor quality prognostic cohort study, retrospective cohort study.
<b>Level 5</b>	Case series with no controls. Specify number of subjects.	Mechanism-based reasoning, study of diagnostic yield (no reference standard).	Not applicable.

Strengths of Evidence	
<b>A</b>	The recommendation is supported by direct scientific evidence from properly designed and implemented controlled trials on pressure ulcers in humans (or humans at risk for pressure ulcers), providing statistical results that consistently support the recommendation (Level 1 studies required).
<b>B</b>	The recommendation is supported by direct scientific evidence from properly designed and implemented clinical series on pressure ulcers in humans (or humans at risk for pressure ulcers) providing statistical results that consistently support the recommendation. (Level 2, 3, 4, 5 studies)
<b>C</b>	The recommendation is supported by indirect evidence (e.g., studies in healthy humans, humans with other types of chronic wounds, animal models) and/or expert opinion
Strengths of Recommendation	
	Strong positive recommendation: definitely do it
	Weak positive recommendation: probably do it
	No specific recommendation
	Weak negative recommendation: probably don't do it
	Strong negative recommendation: definitely don't do it

## Nutrition Assessment

- 1. Assess the weight status of each individual to determine weight history and identify significant weight loss ( $\geq 5\%$  in 30 days or  $\geq 10\%$  in 180 days). (Strength of Evidence = C; Strength of Recommendation = )**
- 2. Assess the individual's ability to eat independently. (Strength of Evidence = C; Strength of Recommendation =  )**
- 3. Assess the adequacy of total nutrient intake (i.e., food, fluid, oral supplements and enteral/parenteral feeds). (Strength of Evidence = C; Strength of Recommendation =  )**

# Quanto posso fidarmi di ciò che mi consigli di fare?

TABLE. Strength of Recommendation and Quality of Evidence

Category/grade	Definition
Strength of recommendation	
A	Good evidence to support a recommendation for use
B	Moderate evidence to support a recommendation for use
C	Poor evidence to support a recommendation
Quality of evidence	
I	Evidence from $\geq 1$ properly randomized, controlled trial
II	Evidence from $\geq 1$ well-designed clinical trial, without randomization; from cohort or case-control analytic studies (preferably from $>1$ center); from multiple time series; or from dramatic naturalistic or quasi-experiments
III	Evidence from opinions of respected authorities on clinical experience, descriptive studies, or expert committees

2. Ensure that all patients (except those with medical contraindications) are maintained in a semirecumbent position (B-II).

3. Perform regular antiseptic oral care in accordance with product guidelines (A-I).

4. Provide easy access to noninvasive ventilation equipment and institute protocols to promote the use of noninvasive ventilation (B-III).

# Quanto posso fidarmi di ciò che mi consigli di fare?

## Comprehensive evidence-based clinical practice guidelines for ventilator-associated pneumonia: Prevention<sup>☆</sup>

### 4.1.3. Frequency of ventilator circuit changes

Based on 2 level 2 trials [39,40], we conclude that the frequency of ventilator circuit changes does not influence the incidence of VAP. Cost considerations favor less frequent changes.

*Recommendation:* We recommend new circuits for each patient, and changes if the circuits become soiled or damaged, but no scheduled ventilator circuit changes.

### 4.2.1. Kinetic bed therapy

Based on 7 level 2 trials [75-81], we conclude that the use of rotating beds is associated with a decreased incidence of VAP. However, feasibility, safety, and cost concerns may be barriers to implementation.

*Recommendation:* The use of rotating beds should be considered.

### 4.3.4. Prophylactic antibiotics: topical/topical plus intravenous antibiotics

Based on the most recent systematic review [90], 1 level 1 trial [91], and 1 level 2 trial [92], we conclude that the use of topical or topical plus intravenous antibiotics may decrease the incidence of VAP. However, inconsistent effects on mortality, length of stay (ICU and hospital), and mechanical ventilation were noted. In addition, serious concerns were raised about the emergence of resistance to antibiotics.

*Recommendation:* We make no recommendation.

# Quanto posso fidarmi di ciò che mi consigli di fare?

## **GUIDELINES FOR EMERGENCY TRACHEAL INTUBATION IMMEDIATELY FOLLOWING TRAUMATIC INJURY**

An EAST Practice Management Guidelines Workgroup

### Level I

Level I recommendations are typically predicated on evidence from randomized, controlled trials. The relevant literature is devoid of randomized, controlled trials and has been comprehensively reviewed to find the best available evidence. The recommendations are based on several peer-review journal publications from institutions throughout the United States and are typically supported in multiple professional organization and society publications. The committee did not find alternative management strategies that were as effective as the recommendations. In summary, the committee consensus finds the recommendations to reflect management principles with a high degree of certainty.

1. Emergency tracheal intubation is needed in trauma patients with the following traits:
  - a) airway obstruction
  - b) hypoventilation
  - c) severe hypoxemia (hypoxemia despite supplemental oxygen)
  - d) severe cognitive impairment (GCS  $\leq 8$ )
  - e) cardiac arrest

# Quelli che... non forniscono raccomandazioni

Evidence Rating	
I	Meta-analysis, systematic review, or at least 3 well-designed RCTs.
II	Two well-designed RCTs, 2 or more systematic reviews, or a literature review of varied study designs.
III	One well-designed RCT, several quasi-experimental designs, or a meta-analysis of observational studies. Includes 2 or more well-designed RCTs.
IV	Well-designed quasi-experimental studies, systematic literature review, or a meta-analysis of observational studies. Includes 1 well-designed RCT.
V	Clinical article, clinical/professional study, well-designed quality improvement study, or professional organizations. This also includes a standard of care (eg, patient identification).
A/P	Evidence from anatomy, physiology, or pathophysiology.
Committee Consensus	Review of evidence, discussion, and consensus when there is insufficient or low-quality evidence.

<sup>a</sup>Sufficient sample size is needed with preference for power.

## B. Acute Care

1. Organize a team of clinicians dedicated exclusively to infusion and vascular access practices to provide the optimum method for infusion delivery in acute care facilities.
  - a. PIVC insertion in adults by infusion/vascular access specialists produced greater first-attempt insertion success and lower rates of complications. In pediatric patients, the number of clinicians required for PIVC insertion was reduced, leading to a better use of resources and personnel.<sup>5,10,29-31</sup> (III)
    - i. One study noted that the majority of catheters reached end of therapy with a single catheter, and costs savings were projected to be more than \$2.9 million USD annually.<sup>5</sup> (IV)
    - ii. First-attempt insertion success is correlated with greater experience and confidence in skills, without a difference in the professional discipline of the inserter, leading investigators to advocate for a team of specialists for PIVC insertion.<sup>32</sup> (IV)

# Quelli che... non forniscono raccomandazioni

## Evidence base

The guideline is evidence-linked, rather than evidence-based. As there was insufficient evidence to guide all clinical decisions, a number of recommendations for practice were solely or partially based on expert opinion. The recommendations that follow are:

**I Generally consistent findings from multiple acceptable studies**

**II Either based on a single study or weak or inconsistent findings from multiple acceptable studies**

**III Limited scientific evidence or no evidence meeting all the criteria of acceptable studies for direct application. This includes expert opinion.**

## 5.0 Pressure redistributing devices

- |   |     |
|---|-----|
| 5.1 Decisions about which pressure redistributing device to use should be based on an overall assessment of the individual and not solely on the basis of scores from risk assessment scales. Holistic assessment should include level of risk, comfort and general health state. | I   |
| 5.2 'At risk' individuals should not be placed on standard foam mattresses.   | I   |
| 5.3 Patients at very high risk of developing pressure ulcers should be placed on alternating pressure mattresses or other high-tech pressure redistributing systems.  | II  |
| 5.4 Pressure redistributing overlays should be used on the operating table of individuals assessed to be at high risk of pressure ulcer development.  | I   |
| 5.5 To ensure continuity of preventive care, post-operative management of at risk individuals should include the use of pressure redistributing mattresses.   | III |
| 5.6 Repositioning should occur when individuals are on pressure redistributing devices.   | III |
| 5.7 The benefits of a pressure redistributing device should not be undermined by prolonged chair sitting.   | III |

(adapted from Waddell *et al*, 1996)

# Il metodo GRADE

1. Assegnazione a priori di un livello di qualità "alta" agli studi sperimentali e "bassa" agli studi osservazionali

**Tabella 3.** Graduazione della qualità delle prove.

<b>Livello qualità</b>	<b>Significato</b>	<b>Conseguenza</b>
Alta	Alto grado di confidenza nei risultati	È molto improbabile che ulteriori studi possano cambiare la fiducia nella stima di effetto
Moderata	Discreto grado di confidenza nei risultati	È probabile che ulteriori studi possano confermare o cambiare la fiducia nella stima di effetto
Bassa	I risultati sono poco credibili	È necessaria ulteriore ricerca per ottenere stime affidabili sugli effetti positivi e negativi dell'intervento
Molto bassa	I dati esaminati sono totalmente inaffidabili	Non è possibile fare affidamento sulle stime di effetto disponibili

# Il metodo GRADE

## 2. "Downgrade" o "upgrade" della classificazione iniziale:

- studi controllati randomizzati e studi osservazionali possono essere declassati se affetti da bias rilevanti
- studi osservazionali possono salire nel ranking quando più studi di alta qualità mostrano risultati coerenti

**Tabella 4.** Criteri per l'aumento (*upgrading*) o la diminuzione (*downgrading*) del giudizio di qualità (alta, moderata, bassa, molto bassa) delle prove

Tipo di prove	Studio controllato e randomizzato = alta Studio osservazionale = bassa Qualsiasi altro tipo di informazione = molto basso
<b>A.</b> Diminuzione della categoria di attribuzione (es. da "alta" a "moderata")	<ol style="list-style-type: none"><li>1. Limiti gravi (-1 livello) o molto gravi (-2 livelli) nella qualità di conduzione dello studio</li><li>2. Incoerenza nei risultati tra studi diversi sullo stesso quesito (-1 o -2 livelli)</li><li>3. Alcune (-1 livello) o importanti (-2 livelli) incertezze circa la diretta trasferibilità dei risultati (<i>directness</i>)</li><li>4. Imprecisione o dati insufficienti (<i>sparse data</i>) (-1 o -2 livelli)</li><li>5. Possibilità di pubblicazione selettiva dei dati (<i>publication e reporting bias</i>) (-1 o -2 livelli)</li></ol>
<b>B.</b> Aumento della categoria di attribuzione (es. da "bassa" a "moderata")	<ol style="list-style-type: none"><li>1. Associazione intervento-<i>outcome</i> forte, ovvero con rischio relativo <math>&gt;2</math> (<math>&lt;0,5</math>), sulla base di prove concordanti provenienti da due o più studi osservazionali, senza alcun fattore di confondimento plausibile (+1 livello)</li><li>2. Associazione intervento-<i>outcome</i> molto forte, ovvero con rischio relativo <math>&gt;5</math> (<math>&lt;0,2</math>) (+2 livelli)</li><li>3. Presenza di un gradiente dose-risposta (+1 livello)</li><li>4. Tutti i possibili fattori di confondimento che avrebbero potuto alterare le stime di effetto avrebbero ridotto l'effetto che si osserva (+1 livello)</li></ol>

# Il metodo GRADE

GRADE specifica due categorie della forza di una raccomandazione che esplicitano i livelli di incertezza:

- raccomandazione forte: i benefici sono chiaramente maggiori dei rischi (positiva) o viceversa (negativa);
- raccomandazione debole: i benefici e i rischi si bilanciano o sono incerti.



- raccomandazione “positiva forte”: **si deve utilizzare**
- raccomandazione “positiva debole”: **si potrebbe utilizzare**
- raccomandazione “negativa debole”: **non si dovrebbe utilizzare**
- raccomandazione “negativa forte”: **non si deve utilizzare**

# Il metodo GRADE

Una raccomandazione forte comporta:

- per i **clinici**: la maggior parte dei pz deve ricevere l'intervento raccomandato;
- per i **pazienti**: informazioni solide per adeguarsi a quanto raccomandato;
- per i **decisori**: adottare la raccomandazione per l'utilizzo delle risorse.

Una raccomandazione debole comporta:

- per i **clinici**: valutare attentamente in quali condizioni o a quali pazienti (condizioni specifiche del paziente e del contesto assistenziale) proporre il trattamento (bilancio beneficio/rischio incerto);
- per i **pazienti**: informazioni solide per adeguarsi a quanto raccomandato;
- per i **decisori**: maggior discussione con gli stakeholder nell'utilizzo delle risorse.

# Linee guida: quale????

**NICE** National Institute for Health and Care Excellence

## Urinary tract infections in adults

Quality standard  
Published: 11 June 2015  
[nice.org.uk/guidance/qs90](http://nice.org.uk/guidance/qs90)

IDEA GUIDELINES

### Diagnosis, Prevention, and Treatment of Catheter-Associated Urinary Tract Infection in Adults: 2009 International Clinical Practice Guidelines from the Infectious Diseases Society of America

Thomas M. Weaver,<sup>1</sup> Suzanne F. Bradley,<sup>2</sup> Diana S. Coe,<sup>3</sup> Richard C. Kaplan,<sup>4</sup> Suzanne E. Goering,<sup>5</sup> James C. Rice,<sup>6</sup> Sanjay Saint,<sup>7</sup> Anthony J. Scheelke,<sup>8</sup> Paul A. Tenkoff,<sup>9</sup> Peter Tenke,<sup>10</sup> and Lindsey E. Nicolle<sup>11</sup>

<sup>1</sup>Department of Medicine and Translational Medicine, University of Massachusetts, Lowell; <sup>2</sup>Department of Internal Medicine, Azevedo Veterans Affairs Medical Center and the University of Michigan, Ann Arbor; <sup>3</sup>Department of Family and Community Medicine, University of Maryland, Baltimore; <sup>4</sup>Department of Medicine, University of Texas, Houston; <sup>5</sup>Department of Urology, Radboud University, Donders Institute; <sup>6</sup>Department of Infectious Diseases, Tropical Medicine, and AIDS, University of Amsterdam, Amsterdam, The Netherlands; <sup>7</sup>Department of Medicine, National University of Singapore, Singapore; <sup>8</sup>Department of Urology, John Wayne Del Paso Medical Center, Redding, Oregon; and Departments of <sup>9</sup>Internal Medicine and <sup>10</sup>Medical Microbiology, University of Manitoba, Winnipeg, Canada

Guidelines for the diagnosis, prevention, and management of persons with catheter-associated urinary tract infection (CA-UTI), both symptomatic and asymptomatic, were prepared by an Expert Panel of the Infectious Diseases Society of America. The evidence-based guidelines encompass diagnostic criteria, strategies to reduce the risk of CA-UTI, strategies that have not been found to reduce the incidence of urinary infections, and management strategies for patients with catheter-associated asymptomatic bacteriuria or symptomatic urinary tract infection. These guidelines are intended for use by physicians in all medical specialties who perform direct patient care, with an emphasis on the care of patients.

**EXECUTIVE SUMMARY**

Catheter-associated (CA) bacteriuria is the most common health care-associated infection worldwide and is a result of the widespread use of urinary catheterization, much of which is inappropriate, in hospitals and long-term care facilities (LTCFs). Considerable personnel time and other costs are expended by health care institutions to reduce the rate of CA infections, especially those that occur in patients with symptoms or signs of urinary tract (CA) urinary tract infection. These guidelines, as previously published,

The Royal Children's Hospital Melbourne

### Clinical Practice Guidelines

## Urinary tract infection

### Urinary Tract Infections

By Helen G. Lee, Pharm.D., BCPS-AQ ID, and Jennifer Le, Pharm.D., M.A.S., FIDSA, FOCR, FCSHP, BCPS-AQ ID

Reviewed by Yanfeng Huang, Pharm.D., FDCP; Brian S. Elzek, Pharm.D., BCPS, BCACP; LaDonna M. DeLoe-Morgan, Pharm.D., BCPS; Mary L. Foss, Pharm.D., MEd, BCPS; and Gabriela Douglas, Pharm.D., BCACP; AAHPW/SC-ADM

#### LEARNING OBJECTIVES

1. Analyze patient risk factors and examination data to distinguish between types of UTIs.
2. Design an appropriate empiric treatment plan according to the type and severity of UTI for a patient presenting in the outpatient or outpatient setting.
3. Justify pharmacotherapy management for special patient populations with asymptomatic bacteriuria.
4. Evaluate the role of antimicrobial and non-antimicrobial strategies for the prevention of recurrent UTI.

#### ABBREVIATIONS IN THIS CHAPTER

AMP	Acute bacterial prostatitis
ASB	Asymptomatic bacteriuria
CA-UTI	Catheter-associated urinary tract infection
OSP	Direct bacterial prostatitis
OR	Carbamapem-resistant Gram-negative bacilli
ISDA	Extended-spectrum $\beta$ -lactamase
ISDA	Infectious Diseases Society of America
GPC	<i>A. gossypii</i> Carbapenemase
MDR	Multi-drug resistant
NDM	New Delhi metallo- $\beta$ lactamase
BSF	Skilled nursing facility

[Table of other common abbreviations](#)

#### INTRODUCTION

According to the CDC, UTIs are the most common bacterial infection requiring medical care, resulting in 8.6 million ambulatory care visits in 2007 (2% of which occurred in the ED) (CDC 2010). Over 10.6 million patients in the United States visited the ED for the treatment of UTIs between 2006 and 2009 and 1.6 million patients (16.7%) were admitted to acute care hospitals (Spencer 2014). The economic burden of using the ED for the treatment of UTIs is estimated at \$2 billion annually. In addition, UTIs rank as the No. 1 infection that leads to an antibiotic prescription after a physician visit (Moores 2014).

Catheter-associated UTIs (CA-UTIs) are the most common type of health care-associated infections reported to the National Healthcare Safety Network, making up two-thirds of hospital-acquired UTIs (CDC 2017). The symptoms of UTIs are generally mild, and misuse of antibiotics can lead to antibiotic resistance. Therefore, it is important to establish the appropriate criteria for treatment using narrow-spectrum antibiotics for the optimal duration.

## Guidelines on Urological Infections

M. Grabe (Chair), R. Bartoletti, T.E. Bjerklund Johansen, T. Cai (Guidelines Associate), M. Çek, B. Köves (Guidelines Associate), K.G. Naber, R.S. Pichard, P. Tenke, F. Wagenlehner, B. Wullt

Sofer Care

This guideline has been adapted for statewide use with the support of the Victorian Paediatric Clinical Network

See also

- [Feverish child](#)
- [Sepsis](#)
- [SPA](#)
- [Urinary Tests](#)

Key Points

1. Signs and symptoms of UTI can be non-specific in young children
2. Collecting urine to exclude UTI is not required if there is another clear focus of fever and the child is not unwell
3. Urinary dipstick is a useful screening test, but a positive urine culture with pyuria confirms the diagnosis
4. Oral antibiotics are appropriate for most children with UTI. Children who are seriously unwell and most infants under 3 months usually require IV antibiotics
5. Seriously unwell children, those with renal impairment, and boys <3 months of age should have a renal ultrasound prior to discharge to exclude renal tract obstruction

# Linee guida: quale????

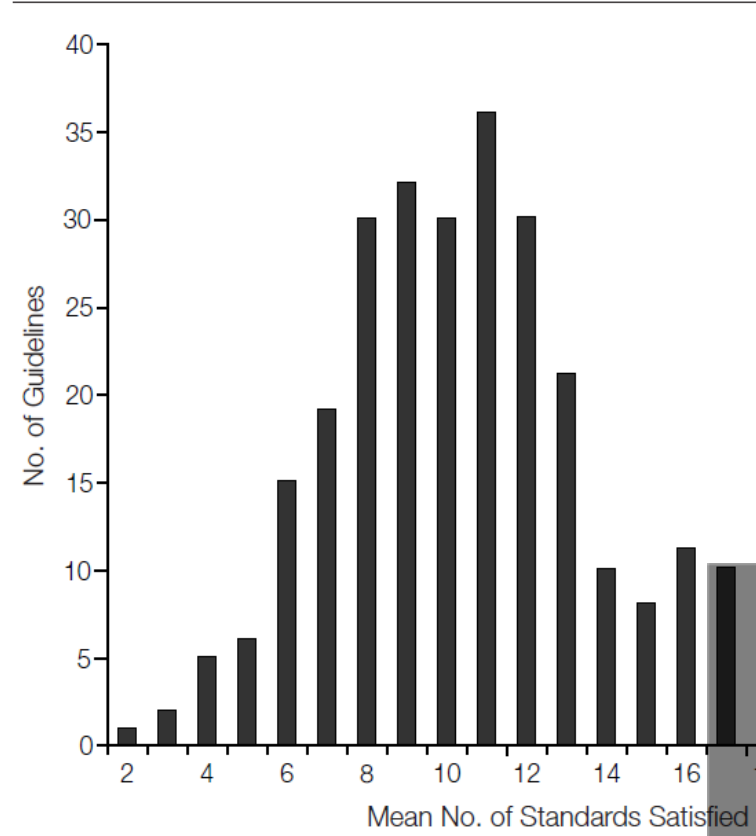
## ■ BARRIERS TO FOLLOWING GUIDELINES

**Number of guidelines.** The most common perceived barrier preventing these GPs from following guidelines was the volume of guidelines they receive. They thought they received too many guidelines and had too little time to read them all. The GPs sometimes felt confused about which one to follow. Although they could not quantify how many new guidelines they received in a month, or from how many sources, GPs appeared to feel overwhelmed and despondent.

## **Guidelines' flexibility**

Evidence-based recommendations are usually expressed in terms of typical clinical situations. Perhaps such recommendations are particularly difficult to apply to individuals who can present with varying combinations of pre-existing illness, beliefs about depression, treatment preferences, concerns about confidentiality and stigma, as well as varying degrees of access to care. We therefore

**Figure 1.** Distribution of the Mean Number of Methodological Standards Satisfied by Guidelines



ORIGINAL CONTRIBUTION

Shaneyfelt TM, et al. 1999;281(20):1900-1905

**JAMA**<sup>®</sup>  
The Journal of the American Medical Association

## Are Guidelines Following Guidelines?

The Methodological Quality of Clinical Practice Guidelines in the Peer-Reviewed Medical Literature

Guidelines published in the peer-reviewed medical literature during the past decade do not adhere well to established methodological standards.

All areas of guideline development need improvement. Greatest improvement is needed in the identification, evaluation, and synthesis of the scientific evidence.

## Practice guidelines developed by specialty societies: the need for a critical appraisal

Roberto Grilli, Nicola Magrini, Angelo Penna, Giorgio Mura, Alessandro Liberati

2000;355:103-6

	<b>1988-91</b> <b>(n=48)</b>	<b>1992-93</b> <b>(n=81)</b>	<b>1994-95</b> <b>(n=125)</b>	<b>1996-98</b> <b>(n=177)</b>	<b>p</b> <b>for trend</b>
Full description of professionals	6 (12%)	9 (11%)	11 (9%)	27 (15%)	0.99
Search undertaken	1 (2%)	4 (5%)	14 (11%)	32 (18%)	<0.001
Grading of recommendation	3 (6%)	5 (6%)	21 (17%)	48 (27%)	<0.001

**Table 2: Number of guidelines that met the three quality criteria according to year of publication**

# Reassessment of Clinical Practice Guidelines Go Gently Into That Good Night

Terrence M. Shaneyfelt, MD, MPH

Robert M. Centor, MD

**I**N 1990, THE INSTITUTE OF MEDICINE PROPOSED guideline development to reduce inappropriate health care variation by assisting patient and practitioner decisions.<sup>1</sup> Unfortunately, too many current guidelines have become marketing and opinion-based pieces, directive rather than assistive statements.

Current use of the term *guideline* has strayed far from original intent of the Institute of Medicine. Most articles called “guidelines” are actually expert consensus reports. It is not surprising, then, that the article by Tricoci et al<sup>2</sup> in this issue of JAMA demonstrates that recent American College of Cardiology (ACC)/American Heart Association (AHA) guidelines have shifted to more class II

of 44 guidelines, 87% of the guideline authors had some form of industry tie.<sup>6</sup>

Other biases are also important. The specialty composition of a guideline panel likely influences guideline development. Specialty societies can use guidelines to enlarge that specialty’s area of expertise in a competitive medical marketplace. Federal guideline committees may focus on limiting

Current use of the term *guideline* has strayed far from the original intent of the Institute of Medicine. Most current articles called “guidelines” are actually expert consensus reports.

for a patient with that single disease. Tricoci et al<sup>2</sup> found that in ACC/AHA guidelines with at least 1 revision, the num-

## **Practice guidelines by specialist societies: a jump back into the past?**

Luciana Ballini, Roberto Grilli

2007;61(7):1076-7

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Guidelines published by specialist societies score low on main quality criteria, is a jump back into the past for those who considered (too optimistically, maybe) established and widely accepted the relevance that key quality aspects (i.e. stakeholder involvement, rigour of development, applicability and editorial independence) have on practice guideline credibility.

# Scientific Evidence Underlying the ACC/AHA Clinical Practice Guidelines

Pierluigi Tricoci, MD, MHS, PhD

Joseph M. Allen, MA

Judith M. Kramer, MD, MS

Robert M. Califf, MD

Sidney C. Smith Jr, MD

**Context** The joint cardiovascular practice guidelines of the American College of Cardiology (ACC) and the American Heart Association (AHA) have become important documents for guiding cardiology practice and establishing benchmarks for quality of care.

**Objective** To describe the evolution of recommendations in ACC/AHA cardiovascular guidelines and the distribution of recommendations across classes of recommen-

**Conclusions** Recommendations issued in current ACC/AHA clinical practice guidelines are largely developed from lower levels of evidence or expert opinion. The proportion of recommendations for which there is no conclusive evidence is also growing. These findings highlight the need to improve the process of writing guidelines and to expand the evidence base from which clinical practice guidelines are derived.

## **Eminence-based guidelines: a quality assessment of the second Joint British Societies' guidelines on the prevention of cardiovascular disease**

R. Minhas

2007;61(7):1137-44

When assessed with an internationally recognised guideline validation tool, the JBS-2 guidelines have low overall quality, demonstrate serious deficiencies and should not be recommended for clinical practice.

EDITORIAL

## **Practice guidelines by specialist societies are surprisingly deficient**

James M. Wright

2007;61(7):1076-7

The term evidence-based implies that it is supported by data from randomised controlled trials (RCTs).

When purportedly evidence-based guidelines and recommendations stray from this principle, they should no longer be able to call them evidence-based.

# Linee guida: ricadute medico-legali

## Legge 24 dd 8/3/2017 (“Gelli”) sulla responsabilità professionale sanitaria

### Responsabilità penale

- L’esercizio professionale di tutti gli esercenti le professioni sanitarie è subordinato al rispetto delle raccomandazioni previste dalle linee guida e dalle buone pratiche clinico-assistenziali.
- L’esercente la professione sanitaria che, nello svolgimento del proprio lavoro, cagioni per imperizia (ignoranza-inadeguatezza-inesperienza) l’evento morte o la lesione del paziente, risponderà penalmente solo in caso di colpa grave.
- L’applicabilità della colpa grave viene meno nel caso in cui, nell’esercizio della sua attività, il professionista abbia rispettato le linee guida e le buone pratiche clinico-assistenziali.

### Responsabilità civile

- Per i dipendenti di un’azienda pubblica si applica l’art. 2043 c.c, dalla quale deriva una minore tutela concessa al paziente in caso di danno cagionato dall’esercente la professione sanitaria. Inoltre spetta all’assistito dimostrare di aver subito il danno, fornendo la prova dell’entità della lesione subita e della necessaria presenza del nesso causale tra la condotta dell’infermiere e il danno stesso.
- Per i dipendenti di aziende private si applicano condizioni meno favorevoli per l’infermiere (art 1218 c.c.) in ragione della natura contrattuale del rapporto infermiere-paziente.

# Linee guida: ricadute medico-legali

## **Responsabilità professionale. Cassazione contro Legge Gelli. Seguire le linee guida non esclude la colpa. La Sentenza**

*“Il rispetto di linee guida e buone pratiche costituisce solo elemento di valutazione e non di esclusione della colpa, e non esime il giudice dal valutare se le circostanze del caso concreto esigessero una condotta diversa da quella prescritta dai protocolli”.*

E'quanto stabilito dalla Corte di Cassazione con sentenza 15749 il 20 marzo scorso, **intervenendo in tempi in cui la legge Gelli salva dal contenzioso per colpa grave il sanitario che segue le linee guida.** E sottolinea che, nello stabilire se la condotta dei sanitari sia stata esente da colpa, si deve avere riguardo della "peculiare e concreta situazione del paziente".

# APPRAISAL OF GUIDELINES FOR RESEARCH & EVALUATION II



- Pubblicato nel 2001 e revisionato nel 2009 (AGREE II)
- Costituisce il riferimento **internazionale** (tradotto in numerose lingue) per la valutazione della qualità delle linee guida.
- **Valuta** la qualità delle linee guida cliniche attraverso l'applicazione di una check-list che indaga il rigore metodologico e la trasparenza con cui le linee guida sono state costruite.
- **Valuta** sia la qualità di quanto viene esplicitamente riportato nella linea guida, sia la qualità di alcuni aspetti delle raccomandazioni.
- **Valuta** la validità di una linea guida, nel senso della probabilità che essa riesca effettivamente a ottenere gli obiettivi auspicati.
- **Non valuta** l'impatto della linea guida sugli esiti clinici dei pazienti.

# APPRAISAL OF GUIDELINES FOR RESEARCH & EVALUATION II



Cioè

- Ti dice quanto le linee guida sono fatte bene
- Ti offre un elemento oggettivo per decidere quanto puoi fidarti ad applicarle
- Non ti dice se sono efficienti nel migliorare gli esiti dei pazienti

### i) Quali linee guida possono essere valutate con AGREE II?

Analogamente allo strumento originale, AGREE é stato realizzato per valutare le LG sviluppate a livello locale, regionale, nazionale, internazionale, sia nella versione originale, sia nei successivi aggiornamenti, sia in versione cartacea che elettronica.

AGREE II è uno strumento metodologico “generico” che può essere applicato a LG che riguardano tutte le patologie/condizioni, gestite in qualsiasi setting assistenziale, per raccomandazioni relative a tutti gli interventi sanitari: preventivi, diagnostici, terapeutici, assistenziali, organizzativi, riabilitativi, palliativi, etc. AGREE II non è, invece, uno strumento idoneo per valutare LG con contenuti esclusivamente organizzativi (*guidance*). Infine, il suo possibile impiego per valutare i reports di *Health Technology Assessment* non è ancora stato formalmente valutato.

### ii) Chi dovrebbe utilizzare AGREE II?

AGREE II é destinato a varie categorie di utenti:

- **professionisti sanitari**, per valutare una LG prima di adottare le sue raccomandazioni nella pratica clinica;
- **organizzazioni che producono LG**, per pianificare una rigorosa metodologia di sviluppo, per verificare che le proprie LG aderiscano a standard di qualità internazionali, per valutare altre LG di altre organizzazioni ai fini di un loro potenziale adattamento;
- **manager**, per identificare quali LG utilizzare nelle decisioni di politica sanitaria;
- **formatori**, sia per insegnare l’approccio critico alle LG sia per definire le competenze fondamentali per la produzione e il reporting delle LG.

# AGREE II: come valutare la qualità delle linee-guida

## **Dimensione 1. Obiettivi e ambiti di applicazione.**

Analizza l'obiettivo generale della LG, i quesiti clinico-assistenziali a cui risponde la LG e la popolazione target.

## **Dimensione 2. Coinvolgimento dei soggetti portatori di interesse (stakeholders).**

Verifica l'entità del coinvolgimento di tutti gli stakeholders, oltre che il punto di vista dei potenziali utenti della LG.

## **Dimensione 3. Rigore metodologico.**

Analizza metodi e strumenti utilizzati per la ricerca bibliografica, la valutazione critica e la selezione delle evidenze scientifiche, la formulazione delle raccomandazioni cliniche, l'aggiornamento della LG.

## **Dimensione 4. Chiarezza espositiva.**

Esamina il linguaggio, la struttura e il formato della LG.

## **Dimensione 5. Applicabilità.**

Analizza le possibili barriere e i fattori facilitanti l'implementazione della LG, le possibili strategie per favorirne l'adozione, l'implicazione sulle risorse economiche conseguenti all'applicazione della LG.

## **Dimensione 6. Indipendenza editoriale.**

Verifica se eventuali conflitti di interesse abbiano influenzato la formulazione delle raccomandazioni.

AGREE II prevede anche due item finali: il primo per assegnare alla LG un punteggio complessivo di qualità, il secondo per esprimere un giudizio relativo al suo potenziale utilizzo.

Per tutti gli item di AGREE II il punteggio viene assegnato utilizzando una scala a 7 punti: da 1 (disaccordo totale) a 7 (accordo totale).

Il manuale d'uso fornisce indicazioni per assegnare lo score a ciascun item, grazie alle tre sezioni che facilitano ulteriormente la valutazione dell'utente: descrizione, dove cercare, come assegnare il punteggio.

### i) Scala di valutazione

Tutti gli item di AGREE II prevedono una valutazione in base alla seguente scala a 7 punti:

<b>1</b> Disaccordo totale	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b> Accordo totale
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**Punteggio 1 (*Disaccordo totale*).** Dovrebbe essere assegnato quando mancano informazioni relative all'item, oppure se il concetto è trattato in modo molto superficiale.

**Punteggio 7 (*Accordo totale*).** Dovrebbe essere assegnato se la qualità delle informazioni riportate è eccezionale e se sono pienamente soddisfatti tutti i criteri e le considerazioni richiesti dal manuale d'uso.

**Punteggio da 2 a 6.** Dovrebbe essere assegnato quando il contenuto dell'item di AGREE II non soddisfa (in misura variabile) i criteri e le considerazioni richiesti dal manuale d'uso. Il punteggio viene assegnato sia in relazione alla completezza, sia alla qualità del reporting. Nella sezione del manuale "Come assegnare il punteggio" vengono forniti per ciascun item i dettagli per valutare i rispettivi criteri e considerazioni.

# Trasformare le evidenze in comportamenti: le LINEE GUIDA

- Le Linee-Guida sono uno strumento di governo clinico indispensabile per facilitare il trasferimento delle conoscenze scientifiche alla pratica professionale e alla pianificazione, organizzazione e valutazione dei servizi sanitari.
- AGREE II è l'unico strumento validato a livello internazionale per valutare la qualità delle LG.
- La conoscenza di AGREE II, il suo utilizzo pratico e la sperimentazione per identificare ulteriori aree di miglioramento costituiscono obiettivo comune per ricercatori, professionisti e organizzazioni sanitarie.