



Richtlijnen en consensus

Ton van Boxtel

Veel patiënten leed door lijnsepsis

“Ik ben doodziek, en ben op. Ik braak die hele nacht en mijn bloeddruk blijft maar zakken, en de artsen blijven maar vocht toedienen, heel veel vocht binnen een korte tijd. Het vermoeden komt al en een dag later komt het woord eruit. Ik heb een lijn sepsis, oftewel een lijninfectie met bloedvergiftiging”

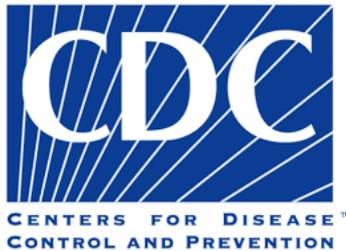
“De lijn moet eruit want alleen dat zal ervoor zorgen dat ik mij beter ga voelen. Vorige week dinsdag wordt dan ook de lijn verwijderd...”

“Ik zie er enorm tegenop, het plaatsen van een lange lijn zonder roesje of narcose vind ik verschrikkelijk. De intensive care arts wilt het me zo aangenaam mogelijk maken en kijkt of hij een nieuw infuus kan prikken voor een roesje, maar helaas is er geen infuus meer mogelijk en moet ik doorbijten...”



Stand van Zaken

Ondanks vele (inter)nationale initiatieven bestaat lijnsepsis nog steeds



GETTING TO ZERO

REDUCING RATES OF CLABSI IN COMMUNITY HOSPITALS



Rijksinstituut voor Volksgezondheid
en Milieu
*Ministerie van Volksgezondheid,
Welzijn en Sport*



*Ministerie van Volksgezondheid,
Welzijn en Sport*



Surviving Sepsis
Campaign

Situatie in Nederland

WIP richtlijn: Intravasale therapie

Enkel op basis van RCT's

Op basis van internationale richtlijnen

Verlopen in 2013

Werkgroep niet actief

Vilans protocollen

Hoofdzakelijk gericht op thuiszorg

Niet gecertificeerd (door wie?)

Prezies registreert PICC's sinds 2014

Eerste 28 dagen??

WIP is Weg

“U dient na te gaan of de richtlijnen nog up-to-date zijn. Dit betekent dat behoudens de disclaimer die is vermeld op de WIP-richtlijnen waarvan de geplande revisiedatum al is verlopen, ook andere WIP-richtlijnen mogelijk op onderdelen niet meer up-to-date zullen zijn, of dat op afzienbare termijn zullen worden.”

Deze website wordt niet meer onderhouden en contact met de WIP is niet meer mogelijk.

18 mei 2011

Internationaal

Med Intensiva. 2018;42(1):5-36



ELSEVIER

medicina *intensiva*

www.elsevier.es/medintensiva



CONSENSUS STATEMENT

Diagnosis and treatment of catheter-related bloodstream infection: Clinical guidelines of the Spanish Society of Infectious Diseases and Clinical Microbiology and (SEIMC) and the Spanish Society of Intensive and Critical Care Medicine and Coronary Units (SEMICYUC)[☆]



F. Chaves^a, J. Garnacho-Montero^{b,*}, J.L. del Pozo (Coordinators)^c,
Authors: E. Bouza^d, J.A. Capdevila^e, M. de Cueto^f, M.Á. Domínguez^g,
J. Esteban^h, N. Fernández-Hidalgoⁱ, M. Fernández Sampedro^j, J. Fortún^k,
M. Guembe^l, L. Lorente^m, J.R. Pañoⁿ, P. Ramírez^o, M. Salavert^p,
M. Sánchez^q, J. Vallés^r

Amerika

INFECTION CONTROL AND HOSPITAL EPIDEMIOLOGY JULY 2014, VOL. 35, NO. 7

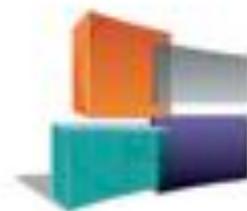
SHEA/IDSA PRACTICE RECOMMENDATION

Strategies to Prevent Central Line–Associated Bloodstream Infections in Acute Care Hospitals: 2014 Update

Jonas Marschall, MD;^{1,2a} Leonard A. Mermel, DO, ScM;^{3a} Mohamad Fakh, MD, MPH;⁴
Lynn Hadaway, MEd, RN, BC, CRNI;⁵ Alexander Kallen, MD, MPH;⁶ Naomi P. O'Grady, MD;⁷
Ann Marie Pettis, RN, BSN, CIC;⁸ Mark E. Rupp, MD;⁹ Thomas Sandora, MD, MPH;¹⁰
Lisa L. Maragakis, MD, MPH;¹¹ Deborah S. Yokoe, MD, MPH¹²

Frankrijk

Anaesth Crit Care Pain Med 34 (2015) 65–69



SFAR

Société Française d'Anesthésie et de Réanimation



Recommendations

Guidelines on the use of ultrasound guidance for vascular access



Yervé Bouaziz ^{a,*}, Paul J. Zetlaoui ^b, Sébastien Pierre ^c, Eric Desruennes ^d, Nicolas Fritsch ^e,
Denis Jochum ^f, Frédéric Lapostolle ^g, Thierry Pirotte ^h, Stéphane Villiers ⁱ

^aDepartment of Anaesthesia and Intensive Care, Hôpital Central, 29, avenue du Maréchal-de-Lattre-de-Tassigny, 54035 Nancy cedex, France

^bDepartment of Anaesthesia and Intensive Care, Hôpital de Bicêtre, 78, Rue du Général-Leclerc, 94275 Le Kremlin-Bicêtre, France

^cDepartment of Anaesthesia, Institut Universitaire du Cancer Toulouse-Oncopole, 31059 Toulouse, France

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^hDepartment of Anaesthesia, Cliniques universitaires Saint-Luc, Université Catholique de Louvain, 1348 Bruxelles, Belgium

ⁱDepartment of Anaesthesia and Intensive Care, Hôpital Saint-Louis, 1, avenue Claude-Veliefaux, 75010 Paris cedex 10, France

New South Wales (Australië)

Guideline



Ministry of Health, NSW
73 Miller Street North Sydney NSW 2060
Locked Mail Bag 961 North Sydney NSW 2059
Telephone (02) 9391 9000 Fax (02) 9391 9101
<http://www.health.nsw.gov.au/policies/>

Peripheral Intravenous Cannula (PIVC) Insertion and Post Insertion Care in Adult Patients

Document Number GL2013_013

Publication date 04-Dec-2013

Functional Sub group Clinical/ Patient Services - Anaesthetics
Clinical/ Patient Services - Nursing and Midwifery

Summary This guideline outlines the principles for the safe insertion, management and removal of PIVCs in adult patients in NSW Health facilities. The guideline aims to minimise complications from the insertion and management of PIVCs.

Author Branch Clinical Excellence Commission

Branch contact Clinical Excellence Commission 92695586

Applies to Local Health Districts, Board Governed Statutory Health Corporations, Chief Executive Governed Statutory Health Corporations, Speciality Network Governed Statutory Health Corporations, Affiliated Health Organisations, Public Health System Support Division, Community Health Centres, NSW Ambulance Service, Public Health Units, Public Hospitals, NSW Health Pathology, Cancer Institute (NSW)

Audience All clinical staff

Distributed to Public Health System, Divisions of General Practice, Health Associations Unions, NSW Ambulance Service, Ministry of Health, Private Hospitals and Day Procedure Centres, Tertiary Education Institutes

Review date 04-Dec-2018

Policy Manual Patient Matters

File No. D13/21356

Status Active

Royal College of Nursing (UK)



Royal College
of Nursing

Standards for infusion therapy

Fourth edition

National Health Service (UK)

Journal of Hospital Infection

journal homepage: www.elsevierhealth.com/journals/jhin

Epic3:

**National Evidence-Based Guidelines for
Preventing Healthcare-Associated Infections
in NHS Hospitals in England**

APIC (CLABSI)

APIC IMPLEMENTATION GUIDE



Guide to Preventing
Central Line-Associated
Bloodstream Infections

Duitsland

Empfehlungen

Bundesgesundheitsbl 2017 · 60:171–206
DOI 10.1007/s00128-016-2487-4
Online publiziert: 16. Januar 2017
© Springer-Verlag Berlin Heidelberg 2017

Prävention von Infektionen, die von Gefäßkathetern ausgehen

Teil 1 – Nichtgetunnelte zentralvenöse Katheter
Empfehlung der Kommission für Krankenhaushygiene und Infektionsprävention (KRINKO) beim Robert Koch-Institut

Inhaltsverzeichnis

1. Hintergrund und Risikocharakterisierung	1.5.17. Wechselintervall von Infusionssystemen (Aspekt der Infektionsprävention)
1.1. Gefäßkatheter als Quelle von Infektionen	1.5.18. Zubereitung/Herstellung von intravenösen Arzneimitteln/ Infusionslösungen (Aspekt Infektionsprävention)
1.2. Inhaltliches Spektrum der Empfehlung, Evidenzkategorien und Bezug zu weiteren Empfehlungen	1.5.19. „Geschlossene“ Infusionsbeutel ohne Luftfilter
1.3. Bedeutung der Prävention, Präventionsziele	1.5.20. Spülung und Block
1.4. Epidemiologie, Risikofaktoren	1.5.21. Heparin-impregnierte Katheter, Heparin-Infusion
1.4.1. Abhängigkeit vom Kathetertyp	1.5.22. Bakterien- und Endotoxinfilter
1.4.2. Daten aus dem KISS	1.5.23. Antimikrobielle Blocklösungen zur CRBS-Prävention
1.4.3. Pädiatrische Intensivstationen (PICU), pädiatrische Kardiochirurgie	2. Surveillance
1.4.4. Patienten mit ausgedehnten Verbrennungen/Verbrühungen	2.1. Surveillance von CAUTI und CRBSI
1.4.5. Patienten außerhalb der Intensivstation	2.2. Kontinuierliche Surveillance senkt Infektionsraten
1.4.6. Heimparenteral ernährte Patienten, Heimantibiostatikatherapie	2.3. Qualität von Surveillance-Daten
1.4.7. Emergenzsituation und Infektionsausbrüche durch Wasser für den menschlichen Gebrauch	3. Empfehlungen
1.4.8. Letalität, Kosten	3.1. Schulung: Vermittlung von Wissen und Training von Fähigkeiten
1.4.9. Personalausstattung	3.2. Maßnahmen bei Anlage eines ZVK (maximale Barrieremaßnahmen und Hautantiseptik)
1.5. Kritische Kontrollpunkte und präventive Maßnahmen	3.3. Ultraschallunterstützte Anlage von Gefäßkathetern
1.5.1. Händehygiene	3.4. Bestmöglicher Anlageort für ZVK
1.5.2. Schulung: Vermittlung von Wissen und Training von Fähigkeiten	3.5. Mehrlumenskatheter
1.5.3. Maximale Barrieremaßnahmen (MBP) bei der ZVK-Anlage	3.6. Verband an der KatheterEinstitzstelle: Antiseptik und Verbandwechselintervalle
1.5.4. Simulationstraining der ZVK-Anlage	3.7. Chlorhexidin-freisetzende Verbände am ZVK
1.5.5. Ultraschallunterstützte Anlage von Gefäßkathetern	3.8. Antiseptische Ganzkörperwaschung von Intensivpatienten
1.5.6. Bestmöglicher Anlageort für ZVK	3.9. Liegedauer, Katheterwechsel, Wechsel über einen Führungsdraht
1.5.7. Peripher eingeführte zentrale Venenkatheter (PCC)	3.10. Antiseptisch oder antibiotisch impregnierte ZVK
1.5.8. Single- vs. Multilumenkatheter, mehrere ZVK bei einem Patienten	3.11. Übergeordnete Empfehlungen (unabhängig vom Kathetertyp)
1.5.9. Verband an der KatheterEinstitzstelle	3.11.1. Nadelfrei zugängliche Konnektionsventile (NFC)
1.5.10. Verbandwechselintervall	3.11.2. Manipulation und Antiseptik an Hubs und Zuspritzstellen
1.5.11. Antiseptik an der KatheterEinstitzstelle	3.11.3. Wechselintervall von Infusionssystemen (Aspekt der Infektionsprävention)
1.5.12. Antiseptische Ganzkörperwaschung von Intensivpatienten	3.11.4. Zubereitung/Herstellung von intravenösen Arzneimitteln/ Infusionslösungen (Aspekt Infektionsprävention)
1.5.13. Liegedauer, Katheterwechsel, Wechsel über einen Führungsdraht	3.11.5. Bakterien- und Endotoxinfilter
1.5.14. Antiseptisch oder antibiotisch impregnierte ZVK	3.11.6. Antimikrobielle Blocklösungen
1.5.15. Nadelfrei zugängliche Konnektionsventile (NFC)	3.12. Surveillance und Konsequenzen erhöhter Infektionsraten
1.5.16. Manipulation und Antiseptik an Hubs und Zuspritzstellen	Literatur

België (BeVANet)



The patient in British Guidelines

Dr A Bodenham, Leeds, UK



Is there a need for guidelines in UK/elsewhere?

No “Difficult vein access society”.

Limited details on training curricula.

In Medicine; Assumption of skills mastered at junior level.

No definition of what constitutes difficult access.

Limited specialised kit available at bedside outside radiology.

Lots of aids, not far away! But unknown to many.

Still significant complications locally and nationally.

Increasing numbers of non medical staff inserting and removing devices.

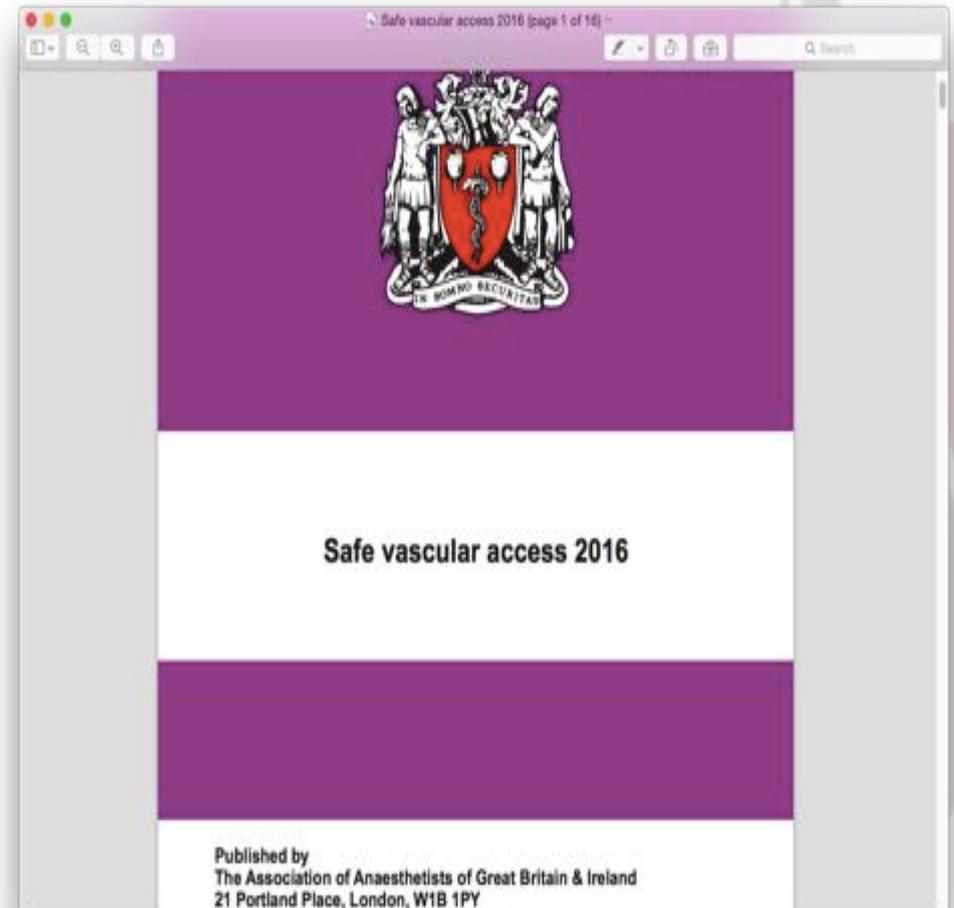
Likely to be less familiar with recognition and management complications.

Guidelines

Association of Anaesthetists of Great Britain and Ireland* Safe vascular access 2016

A. Bodenham (Chair),¹ S. Babu,² J. Bennett,³ R. Binks,⁴ P. Fee,⁵ B. Fox,⁶ A. J. Johnston,⁷ A. A. Klein,⁸ J. A. Langton,⁹ H. Mclure¹⁰ and S. Q. M. Tighe¹¹

Free access at Journal
or AAGBI website.



What is in document?

Peripheral venous

Arterial

Intraosseus

Central Venous Catheters

Organisational issues

Adult and to lesser extent paediatrics

Complications

recognition/prevention/management

Aimed at anaesthetists but equally relevant to others.

What is in the document?



Patterns of major legal claims; -closed claims: (UK, USA, Denmark)

- Major bleeding in pleural/peritoneal space
- Pericardial tamponade
- Inadvertent unrecognised arterial cannulation
 - Stroke if in carotid, proximal aorta.
- Extravasation injury
- Local pressure from bleeding; skin loss, nerve damage, respiratory obstruction.
- Lost guidewires, catheters, embolisation
- Death
- *High value claims.*

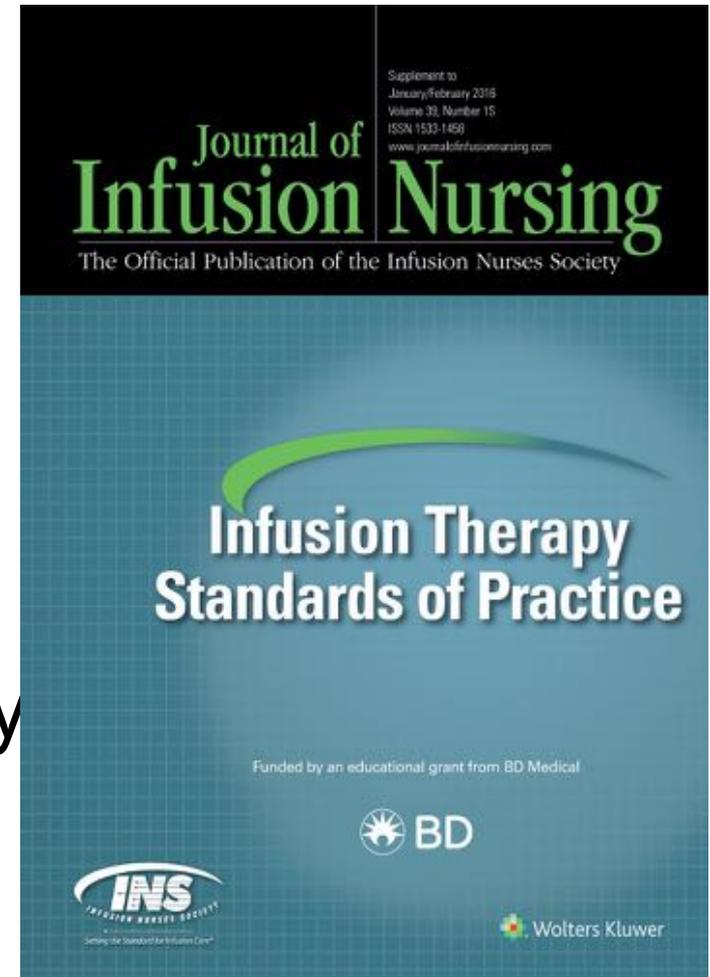
Do Guidelines Consider the Patient? Infusion Therapy Standards of Practice

Mary Alexander, MA, RN, CRNI®, CAE, FAAN
Infusion Nurses Society
Norwood, MA, USA
June 2018



Infusion Therapy Standards of Practice

- Published in 2016;
revised every 5 yrs
- 64 Standards, 9 sections
- Conduct an extensive literature review
- Rank the strength of the body of evidence
- Evaluate and analyze reviewers' comments
 - ~800 comments from 60 external reviewers



Title Change: Infusion *Therapy* Standards of Practice

- ‘Infusion therapy does not “belong” to one group of clinicians, but is the responsibility of any clinician who is involved in the practice.’
- SOP 3: Scope of Practice
 - Definition of roles and responsibilities
 - Collaboration among the health care team
 - Scope of practice within legal framework

Evidence of the Evolving Science of Infusion Therapy

- INS Standards 2011
 - Level I evidence – 3.8% of rankings
 - Level V evidence – 67%
- INS Standards 2016
 - Level I evidence – 5.8% of rankings
 - Level V evidence – 46%
 - 350 more references

4. Infusion Team

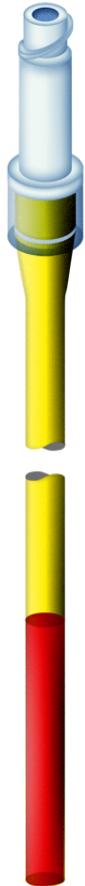


- Scope of service to meet patient and organization needs
- Vascular access device (VAD) insertion and management assigned to individuals/teams with infusion therapy education, training and validated competency (I)
- More studies needed to expand and raise level of evidence ranking

FLUSHING AND LOCKING Standard

- 40.1 Vascular access devices (VADs) are flushed and aspirated for a blood return prior to each infusion to assess catheter function and prevent complications.
- 40.2 VADs are flushed after each infusion to clear the infused medication from the catheter lumen, thereby reducing the risk of contact between incompatible medications.
- 40.3 The VAD is locked after completion of the final flush to decrease the risk of intraluminal occlusion and catheter-related bloodstream infection (CR-BSI), depending on the solution used.

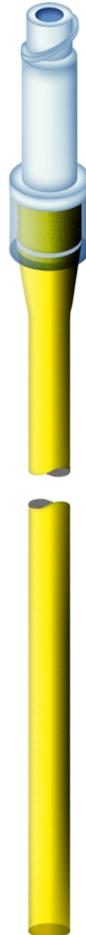
Displacement



Bij afkoppelen of
aankoppelen
wordt
bloed in de
katheter
opgezogen

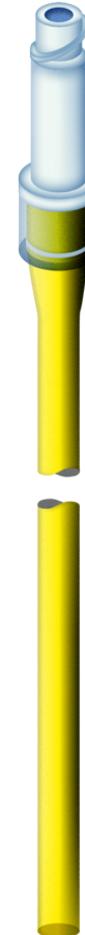
■ NaCl oplossing

■ bloed



Bij afkoppelen
wordt extra
Vloeistof
afgegeven

■ NaCl oplossing



Bij aan- en
afkoppelen
is geen
vloeistofverplaatsing

■ NaCl oplossing

Do the CDC Guidelines for Preventing Catheter-Related Infections Consider Patient Preferences?

Naomi P. O'Grady, M.D.

Clinical Center
National Institutes of Health

Bethesda, MD



GRADE's Approach to Quality of Evidence

1. Establish initial level of confidence

Study design	Initial confidence in an estimate of effect
Randomized trials →	High confidence
Observational studies →	Low confidence

GRADE's Approach to Quality of Evidence

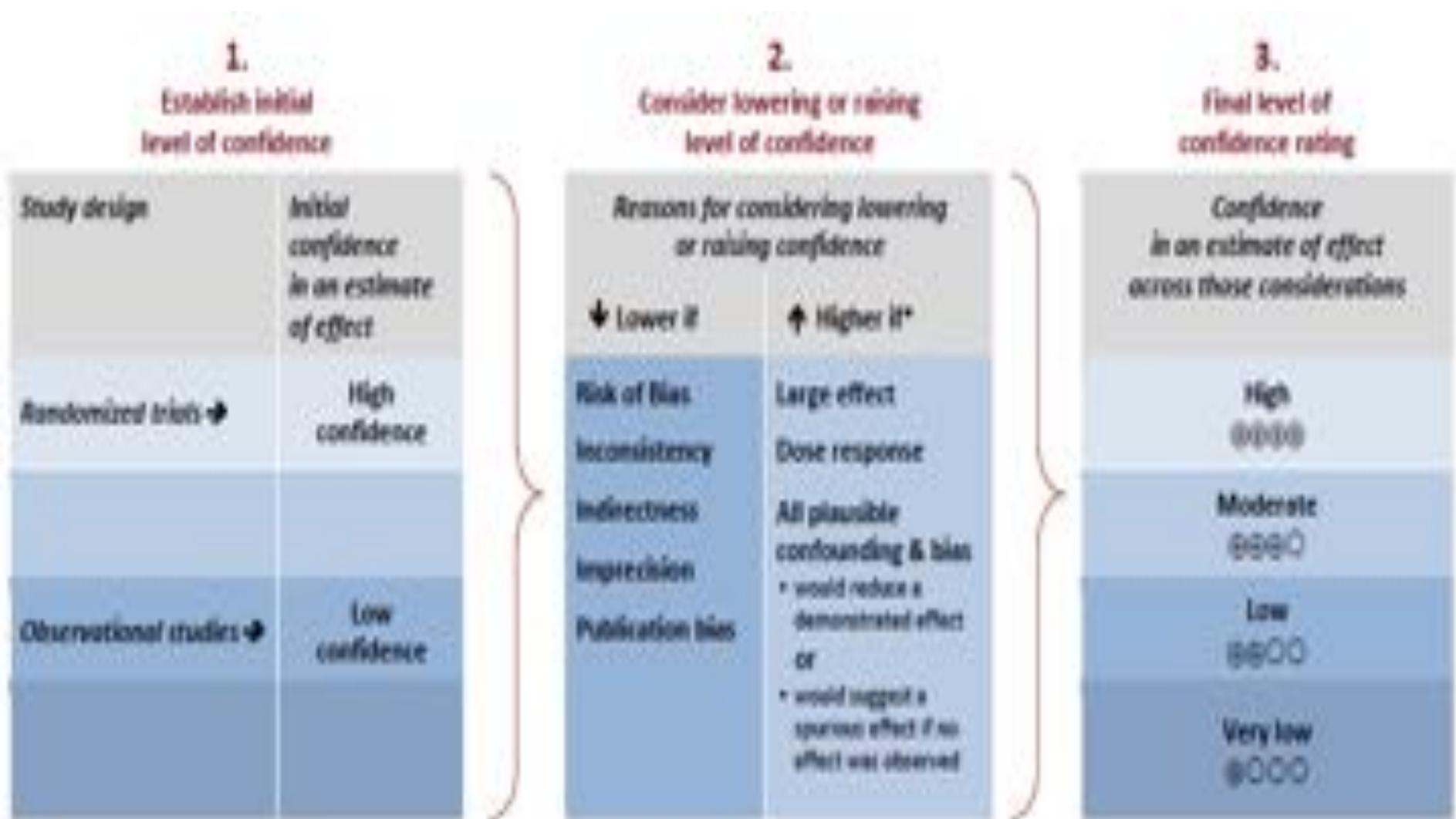
1. Establish initial level of confidence

Study design	Initial confidence in an estimate of effect
Randomized trials →	High confidence
Observational studies →	Low confidence

2. Consider lowering or raising level of confidence

Reasons for considering lowering or raising confidence	
↓ Lower if	↑ Higher if*
Risk of bias	Large effect
Inconsistency	Dose response
Indirectness	All plausible confounding & bias
Imprecision	• would reduce a demonstrated effect or
Publication bias	• would suggest a spurious effect if no effect was observed

GRADE's Approach to Quality of Evidence



Updating the Guideline to Prevent Intravascular Catheter Infections

Guideline production management  guideline

Methodologists hired by CDC

GRADE methodology used for this update-
however...

Epidemiology not randomized or controlled

Not smart to spend 3-5 years on a document with low
quality evidence and weak recommendations

Low quality evidence and strong recommendation
equally problematic

Develop rationale to make measured statements on
evidence that is not RCT

Updating the Guideline

Current Guideline stands in place until there is an update

“Core Practices” document being developed for practices that will not change or have become standard operating procedures

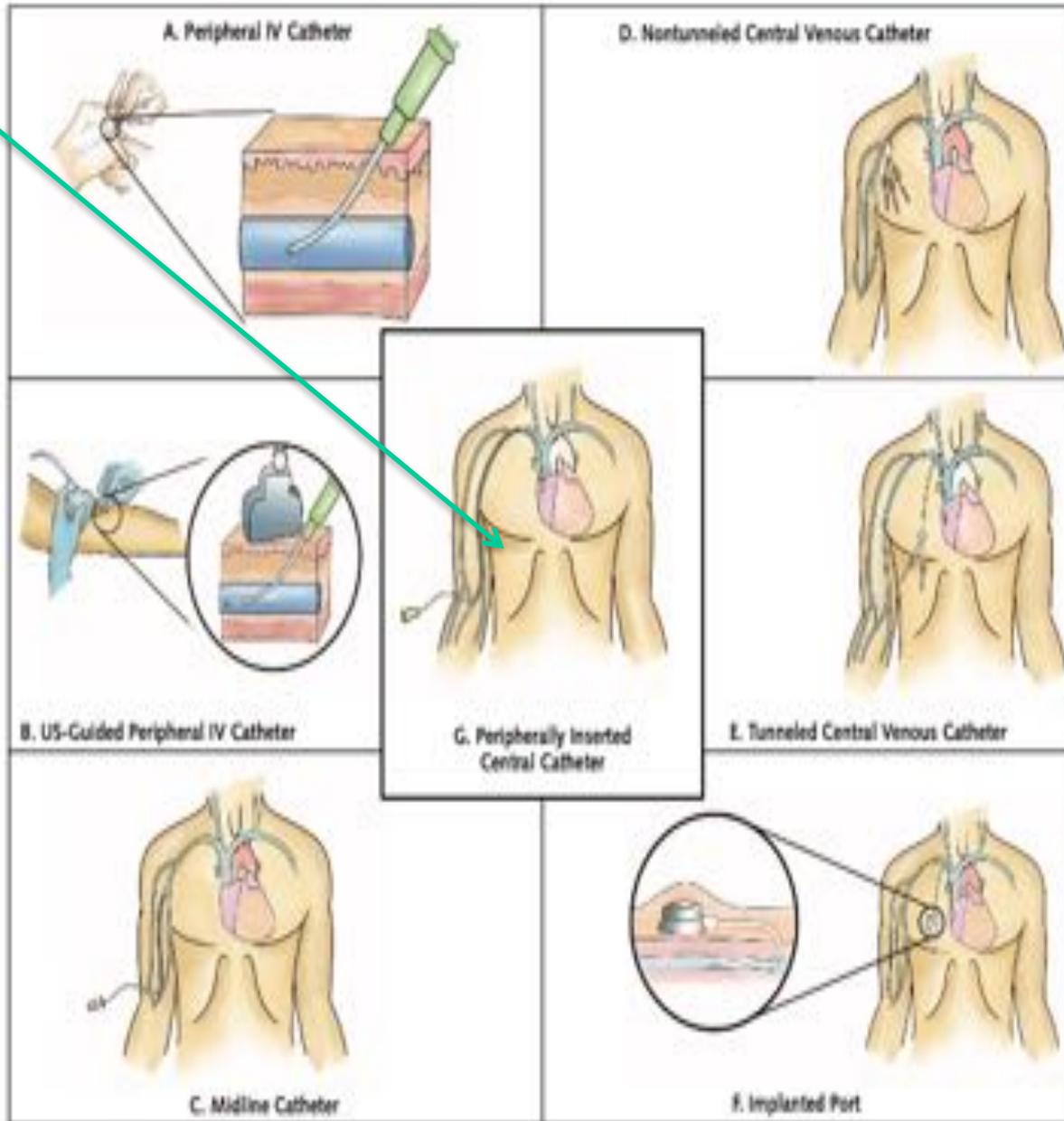
Wash your hands before inserting a catheter

Checklists

Priority placed on practices that have changed and things that are new

Are there items that need to be removed completely?

Vascular Access Devices



MAGIC paper,
Chopra et al, 2015

Figure 4. Venous access device recommendations for infusion of non-peripherally compatible infusates.

Device Type	Proposed Duration of Infusion			
	<1 d	6-14 d	15-30 d	>31 d
Peripheral IV catheter	Appropriate	Appropriate	Appropriate	Appropriate
US-guided peripheral IV catheter	Appropriate	Appropriate	Appropriate	Appropriate
Nontunneled/acute central venous catheter	Central venous catheter preferred in critically ill patients or if hemodynamic monitoring is needed for 6-14 d		Appropriate	Appropriate
Midline catheter	Appropriate	Appropriate	Appropriate	Appropriate
PICC	Appropriate	PICCs rated as appropriate at all proposed durations of infusion		
Tunneled catheter	Appropriate	Tunneled catheter neutral for use >15 d	No preference between tunneled catheter and PICC for proposed durations >15 d	
Port	Appropriate	Appropriate	Appropriate	No preference among port, tunneled catheter, or PICC for >31 d



Appropriate Neutral Inappropriate Disagreement

MAGIC paper, Chopra et al, 2015

Conclusie

- Nederland kan niet zonder richtlijn infuusbeleid
- Richtlijn niet enkel gericht op infectie preventie
- Niet van één specialisme maar uitgaan van
“de Patiënt”

Hartelijk dank

E-MAIL: TON@INFU-IN.COM