



TÜRK HASTANE ENFEKSİYONLARI VE KONTROLÜ DERNEĞİ
**HASTANE ENFEKSİYONLARI
EĞİTİM PROGRAMI** **HİEP 2025**

25. Yılda
KONUŞULMAYAN KALMASIN

14-16 Kasım 2025
Ankara Plaza Otel

**BİRLİKTEN GÜÇ DOĞAR: HASTANE ENFEKSİYONLARINI
ÖNLEMEDE DEMET STRATEJİLERİ**

 Murat Dizbay Oturma Başkanı	 Halıs Akalın Oturma Başkanı	
 Melek Türkoğlu Konuşmacı Ventilatör ilişkili Pnömoni	 Pınar Zeyneloğlu Konuşmacı Kateter ilişkili Kan Dolaşımı Enfeksiyonu	 Güler Ali Özdemir Konuşmacı Cerrahi Alan Enfeksiyonu

Birlikten Güç Doğar: Hastane Enfeksiyonlarını Önlemede Demet Stratejileri

Kateter İlişkili Kan Dolaşımı Enfeksiyonu



Pınar Zeyneloğlu
Başkent Üniversitesi Tıp Fakültesi
Anesteziyoloji AD, Yoğun Bakım BD





Healthcare-Associated Infections (HAIs)

SEARCH

Disruptions in Availability of BD BACTEC Blood Culture Bottles Situation Summary

About

Updates



HASTANELERİ ENFEKSİYON KONTROL PROGRAMI

HAZIRLAMA REHBERİ

ANKARA, EKİM 2025



SAĞLIK HİZMETİ İLE İLİŞKİLİ ENFEKSİYONLAR ULUSAL ÖNLEM PAKETİ UYGULAMALARI



*ULUSAL ENFEKSİYON ÖNLEME VE KONTROL DANIŞMA
KURULU ÇALIŞMASI*

Mart 2021, Ankara

Global report on infection prevention and control 2024



World Health Organization

Anaesthesia and intensive care Medicine, 2015



SAĞLIK HİZMETİ İLE İLİŞKİLİ ENFEKSİYONLAR
ULUSAL ÖNLEM PAKETİ UYGULAMALARI



ULUSAL ENFEKSİYON ÖNLEME VE KONTROL DANIŞMA
KURULU ÇALIŞMASI

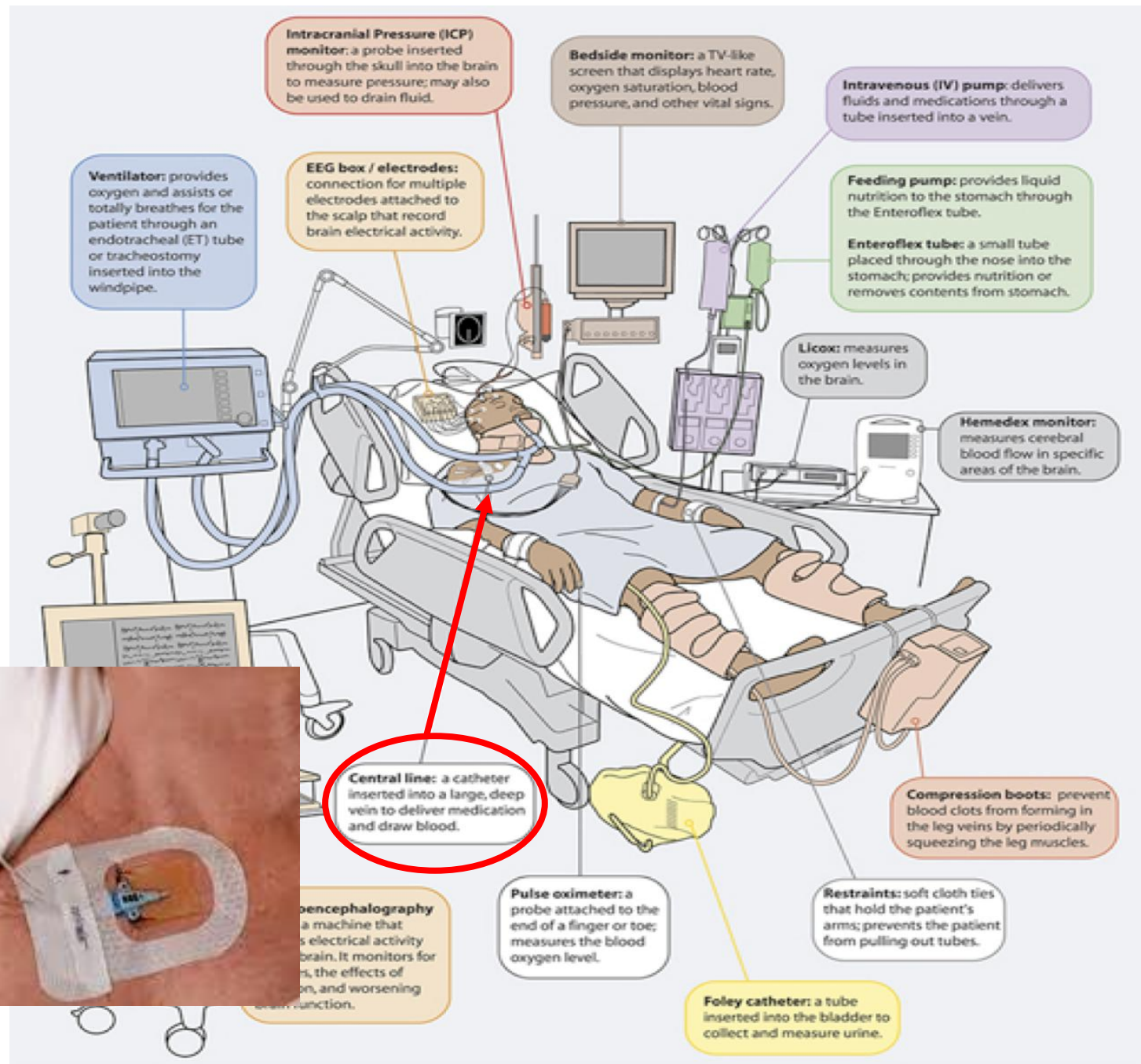
Mart 2021, Ankara

Önlem paketleri --- Demetler

- Tek başına yararlı olduğu kanıtlanmış ve birlikte uygulandıklarındaki etkileri ayrı ayrı uygulanmalarındaki etkilerinin toplamından daha fazla etki gösteren uygulamalar
- Sinerjik etki
- 3-6 önleyici müdahalenin birlikte uygulanması

Bundle
(demetler)

Standart
Önlemler
ve
İzolasyon

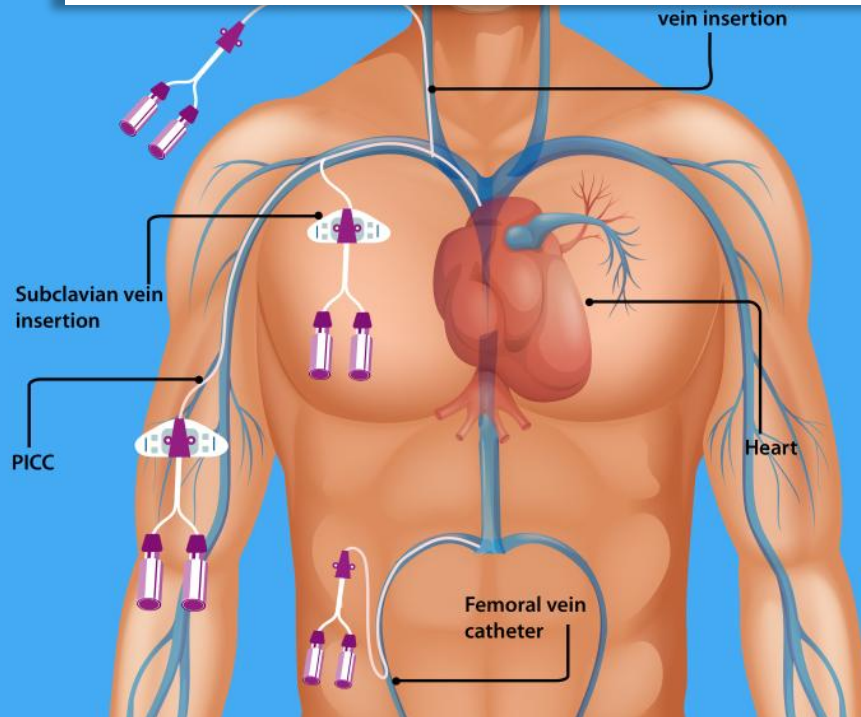


Impact of catheter-related bloodstream infections on the mortality of critically ill patients: a meta-analysis

Ilias I Siempos¹, Petros Kopterides, Iraklis Tsangaris, Ioanna Dimopoulou, Apostolos E Armaganidis

Affiliations + expand

PMID: 19487944 DOI: 10.1097/CCM.0b013e3181a02a67



Accurate effect estimates are needed to inform input parameters of health economic models for central line-associated bloodstream infections (CLABSI) and catheter-related bloodstream infections (CR-BSI). There is controversy on whether catheter-related bloodstream infections (CR-BSI) increase mortality in critically ill patients.

Several comparative studies that reported on mortality of intensive care unit patients with and without CR-BSI.

Search strategies included manual searches of reference lists, reference lists of retrieved publications were searched for additional references. Heterogeneity was assessed by means of I-statistic and chi-square test. Publication bias was detected by the funnel plot method using Egger's test. Pooled

odds ratios (OR) and 95% confidence intervals (CI) were calculated by implementing both the Mantel-Haenszel fixed effect and the DerSimonian-Laird random effects model.

Results: Eight studies, involving 2,540 ICU patients, were included. Heterogeneity was detected ($I^2 = 0.67$, 95% CI 0.32-0.85, $p = 0.003$). Publication bias was not found (Egger's test, $p = 0.28$). All-cause in-hospital mortality was higher in ICU patients with CR-BSI than in those without CR-BSI (fixed effect model: OR = 1.81, 95% CI 1.44-2.28; random effects model: OR = 1.96, 95% CI 1.25-3.09). This was also the case for the subgroup analysis of the studies that were matched for severity of illness (fixed effect model: OR = 1.65, 95% CI 1.28-2.13; random effects model: OR = 1.70, 95% CI 1.00-2.90).

Conclusion: Presence, as opposed to absence, of CR-BSI is associated with higher mortality in critically ill adult patients. This finding seems to justify and may enhance efforts to prevent CR-BSI in such patients.



T.C. SAĞLIK BAKANLIĞI
HALK SAĞLIĞI
GENEL MÜDÜRLÜĞÜ

ULUSAL ENFEKSİYON ÖNLEME VE KONTROL DANIŞMA
KURULU ÇALIŞMASI

Mart 2021, Ankara

SANTRAL KATETER İLE İLİŞKİLİ KAN DOLAŞIMI ENFEKSİYONU ÖNLEME PAKETİ (SKİ-KDE DEMETİ)

Guidelines Intravascular Infections,

Naomi P. O'Grady, M.D.¹,
Dellinger, M.D.⁴, Jeffery G



SHEA/IDSA/APIC Practice Recommendation

Strategies to prevent central line-associated bloodstream infections
in acute-care hospitals: 2022 Update

International Journal of Infectious Diseases 150 (2025) 107290

Contents lists available at ScienceDirect



ELSEVIER

International Journal of Infectious Diseases

journal homepage: www.elsevier.com/locate/ijid



ISID Guideline

Preventing central line-associated bloodstream infections: A position
paper of the International Society for Infectious Diseases, 2024 update

Victor Daniel Rosenthal^{1,2,3,*}, Ziad A. Memish^{3,4}, FNU Shweta^{3,5}, Gonzalo Bearman^{3,6},
Larry I. Lutwick^{3,7}



D, MSc, PhD^{1,2,a}, Jonas Marschall MD, MSc^{3,4,a}, Marci Drees MD, MS^{5,6},
ik MD, MPH⁷, Lynn Hedaway MD, BN, NPD, BC, CPNI⁸, Lisa L. Maragakis MD, MPH⁹

The NEW ENGLAND JOURNAL of MEDICINE

N Engl J Med 2023;389:1121-31

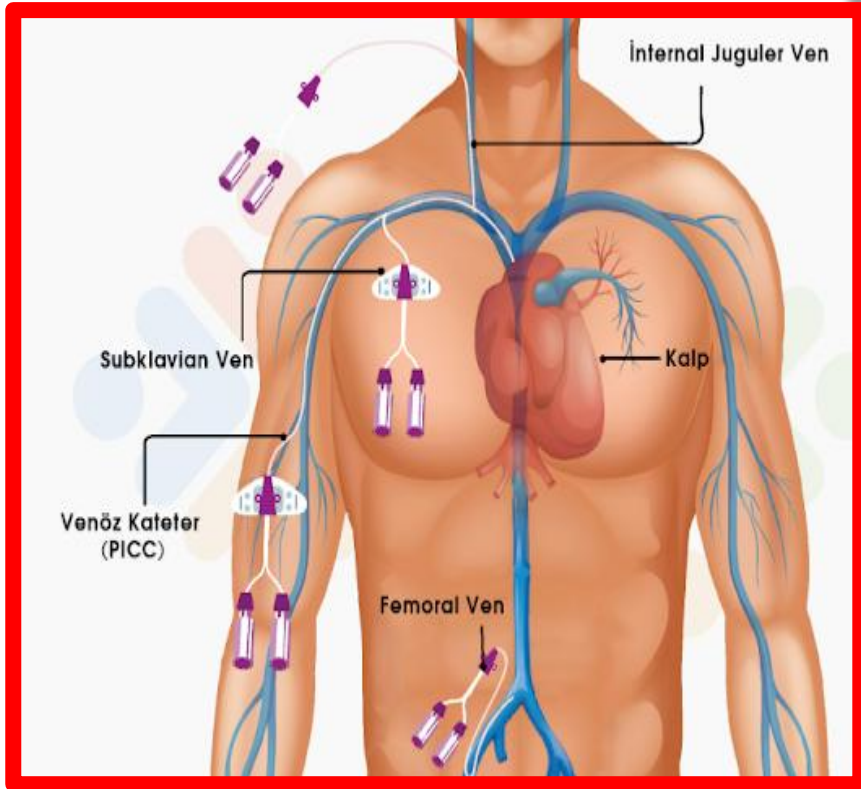
REVIEW ARTICLE

Darren B. Taichman, M.D., Ph.D., *Editor*

Prevention of Central Line–Associated Bloodstream Infections

Naomi P. O'Grady, M.D.

Santral kateter Kan dolaşımı



Tabl

Type

Peri

Peri

Mid

Short-te

Pulmon

Pressur

Periphe

Long-te

Totally i



Central line associated and primary bloodstream infections

Curr Opin Crit Care 2023, 29:423–429

Adam G. Stewart^a, Kevin B. Laupland^{b,c} and Alexis Tabah^{a,b,d}

not enter central veins; it is associated with lower rates of in-

KEY POINTS

- In critically ill patients, the pooled prevalence of primary and catheter-associated bloodstream infection (BSI) from contemporary studies was 19.7–40.7% and 26.4–37.3% of all BSIs, respectively.
- Higher severity scores, length of ICU stay, and duration of catheter insertion are risk factors for catheter-associated BSI.
- The use of prevention bundles when inserting a central venous catheter is important to reduce catheter-associated BSI incidence.

Table 2. Strategies and Devices for Preventing Central Line–Associated Bloodstream Infection.

Checklists

Catheter-insertion cart or kit

Hand hygiene

Maximal sterile barrier precautions

Alcoholic chlorhexidine skin antiseptics

Selection of subclavian catheter-insertion
(in patients in the intensive care unit)

Chlorhexidine dressings

Chlorhexidine bathing

Antibiotic- or antiseptic-impregnated catheters

Manual decontamination of catheter hubs and caps
before catheter insertion

Antiseptic-containing hubs and caps

SKI-KDE insidansi



BAŞKENT ÜNİVERSİTESİ ANKARA HASTANESİ
İNVAZİV ALET İLİŞKİLİ ENFEKSİYON ÖNLEMLERİNE YÖNELİK
HASTA İZLEM FORMU

HASTA BARK



BAŞKENT ÜNİVERSİTESİ

ÜRİNER KATETER TAKILMA VE İZLEM KONTROL LİSTESİ		1. Kateter Takılma Tarihi:.....				2. Kateter Takılma Tarihi:.....			
		Hemşire:.....				Hemşire:.....			
TAKILMA KONTROLÜ	Üriner kateter gerekli mi?	<input type="checkbox"/> Evet		<input type="checkbox"/> Hayır		<input type="checkbox"/> Evet		<input type="checkbox"/> Hayır	
	Üriner katetere alternatif var mı?	<input type="checkbox"/> Evet		<input type="checkbox"/> Hayır		<input type="checkbox"/> Evet		<input type="checkbox"/> Hayır	
	Üriner kateter uygulaması öncesi el hijyeni sağlandı mı?	<input type="checkbox"/> Evet		<input type="checkbox"/> Hayır		<input type="checkbox"/> Evet		<input type="checkbox"/> Hayır	
	Üriner kateter aseptik tekniğe (steril eldiven, steril örtü, steril spanj ve antiseptik solüsyon kullanılması) uygun yapıldı mı?	<input type="checkbox"/> Evet		<input type="checkbox"/> Hayır		<input type="checkbox"/> Evet		<input type="checkbox"/> Hayır	
	Üriner kateter uygulaması iki sağlık çalışanı tarafından mı uygulandı?	<input type="checkbox"/> Evet		<input type="checkbox"/> Hayır		<input type="checkbox"/> Evet		<input type="checkbox"/> Hayır	
	Üriner kateteri takan 2. Kişi:	<input type="checkbox"/> Doktor Tekniker/Teknisyen Diğer (.....)				<input type="checkbox"/> Doktor Tekniker/Teknisyen Diğer (.....)			
İZLEM PARAMETRELERİ	Üriner kateter uygulaması sonrası el hijyeni sağlandı mı?	<input type="checkbox"/> Evet		<input type="checkbox"/> Hayır		<input type="checkbox"/> Evet		<input type="checkbox"/> Hayır	
	İzlem Parametreleri/ Kateter İzlem Günü	(.....)	(.....)	(.....)	(.....)	(.....)	(.....)	(.....)	(.....)
	Günlük kateter gerekliliğinin değerlendirilmesi yapıldı mı?	<input type="checkbox"/> E	<input type="checkbox"/> H	<input type="checkbox"/> E	<input type="checkbox"/> H	<input type="checkbox"/> E	<input type="checkbox"/> H	<input type="checkbox"/> E	<input type="checkbox"/> H
	Üriner kateter ve kateter drenaj sistemi bütünlüğü kontrol edildi mi?	<input type="checkbox"/> E	<input type="checkbox"/> H	<input type="checkbox"/> E	<input type="checkbox"/> H	<input type="checkbox"/> E	<input type="checkbox"/> H	<input type="checkbox"/> E	<input type="checkbox"/> H

Santral kateter takılma ve izlem kontrol listesi

SANTRAL KATETER TAKILMA VE İZLEM KONTROL LİSTESİ		Santral Kateter Takılma Tarihi:.....				Hemşire:.....			
TAKILMA KONTROL LİSTESİ	Yapılan İşlem	<input type="checkbox"/> Yeni Kateter Takılması		<input type="checkbox"/> Kılavuz kateter üzerinden kateter değişimi					
	SK Tipi	<input type="checkbox"/> Juguler		<input type="checkbox"/> Subklavyen		<input type="checkbox"/> Femoral		<input type="checkbox"/> Diğer.....	
	SK Kullanım Amacı	<input type="checkbox"/> Hidrasyon/İlaç		<input type="checkbox"/> Diyaliz		<input type="checkbox"/> CVP Ölçümü		<input type="checkbox"/> TPN	
	SK Takılma Şekli	<input type="checkbox"/> Acil		<input type="checkbox"/> Planlı					
	SK Takan Kişi	<input type="checkbox"/> Asist.Dr.		<input type="checkbox"/> Uzm. Dr		<input type="checkbox"/> Öğr. Üyesi		<input type="checkbox"/> Diğer.....	
	SK takma işlemi ilk girişimde başarılı oldu mu?	<input type="checkbox"/> Evet		<input type="checkbox"/> Hayır					
	Girişim başarısız oldu ise kateteri takan kişi değişti mi?	<input type="checkbox"/> Evet		<input type="checkbox"/> Hayır					
	Kateteri takan kişi işleme başlamadan önce aşağıdaki işlemlerden hangilerini yaptı?	<input type="checkbox"/> El hijyeni sağladı		<input type="checkbox"/> Cilt antisepsisi sağladı		<input type="checkbox"/> Cildin kurumasını bekledi			
	Hasta üstünü tam kapatan büyük steril örtü kullandı mı?	<input type="checkbox"/> Evet		<input type="checkbox"/> Hayır					
	Kateteri takan kişi işlem sırasında aşağıdakilerden hangilerini kullandı?	<input type="checkbox"/> Steril eldiven		<input type="checkbox"/> Steril Önlük		<input type="checkbox"/> Bone		<input type="checkbox"/> Maske	
Kateteri takan kişi işlem boyunca sahanın sterilitesini korudu mu?	<input type="checkbox"/> Evet		<input type="checkbox"/> Hayır						
Kateteri takan kişiye yardım eden personel aşağıdakilerden hangilerini kullandı?	<input type="checkbox"/> Steril eldiven		<input type="checkbox"/> Steril Önlük		<input type="checkbox"/> Bone		<input type="checkbox"/> Maske		
Kateteri takan kişiye yardım edenler işlem boyunca sahanın sterilitesini korudu mu?	<input type="checkbox"/> Evet		<input type="checkbox"/> Hayır						
İşlem tamamlandıktan sonra kateter takılan bölge steril pansuman ile kapatıldı mı?	<input type="checkbox"/> Evet		<input type="checkbox"/> Hayır						
İZLEM PARAMETRELERİ	İzlem Parametreleri/ Kateter İzlem Günü	(.....)	(.....)	(.....)	(.....)	(.....)	(.....)	(.....)	(.....)
	Günlük kateter gerekliliğinin değerlendirilmesi yapıldı mı?	<input type="checkbox"/> E	<input type="checkbox"/> H	<input type="checkbox"/> E	<input type="checkbox"/> H	<input type="checkbox"/> E	<input type="checkbox"/> H	<input type="checkbox"/> E	<input type="checkbox"/> H
	Kateter ve bağlantılarına her erişim öncesi el hijyeni sağlandı mı?	<input type="checkbox"/> E	<input type="checkbox"/> H	<input type="checkbox"/> E	<input type="checkbox"/> H	<input type="checkbox"/> E	<input type="checkbox"/> H	<input type="checkbox"/> E	<input type="checkbox"/> H
	Kateter ve bağlantılarına her erişim sonrasında el hijyeni sağlandı mı?	<input type="checkbox"/> E	<input type="checkbox"/> H	<input type="checkbox"/> E	<input type="checkbox"/> H	<input type="checkbox"/> E	<input type="checkbox"/> H	<input type="checkbox"/> E	<input type="checkbox"/> H
	HUB dezenfeksiyonu sağlandı mı?	<input type="checkbox"/> E	<input type="checkbox"/> H	<input type="checkbox"/> E	<input type="checkbox"/> H	<input type="checkbox"/> E	<input type="checkbox"/> H	<input type="checkbox"/> E	<input type="checkbox"/> H
	HUB için kullanılan dezenfektanın kuruması bekledi mi?	<input type="checkbox"/> E	<input type="checkbox"/> H	<input type="checkbox"/> E	<input type="checkbox"/> H	<input type="checkbox"/> E	<input type="checkbox"/> H	<input type="checkbox"/> E	<input type="checkbox"/> H
	Pansuman değişimi uygun sıklıkta yapıldı mı?	<input type="checkbox"/> E	<input type="checkbox"/> H	<input type="checkbox"/> E	<input type="checkbox"/> H	<input type="checkbox"/> E	<input type="checkbox"/> H	<input type="checkbox"/> E	<input type="checkbox"/> H
	Pansuman değişimi aseptik teknikle yapıldı mı?	<input type="checkbox"/> E	<input type="checkbox"/> H	<input type="checkbox"/> E	<input type="checkbox"/> H	<input type="checkbox"/> E	<input type="checkbox"/> H	<input type="checkbox"/> E	<input type="checkbox"/> H
	Pansuman değişiminde aseptik olarak >% 0.5 klorheksidin içeren alkol solüsyonu kullanıldı mı?	<input type="checkbox"/> E	<input type="checkbox"/> H	<input type="checkbox"/> E	<input type="checkbox"/> H	<input type="checkbox"/> E	<input type="checkbox"/> H	<input type="checkbox"/> E	<input type="checkbox"/> H
	Antiseptik solüsyonun kuruması bekledi mi?	<input type="checkbox"/> E	<input type="checkbox"/> H	<input type="checkbox"/> E	<input type="checkbox"/> H	<input type="checkbox"/> E	<input type="checkbox"/> H	<input type="checkbox"/> E	<input type="checkbox"/> H
Setler standartlaştırılmış sürede değiştirildi mi?	<input type="checkbox"/> E	<input type="checkbox"/> H	<input type="checkbox"/> E	<input type="checkbox"/> H	<input type="checkbox"/> E	<input type="checkbox"/> H	<input type="checkbox"/> E	<input type="checkbox"/> H	

Amaç → İşlem sırasında tüm kritik adımların atlanmadığından emin olmak
Uygulama → İşlemi, uygulayıcı dışındaki bir başka eğitimli sağlık çalışanı gözlemlemeli ve doldurmalı
Gözlemci, aseptik teknikte bir ihlal fark ettiğinde işlemi durdurma yetkisine sahip olmalı

VENTİLATÖR İLİŞKİLİ PNOMONİ-VİP ÖNLEM PAKETİ KONTROL LİSTESİ		İzlem Parametreleri/ Ventilatör İzlem Günü								
İZLEM	Endotrakeal entübasyon ve mekanik ventilasyon ihtiyacı var mı?	UE	UH	UU	UE	UH	UU	UE	UH	UU
	Yatak başı seviyesi uygun mu? (30°-45°)	UE	UH	UU	UE	UH	UU	UE	UH	UU
	Sedasyon tatili yapıldı mı?	UE	UH	UU	UE	UH	UU	UE	UH	UU
	Ağız bakımı uygun olarak yapıldı mı? (en az 3x1)	UE	UH	UU	UE	UH	UU	UE	UH	UU
Hemşire Adı Soyadı	



Guidelines for Intravascular Infections, 2017

Naomi P. O'Grady, M.D.¹, M. Joelle Dellinger, M.D.⁴, Jeffery Garlino, M.D.⁷, Henry Masur, M.D.¹, L. Randall King, M.D.¹⁰, Adrienne Randolph, M.P.H.¹³ and the Healthcare Infection Control Practices Advisory Committee

- For (Central Line Infections)
- Follow (Central Line Infections)
- Perf (Central Line Infections)
- Adh (Central Line Infections)
- Use (Central Line Infections)
- Hand (Central Line Infections)
- Cor (Central Line Infections)
- Bat (Central Line Infections)
- For (Central Line Infections)
- Edu (Central Line Infections)
- app (Central Line Infections)
- Des (Central Line Infections)
- Per (Central Line Infections)
- cer (Central Line Infections)
- Pro (Central Line Infections)
- Ree (Central Line Infections)
- pro (Central Line Infections)
- Em (Central Line Infections)
- Ens (Central Line Infections)
- Use (Central Line Infections)
- Supp (Central Line Infections)
- Ant (Central Line Infections)
- Ant (Central Line Infections)

Central Line Infections

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S.

insertion and maintenance, and

of central lines.

in the insertion and maintenance of

policies,

lies).

s.



Takılma öncesi

1. Santral kateter yerleştirilmesi, bakımı ve sürdürülmesinde görev alan sağlık personeli için zorunlu **eğitim ve yeterlilik değerlendirmeleri**
2. İki aydan büyük yoğun bakım hastalarına **günlük klorheksidinle hazırlanan banyo** uygulayın

Takılma sırası

1. YBÜ ve dışındaki ortamlarda bir **kontrol listesi** önerilir
2. Her şeyi kapsayan bir **kateter arabası veya kiti** kullanın
3. Kateter takılması veya manipülasyonundan önce **el hijyeni** uygulayın
4. Santral kateter takılması sırasında maksimum **steril bariyer önlemleri** benimseyin
5. **Cilt hazırlığı için alkollü bir klorheksidin** antiseptiği kullanın
6. YBÜ'de enfeksiyöz komplikasyonları en aza indirmek için **femoral bölgeyi kullanmaktan kaçının**
7. Kateter yerleştirmek için **ultrason** rehberliğini dahil edin

Takılma sonrası

1. Uygun bir **hemşire-hasta oranı** sağlayın ve YBÜ'de geçici hemşire kullanımını kısıtlayın
2. İki aylıktan büyük hastalarda **klorheksidin içeren pansumanlar** uygulayın
3. **Pansumanların değiştirilmesi**
4. Kateterleri kullanmadan önce, **kateter hub, iğnesiz konnektör ve enjeksiyon portlarını dezenfekte** edin
5. **Gerekli olmayan kateterleri çıkarın**
6. Kan, kan ürünleri veya lipit formülasyonları için kullanılmayan **uygulama setlerini 7 güne kadar aralıklarla rutin olarak değiştirin**
7. YBÜ ve dışında SKİ-KDE için **sürveyans** yapın



SANTRAL KATETER İLE İLİŞKİLİ KAN DOLAŞIMI
ENFEKSİYONU ÖNLEME PAKETİ (SKİ-KDE DEMETİ)

SKİ-KDE ÖNLEM PAKETİ

Santral kateter bakımı sırasında

1. Kateter ve bağlantılarına her erişim öncesi ve sonrasında el hijyeninin sağlanması.

2. Günlük olarak kateter gerekliliğinin değerlendirilmesi.

3. Kateter bağlantı noktalarının dezenfeksiyonunun sağlanması*.

4. Pansuman değişimlerinin uygun sıklıkta aseptik tekniklere uygun yapılması**.

5. İnfüzyon setlerinin standart değişim sürelerine uyulması***.

Santral venöz kateter (SVK) ilişkili infeksiyonun önlenmesi için takma sırasında uygulanacak önlem paketi

Hasta adı soyadı	
Protokol numarası	
Servis	
İşlemin yapıldığı tarih/ saat	----- / ----- / ----- : -----
Yapılan işlem	<input type="checkbox"/> Yeni kateter takılması <input type="checkbox"/> Kılavuz kateter üzerinden kateter değişimi
SVK	<input type="checkbox"/> Juguler <input type="checkbox"/> Subklavyen <input type="checkbox"/> Brakiyal <input type="checkbox"/> Femoral <input type="checkbox"/> Tüneli kateter <input type="checkbox"/> Port
SVK kullanım amacı	<input type="checkbox"/> Hidrasyon/ilâç <input type="checkbox"/> Diyaliz <input type="checkbox"/> CVP ölçümü <input type="checkbox"/> Pulmoner arter kateterizasyonu <input type="checkbox"/> TPN

Santral venöz kateter (SVK) ilişkili infeksiyonun önlenmesi için bakım sırasında uygulanacak önlem paketi

SVK günü	1	2	3	4	5	6	7	8
El hijyeni sağlandı mı?								
Kateter örtüsü uygun mu?								
Pansuman %2'lik CHG ve alkol içeren antimikrobiyal ile yapıldı mı?								
Hub dezenfeksiyonu yapılıyor mu?								
SVK gerekli mi?								

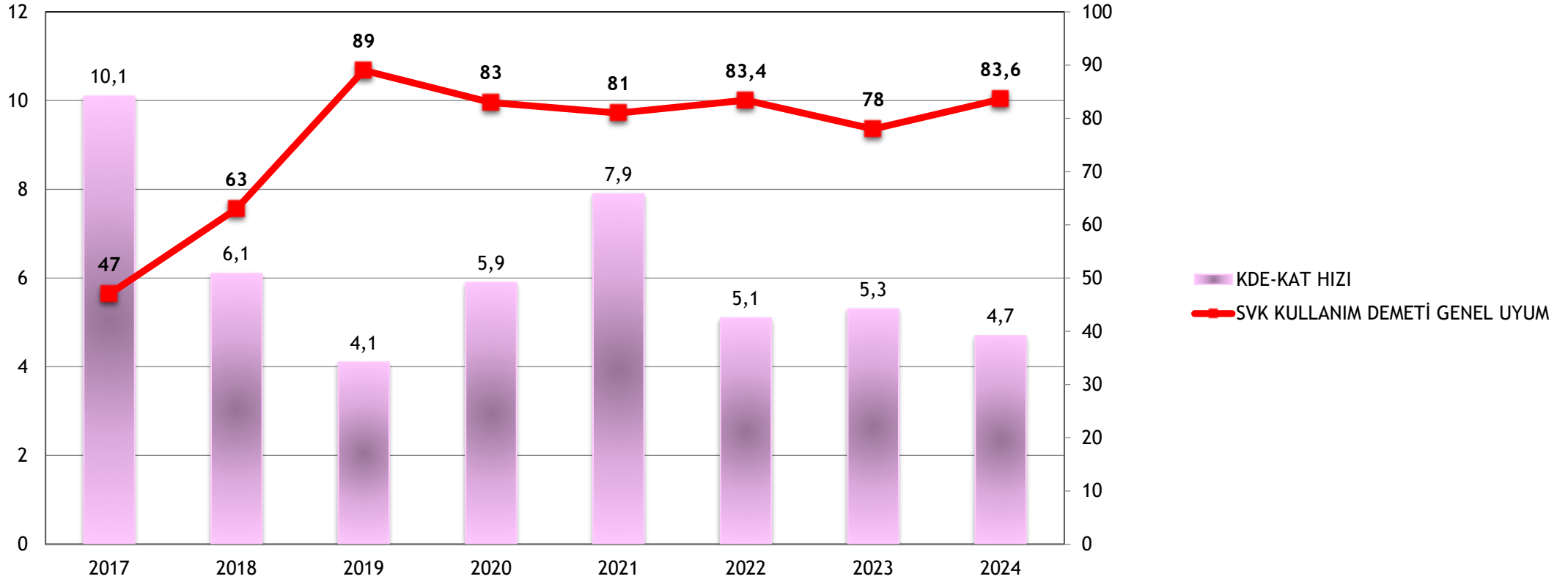
Maske	<input type="checkbox"/> Evet	<input type="checkbox"/> Hayır
Kateteri takan kişi işlem boyunca sahanın sterlitesini korudu mu?	<input type="checkbox"/> Evet	<input type="checkbox"/> Hayır
Kateteri takan kişiyi asiste eden personel aşağıdakilerden hangilerini kullandı?		
Steril eldiven	<input type="checkbox"/> Evet	<input type="checkbox"/> Hayır
Steril önlük	<input type="checkbox"/> Evet	<input type="checkbox"/> Hayır
Bone	<input type="checkbox"/> Evet	<input type="checkbox"/> Hayır
Maske	<input type="checkbox"/> Evet	<input type="checkbox"/> Hayır
Kateteri takan kişiyi asiste eden kişiler işlem boyunca sahanın sterlitesini korudu mu?	<input type="checkbox"/> Evet	<input type="checkbox"/> Hayır
İşlem tamamlandıktan sonra kateter takılan bölge steril pansuman ile kapatıldı mı?	<input type="checkbox"/> Evet	<input type="checkbox"/> Hayır



KATETER İLİŞKİLİ KAN DOLAŞIMI ENFEKSİYONLARINI ÖNLEMEDE DEMET UYGULAMASI

Burcu Gönülal¹, Tuğba Yanık Yalçın¹, Ebru Yılmaz¹, Hande Arslan¹

¹Başkent Üniversitesi Tıp Fakültesi Hastanesi, Enfeksiyon Hastalıkları ve Klinik Mikrobiyoloji



2018 yılında %65'e, 2019 yılında %89'a yükseldiği, KI-KDE hızının 2017 yılında 1000 kateter/günde 10,1 iken 2018 yılında 6,1, 2019 yılında 4,1'e gerilediği görülmüştür. Maddelere göre uyum oranları grafik 2'de sunulduğu gibi; SVK takılma endikasyonu devamlılığı %99,5, pansumanın temiz ve son 7 gün içinde değişmiş olması %89,5, hıub bakımı verilmiş olması %70,1, pansuman için %2 klorheksidin kullanımı %99,5, katetere temas öncesi el hijyeni sağlanması %33,7 olarak bulunmuştur.

Sonuç: KI-KDE'nin önlenmesine yönelik uygulanan santral venöz kateter kullanım demetinin KI-KDE hızını düşürmekte oldukça etkili olduğu görülmüştür. Demet uyumunun artarak devam edebilmesi için eğitim ve denetim çalışmalarının sürekliliğinin sağlanması önemlidir.

An Intervention to Decrease Catheter-Related Bloodstream Infections in the ICU

Peter Pronovost, M.D., Ph.D., Dale Needham, M.D., Ph.D., Sean Berenholtz, M.D., David Sinopoli, M.P.H., M.B.A., Haitao Chu, M.D., Ph.D., Sara Cosgrove, M.D., Bryan Sexton, Ph.D., Robert Hyzy, M.D., Robert Welsh, M.D., Gary Roth, M.D., Joseph Bander, M.D., John Kepros, M.D., and Christine Goeschel, R.N., M.P.A.

Table 3. Rates of Catheter-Related Bloodstream Infection from Baseline (before Implementation of the Study Intervention) to 18 Months of Follow-up.*

Study Period	No. of ICUs	No. of Bloodstream Infections per 1000 Catheter-Days				
		Overall	Teaching Hospital	Nonteaching Hospital	<200 Beds	≥200 Beds
Baseline	55	2.7 (0.6–4.8)	2.7 (1.3–4.7)	2.6 (0–4.9)	2.1 (0–3.0)	2.7 (1.3–4.8)
During implementation	96	1.6 (0–4.4)†	1.7 (0–4.5)	0 (0–3.5)	0 (0–5.8)	1.7 (0–4.3)†
After implementation						
0–3 mo	96	0 (0–3.0)‡	1.3 (0–3.1)†	0 (0–1.6)†	0 (0–2.7)	1.1 (0–3.1)‡
4–6 mo	96	0 (0–2.7)‡	1.1 (0–3.6)†	0 (0–0)‡	0 (0–0)†	0 (0–3.2)‡
7–9 mo	95	0 (0–2.1)‡	0.8 (0–2.4)‡	0 (0–0)‡	0 (0–0)†	0 (0–2.2)‡
10–12 mo	90	0 (0–1.9)‡	0 (0–2.3)‡	0 (0–1.5)‡	0 (0–0)†	0.2 (0–2.3)‡
13–15 mo	85	0 (0–1.6)‡	0 (0–2.2)‡	0 (0–0)‡	0 (0–0)†	0 (0–2.0)‡
16–18 mo	70	0 (0–2.4)‡	0 (0–2.7)‡	0 (0–1.2)†	0 (0–0)†	0 (0–2.6)‡

BACKGROUND

Catheter-related bloodstream infections occurring in the intensive care unit (ICU) are common, costly, and potentially lethal.

METHODS

We conducted a collaborative cohort study predominantly in ICUs in Michigan. An evidence-based intervention was used to reduce the incidence of catheter-related bloodstream infections. Multilevel Poisson regression modeling was used to compare infection rates before, during, and up to 18 months after implementation of the study intervention. Rates of infection per 1000 catheter-days were measured at 3-month intervals, according to the guidelines of the National Nosocomial Infections Surveillance System.

RESULTS

A total of 108 ICUs agreed to participate in the study, and 103 reported data. The analysis included 1981 ICU-months of data and 375,757 catheter-days. The median rate of catheter-related bloodstream infection per 1000 catheter-days decreased from 2.7 infections at baseline to 0 at 3 months after implementation of the study intervention ($P \leq 0.002$), and the mean rate per 1000 catheter-days decreased from 7.7 at baseline to 1.4 at 16 to 18 months of follow-up ($P < 0.002$). The regression model showed a significant decrease in infection rates from baseline, with incidence-rate ratios continuously decreasing from 0.62 (95% confidence interval [CI], 0.47 to 0.81) at 0 to 3 months after implementation of the intervention to 0.34 (95% CI, 0.23 to 0.50) at 16 to 18 months.

CONCLUSIONS

An evidence-based intervention resulted in a large and sustained reduction (up to 66%) in rates of catheter-related bloodstream infection that was maintained throughout the 18-month study period.

Vital Signs: Central Line--Associated Blood Stream Infections --- United States, 2001, 2008, and 2009

Weekly

March 4, 2011 / 60(08);243-248

On March 1, this report was posted as an MMWR Early Release on the MMWR website (<http://www.cdc.gov/mmwr>).

Abstract

Background: Health-care--associated infections (HAIs) affect 5% of patients hospitalized in the United States each year. Central line--associated blood stream infections (CLABSIs) are important and deadly HAIs, with reported mortality of 12%--25%. This report provides national estimates of the number of CLABSIs among patients in intensive-care units (ICUs), inpatient wards, and outpatient hemodialysis facilities in 2008 and 2009 and compares ICU estimates with 2001 data.

Methods: To estimate the total number of CLABSIs among patients aged ≥ 1 year in the United States, CDC multiplied central-line utilization and CLABSI rates by estimates of the total number of patient-days in each of three settings: ICUs, inpatient wards, and outpatient hemodialysis facilities. CDC identified total inpatient-days from the Healthcare Cost and Utilization Project's National Inpatient Sample and from the Hospital Cost Report Information System. Central-line utilization and CLABSI rates were obtained from the National Nosocomial Infections Surveillance System for 2001 estimates (ICUs only) and from the National Healthcare Safety Network (NHSN) for 2009 estimates (ICUs and inpatient wards). CDC estimated the total number of outpatient hemodialysis patient-days in 2008 using the single-day number of maintenance hemodialysis patients from the U.S. Renal Data System. Outpatient hemodialysis central-line utilization was obtained from the Fistula First Breakthrough Initiative, and hemodialysis CLABSI rates were estimated from NHSN. Annual pathogen-specific CLABSI rates were calculated for 2001--2009.

Results: In 2001, an estimated 43,000 CLABSIs occurred among patients hospitalized in ICUs in the United States. In 2009, the estimated number of ICU CLABSIs had decreased to 18,000. Reductions in CLABSIs caused by *Staphylococcus aureus* were more marked than reductions in infections caused by gram-negative rods, *Candida* spp., and *Enterococcus* spp. In 2009, an estimated 23,000 CLABSIs occurred among patients in inpatient wards and, in 2008, an estimated 37,000 CLABSIs occurred among patients receiving outpatient hemodialysis.

Conclusions: In 2009 alone, an estimated 25,000 fewer CLABSIs occurred in U.S. ICUs than in 2001, a 58% reduction. This represents up to 6,000 lives saved and \$414 million in potential excess health-care costs in 2009 and approximately \$1.8 billion in cumulative excess health-care costs since 2001. A substantial number of CLABSIs continue to occur, especially in outpatient hemodialysis centers and inpatient wards.

Sustaining Reductions in Central Line--Associated Bloodstream Infections in Michigan Intensive Care Units: A 10-Year Analysis

Peter J Pronovost¹, Sam R Watson², Christine A Goeschel³, Robert C Hyzy⁴, Sean M Berenholtz³

Am J Med Qual. 2016 May;31(3):197-202.

Affiliations + expand

PMID: 25609646 DOI: [10.1177/1062860614568647](https://doi.org/10.1177/1062860614568647)

Abstract

This article describes the interventions that sustained low central line-associated bloodstream infection (CLABSI) rates in the Michigan Keystone ICU Project. This analysis included data from March 2004 to December 2013 for 121 intensive care units (ICUs) in 73 hospitals. The Keystone Project was a cohort collaborative with an improvement team in each ICU. During the sustainability period, teams integrated the intervention into staff orientation, collected and submitted monthly data, and reported infection rates to leaders. The annual mean rate of BSIs dropped from 2.5 infections/1000 catheter-days in 2004 to 0.76 in 2013. A subset analysis found nearly double the percentage of ICUs with a mean rate of <1 infection/1000 catheter-days in 2013 compared with baseline. Active involvement of hospital leaders and the Keystone Center as well as ongoing monitoring and feedback of performance were important in sustaining results. These findings suggest that large-scale improvement projects can be sustained, establishing a new normal for care.

Open access

BMJ Open Quality

Bundle central infectio care un

Poonam Gupta
Leena Mathew
Sara Al-Balush

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¹Quality Improvement Department, Hamad Medical

ABSTRACT

Background Central venous catheterisation is commonly used in critical patients in intensive care units (ICU). It may cause complications and attribute to increase mortality and morbidity. At coronary ICU (CICU) of cardiac hospital, central line-associated bloodstream infection (CLABSI) rate was 2.82/1000 central line days in 2015 and 3.11/1000 central line days in 2016. Working in collaboration with Institute for Healthcare Improvement (IHI), we implemented evidence-based practices in the form of bundles in with the aim of eliminating CLABSI in CICU.

Methods In collaboration with IHI, we worked on this initiative as multidisciplinary team and tested several changes. CLABSI prevention bundles were tested and implemented, single kit for line insertion, simulation-based training for line insertions, standardised and real-time bundle monitoring by direct observations are key interventions tested. We used model for improvement and changes were tested using small Plan-Do-Study-Act cycles. Surveillance methods and CLABSI definition used according to National Healthcare Safety Network.

Results The CLABSI rate per 1000 patient-days dropped from 3.1 per 1000 device-days to 0.4 per 1000 device-days. We achieved 757 days free of CLABSI in the unit till December 2018 when a single case happened. After that we achieved 602 free days till July 2020 and still counting.

Conclusions Implementation of evidence-based CLABSI prevention bundle and process monitoring by direct observation led to significant and subsequently sustained improvement in reducing CLABSI rate in adult CICU.

ORIGINAL

Sustained bloodstream infections of catheters over 11 years

Abstract

Background: Prospective randomized controlled studies have demonstrated that addition of chlorhexidine (CHG) dressings reduces the rate of catheter (central venous and arterial)-associated bloodstream infections (CABSI). However, studies confirming their impact in a real-world setting are lacking.

Methods: We conducted a real-world data study evaluating the impact of incrementally introducing chlorhexidine dressings (sponge or gel) in addition to an ongoing catheter bundle on the rates of CABSI, expressed as incidence density rates per 1000 catheter-days measured as part of a surveillance program. Poisson regression models were used to compare infection rates over time. Both dressings were used simultaneously during one of the five study periods.

Results: From 2006 to 2014, 18,286 patients were admitted (91,292 ICU-days and 155,242 catheter-days). We recorded 111 CABSI. We observed a progressive but significant decrease of CABSI rates from 1.48 (95% CI 1.09–2.01) without CHG dressings to 0.69 (95% CI 0.43–1.09) and 0.23 (95% CI 0.11–0.48) episodes per 1000 catheter-days when CHG sponge and CHG gel dressings were used ($p=0.0007$; $p<0.001$). A non-significant lower rate of infections occurred with CHG gel compared with CHG sponge dressings. An identical low rate of allergic skin reactions (0.3/1000 device-days) was observed with both types of CHX dressings. Post-study data until 2018 confirmed a sustained decrease of infection rates over 11 years.

Conclusions: The addition of chlorhexidine dressings to all CVC and arterial lines to an ongoing catheter bundle was associated with a sustained 11-year reduction of all catheter-associated bloodstream infections. This large real-world data study further supports the current recommendations for the systematic use of CHG dressings on all catheters of ICU patients.

Keywords: Catheter-related infections, Central line-associated bloodstream infections, Catheter bundle, Nosocomial infection, Bacteremia, Chlorhexidine-dressing, Chlorhexidine sponge, Chlorhexidine gel



RESEARCH

Implementing CLABSI prevention bundles in a surgical intensive care unit using peer tutoring

Abstract

Background: Central line-associated bloodstream infections (CLABSIs) can be prevented through well-coordinated, multifaceted programs. However, implementation of CLABSI prevention programs requires individualized strategies for different institutional situations, and the best strategy in resource-limited settings is uncertain. Peer tutoring may be an efficient and effective method that is applicable in such settings.

Methods: A prospective intervention was performed to reduce CLABSIs in a surgical intensive care unit (SICU) at a tertiary hospital. The core interventions consisted of implementation of insertion and maintenance bundles for CLABSI prevention. The overall interventions were guided and coordinated by active educational programs using peer tutoring. The CLABSI rates were compared for 9 months pre-intervention, 6 months during the intervention and 9 months post-intervention. The CLABSI rate was further observed for three years after the intervention.

Results: The rate of CLABSIs per 1000 catheter-days decreased from 6.9 infections in the pre-intervention period to 2.4 and 1.8 in the intervention (6 m; $P = 0.102$) and post-intervention (9 m; $P = 0.036$) periods, respectively. A regression model showed a significantly decreasing trend in the infection rate from the pre-intervention period ($P < 0.001$), with incidence-rate ratios of 0.348 (95% confidence interval [CI], 0.98–1.23) in the intervention period and 0.257 (95% CI, 0.07–0.91) in the post-intervention period. However, after the 9-month post-intervention period, the yearly CLABSI rates reverted to 3.0–5.4 infections per 1000 catheter-days over 3 years.

Conclusions: Implementation of CLABSI prevention bundles using peer tutoring in a resource-limited setting was useful and effectively reduced CLABSIs. However, maintaining the reduced CLABSI rate will require further strategies.

Keywords: Central line-associated bloodstream infection, Intensive care unit, Education, Intervention, Learning by teaching, Peer tutoring

Antimicrobial Resistance and Infection Control

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RESEARCH ARTICLE

The impact of central line-associated

Hung-Jen Tang^{1,2}, Hsin-Lan Lin^{3,4}

The Impact of Implementing a Bundle of Control Measures to Reduce Catheter-Related Infections

Mayra Goncalves Meneghini^a,
Fernando Bellissimo-Rodrigues^{c,d},
Giuseppe Di Lorenzo^e,
Marcelo Lourencini Puga^a, Ana Maria Lacerda^a

Abstract

Background: Knowledge about central line-associated bloodstream infection (CLABSI) is limited.

Methods: A quality-improvement process and outcome surveillance process were implemented to reduce CLABSI per 1,000 catheter-days. Data were collected from March 1, 2010 to February 28, 2011.

Results: During this 10-month period, 1,000 catheter-days were performed by intensivists. The rate of CLABSI decreased from 1.65 per 1,000 catheter-days in the pre-intervention period to 0.65 per 1,000 catheter-days in subjects in which a maximal sterile barrier technique was used. Moreover, CVC inserted by non-intensivists decreased (P = 0.010).

Conclusions: This multidisciplinary approach effectively reduced the rate of CLABSI during catheter insertion.

Keywords: Central line bundle, CLABSI, infection control

Abstract

Background: The aim of the study was to investigate how control bundles reduce the rate of central venous catheter-associated bloodstream infections (CVC-BSIs) rates in critically ill patients.

Methods: This is a prospective before-and-after study designed to evaluate whether a set of control measures (bundle) can help prevent CVC-BSI. The bundles included a checklist that aimed to control practices related to CVC insertion, manipulation, and maintenance based on guidelines of the Center for Disease Control and Prevention (CDC).

Results: We examined 123 checklists before and 155 checklist after implementation of the training program. Compared with the pre-intervention period, CVC-BSI rates decreased. Hand hygiene techniques were used correctly. CVC-BSI incidence was 9.3 and 5.1 per 1,000 catheter-days before and after the training program, respectively.

Conclusions: The implementation of a bundle and training program effectively reduces CVC-BSI rates.

Reducing the rate of catheter-associated bloodstream infections in a surgical intensive care unit using the Institute for Healthcare Improvement central line bundle

Greg D. Sacks, M.D., M.P.H.^a, Brian S. Diggs, Ph.D.^b, Pantelis Hadjizacharia, M.D.^c, Donald Green, M.D.^c, Ali Salim, M.D.^d, Darren J. Malinoski, M.D.^{b,e,*}

^a Department of Surgery, University of California, Los Angeles, CA, USA; ^b Department of Surgery, Oregon Health & Science University, Portland, OR, USA; ^c Department of Surgery, University of Arizona, Tucson, AZ, USA; ^d Department of Surgery, Brigham and Women's Hospital, Boston, MA, USA; ^e Section of Surgical Critical Care, Portland VA Medical Center, Portland, OR, USA

KEYWORDS:

Catheter-associated line infections;
Infection control;
Central venous catheters;
Quality improvement;
Healthcare cost;
Checklist

Abstract

BACKGROUND: Central line-associated bloodstream infections (CLABSIs) are a significant source of morbidity and mortality. This study sought to determine whether implementation of the Institute for Healthcare Improvement (IHI) Central Line Bundle would reduce the incidence of CLABSIs.

METHODS: The IHI Central Line Bundle was implemented in a surgical intensive care unit. Patient demographics and the rate of CLABSIs per 1,000 catheter days were compared between the pre- and postintervention groups. Contemporaneous infection rates in an adjacent ICU were measured.

RESULTS: Baseline demographics were similar between the pre- and postintervention groups. The rate of CLABSIs per catheter days decreased from 19/3,784 to 3/1,870 after implementation of the IHI Central Line Bundle (1.60 vs 5.02 CLABSIs per 1,000 catheter days; rate ratio .32 [.08 to .99, P < .05]). There was no significant change in CLABSIs in the control ICU.

CONCLUSIONS: Implementation of the IHI Central Line Bundle reduced the incidence of CLABSIs in our SICU by 68%, preventing 12 CLABSIs, 2.5 deaths, and saving \$198,600 annually.

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ELSEVIER

The effect of an intervention bundle to prevent venous catheter-related bloodstream infection national programme in the Netherlands

T.I.I. van der Kooi^{a,*}, E.A. Smid^b, M.B.G. Koek^a, S.E. Geerlings^c, L.G.M. Bode^d, T.E.M. Hopmans^a, S.C. de Greeff^a

In conclusion, following a national programme to introduce an intervention bundle, CRBSI incidence decreased significantly. In the ICU, with relatively low CRBSI incidence, the compliance with the CRBSI intervention bundle was not associated with CRBSI risk. Outside the ICU, the introduction of a CRBSI bundle appeared to be an effective method to reduce CRBSI rates. Hospitals and departments with relatively high CRBSI incidences will benefit from implementing the CRBSI intervention bundle to improve patient care.

Six-item bundle to prevent central line-related bloodstream infection: definitions of the bundle items

Insertion bundle elements:

1. *Hand hygiene*: all hospital personnel who take part actively in inserting the central venous catheter (CVC) must disinfect their hands.
2. *Precautions during insertion*: the patient is covered with a sterile drape to at least 80%, including the head and hair when inserting in the jugular or subclavian vein, and the clinician and assistants wear sterile gowns and gloves, a hat, and a mouth nose mask.
3. *Disinfection of the skin*: the skin should be disinfected with 0.5% chlorhexidine in 70% alcohol before insertion.
4. Selection of insertion site: choose the most optimal insertion site in descending preference: (1) v. subclavian, (2) v. jugular, (3) v. femoral. Deviation of this preferred order is accepted when documented.

Maintenance bundle elements:

5. *Daily check on indication*: every day it should be checked that the indication for the CVC is still valid; otherwise, the CVC should be removed within 24 h.
6. *Daily check on insertion site*: Every day the insertion site should be checked for infection symptoms; when there are infection symptoms, the CVC should be removed within 24 h.

The Effectiveness of Bundle Applications in the Prevention of Central Line-associated Bloodstream Infections: Nine Years of Observation.

Bahar Madran¹ , Şiran Keske^{2,3} , Veli Oğuzalp Bakır⁴ , Önder Ergönül^{2,3} 



Eda Polat,
İkbal Çavdar



ABSTRACT

Objective: This study aimed to assess the effectiveness of chlorhexidine-impregnated dressing in a bundle of interventions to reduce the rate of central line-associated bloodstream infections (CLABSIs).

Materials and Methods: We performed a bundle of interventions to reduce the CLABSIs from 2012. As one bundle component, we started using the chlorhexidine impregnated catheter dressing. We used a document describing applying central venous catheters for the practicing physicians and nurses, and we organized several educational meetings. An interrupted time-series analysis was performed.

Results: Seventy-six CLABSI events were detected in total between January 1, 2011, and December 31, 2019. Twenty-six cases were detected in the pre-intervention period (January 1, 2011, to December 31, 2011), and 50 patients were seen in the post-intervention term (January 1, 2012, to December 31, 2019). The annual CLABSI rate was 2.60/1000 catheter days in the pre-intervention period and 0.46/1000 catheter days ($p=0.0328$) in the post-intervention period. The CLABSI rate among hematology-oncology inpatients decreased from 3.39 to 0.71 ($p=0.0101$) in the same term.

Conclusion: By using bundle form including chlorhexidine impregnated dressing, the rate of CLABSIs decreased significantly. This effect has been observed consistently for nine years, and the clinical pathway use has become the standard care protocol.

Keywords: Chlorhexidine, bundle, central line-associated bloodstream infections.

The Impact of Care Bundle Approach in Preventing Central Line-associated Bloodstream Infections in Surgical Intensive Care Units

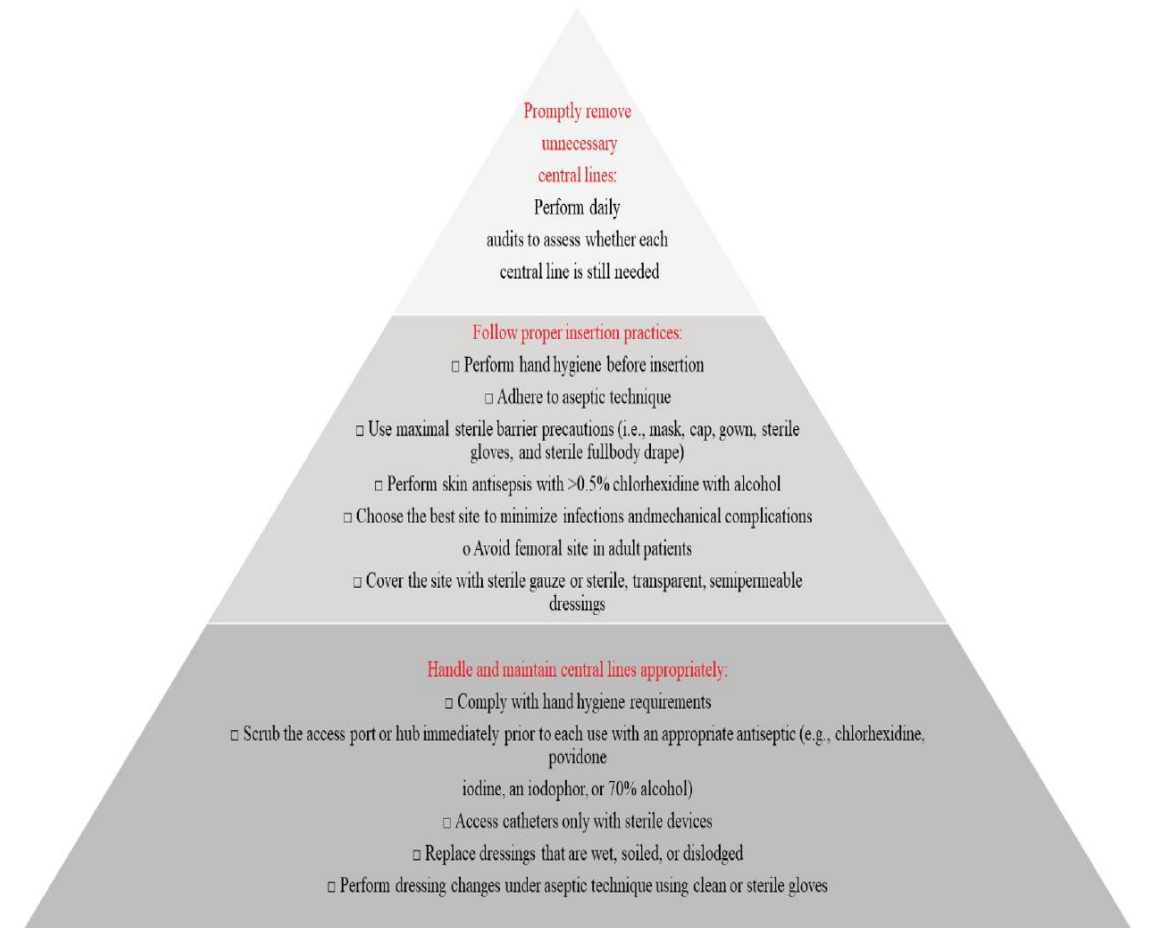


Figure 1. Contents of care bundle

Prevention of Central-Line Associated Bloodstream Infections: 2021 Update

Infect Dis Clin N Am 35 (2019) 1000–1010

DOI: 10.1016/j.idc.2019.09.001, Mark E. Rupp, MD, Kelly A. Cawcutt, MD, MS*

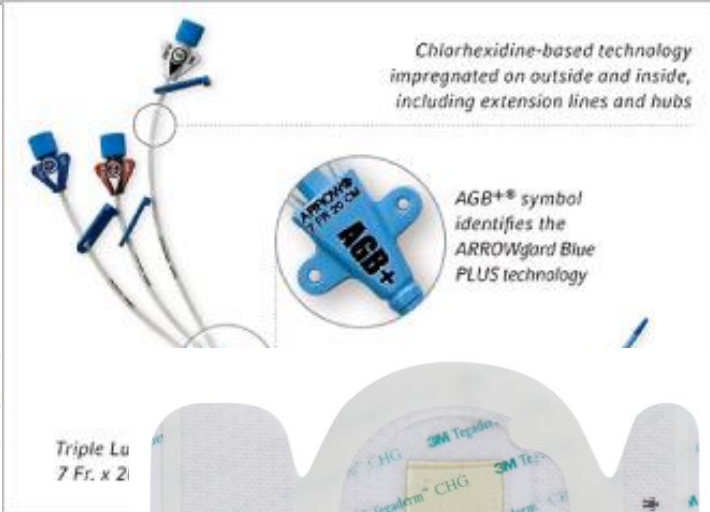


Table 1

Evidenced-based practices for prevention of vascular access catheter infections

Pericatheter Insertion

Devices and Technology

Appropriate staffing	Antimicrobial catheter coatings
Education and training	Chlorhexidine impregnated dressings
Maximal sterile barriers	Passive port protectors
Insertion site selection	Silver-impregnated connectors
Cutaneous antiseptics	Sutureless catheter securement
Insertion checklist	Antimicrobial catheter locks
Bundle approach	

Postcatheter insertion

- Scrub the hub
- Chlorhexidine patient bathing
- De-escalation of unneeded catheters
- Catheter dressing maintenance
- Bundled approach



REVIEW

Open Access



Expert consensus-based clinical practice guidelines management of intravascular catheters in the intensive care unit

Jean-François Timsit^{1,2}, Julien Baleine³, Louis Bernard⁴, Silvia Calvino-Gunther⁵, Michael Darmon⁶, Jean Dellamonica⁷, Eric Desruennes^{8,9}, Marc Leone¹⁰, Alain Lepape^{11,12}, Olivier Leroy^{13,14}, Jean-Christophe Lucet^{15,16}, Zied Merchaoui¹⁷, Olivier Mimoz^{18,19,20}, Benoit Misset²¹, Jean-Jacques F... Jean-Pierre Quenot^{24,25,26}, Antoine Roch^{27,28}, Matthieu Schmidt^{29,30}, Michel Slama³¹, Bertrand Sou... Jean-Ralph Zahar^{33,34}, Walter Zingg³⁵, Laetitia Bodet-Contentin³⁶ and Virginie Maxime^{37*}

Table 2 Strategies proposed by experts to allow a reduction of catheter-related infections

For the catheter insertion	During catheter care
Hand hygiene	Hand hygiene
Maximum hygiene and asepsis measures (cap, mask, sterile gown, sterile gloves, large sterile fields)	Regular inspection of catheter site Change semipermeable dressing at time of detachment, s...
2% Chlorhexidine-alcohol for skin antiseptis	Change of tubing a... Disinfect valves bet... compress or an a... Remove the cathet...

First field: prevention

R1.1—To decrease the risk of central venous catheter-related infection, the subclavian vein should be used rather than the jugular or femoral vein, in the absence of contraindication. This recommendation does not apply to venous catheters used for renal replacement therapy.

GRADE 1+ STRONG CONSENSUS

Second field: surveillance

R2.1—The experts suggest that the incidence of catheter-related infections is decreased when the intensive care unit is part of a surveillance network.

EXPERT OPINION

REVIEW

A state of the art review on optimal practices to prevent, recognize, and manage complications associated with intravascular devices in the critically ill



Jean-François Timsit^{1,2*}, Mark Rupp^{3,4}, Emilio Bouza^{5,6,7}, Vineet Chopra⁸, Tarja Kärpänen⁹, Kevin Laupland¹⁰, Thiago Lisboa^{11,12}, Leonard Mermel^{13,14}, Olivier Mimoz^{15,16,17}, Jean-Jacques Parienti^{18,19}, Garyphalia Poulakou²⁰, Bertrand Souweine^{21,22} and Walter Zingg²³

Essential components of bundles of care

Insertion and maintenance bundles have been developed to prevent microbial colonization of central venous catheters, thereby mitigating risk of CRBSI. **Implementation of such bundles has been demonstrated to reduce the incidence of CLABSI by 52%** (95% CI 32–66%) on the basis of high-quality studies [109]. Examples of some

Box 2: Key elements of prevention of catheter-related infection

Hand hygiene.

Strict aseptic surgical condition at catheter insertion.

Preferential use of **subclavian venous** and radial arterial insertion sites.

Avoidance of insertion and immediate removal of unnecessary catheters.

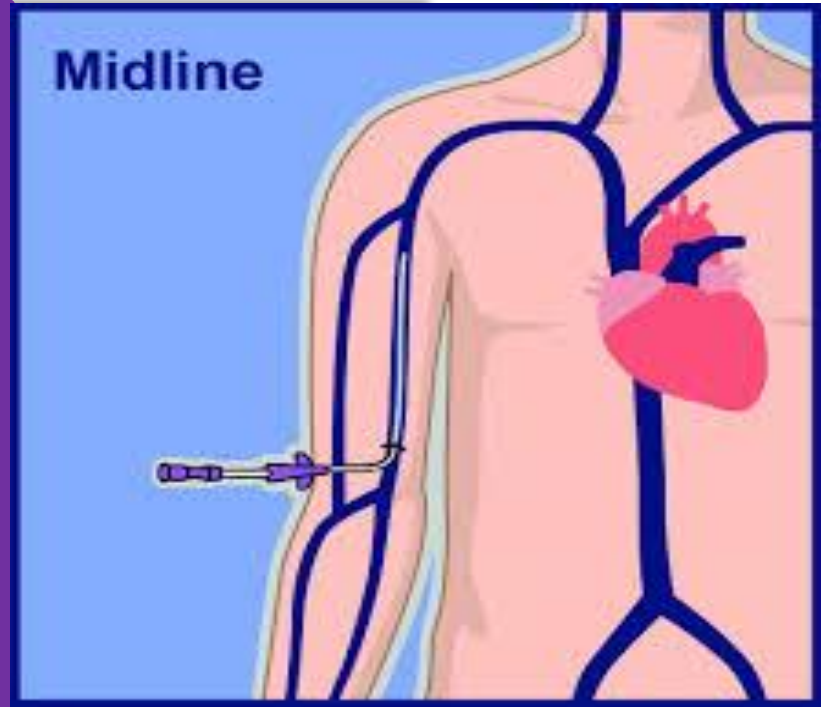
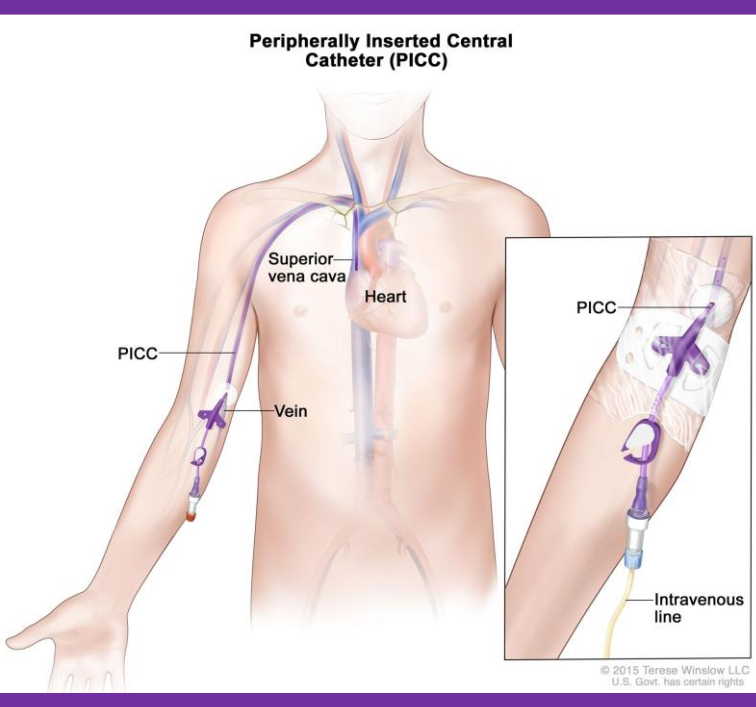
Immediate replacement of soiled, moistened, or detached catheter dressings.

Use of alcoholic 2% chlorhexidine gluconate for skin antisepsis and catheter care.

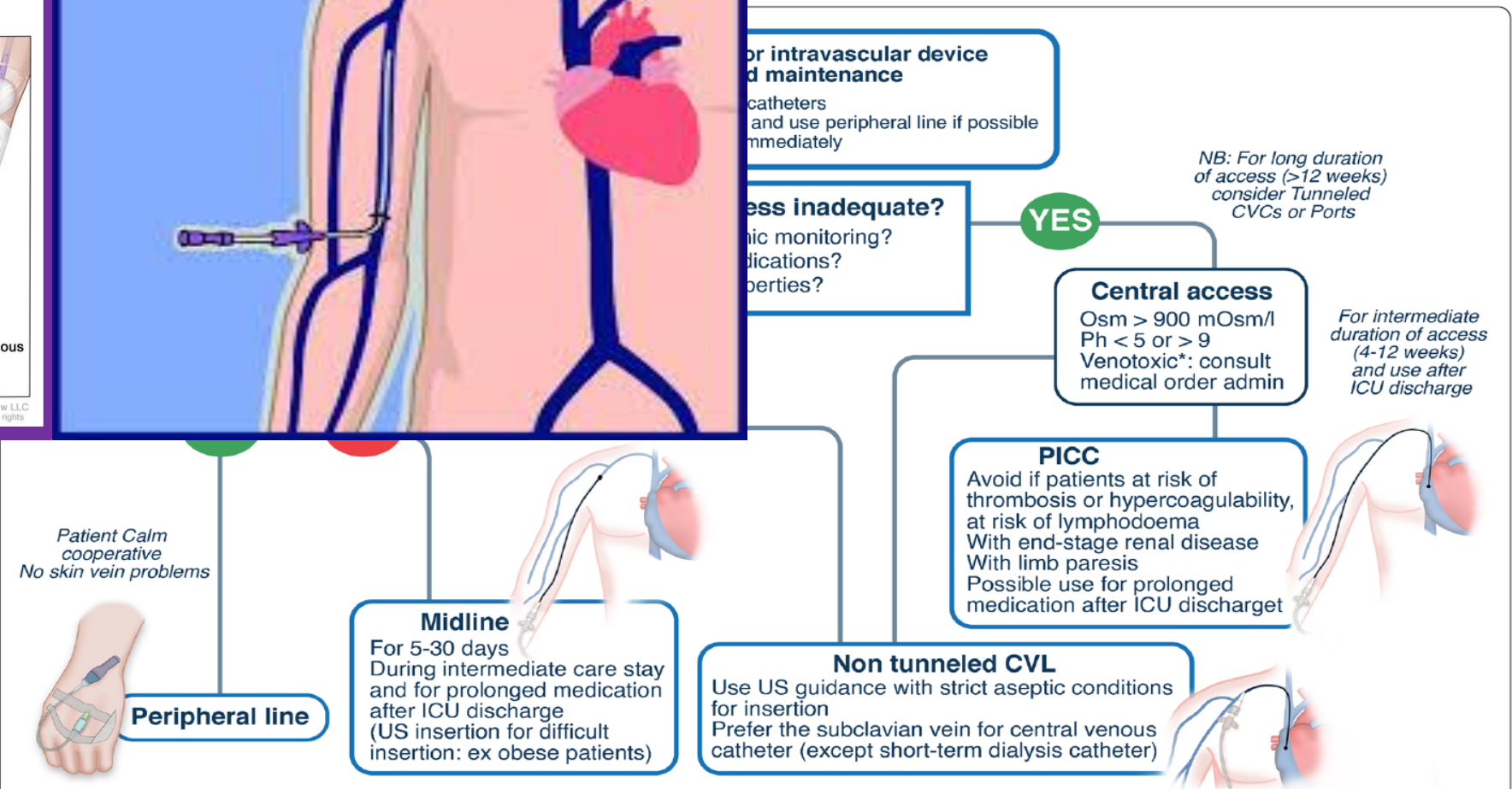
Institution of a **continuous quality improvement program.**

Audit and feedback of the process of care, infection rates, and periodic re-education of providers.

The use of CHG-impregnated dressings or antimicrobial-impregnated catheters should be limited to situations where a continuous quality improvement program failed.



SVK kullanımını %70
 PICC veya midline kateter?
 Eğitim ve kontrol listeleri
 Demetler
 Sürekli takip



Key measures for <u>catheter-related infection prevention</u>	
Insertion: <ul style="list-style-type: none"> •Clean the skin with 2% alcoholic chlorhexidine •Use full sterile barrier precaution during central venous and arterial catheter insertion •Use chlorhexidine-gel dressing for central line dressings 	Maintenance: <ul style="list-style-type: none"> •Inspect the catheter insertion site and discuss the need to maintain the catheter daily •Rubbing your hands with a hydro-alcoholic solution before each catheter manipulation •Change tubing every 4 to 7 days (every 24h after blood product or lipid emulsion administration) •Change dressing every day 7 or immediately if non-adherent, soiled or moistened

Fig. 1 Key considerations for intravenous insertion and maintenance. CVL, central venous line; PICC, peripherally inserted central vein catheter

FAST HUGS BID

FAST



BID

	For medical patient	For surgical patient
F	Feeding	Feeding (NBM, enteral, TPN)
A	Analgesia	Analgesia (VAS score)
S	Sedation	Sensorium (GCS, Ramsay sedation score)
T	Thromboprophylaxis	Thromboprophylaxis, temperature, tubes
H	Head-up	Head-up/hemodynamics
U	Ulcer prophylaxis	Ulcer prophylaxis, urine output
G	Glycemic control	Glycemic control
S	Spontaneous breathing trial	Supplement O ₂ (mask, NIV, high flow O ₂)
B	Bowel movement	Bowel (ileus/gastroparesis/distension/bowel movement)
I	Indwelling catheter	Indwelling catheter (CVC, A-line, epidural, Foleys), imbalance (electrolyte, cumulative fluid)
D	Drug de-escalation	Drugs (de-escalation, number of days), delirium

SKİ-KDE Önlem Stratejileri

- YB hastalarında SVK çoğu zaman gerekli ancak ihtiyaç günlük sorgulanmalı, periferik katetere de-eskalasyon planlanmalı
- SKİ-KDE mort&morb ilişkili ve önlenabilir sağlık hizmeti ilişkili enfeksiyonlar
- SVK takılması ve bakımında önlem demetlerinin uygulanması faydalı
- Düzenli eğitim ve süreç uyumu izlenmeli, veri analizi sonrası geribildirim (Multimodal yaklaşım)
- YBÜ sürveyans ağının bir parçası olmalı

Önlem demetleri



Eğitim



SKİ-KDE sürveyansı

Önerilere uyumun monitörizasyonu



SKİ-KDE hızlarının raporlanması



Performans geribildirimi



Multidisipliner takım

