# RECOMENDACIONES DE SOCIEDADES CIENTÍFICAS PARA USO DE APÓSITOS CON GLUCONATO DE CLORHEXIDINA Y TAPAS DE DESINFECCIÓN PASIVA PARA REDUCCION DEL RIESGO DE CABSI (Catheter-Associated Bloodstream Infection)

## 1) Uso De Apósitos Con Gluconato De Clorhexidina



Las siguientes son recomendaciones y estrategias de las sociedades científicas basadas en la evidencia actual disponible p mejorar la práctica clínica en para la reducción del riesgo de infecciones en torrente sanguíneo relacionada con los accesos vasculares centrales(CABSI) las cuales deberían estar incorporadas a los protocolos de inserción y mantenimiento de accesos vasculares centrales.

### 1. Centers for Disease Control and Prevention (CDC)

En las guías en prevención de infecciones relacionadas con catéteres intravasculares 2017 recomiendan:

*Use a chlorhexidine-impregnated sponge dressing for temporary short-term catheters in patients older than 2 months of age if the CLABSI rate is not decreasing despite adherence to basic prevention measures, including education and training, appropriate use of chlorhexidine for skin antisepsis[93, 96–98]. Category 1A*

Use un apósito de esponja impregnado con clorhexidina para catéteres temporales a corto plazo en pacientes mayores de 2 meses de edad si la tasa de CLABSI no disminuye a pesar del cumplimiento de las medidas de prevención básicas, incluida la educación y la capacitación, el uso apropiado de clorhexidina para la antisepsia de la piel [93, 96-98]. Categoría 1A

| Recomendación | Evidencia | # De Estudios | Comentarios |
|---|---|---|---|
| "Utilice un apósito impregnado con clorhexidina esponja para catéteres temporales a corto plazo" | IA | *93, 96–98* | ECC multi centro doble ciego n=2095<br>HR: 0,24 IC95%0,09-0,65<br>ECC multi centro<br>N=705 neo<br>HR: 0,6 IC95% 0,5-0,9<br>Meta-análisis ECC(#8)<br>OR: 0,58 IC95% 0,29-1,14 NS<br>ECC 145<br>RR col: 0,61 IC95% 0,31-1,02 |

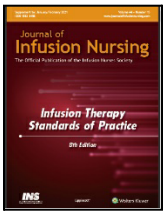

- Timsit JF, Schwebel C, Bouadma L, et al. Chlorhexidine-impregnated sponges and less frequent dressing changes for prevention of catheter-related infections in critically ill adults: a randomized controlled trial. JAMA 2009; 301:1231–41.
- Garland JS, Alex CP, Mueller CD, et al. A randomized trial comparing povidone-iodine to a chlorhexidine gluconate-impregnated dressing for prevention of central venous catheter infections in neonates. Pediatrics 2001; 107:1431–6.

- Levy I, Katz J, Solter E, et al. Chlorhexidine-impregnated dressing for prevention of colonization of central venous catheters in infants and children: a randomized controlled study. Pediatr Infect Dis J 2005; 24:676–9.

**2. Sociedad de Enfermeras de Infusión (INS) – Estándares de práctica de la terapia de infusión – 2021**

Gorski LA, Hadaway L, Hagle ME, et al. Infusion therapy standards of practice. J Infus Nurs. 2021;44(suppl 1):S1-S2[illegible] doi:10.1097/NAN.00000000000






**Estándar 36 "Conectores Libres de Aguja" (S104- S105)**

**Standard 42. vascular access device assessment, care, and dressing changes**

Practice Recommendations

*K.3. Use chlorhexidine-impregnated dressings for all patients 18 years and older with short-term nontunneled CVADs. Use for arterial catheters and other CVADs when all other CABSI prevention strategies have proven ineffective. Use with caution among patients with fragile skin and/or complicated skin pathologies; monitor for erythema and dermatitis at the dressing site (I)*

*a. For premature neonates, chlorhexidine-impregnated dressings are not recommended to protect the site of short-term, nontunneled CVADs due to the risk of serious adverse skin reactions*

*b. For pediatric patients less than 18 years and nonpremature neonates, no recommendation can be made about the use of chlorhexidine-impregnated dressings to protect the site of short-term, nontunneled CVADs due to the lack of enough evidence. More large clinical trials are needed to confirm the clinical efficacy and safety in this patient population*

**Estándar 42 Dispositivo de acceso vascular (DAV) evaluación, cuidado, y cambios de apósito.**

Recomendaciones de práctica

K. 3 Use apósitos impregnados con clorhexidina para todos los pacientes de 18 años o más con DAVC sin túnel a corto plazo. Úselo para catéteres arteriales y otros DAVC cuando todas las demás estrategias de prevención de CABSI hayan demostrado ser ineficaces. Usar con precaución en pacientes con piel frágil y / o patologías cutáneas complicadas; controlar el eritema y la dermatitis en el sitio del apósito (I).

a. Para los recién nacidos prematuros, no se recomiendan los apósitos impregnados con clorhexidina para proteger el sitio de DAVC no tunelizados a corto plazo debido al riesgo de reacciones cutáneas adversas graves.

b. Para pacientes pediátricos menores de 18 años y recién nacidos no prematuros, no se puede hacer ninguna recomendación sobre el uso de apósitos impregnados con clorhexidina para proteger el sitio de DAVC a corto plazo no tunelizados debido a la falta de evidencia suficiente. Se necesitan ensayos clínicos más amplios para confirmar la eficacia clínica y la seguridad en esta población de pacientes.

- Safdar N, O'Horo JC, Ghufran A, et al. Chlorhexidine-impregnated dressing for prevention of catheter-related bloodstream infection: a meta-analysis. Crit Care Med. 2014;42(7):1703-1713. doi:10.1097/ CCM.0000000000000319

- Loveday HP, Wilson JA, Prieto J, Wilcox MH. epic3: revised recommendation for intravenous catheter and catheter site care. J Hosp Infect. 2016;92(4):346-348. doi:10.1016/j.jhin.2015.11.011
- Talbot TR 3rd, Stone EC, Irwin K, et al. 2017 Recommendations on Use of Chlorhexidine-Impregnated Dressings for Prevention of Intravascular Catheter-Related Infections. Centers for Disease Control and Prevention, National Center for Emerging and Zoonotic Infectious Diseases, Division of Healthcare Quality and Promotion; 2017. https:// www.cdc.gov/infectioncontrol/pdf/guidelines/c-i-dressings-H.pdf
- Düzkaya DS, Sahiner NC, Uysal G, Yakut T, Çitak A. Chlorhexidine impregnated dressings and prevention of catheter-associated bloodstre infections in a pediatric intensive care unit. Crit Care Nurse. 2016;36(6):e1-e7. doi:10.4037/ccn2016561
- Levy I, Katz J, Solter E, et al. Chlorhexidine-impregnated dressing for prevention of colonization of central venous catheters in infants and children: a randomized controlled study. Pediatr Infect Dis J. 2005;24(8):676-679. doi:10.1097/01.inf.0000172934.98865.14




### 3. Sociedad Epidemiológica para el Cuidado de la Salud EEUU (SHEA/IDSA)

Emitieron guías de práctica clínica para asistir a los hospitales de cuidados agudos en la implementación y priorización de la prevención de CLABSI, las estrategias especiales para prevenir CLABSI incluyen el uso de " apósitos que contienen clorhexidina"

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

Update Author(s): Jonas Marschall, MD; Leonard A. Mermel, DO, ScM; Mohamad Fakih, MD, MPH; Lynn Hadaway, MEd, RN, BC, CRNI; Alexander Kallen, MD, MPH; Naomi P. O'Grady, MD; Ann Marie Pettis, RN, BSN, CIC; Mark E. Rupp, MD; Thomas Sandora, MD, MPH; Lisa L. Maragakis, MD, MPH; Deborah S. Yokoe, MD, MPH Source: Infection Control and Hospital Epidemiology, Vol. 35, No. 7 (July 2014), pp. 753-771 Published by: The University of Chicago Press on behalf of The Society for Healthcare Epidemiology of America Stable URL: http://www.jstor.org/stable/10.1086/676533

*Use chlorhexidine-containing dressings for CVCs in patients over 2 months of age (quality of evidence: I).*[80,155-160]

Use apósitos que contengan clorhexidina para CVC en pacientes mayores de 2 meses de edad (calidad de la evidencia: I)


- Garland JS, Alex CP, Mueller CD, et al. A randomized trial comparing povidone-iodine to a chlorhexidine gluconate impregnated dressing for prevention of central venous catheter infections in neonates. *Pediatrics* 2001;107(6):1431–1436.
- Levy I, Katz J, Solter E, et al. Chlorhexidine-impregnated dressing for prevention of colonization of central venous catheters in infants and children: a randomized controlled study. PediatrInfect Dis J 2005;24(8):676–679.
- Timsit JF, Mimoz O, Mourvillier B, Souweine B, Garrouste-Orgeas M et al. Randomised controlled trial of chlorhexidine dressing and highly adhesive dressing for preventing CRBSIs in critically ill adults, Am J Resp Crit Care Med. 2012: 186(12): 1272-1278.


### 4. Guías NICE (Instituto Nacional Para la Salud y la Excelencia Clínica de Reino Unido) 2015

*Estimates of the population for Tegaderm CHG based on adult intensive care episodes needing a central venous or arterial catheter vary from around 88,000 to 226,000 depending on whether episodes longer than 48 hours, or all episodes, are used. Based on these estimates, if the use of Tegaderm CHG became standard practice, it has the potential to save the NHS in England between £4.2 million and £10.8 million each year, assuming the baseline catheter-related bloodstream infection rate is 1.48 per 1000 catheter days.*

Guías NICE 2015 indican que la adopción del apósito de aseguramiento Tegaderm™ CHG IV, para sitios de inserción de catéteres centrales venosos y arteriales está respaldada por la evidencia [12]

Ahorro de costos estimado del uso de Tegaderm™ CHG versus apósitos transparentes semipermeables $114 (USD) por paciente

La integración de Tegaderm™ CHG a la práctica estándar tiene el potencial de ahorrarle al Servicio Nacional de Salud Inglaterra entre £4.2 millones - £10.8 millones cada año*;



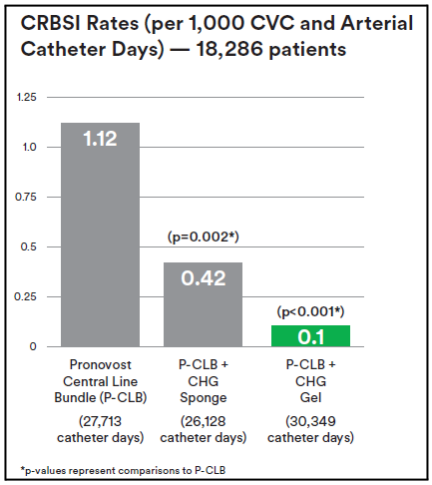
**Estudios Real World Data**

**Sustained reduction of catheter-related associated bloodstream infections with enhancement of catheter bundle by chlorhexidine dressings over 11 years**

https://rd.springer.com/article/10.1007%2Fs00134-019-05617-x

**Aspectos destacados del estudio**

- Otro estudio que apoya el uso de Tegaderm CHG en todos los catéteres de pacientes en UCI
- 11 años, más de 18mil pacientes, 155mil días de catéter: el uso de TCHG con el paquete de CVC tradicional condujo a una reducción sostenida de las ITSRC.
- Oportunidad de mejorar las tasas de CRBSI incluyendo TCHG a un paquete de CVC tradicional.




**Diseño**

Estudio Real World Data de 11 años que mide las infecciones del torrente sanguíneo asociadas a catéteres venosos y arteriales centrales de 2006 a 2014. 35 camas en UCI.

**Intervención**

- Sin apósitos de CHG
- Con apósitos esponjas de CHG
- Con apósitos gel de CHG

**Resultados**

- **Sin apósitos de CHG:** 1.12 CRBSI Densidad de incidencia
- apósitos esponjas de CHG: 0.42 CRBSI Densidad de incidencia (p=0.002)
- apósitos gel de CHG : 0.10 CRBSI Densidad de incidencia (p=<0.001)
- 155,242 días catéter (2006 – 2014)
- 91,292 días de UCI
- n=18,286 total de pacientes
- Yugular, Subclavios, femoral, arterial (incluyendo diálisis y catéteres cardíacos)
- Tasa de eventos adversos: 0,3 / 1000 días dispositivo desde marzo de 2012 hasta mayo de 2013 para los apósitos de gel y esponja CHG (Next Gen).
- Eggimann P, Pagani JL, Dupuis-Lozeron, et al. Sustained reduction of catheter-associated bloodstream infections with enhancement of catheter bundle by chlorhexidine dressings over 11 years. *Intensive Care Med.* 2019. online edition ahead of print. (https ://doi.org/10.1007/s0013 4-019-05617 -x)

- Pronovost P. Needham D, Berenholtz a et al. *An Intervention to decrease catheter-related bloodstream infections in the ICU.* N Engl J Med. 2006. 355: 2725-2732. (modern bundle: hand hygiene, full barrier precautions, CHG skin antiseptic, avoidance of femoral site, and removal of catheter when clinically indicated).
- Timsit JF, Mimoz O, Mourvillier B, Souweine B, Garrouste-Orgeas M et al. Randomised controlled trial of chlorhexidine dressing and highly adhesive dressing for preventing CRBSIs in critically ill adults, *Am J Resp Crit Care Med.* 2012: 186(12): 1272-1278.



**2) Desinfección de puertos y conectores**

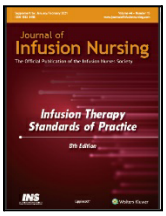
Un estudio informó que el 31% de los Enfermeros NO desinfecta los conectores libres de aguja antes de acceder a ellos

- Karchmer TB, Cook EM, Palavecino E, et al. Needleless valve ports may be associated with a high rate of catheter-related bloodstream infection [abstract]. In: Program of the 15th Annual Meeting of the Society for Healthcare Epidemiology of America (Los Angeles, CA). Washington, DC: Society for Healthcare Epidemiology of America, 2005. 307

Un estudio realizado en Brasil a través de prácticas seleccionadas encontró sólo un 38,7% de cumplimiento de la desinfección

- J. M. Jardim, R. A. Lacerda, N. D. J. D. Soares, and B. K. Nunes, "Evaluation of practices for the prevention and control of bloodstream infections in a government hospital," Revista da Escola de Enfermagem, vol. 47, no. 1, pp. 38–45, 2013.

1. **Sociedad de Enfermeras de Infusión (INS) – Estándares de práctica de la terapia de infusión – 2021**
   Gorski LA, Hadaway L, Hagle ME, et al. Infusion therapy standards of practice. *J Infus Nurs*. 2021;44(suppl 1):S1-S224. doi:10.1097/NAN.00000000000




**Estándar 36 "Conectores Libres de Aguja" (S104- S105)**

**Practice Recommendations**

G.2. Perform passive disinfection by applying a cap or covering containing a disinfectant agent (eg, 70% isopropyl alcohol, iodinated alcohol) to create a physical barrier to contamination between uses. Follow manufacturers' directions for use regarding time for effectiveness after attachment and the maximum length of effectiveness. Once removed, discard used disinfection caps and do not reattach to the needleless connector. Use multidisciplinary implementation strategies including staff education and leadership support and provide consistent feedback to staff regarding outcomes, as this has been shown to decrease catheter-associated bloodstream infection (CABSI) rates.[28,34-36] **(I)**

**Recomendaciones de práctica**

Realice la desinfección pasiva aplicando una tapa que contenga un agente desinfectante (por ejemplo, alcohol isopropílico al 70%, alcohol yodado) para crear una barrera física a la contaminación entre usos. Siga las instrucciones de uso de los fabricantes con respecto al tiempo de efectividad después de la colocación y la duración máxima de efectividad. Una vez retiradas, deseche las tapas de desinfección usadas y no vuelva a colocarlas en el conector sin aguja. Utilice estrategias de implementación multidisciplinarias, incluida la educación del personal y el apoyo de liderazgo, y brinde retroalimentación constante al personal con respecto a los resultados, ya que se ha demostrado que esto reduce las tasas de infección del torrente sanguíneo asociada al catéter (CABSI) 28,34-36 **(I)**

- Moureau NL, Flynn J. Disinfection of needleless connector hubs: clinical evidence systematic review. Nurs Res Pract. 2015;2015:796762.doi:10.1155/2015/796762
- Voor In 't Holt AF, Helder OK, Vos MC, et al. Antiseptic barrier cap effective in reducing central line-associated bloodstream infections: a systematic review and meta-analysis. Int J Nurs Stud. 2017;69:34-40. doi:10.1016/j.ijnurstu.2017.01.007
- Beeler C, Kerley D, Davis C, et al. Strategies for the successful implementation of disinfecting port protectors to reduce CLABSI in a la tertiary care teaching hospital. Am J Infect Control. 2019;47(12):1505-1507. doi:10.1016/j.ajic.2019.05.016
- Inchingolo R, Pasciuto G, Magnini D, et al. Educational interventions alone and combined with port protector reduce the rate of centralvenous catheter infection and colonization in respiratory semi-intensive care unit. BMC Infect Dis. 2019;19(1):215. doi:10.1186/s12879-019-3848-z




**2. Joint Commission 07.04.01:**

"Implemente Prácticas basadas en Evidencia para Prevenir Infecciones del Torrente Sanguíneo" 07.04.01: "Use un protocolo estandarizado para desinfectar los conectores libres de Aguja antes de acceder al Puerto"

**3. Sociedad Epidemiológica para el Cuidado de la Salud EEUU (SHEA/IDSA)**

- "Use un Puerto con antiséptico/ tapa protectora para cubrir los conectores" (Calidad de la Evidencia: 1- nivel más alto)

**Criterio de Práctica**

*Recognize that needleless connectors are potential sites for intraluminal microbial contamination and require careful adherence to infection prevention practices. There is no consensus on the design or type of needleless connector to prevent or reduce*

Reconozca que los Conectores Libres de aguja son puertas de entrada potencial para la contaminación intraluminal y requieren adherencia cuidadosa a las Prácticas de Prevención (Nivel IV)

*Ensure that disinfecting supplies are readily available at the bedside to facilitate staff compliance with needleless connector disinfection. 14,36*

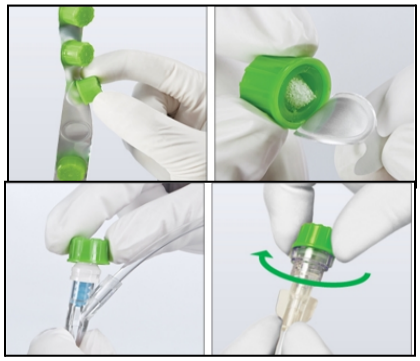
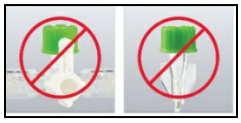
G: I: Asegúrese de que los suministros para la desinfección estén disponibles en la cabecera del paciente para facilitar el cumplimiento por parte del personal (Nivel V)

**Características de los tapones desinfectantes para conectores y recomendaciones de uso**

- Agente Químico: Alcohol Isopropílico (IPA) al 70% en un tapón (espuma)
- Actúa como desinfectante y Barrera física entre accesos al puerto
- Puede permanecer hasta por 7 días- mientras no sea removido
- Vida útil: 3 años
- Libre de Látex/ Aprobado por la FDA

- Uso único



| Tipo de Tapón Desinfectante | Procedimiento |
|---|---|
| **Tapón Desinfectante para Conectores Libres de Aguja**<br>  | **Indicación :** Descontaminación SOLO conectores libres de aguja<br>1. Lavado de manos<br>2. Despréndalo de la tira o del sello de aluminio<br>3. Para fijar el tapón a un conector libre de aguja empuje y enrosque en sentido de las manecillas del reloj hasta que ajuste en su lugar<br>4. El tapón desinfectara el conector libre de aguja en 1 minuto<br>5. El tapón desinfectante puede proteger hasta por 7 días si no es removido<br>6. Evite reusar los tapones, remplácelo con uno nuevo tras cada acceso a la línea<br>7. Evite colocar las tiras en los bolsillos del uniforme!<br>8. Precaución : NO usar Curos™ Tapón Desinfectante para Conectores Libres de aguja en conectores hembra (llaves de 3 vías conos del de hemodiálisis  o |
| **Tapón Desinfectante para Conectores Luer Macho**<br>   | **Indicación :** Descontaminación conectores Luer macho<br>(Equipos de bomba, , macro o microgoteo)<br>1. Lavado de manos<br>2. Despréndalo de la tira<br>3. No contiene espuma<br>4. Retraiga la rosca luer, empuje y gire hasta llegar al fondo del conector macho asegure<br>5. El tapón desinfectara el conector libre de aguja en 1 minuto<br>6. El tapón desinfectante puede proteger hasta por 7 días si no es removido<br>7. Si el conector luer macho esta visiblemente sucio (residuos de sangre) se deberá limpiar con un toallin estéril antes de conectar el tapón desinfectante<br>8. Evite reusar los tapones<br>9. Evite colocar las tiras en los bolsillos del uniforme! |
| **Tapón desinfectante para conectores Luer Hembra**<br>  | **Indicación :** Descontaminación conectores hembra ( Llave de tres vías y conos de catéteres de hemodiálisis) |

| | |
|---|---|
| | 1. Lavado de manos<br>2. Despréndalo de la tira<br>3. No contiene espuma<br>4. Para fijar el tapón a un conector hembra empuje y ajuste en sentido de la manecillas del reloj hasta que ajuste en su lugar<br>5. El tapón desinfectara el conector libre de aguja en 1 minuto<br>6. El tapón desinfectante puede proteger hasta por 7 días si no es removido<br>7. Evite reusar los tapones<br>8. Evite colocar las tiras en los bolsillos del uniforme! |



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