

Evidence-Based Fact Sheet To Improve Care Chloraprep® for Skin Antisepsis



Presented in collaboration by the following PVAMC Committees:
Nursing Clinical Practice Committee, Nursing Education and Staff Development, and Infection Control

What is Chloraprep®?

- ◆ Skin antiseptic composed of 2% Chlorhexidine gluconate (CHG) and 70% isopropyl alcohol
- ◆ Supplied in 3 sizes of disposable applicators:
(10.5 ml for Cardiac Cath lab & Interventional Radiology only)
- ◆ Replaces Povidone – Iodine Swabsticks, 2 x2 pads will continue to be available if Chloraprep® can not be used.



What are advantages over Povidone – Iodine?

- ◆ Broad spectrum antimicrobial which achieves greater reductions in skin microflora
- ◆ Greater residual activity – persists for 48 hours
- ◆ Not inactivated by blood or serum proteins
- ◆ Less skin irritation
- ◆ Clear solution allows for unobstructed visualization
- ◆ Category IA recommendation by CDC Guidelines for Prevention of Intravascular Catheter-Related Infections for cutaneous antisepsis*

Ease of Use:

- ◆ One-step, back and forth, friction scrubbing application without worry of site contamination
- ◆ Dries quickly

Chloraprep® is used for:

Skin Antisepsis

- ◆ Blood cultures
- ◆ Peripheral IV starts
- ◆ Central line starts
- ◆ Central line care
- ◆ Accessing implanted central lines
- ◆ Accessing dialysis fistulas
- ◆ Therapeutic phlebotomy
- ◆ Small biopsies, minor procedure prep
- ◆ Closed surgical incisions
- ◆ Orthopedic pin placement and maintenance
- ◆ G-tube or chest tube site care

Do NOT use Chloraprep® for:

- ◆ Routine blood draws
- ◆ IV line access
- ◆ Lumbar punctures (Can not contact CSF)
- ◆ Epidural care
- ◆ Foley care or placement
- ◆ Open wounds or non intact skin
- ◆ Anything near eyes or ears

Evidence Base

References:

1. Allen G. Evidence for Practice: Iodophors for preoperative skin preparation. *AORN Journal*. 2002; 76 (4): 698.
2. Centers for Disease Control and Prevention. Guidelines for the Prevention of Intravascular Catheter-Related Infections. *MMWR* 2002; 51 {No. rr-10:inclusive page numbers.}
- * Category IA recommendations are strongly recommended for implementation and strongly supported by well-designed experimental, clinical, or epidemiological studies.
3. Mimos, O, Karim A, Mercat A. Chlorhexidine compared with povidone-iodine as skin preparation before blood culture: a randomized, controlled trial. *Annals of Internal Medicine* 1999; 131:834 –837.

PVAMC Experience: Implementation of Chloraprep® for Central line placement and care in the ICU was an intervention instrumental in decreasing central line associated bloodstream infection rate consistently below the National Nosocomial Infection Surveillance Benchmark for comparable ICU settings. The lower infection rate has been sustained for one year. Infection Control Committee recommended implementation PVAMC wide.

Cost Avoidance:

- ◆ Cost of avoiding one bloodstream infection is estimated to be between \$34,000 - \$56,000. Use of Chloraprep for IV line care and skin care decreases risk of bloodstream infections related to skin flora.

Reference: Dimick, J, Pelz R, Consumji R. Increased resource use associated with catheter-related bloodstream infection in the surgical intensive care unit. *Archives of Surgery* 2001; 136: 229-34.)

- ◆ Decreasing blood culture contamination promotes appropriate antimicrobial usage; a key intervention for preventing antimicrobial resistance.

References: Waltzman, M, Harper, M. Financial and clinical impact of false-positive blood culture results. *Clinics in Infectious Diseases* 2001; 33:296-299.

Little, J. Russell, et al. A randomized trial of povidone-iodine compared with iodine tincture for venipuncture site disinfection: effects on rates of blood culture contamination *Am J Med*. 1999, 107:119-125.