

BD Surgiphor Antimicrobial Irrigation System

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Device

BD Surgiphor Antimicrobial Irrigation System is a pre-mixed, pre-labeled container holding a terminally sterile, dilute (0.5%) povidone-iodine solution.¹ According to manufacturers, this is the only ready to use, wound irrigation system currently available. The bottle holds 450 mL of a consistently concentrated solution, and is designed to be compressible, with a concave structure, enhancing user control and preventing rolling if it is knocked over. The pre-labeled bottle aligns with the National Patient Safety Goals from The Joint Commission and the solution is stated to meet the guidelines and recommendations for intraoperative irrigation.¹

Actions for Consideration

Partner: Identify the appropriate clinical and value analysis team members to assess with the review of this technology. Essential clinical team members may include those with specialized knowledge in the surgical specialty where this product is used. This may include orthopedic surgeons, operating room nurses, infection prevention specialists, and quality management.

Connect: A careful review of the potential benefit of this product is helpful. Connect with experts in nursing, as well as quality and performance improvement, to help obtain any infection metrics and/or tracking data. Collecting and reviewing data, including patient injury and any associated complications, will help to inform development strategies for prevention and care.

Communicate: If a change in utilization is recommended, ensure sharing of product education with all end users. This may include partnering with the supplier for training on new technology. A comprehensive communication plan that includes critical information and details on a product change will help ensure successful implementation. Robust knowledge and data sharing will not only enhance discussions, but may lead to actionable conversations between peers.

HealthTrust Resources: Access the [Clinical Knowledge Insights Library](#) to find checklists and toolkits with actionable information. Examples for this category include resources on product conversion, value analysis, and communication plans.² Network on the [HealthTrust Huddle](#), our member community that shares ideas and seeks guidance from colleagues.³

Professional Society Statements and Clinical Practice Guidelines

In their *Surgical Site Infection Prevention Recommendations*, The World Health Organization suggests irrigating incisional wounds with an aqueous povidone-iodine solution during the intraoperative period before closure (complete infographic found [here](#)).⁴

In their 2017 *Guideline for the Prevention of Surgical Site Infection*, the Centers for Disease Control and Infection suggest the use of intraoperative irrigation of both deep and subcutaneous tissue with aqueous iodophor solution (complete guideline found [here](#)).⁵

The American Academy of Orthopedic Surgeons indicates that irrigation of a surgical wound with a sterile dilute povidone-iodine (0.35% betadine) assists in the reduction of surgical site infection in both joint replacement and spine procedures (complete details found [here](#)).⁶

FDA Approval

BD Surgiphor Antimicrobial Irrigation System has an FDA 510(k) premarket approval (K221504; found [here](#)), and has an indication for use as follows:

“BD Surgiphor Antimicrobial Irrigation System is intended to mechanically loosen and remove debris and foreign materials, including microorganisms, from wounds.”⁷

Clinical Evidence

Evidence for this product is limited. However, information from ClinicalTrials.gov describes a current multicenter randomized controlled trial (estimated completion date 2025) studying Surgiphor and its role in reducing acute prosthetic joint infections for total hip and knee arthroplasty in the 90-day post-operative period (found [here](#)).⁸

- A literature review by Siddiqi et al. (2021) provides a general overview of the available antiseptic irrigation solutions, including their method of action, description of outcomes, and any complications. Povidone-iodine is described as a beneficial antiseptic with an ability to remove bacterial biofilms present in prosthetic joint infections. Complications included possibility of cytotoxic effects and patient-reported allergies, as examples. The authors noted the need for future clinical studies to determine the most effective irrigation solution. Consulting obligations were reported as potential conflicts of interest.⁹

Summary

Careful review and understanding of physician utilization, patient needs, cost, and product attributes will help determine direction and opportunity. Partnering with practitioners will guide discussions for indications, develop strategies to manage use, share transparency of pricing, and allow for more informed decision making.

References

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