

# Surgical Skin Preparation: Decision Guide

## Patient Assessment



**Is the patient less than 2 months old?**

Use an aqueous soap or saline solution



**Does the patient have any allergies to CHG or PI?**

If allergic to PI use CHG\*  
If allergic to CHG use PI\*

\*Either Aqueous or Alcohol solution based on the surgical site

## Surgical Site Assessment

### Eyes

Use PI in Aqueous  
Dilute solution 1:10

### Mouth

Use 0.12% CHG oral rinse



### Ears

Use PI in Aqueous



### Open Wound/Trauma

Use 0.9% warm saline

### Genitals

Use PI in Aqueous

### All other intact skin

Use CHG in Alcohol

**Always follow manufacturers instructions for use**

## Surgical Skin Preparation Selection

### Aqueous or Alcohol Based Solutions

Alcoholic skin preparations are more effective than aqueous solutions in the prevention of SSIs.

Expert guidance therefore supports the use of an alcohol-based skin preparation solution where possible.

Aqueous skin preparations should only be used when skin preparations containing alcohol are contraindicated.

### Chlorhexidine Gluconate (CHG) or Povidone Iodine (PI) Skin Preparation

Both PI and CHG are effective against a broad range of skin microorganisms and exert persistent activity that prevents regrowth for several hours after application.

Evidence for differences in efficacy between CHG and PI is currently limited, but tends to favour CHG.

### 0.5% or 2% CHG Solutions

Assumptions that a 2% solution is more effective have been made because of guidance related to intravenous (IV) devices.

Since an IV device remains in the skin for prolonged periods the conditions are not comparable.

Currently there is limited evidence for the enhanced efficacy of 2% solutions, over 0.5% solutions, in surgical skin preparation.

### Multi-Dose Bottles or Single-Use Applicators

Single-use applicators have been developed to minimise the risk of contamination and misuse associated with multi-dose bottles.

If multi-dose containers are used it is important to use aseptic technique during handling e.g. not touching the cap or inside neck of the bottle and label with the date of opening and used within a defined period, as recommended by the manufacturers.

If a single-use applicator is used, it should be discarded immediately.

Reference: OneTogether Surgical Skin Preparation Quality Improvement Resource, 2023

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