

A Comparison of the Application, Removal and Cost Effectiveness of Zinc Oxide Barrier Products

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Introduction

- Zinc Oxide is widely used as an incontinent barrier to soothe and protect damaged skin.
- Traditional Zinc Oxide barrier products are applied by hand (or “rubbed-on”) in a thick layer.
- Application of Zinc Oxide barrier products can be difficult and messy; with product wasted as it becomes caked onto gloves, bedding and clothing.
- An alternative is to use a Zinc Oxide spray to protect the skin, which permits a touchless application.

Aim

To investigate the application, removal, and cost effectiveness of two “rub-on” Zinc-Oxide barrier products, compared to a Zinc-Oxide protectant spray that permits a touchless “no-rub-on” treatment.

Method

The application and removal of a Zinc Oxide Protectant Spray (ZO1*) and two Zinc Oxide barrier protectant creams (ZO2**, ZO3***) was evaluated using a model of the sacral region measuring 8” x 11” (Figure 1)



Figure 1: Sacral model used during study

Evaluation involved a 10 person participant group, and was performed as follows:

Application

- 1) Each bottle / tube of protectant cream was weighed at the start of the study.
- 2) The study purpose was explained to each participant.
- 3) Each participant was instructed to read the ‘directions for application’ on the product labelling prior to application.
- 4) With gloved hands each product was applied liberally to the sacral model (Figure 2).
- 5) Each participant rated the effort to apply each product on a scale from 1-10; 1 = very easy, 10 = very difficult (Figure 3A).
- 6) The amount of product applied was determined by weighing the bottle / tube post application (Figure 3B)

Removal

- 1) The barrier cream was removed from the sacral wound model using dry paper towel. The same brand was used by each participant.
- 2) Each participant rated the effort to remove each product on a scale from 1-10; 1 = very easy, 10 = very difficult (Figure 3C).

Photographs were taken following the application and after one wipe during removal of each product (Figure 2)

- * ZO1 – Touchless Care Skin Protectant (Crawford Healthcare)
- ** ZO2 – Desitin Rapid Relief Cream (Johnson & Johnson)
- *** ZO3 – Sensicare Protective Barrier (ConvaTec)

Results

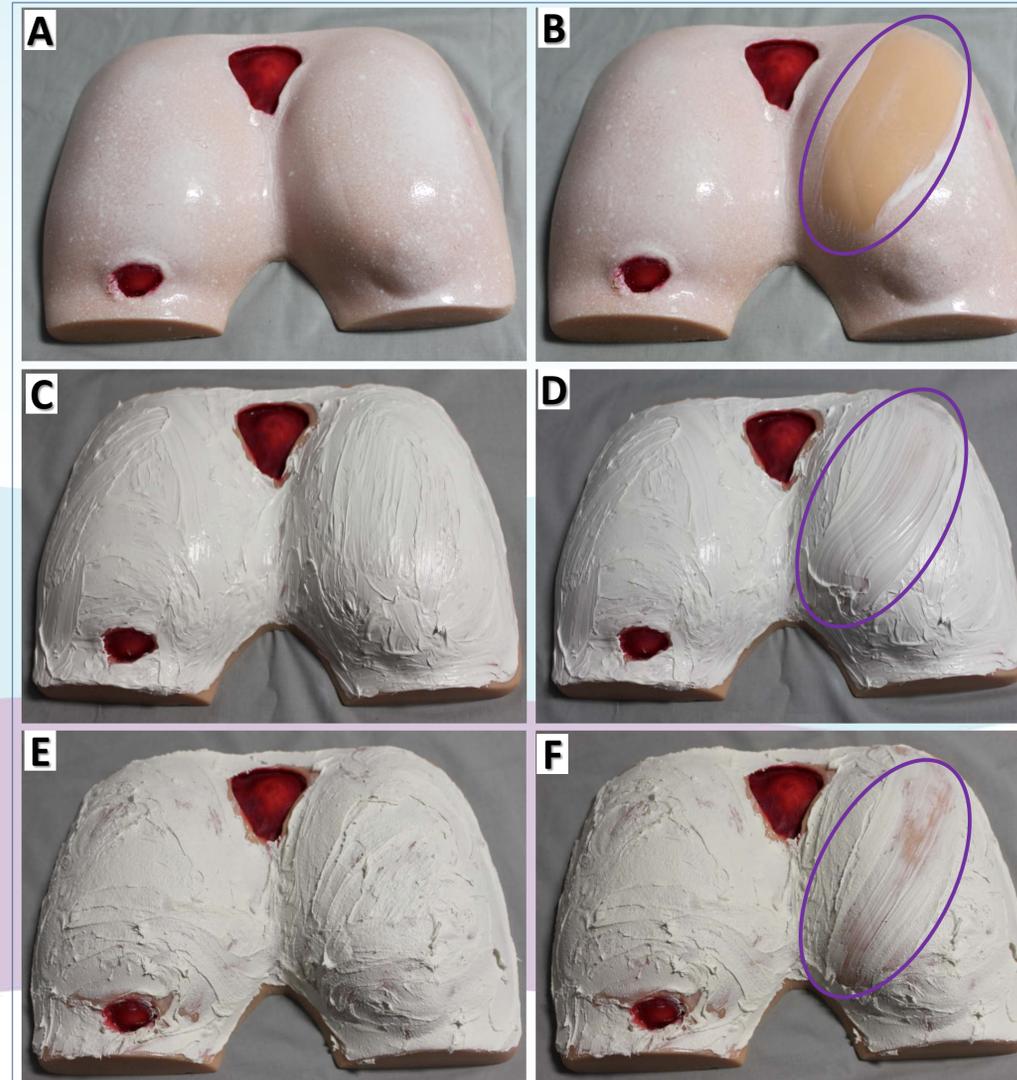


Figure 2: Representative images of Sacral model post product application.

- A) ZO1 post application, B) and following one removal wipe
- C) ZO2 post application, D) and following one removal wipe
- E) ZO3 post application, F) and following one removal wipe

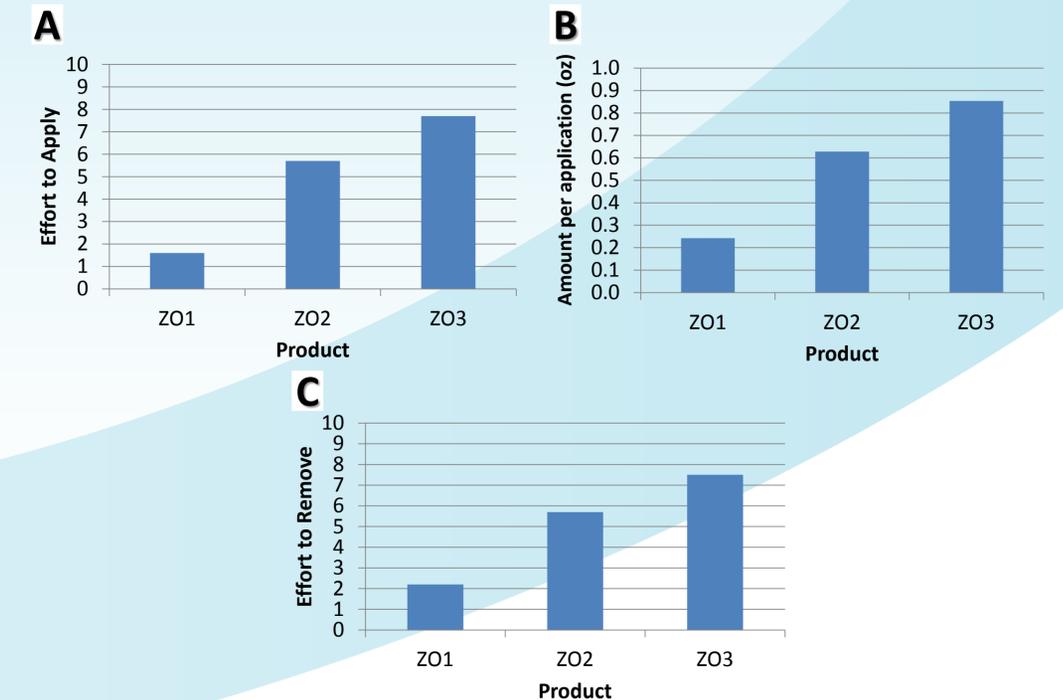


Figure 3: Evaluation of Zinc Protectant Products:

- A) Effort to apply, B) amount used applied per product per application, C) Effort to remove. Each product was evaluated on ten occasions.

Conclusion

- Clear differences seen between the Zinc Oxide treatments assessed.
- ZO1 was judged to be easier to apply and remove than ZO2 and ZO3.
- Application of ZO2 and ZO3 was associated with gross contamination of participants gloves and often the outside of the products tube.
- Significantly less ZO1 was required to cover the test area than the other products tested; translating to more applications than a comparably sized tube of ZO2 and ZO3.
- Findings to be verified in studies by clinicians in a clinical environment.