



# The GLOVE Project



GENERATION AND EVALUATION OF HAND THERAPY DEVICES FOR EPIDERMOLYSIS BULLOSA

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Skinwear Ltd



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- ▶ Devices to delay webbing not tolerated
  - ▶ Hand dressings bulky and baggy restrict ROM and function
  - ▶ Thermoplastic splints need regular review and adjustment
  - ▶ Data collection intermittent, and accurate assessment compromised by dressings and contractures

# Using a model of user engagement and co-design Glove developed:

- ▶ 1. a) A dressing glove b) web spacer glove
- ▶ 2. A splint glove prototype
- ▶ 3. A Hand Therapy Online system comprising an EB hand assessment, clinician and patient recorded outcomes and routine data capture.

# Design

An N of 1 study design adopted to investigate:

- ▶ dressing glove performance and determine when, when not and why the glove with predefined outcomes.

Three phases:

- ▶ before
- ▶ familiarisation with the dressing glove
- ▶ after with participants acting as their own control

# Methods

- ▶ Co-design workshops groups conducted from October 2014 to May 2015 with adults, children, carers and clinicians to establish current concerns with devices.
- ▶ Qualitative data were analysed into user needs and design cues for the dressing glove, guided development of the gloves and hand therapy assessment.
- ▶ Ethics approval and R&D numbers. IRAS Project ID 213515; Rec 17/LO/0420.

# Study Sample

- ▶ Between May 2017 and January 2018, twelve participants recruited and fitted with bespoke dressing gloves

Eight adults

Four children

- ▶ For various reasons four participants were able to complete the after-data phase.
- ▶ Data collected, analysed to determine clinical effectiveness and by health economists to establish economic value.

# Results

Dressing glove conforms to hand in one layer

protecting from friction

- ▶ absorbing blister fluid
- ▶ allowing frequent changes, promoting hand hygiene

Compared to conventional dressings and bandages:

reduced the time to change dressings

- ▶ reduced dressings being in situ up to five days, which leads to maceration and avoidable skin damage.
- ▶ Improved ROM and function
  
- ▶ reinforced Skinnies WEB™ web spacer glove compatible with dressing glove, helps maintain web spaces



# The HTO system can be:

- ▶ completed remotely by patients and clinicians
- ▶ during face to face and Skype consultations

## Demonstrating:

- ▶ improved communication between clinicians and patients
- ▶ sustained routine data collection for research and service evaluation


# Conclusion

- ▶ one-year evaluation, funded by DEBRA UK, using HTO system as a clinical tool with adult EB service at GSTT to test its effectiveness.
- ▶ will enable further data collection on performance dressing glove and Skinnies WEB™ web spacer glove.
- ▶ seeking funding to finalise and conduct a proof of concept study of the adjustable splint glove linking with HTO.



▶ Reference

Graham. T, Sooriah. S, Giampieri. S, Box. R and Grocott P.  
Iterative co-design and testing of a novel dressing glove for  
Epidermolysis Bullosa. *Journal of Wound Care*. In press.



# Thank you

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