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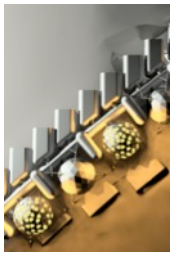
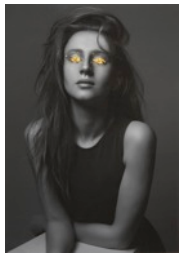
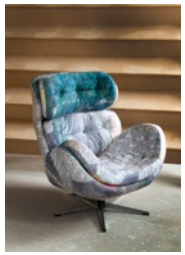
Dr. Jess Power
e.power@hud.ac.uk

Using QFD as a method to develop functional medical products for children with cancer

Background

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- **Local charity – real world problem**
- **Cancer in childhood is rare**
- **Intensive chemotherapy – central venous catheters (lines)**
- **Tunneled under skin, external opening on chest**

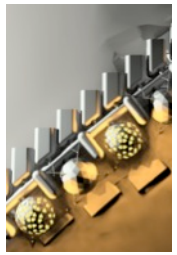
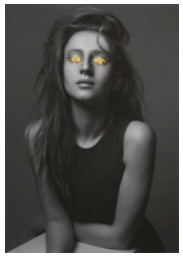
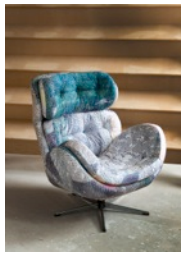
Problem

- **Risk of displacement**
- **Accidental complete removal**
- **Children may wish to conceal them**
- **Discomfort during sleep**
- **Lines may dangle**

Challenge

Harness to improve well-being of children with cancer

Research Plan

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- **Interdisciplinary team Dr J power, Prof D Leaper, J Harris**
- **Local cancer charity Little Heroes**
- **Student researcher (teaching/research nexus)**

Philosophical Approach - constructive interpretivism

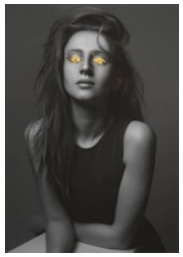
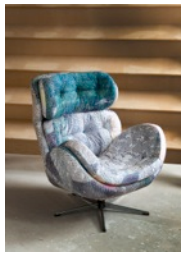
- **Balance – academic enquiry and practical application**
- **Resolve epistemological and methodological differences**
- **Timeframe – interpretivist approach was adopted**

Data collection techniques

- **Market research / product research / standards**
- **Focus group / interviewed medical personnel**
- **Product analysis**
- **Synthesized the findings using a QFD**

QFD



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A method of translating customer needs (16) into appropriate technical requirements (29)

Parents / carers

- **Location of harness (comfort)**
- **Design function (functional)**
- **Health and Safety (various)**
- **Style line (aesthetics)**

Comfort wear trial – current products

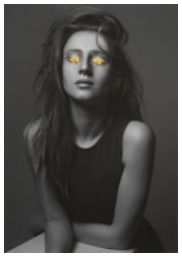
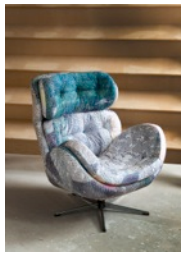




Priority; Comfort (fit), function, H&S, styleline

“Wigglebag”



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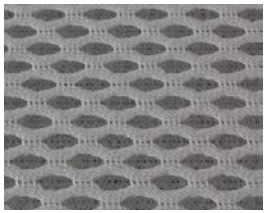
Harness to improve well-being of children with cancer

- Ergonomically designed
- Comfort / functionality/ dignity
- Stylish
- Antibacterial




Any Questions ?

Special thanks to:

- **Little Heroes Cancer Trust**
- **Helen Turner**
- **Maureen Jackson**
- **Melissa Fletcher**
- **Ruth Clare**

Project Lead:

Dr. Jess Power

e.power@hud.ac.uk

Co-authors D.Leaper and J.Harris