Aims

Create a tool that requires minimal staff input
Create a tool that is free and accessible during the blood testing procedure
Evaluate the ‘tool’ in an in-patient setting
Develop a ‘tool’ to prepare children for having their blood taken with the help of engaging visuals created by illustrator George Mellor

Thank you to all participating families!

Introduction

Children and young people are one of the biggest user groups of mobile technology, with many digital applications known to have a positive impact on their development in education and health. Digital technology should be effectively harnessed by healthcare professionals in order to provide innovative and relevant ‘tools’ that aid communication and preparation for procedures.

The Blood Quest application for the iPad (currently in development) is one such tool that aims to use digital technology to prepare children (7-11 years) for blood tests and provide an engaging distraction during the blood testing procedure.

This project builds on the outcomes from a collaborative research study led by the GO Create! arts programme and the Centre for Outcomes and Experience Research in Childr'en's Health, Illness and Disability (ORCHID) at Great Ormond Street Hospital (GOSH), supported by Roald Dahl’s Marvellous Children’s Charity and the Burdett Nursing Trust.

In this study novel methods of information-giving combined with creative distraction techniques were shown to have a positive effect on the experience of children having their blood tested. A game was developed with children and the Blood Quest App brings together the learning and creative elements trialled, and allows us to explore the potential of ‘digital distraction’.

Methods

Phase 1

Arts-based workshops and one-to-one sessions with children on an oncology ward, exploring the importance of blood within the body, its role in medical conditions and why blood tests are needed.

A printed resource was developed based on ideas explored with children.

Sample: 7 hospitalised children aged 4-12 years with non-malignant haematological conditions and recent experience of having their blood taken.

Phase 2

Fifteen children aged 7-12 years played the game/resource before having their blood taken and answered questions about their experience.

All children found the game fun and reported having learnt something new about blood. A suggested improvement was to develop the ‘game’ element further so that children could benefit from playing it more than once.

Children wanted the ‘tool’ to be a game they could play before having their blood taken, both at home and in the hospital.

Phase 3

The hospital as a whole is moving to a ‘tablet’ model to replace its current Patient bedside Entertainment System, and i-Pods will be available to all patients in the bedside. We explore the potential of digital distraction as a way of incorporating some of the suggestions made by families.

A ‘Wire-Frame’ was created to outline the potential functionality of a multi-application App that was shared with nurses from the Children’s Hospital School at GOSH and their feedback was used for further refinement.

Outcomes

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BLOOD QUEST

Using expertise from the arts and humanities to co-create digital distraction and preparation opportunities that respond to the specific needs of hospitalised children, the Blood Quest App for the iPad will provide visually appealing and imaginative explanations that help answer some of concerns children have about blood tests. Our target audience are children between 7 – 11 years, but we are keen to trial the App with other age groups.

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References


Needle related procedures are one of most frightening and upsetting parts of receiving medical treatment and being in hospital.

Background

Venepuncture for blood sampling is one of the procedures most feared by children (Carlson et al., 2000). It can be an especially distracting experience for patients who often need to have their blood taken on multiple occasions. A systematic review found strong evidence that distraction is effective in reducing pain and distress in children (Osman et al., 2013).

In practice, distraction is not always possible, for example in an emergency situation, where there is a lack of time to spend with children prior to or during the procedure or in some hospitals, a shortage of distraction aids available. In many cases, children are so acutely unwell that there is no time to prepare them for venepuncture. In our knowledge, no studies have focused on developing a preparation tool by children for children that does not have to be delivered by staff.