

# Innovating for Improvement

An evaluation of an innovative telephone app (BlueIce) for young people (aged 11-17) who self-harm

**Oxford Health NHS Foundation Trust**



---

## About the project

---

**Project title:** An evaluation of an innovative telephone app (Bluelce) for young people (aged 11-17) who self-harm

**Lead organisation:** Oxford Health NHS Foundation Trust

**Partner organisation:** University of Bath

**Project lead/s:** Professor Paul Stallard, Dr Wendy Woodhouse, Ms Pauline Scully, Ms Michelle Maquire.

---

## Contents

About the project .....	2
Part 1: Abstract.....	3
Part 2: Progress and outcomes .....	9
Part 3: Cost impact .....	15
Part 4: Learning from your project .....	18
Part 5: Sustainability and spread .....	21

## Part 1: Abstract

### Project summary and aims

Self-harm among young adolescents is common, with up to 20% self-harming by the age of 18. In addition to the immediate physical harm, self-harm is associated with poor mental health and increased risk of suicide.

At the time of self-harm, almost all young people are on their own, although nearly all have access to their mobile phone. The UK OfCom survey (2015) shows that approximately 90% of 15 year olds have a smartphone with ownership increasing with age. Smart phones therefore offer an accessible way of delivering and supporting mental health interventions for this age group.

To help improve psychological care and outcomes for young people who self-harm, a team at Oxford Health NHS Foundation Trust is implementing and evaluating a self-management smartphone app, specifically designed for young people aged 12 to 17 who self-harm. The smartphone app will provide accessible, real-time guidance for young people to help them cope with self-harming urges.



The app, BlueIce, has been co-produced with young people who have self-harmed and is designed as an adjunct to therapy. It includes a mood monitoring diary and a personalised self-help menu of mood lifting activities, including music and photo libraries, physical activities, audio-taped relaxation and mindfulness exercises, identification and challenging of negative thoughts, and distress tolerance activities. BlueIce records mood and mood lifting activities. After use, young people are asked to re-rate their mood and are routed to emergency numbers if they are still feeling an urge to self-harm.

BlueIce will be offered to 50 young people who are regularly self-harming and attending child and adolescent mental health service (CAMHS) outpatient clinics located across Bath and North East Somerset, Buckinghamshire, Oxfordshire, Swindon and Wiltshire. The project will involve assessing the acceptability, safety, use and effect of BlueIce.

### Project Implementation

#### Set-up

- Approvals

The project needed to be reviewed by the Medicines and Health Products Regulatory Authority (MHRA) and approved by NHS Ethics and Oxford Health Trust Research and Development department. The process was initiated at the start of October 2015 but it was not until April 2016 that all the necessary approvals were obtained.

- **Project staff recruitment**

Our initial job advert for a Research Assistant project attracted 47 applications and we offered the post to a successful applicant at the end of January. After accepting the position the successful applicant subsequently declined to take up the post after they were offered a full-time post in another organisation. A second process of recruitment was initiated and Joanna Porter took up the post in June 2016. We were able to secure interim project support from our partner, the University of Bath from Dr Rebecca Grist. We also received support from Oxford Health Research and Development Department from Joanna Ciapala and Fay Davies.

## **Implementation**

- **Senior engagement:**

The project team consisted of senior members from Oxford Health NHS Foundation Trust. Professor Paul Stallard is Head of Psychological Therapies; Dr Wendy Woodhouse is Clinical Director; Pauline Scully was the Child and Family Operational Director and Michelle Maguire is the Head of Service. This ensured that the project was discussed and reviewed at high profile Trust meetings including the Directorate Quality Committee, Clinical Advisory Group, and area Operational and Governance meetings.

**We also engaged our Clinical Commissioners for Swindon, Wiltshire and BaNES. A presentation on 3<sup>rd</sup> May 2016 resulted in Bluelce being selected as a CQUIN target.**

- **Clinical engagement**

Bluelce is designed to be used alongside the traditional CAMHS face to face intervention. It is designed to facilitate greater self-control by providing the young person with an accessible, readily available tool box of strategies which they can use at times of distress. We therefore had to engage with clinical staff in recruiting young people for this project.

We embarked on a series of rolling visits to all clinical teams. The project was presented and demonstrated at team meetings and our research team spent time in each different location to show and prompt clinicians to think about possible referrals.

**We seized the opportunity to raise the profile of Bluelce at staff training events and reached 130 clinical staff through two suicide prevention workshops. This generated considerable enthusiasm amongst clinical staff and we recruited our first young person into the project on 25<sup>th</sup> May 2016.**

## **Measurement**

Outcome measures include standardised self-report measures and qualitative interviews with data being collected at three time points

- **Baseline**

Before using Blueice (T1): We assessed any self-harm in the 4 weeks before using Blueice. Standardised assessments were completed of mood (Mood and Feelings Questionnaire - MFQ), anxiety (revised Child Anxiety and Depression Scale – RCADS) and behaviour (Strength and Difficulties Questionnaire - SDQ).

- **Post familiarization**

2 weeks after downloading Blueice (T2): We interviewed young people to assess acceptability (able and want to use Blueice), and safety (app crashes, make want to harm more).

- **Post-use**

12 weeks after using Blueice (T3): The questionnaires completed at baseline were repeated along with a qualitative interviews to assess Blueice use and effect on self-harm

## **What happened?**

We received 54 referrals from 37 clinicians in 8 different clinical teams. All the core professional groups in CAMHS had engaged with this project.

Of the 54 young people referred, 44 were eligible and consented to take part. Of the remaining 10, we were unable to contact 3; a further 2 had left CAMHS; 4 were ineligible (e.g. safeguarding risks) and 1 opted out.

The 44 participants familiarised themselves with Blueice with 40 being interviewed two weeks later (post familiarisation). Of these, 37 wanted to use Blueice for 12 weeks. At the time of writing we have completed post use assessments with 28, have 5 interviews still to complete and have been unable to contact the remaining 4.

## **What has gone well?**

- **Senior Support**

We received high level support from our Trust and our commissioners. This has ensured that the project has been embedded within our Trust. Blueice has also been presented to our Commissioners who selected this project as a CQUIN target for 2016/17.

- **Clinical engagement**

We are delighted with the positive response from clinicians. Feedback from those clinical staff involved in the project has been overwhelmingly positive as captured in the quote below from a senior mental health practitioner.

*‘All ‘my girls’ (patients) are finding the app very helpful! From my point of view, the self-harming incidents are much less frequent for those using the app.’*

- **Integration into practice**

We undertook a more detailed review of 9 sets of clinical notes. Although clinicians were not required to review Blueice during their face to face meetings we found

references to BlueIce in half (5) of the notes we examined.

*“She has been using the BlueIce app, in particular the mood lifter and has found this helpful”*

Given that one of our aims was to integrate digital health into clinical practice we were very encouraged by this finding.

- Young people

We have been surprised and gratified by the enthusiastic and positive response from young people. This will be discussed in more detail later in this report.

*“It’s actually really good, it has helped a lot and I haven’t self-harmed in a while. Since using the app I’ve done it once and that is over 4 weeks which is really good”*

### **What have been the challenges?**

Firstly, we experienced delays in securing the necessary approvals to undertake the project. We were advised that a telephone App might be classified as a medical device and that we needed to check this with the MHRA. We submitted an application on 2<sup>nd</sup> October 2015 but it was not until 17<sup>th</sup> December 2015 that we received their guidance. We were unable to submit our study for ethical review and approval until we had guidance from the MHRA.

The second challenge arose from delays in recruiting a Research Assistant to work on this project. The initial advert attracted much interest and after interview we offered the 0.6 w.t.e. post to a candidate who unfortunately withdrew three weeks later. We re-advertised and successfully appointed Joanna Porter who took up her post on 13<sup>th</sup> June 2016. To bridge this gap we were able to draw on another Research Assistant (Rebecca Grist) from our partner the University of Bath.

Thirdly, BlueIce was developed and co-produced with considerable input from young people. Following their advice, BlueIce was developed for android based smartphones. However, the cost of Apple phones has decreased whilst the cost of android has increased resulting in nearly all young people now having iPhones. We therefore had to purchase android phones to lend to young people for this project. We have now made an Apple version of BlueIce.

### **What has been the impact?**

The aim of this project is to assess the acceptability, safety, use and effect of BlueIce to determine whether it should be more widely used within specialist CAMHS.

**93%**

#### **Young person acceptability**

Post familiarisation qualitative interviews highlighted that BlueIce was highly acceptable to young people. Feedback was overwhelmingly positive with 37/40

wanting to use Blueelce for the 12 week trial and 89% wanting to keep Blueelce at the end of the project.

We had few suggestions for change other than making a version for Apple based systems which we have done.

### **100% Clinician acceptability**

All core professional groups in CAMHS from 8 different teams referred young people to the project. In total, 37 different clinicians referred young people to use Blueelce.

### **100% Safety**

No safety issues were identified during post-familiarisation interviews. Blueelce worked as intended and none of the 40 young people interviewed thought that Blueelce would make them harm more.

### **80% Able to use**

33/40 young people thought that they would be able to use Blueelce if they had thoughts of self-harm.

### **60% Help to stop self-harming**

24/40 young people thought that Blueelce would help them to stop self-harming. This will be summarised in more detail below but the following captures feedback from one young person.

*"I used it a couple of times when I was struggling and have not self-harmed in two weeks"*

### **295 Self-harming incidents prevented**

Reports from young people indicate that over the course of this project Blueelce has helped to prevent 295 episodes of self-harm.

### **What have we learned?**

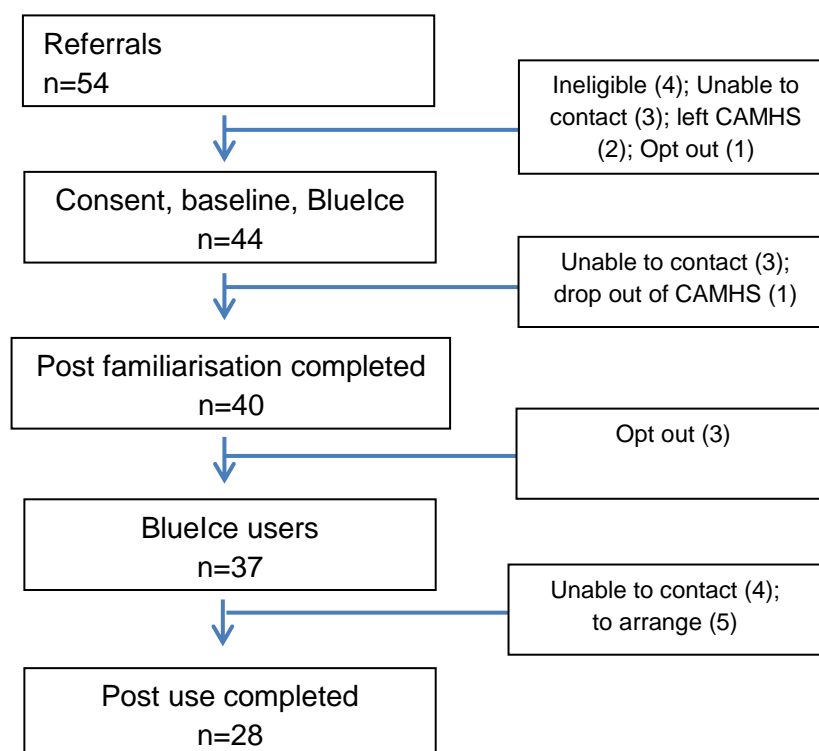
Our experience has highlighted the need to be flexible and responsive to challenges. Having senior clinicians and managers as part of our project team has ensured that we have the necessary experience to maintain our project momentum. We also recognise that our success depended on our project maintaining a positive and high profile. We therefore took every opportunity to discuss Buelce at varying levels across our Trust and with our commissioners.



## Part 2: Progress and outcomes

### Intervention flow

The figure below summarises the flow of young people through the project.



Of those who gave consent, 91% completed post familiarisation assessments. Of these 40, 93% wanted to use BlueIce. We have 5 follow-up assessments which are scheduled to be completed by the end of February. If these are completed as anticipated we will have post-use information from 82% of those who used BlueIce.

### Primary and Secondary data

- Data sources

We undertook qualitative interviews with young people, reviewed some clinical records and used standardised measures to assess changes in anxiety (assessed by the Revised Child Anxiety and Depression Scale) depression (assessed by the Mood and Feelings Questionnaire) and behaviour (Strengths and Difficulties Questionnaire).

- Data validity and reliability

The majority of our information is collected via retrospective self-report or standardised measures. We do not however have any prospective diary records which would provide a more objective and possibly more accurate way of assessing self-harm.

### Data quality

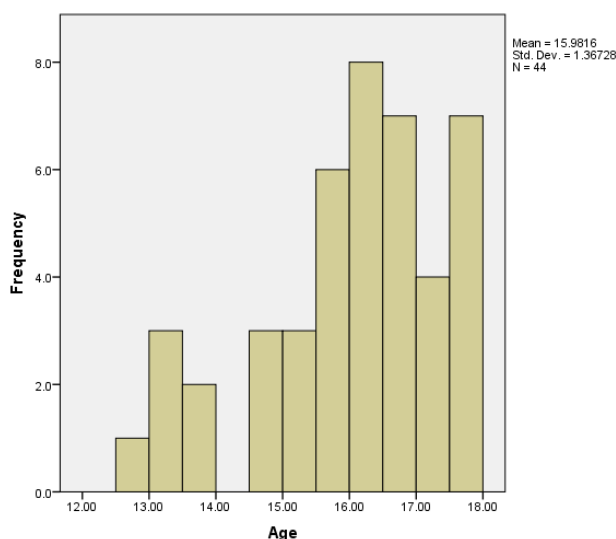
We have data from 44 young people at baseline. We conducted post familiarisation interviews with 40 and are on target to complete post use interviews with 33. Qualitative interviews have reached saturation with no new themes emerging. We are therefore confident that our data is representative of our sample group.

Adjustments: Traditionally, CAMHS rely extensively on face to face interventions with clinicians tending to be suspicious or unsure about digital interventions. An implicit aim of the study was to collect evidence on the effectiveness of BlueICE and its ability to transform the way that care is provided through the addition of digital health interventions. We therefore undertook an analysis of 9 sets of clinical records to determine whether they contained any reference to BlueICE. We were pleased to find evidence that BlueICE was discussed in 5 of these records.

### Results

- Demographics:

40 girls and 4 boys average age 16 years (range 12-17) participated in the project.

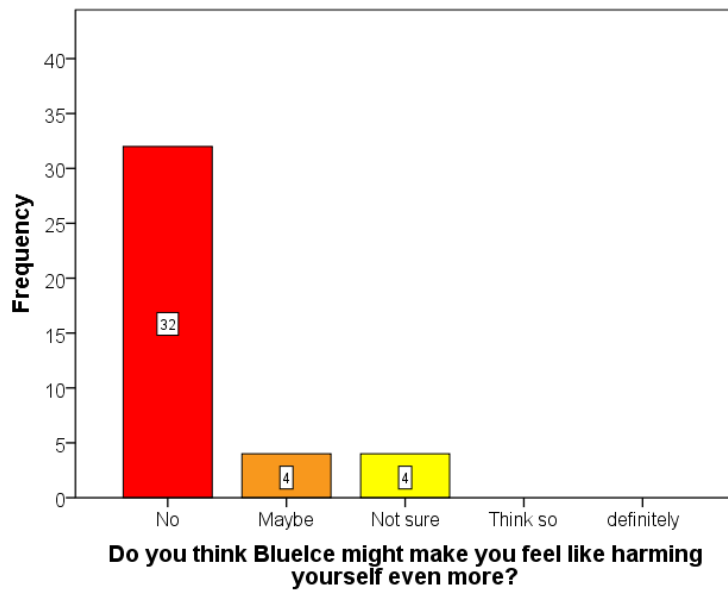


Baseline assessments revealed complex and chronic presentations of psychological problems.

- 96% scored above the cut-off on the Mood and Feelings Questionnaire indicating depression
- 81% scored above the cut-off on one or more of the subscales on the Revised Anxiety and Depression Scale indicating an anxiety problem.
- 68% had self-harmed at least once in the 4 weeks before starting the project
- 85% of young people described a definite or severe problems with 79% reporting this being present for more than 12 months as assessed by the Strength and Difficulties Questionnaire.

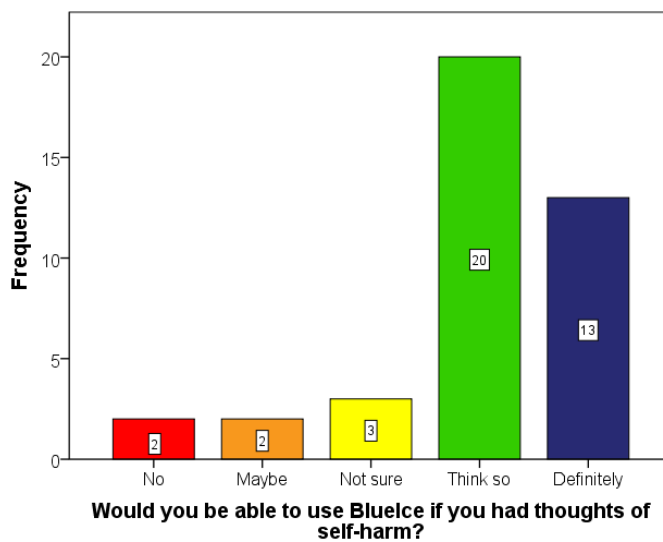
- Safety

No young person thought that BlueIce would increase the likelihood that they would self-harm.



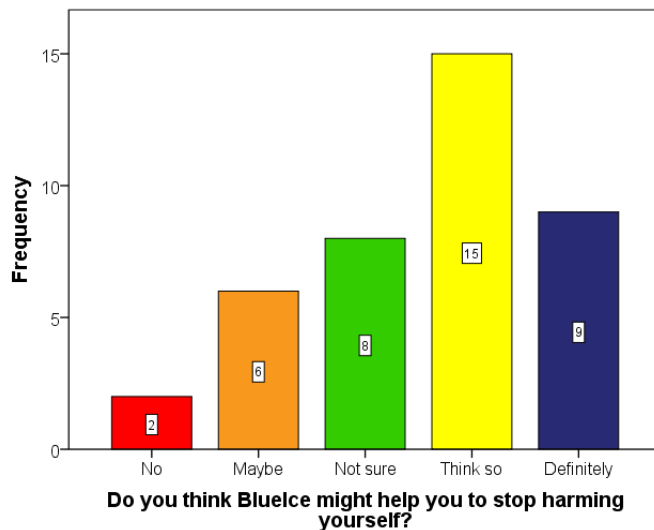
- Able to use?

Only 2 young people reported that they would be unable to use BlueIce if they had thoughts of self-harm. These young people found their urges too powerful to resist.



- Help you to stop self-harming

Young people expressed a range of views about whether Blueelce would help them to stop self-harming. 60% felt it would, 20% were unsure, 15% felt it might with only 5% being clear that it wouldn't. Interestingly those who thought Blueelce would not help them could see the benefits of using it. These young people did not feel ready to stop self-harming and therefore felt Blueelce would not help them.



- Acceptability

After the two week familiarisation 93% of young people wanted to go on and use Blueelce.

- Effect on self-harm

We have assessed changes in self-harm in three ways.

Firstly, some young people reported that since using Blueelce they have not self-harmed at all. We therefore projected pre-Blueelce rates of self-harm over the course of the 12 week study to predict how many episodes have potentially been prevented. Our data suggest that 212 episodes have been prevented.

*"If CAMHS had given me that app around 3 or 4 years ago I wouldn't be cutting by now"*

Secondly, other young people were continuing to self-harm but at a reduced rate. We therefore calculated the actual number of reported self-harming incidents that were prevented by Blueelce. A total of 83 episodes of self-harm were prevented.

**In total, our data suggest that Blueelce has prevented 295 episodes of self-harm in 28 young people over a 14 week period, approximately 10 episodes per person.**

Thirdly, we looked at changes in self-harming status of the 28 young people who have completed the study. Of the 6 who were not self-harming in the 4 weeks before using Blueelce, none were self-harming at the final 12 week follow-up. Of the 22 who

had self-harmed in the 4 weeks before using Blueelce, 4 were not self-harming at all and 12 were harming at a reduced frequency. The remaining 6 (27%) appear to be self-harming at the same rate.

**Blueelce helped 73% of young people who were self-harming to stop or to reduce their self-harming**

- **What does this mean to young people**

**Case example 1**

Context: BD (age 16) was seen by CAMHs for weekly sessions for 4 months at the beginning of 2014 and was re-referred at the start of 2016. Both referrals were related to self-harming.

Outcome: BD used Blueelce alongside sessions with her therapist at CAMHS. At the two week post-familiarisation interview BD reported that she had not self-harmed over the past two weeks. Prior to this BD self-harmed by cutting nearly every day. At the 12 week follow up BD reported that she had continued to use Blueelce a couple of times each week.

Summary: Since having the app BD had cut on just two occasions. It was reported in the clinical notes that after the trial finished BD continues to find the app helpful. In an 8 week period since her final Blueelce meeting BD has self-harmed just once.

**Case example 2**

Context: PK (age 16) is a young person with a diagnosis of autism who had reported self-harming for the past 5 years.

Outcome: Prior to using the app PK reported self-harming nearly every day, or at least a couple of times per week. Over the course of the 14 week trial PK reported 2 episodes of self-harm.

Summary: After about two weeks of using the app it was recorded in clinical notes that PK really likes the app and that she hadn't recently self-harmed. Since her final Blueelce meeting no further episodes of self-harm have been recorded in clinical notes.

### The experience of young people

*"I use to harm myself pretty much every day I think there were only a couple of days when I wouldn't. Since having the app I'm like clean, I haven't done anything"*

*"...before I had the app I didn't really do anything, like if I felt low I'd just sit in my bed and just make myself feel worse and overthink but with the app it like with all the mood lifters I can do things, like it encourages me to maybe watch a film, go downstairs make dinner, or like cook, or whatever, I don't know, it just distracts me"*

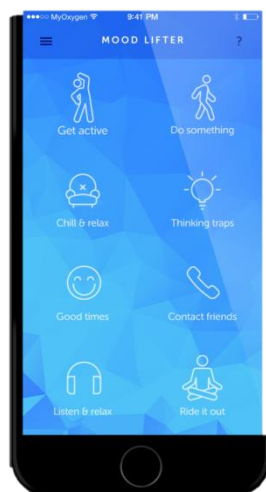
### The experience of parents

*'...it may not change the situation she's struggling with but it changes her and it's a positive change, I don't mean she's bouncing round happy but more stable I guess is what I'm trying to say and it's, it's amazing'*

*'if someone was in that situation and was on a waiting list at least the parent would know 'right well, you can download this' and it's self-explanatory, you know that will see you through'*

## Part 3: Cost impact

### Current costs



Any episode of self-harm has significant personal consequences for the young person. However, from a service perspective, an episode of self-harm can result in an attendance at an Accident and Emergency department (A&E) followed by a mental health assessment. If the presentation at A&E occurs after 5.00pm the young person may be admitted overnight so that the mental health assessment can occur the next morning. On the basis of Department of Health reference costs for 2015, the cost of an A&E attendance is £132 and a specialist mental health contact £230. With an overnight stay the direct cost of an episode of self-harm will be approximately £500.

### Calculating costs

We will investigate changes in episodes of self-harming before and after using BlueIce on the basis of self-reports from young people. We are aware that this may be subject to various biases but self-report is the only way we can quantify internal processes and urges.

Similarly, we are aware that most episodes of self-harm will not result in A&E attendance. We will therefore model assumptions about the percentage of episode that may have resulted in A&E attendance to examine the potential range of costs savings.

Finally, it is beyond the scope of this project to look at other indirect savings that might arise from reduced self-harming such as shorter treatment episodes, lower relapse rates or reduced contact with primary care.

### Cost of the Intervention

The initial development costs of BlueIce were £16,000. For the 40 young people involved in this project this equates to £400 per person.

A mental health (Band 4) worker helped young people to download and personalise BlueIce (1 hour at approximately £20 per hour plus travel £5).

Thus the total cost of delivering BlueIce in this project was £17,000 or £425 per person.

## Costing assumptions

Data from the 28 young people who have completed post-use interviews suggest that BlueIce has prevented 295 episodes of self-harm (approximately 10 per person)

- Assumptions

(i). The majority of these acts of self-harm would not result in a hospital attendance. It has been suggested that 1 in 8 will result in hospital presentation. We will therefore make some assumptions about the number of incidents resulting in hospital attendance in order to quantify potential savings.

(ii). We will assume that those who do attend hospital will not require an overnight stay. The costs of attendance plus a mental health assessment will be £362 per attendance.

## Potential cost savings during the project

The figures in the table below show the range of potential savings based on a series of assumptions about how many of these 295 episodes would have resulted in A&E attendance and a mental health assessment (total cost= £362 per episode).

Ratio of hospital attendance to self-harming episodes	Number of hospital attendances prevented	Potential savings at £362 per attendance
1: 8	37	£13,394
1:15	20	£7,240
1:50	6	£2,172
1: 100	3	£1,086



## Potential future savings

The majority of our costs are one-off product development costs (£16,000). BlueIce is now available to many young people at no additional cost and thus the development costs will proportionately reduce with the number of users: 100 users = £160 per person; 1,000 users = £16; 10,000 users = £1.60

If we scale up our findings (BlueIce prevented 10 episodes of self-harm) to 100 users. A total of 1000 episodes of self-harm will be prevented. Repeating our assumptions about the number that will result in hospital attendance provides the following:

Ratio of hospital attendance to self-harming episodes	Number of hospital attendances prevented	Potential savings at £362 per attendance
1: 8	125	£45,250
1:15	57	£24,254
1:50	20	£7,240
1: 100	10	£3,620

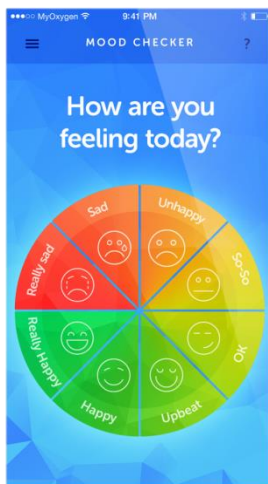
These calculations suggest that at scale the costs significantly reduce and are easily offset by the potential cumulative savings to the NHS in terms of reduced hospital attendance.

## Part 4: Learning from your project

### Achievement of goals

We have achieved our goals. We have engaged with 37 clinicians from 8 clinical teams to work with 44 young people who are self-harming to demonstrate the safety, acceptability (clinician and young person), use and positive effects of Blueelce.

Contributors to the success of this project included:



- Senior clinical and managerial involvement with the project. This ensured strong leadership, a high profile within the Trust and regular progress reviews at senior Trust groups.
- Pro-active and high visibility within clinical teams. Our approach was to be present, patient and persistent which served to interest and motivate clinicians and to reduce any concerns about the use of technology.
- A good product that was co-produced and designed with young people. This maximized the engagement of young people with the project. Interestingly, apart from the need to develop an Apple based version Blueelce proved to be popular and highly acceptable to young people.

### Organisational culture

- Oxford Health NHS Foundation Trust is a progressive and innovative provider of child and adolescent mental health services. This project fitted well with the priorities and aspirations of the Trust to develop evidence based digital health interventions. The Trust was highly supportive throughout this project and for example, provided us with a number of android based phones to deliver the intervention.

### Challenges

We originally planned to ask clinicians to use a standardised template to review and record self-harm that would be completed during each clinical session. Whilst seeking project approvals it became clear that this would introduce an additional administrative burden that would have a potentially negatively impact on clinician involvement in the trial. At this time there were competing Trust recording priorities including a focus on improving recording of the care programme approach (CPA) and the use of routine outcome measures (ROMS). We therefore decided to abandon clinician reports and to rely on self-reports of self-harm.

The second challenge was that of technology and how the vast majority of young people involved with the project had iPhone. As a result of our development work we developed BlueIce for android based systems and so had to give young people android phones in order to trial BlueIce. We were supported in this by our Trust and the Health Foundation who allowed us to use funds to build an apple version of BlueIce which will run on iPhone.

The final challenge was that of time and the delays we encountered seeking the necessary approvals for the project and in recruiting. We had not envisaged the need to apply for HRA approval, a process that took considerable time to complete. This delayed the start of staff recruitment which was further affected by the withdrawal of the applicant offered the post after the first wave of recruitment. We were very fortunate that our partner, the University of Bath, were able to support the project during this time.

### **Specific learning**

We have been very pleased with the success of this project. We have three learning points for other organisations wishing to develop and introduce digital health technology as part of their clinical practice.

- Co-design, develop and produce the digital intervention with the intended target group. This will maximize engagement, acceptability and use.
- Ensure that the innovation is consistent with the organization's priorities and that it is supported and monitored at a senior clinical and managerial level.
- Persistence. The process of engaging clinical staff required time, patience and persistence in order to address potential worries and fears about technology.

### **NHS learning**

This project has demonstrated that it is possible to introduce a digital self-help tool alongside traditional face to face clinical practice. There are three issues which seem important.

- BlueIce was introduced as an adjunct, rather than an alternative therapy. It is our impression that this made clinicians more open to recommending BlueIce since it did not directly compete or interfere with the interventions clinicians provided.
- Clinicians are anxious about technology. It is our impression that the use of research assistants to deal with the technological demands of downloading and personalizing the app was helpful in overcoming this barrier.
- The innovation had strong and credible clinical leadership. The project team included the Head of Psychological Therapies and the Trust Clinical Director. These are respected, credible and influential clinicians who undoubtedly had a positive influence on clinical staff.

**Advice for others**

Acceptable, evidence based digital interventions offer low cost ways of providing young people with self-management skills. Our experience suggests that these interventions can fit with current practice and are welcomed by young people.

## Part 5: Sustainability and spread

### Sustainability

Blueelce will be sustained within Oxford Health as an adjunct to traditional face to face interventions for young people who self-harm. Sustainability has been helped by:

- **Compatible technology:** The development of Blueelce to run on Apple based smartphones and tablets. All clinicians within Oxford Health have iPads and can now readily access Blueelce. Similarly the vast majority of young people have iPhones so that Blueelce can be quickly installed on their smartphone.
- **Positive outcomes:** We intend to share the results of this project with our clinical staff. The positive results and audio feedback from those who have used Blueelce provide a powerful endorsement of Blueelce which we envisage will motivate clinicians.
- **Fit with Trust and Commissioning objectives.** Oxford Health Trust is keen to promote the integration of digital health interventions into clinical practice. Our service has recently been recommissioned and one of the explicit aims in our new service model is to provide more digital interventions. This will be reviewed with our commissioners and will therefore ensure that Blueelce continues to be used.

### Risks and challenges

The biggest challenge continues to be the engagement of clinical staff. Whilst we are delighted to have engaged 37 clinicians from all the key professional groups in this project we are aware that this is a small percentage of our total workforce. We know that a number of professionals will continue to have concerns about digital interventions which will result in them not being recommended to young people. We intend to find out more about these potential barriers so that we can provide the necessary input to overcome them. This will form part of a sustainability and spread bid that we intend to submit to the Health Foundation.

### Spread

We have recently been successful in an application to NHS England (NHSE) to develop Blueelce. This is part of a wider Department of Health initiative that aims to identify and develop mobile apps and tools to meet standards that will allow them to be accredited and promoted to the public through the NHS Choices website.

The aim of this NHSE project is to ensure that Blueelce meets the required safety and governance issues for digital technology. Support from the Health Foundation for this project has helped Blueelce to progress to this final stage of national endorsement. We envisage that Blueelce will be available to be licenced to child mental health services for an unlimited use annual contract by the autumn of 2017.

## **Future milestones**

- Our immediate task is to disseminate the findings of this project to clinicians working within our Trust.
- In order for BlueIce to be sustainable we need to develop a user manual for staff and young people about how to personalise the app. During this project this task has been undertaken by a researcher but in the longer term responsibility needs to transfer to the clinician and young person.
- Thirdly, we need to undertake a survey of our clinical staff to identify their attitudes to digital technology. This will help identify barriers to the use of BlueIce which we can then consider how best to address.
- Fourthly, we will work with NHSE to ensure that BlueIce meets the standards for accreditation and endorsement on NHS Choices
- Fifthly, we aim to disseminate the findings of this project through peer review publications and presentations at National and European conferences.
- Finally, we will explore funding for a definitive randomised controlled trial of BlueIce to demonstrate more clearly the impact and cost effectiveness.

## **External Interest**

- We have published a paper in a peer reviewed journal (Journal of Medical and Internet Research) which is attached as an appendix. Stallard P. Porter J, Grist R. (2016). Safety, acceptability and use of a smartphone application, BlueIce, for young people who self-harm: protocol for an open Phase 1 trial. JMIR Research Protocols, 5 (4) e217
- We have presented BlueIce at the Thames Valley Suicide Prevention and Intervention Network (13.9.16).
- We have been selected by NHS England as part of their digital health initiative.