



Edge Hill
University

Faculty of
Health, Social Care
and Medicine



Southport and
Ormskirk Hospital
NHS Trust



What? Why? Children in Hospital (WWCiH) procedural videos; evaluating children and their parent/carers perceptions of viewing these videos within Southport & Ormskirk Hospital NHS Trust Children's Accident & Emergency Department

Final Report

9th October 2022

**Professor Lucy Bray & Dr Jennifer Kirton
Faculty of Health, Social Care and Medicine,
Edge Hill University**

**Dr Sharryn Gardner, Jennifer Warham, Anastasia Kukharuk, Alex van Spelde
Southport & Ormskirk Hospital NHS Trust**



Acknowledgements

We would like to thank all the children, young people and parents/carers in Southport & Ormskirk NHS Hospital who kindly shared their time and views with us.

This independent evaluation was funded by What? Why? Children in Hospital.

Background

Children attending hospital for clinical procedures such as X-rays, blood tests or examinations can often feel uncertain and anxious. This can result in them being scared and non-co-operative to clinical procedures (Bray et al 2018) and having a poor experience of undergoing a procedure (Bray et al 2019). Children and young people report wanting to know what is going to happen when they come to hospital for a procedure (Bray et al 2021). Multiple resources for reducing clinical procedure-related anxiety have been developed for both children and their parents (Copanitsanou & Valkeapää 2014). These include information leaflets, story books, colouring books, as well as platforms providing virtual reality simulations of various hospital environments (Bray et al 2020). Many of these are resource intensive or time consuming and are not always used effectively prior to procedures (Bray et al 2022).

What? Why? Children in Hospital is a charity that has developed short educational videos explaining 44 procedures including blood tests, X-rays, MRI, and CT, Ultrasound, EEG, ECG and Echo and lung function tests. These short videos are freely and easily available, provide direct examples of the procedure, and offer ideas for hospital role play that parents can use to explain a procedure to their child. The videos, available on YouTube have had over 10 million views worldwide and have been evaluated positively by children and parents. A study by What? Why? Children in Hospital in 2015 based on 100 parents in the UK showed that 91% of parents of a child thought it would be helpful to have videos about hospital procedures to help them prepare their child and/or help them to be less anxious about going to hospital. The study also showed that 94% of healthcare and education professionals responded that they thought videos about hospital procedures were helpful to children (Boot et al., 2015) and a further survey in 2019 with health professionals has shown that 91% (71 out of 78) felt the videos could help reduce a child's anxiety (WWCiH website). This survey in 2019 also highlighted that 90% (19 out of 21) of the parents and children who responded stated that it would be helpful to have tablets in the waiting area to give parents and children the opportunity to watch the procedural videos.

Similar videos have been found to reduce anxiety in children and parents before surgical procedures (Kim et al 2019). However, evidence shows that parents may not independently seek out preparatory information to share with their child or may not be aware when arriving at A & E that their child will require a procedure. The WWCiH charity have been awarded funding to provide two tablets within the A&E department of Southport and Ormskirk Hospital NHS Trust for use by families to help prepare them for a clinical procedure. This small evaluation project aims to gather data focussed on whether children and their parents view this as useful and if they perceive that accessing the WWCiH videos helps reduce any procedural anxiety.



Evaluation Aim

To evaluate the use of the WWCiH procedural videos on a tablet with children and parents/carers within an Accident and Emergency department and any impact it is perceived as having on their procedure.

Evaluation Objectives

- To evaluate the suitability of the use of electronic tablets to show children the WWCiH procedural videos within the Accident and Emergency Department setting.
- To evaluate children and their parent/carers experiences of using the tablet with the WWCiH procedural videos within the Accident and Emergency Department.
- To evaluate the perceived impact of the WWCiH procedural videos on children's experience of undergoing the clinical procedure.
- To evaluate if there are any barriers to the WWCiH procedural videos being used by children within the department.
- To examine the reasons why children and/or their parent/carers may choose to not access the WWCiH procedural videos.

Design

This was a mixed method service evaluation questionnaire project gathering complementary quantitative (closed response questions) and qualitative (open response questions) data. This mixed method approach was suitable to collect evaluation data to inform WWCiH future service planning.

Sample

All children aged 6–15 years old requiring a non-urgent clinical procedure within the Accident and Emergency Department.

All children who are cognitively able to respond to a short questionnaire.

All children with a parent/carer able to provide consent for their participation.

All children deemed by the clinical team as appropriate to participate e.g no safeguarding concern, not under the care of psychological services for procedural anxiety.

Parents of the above children who accompanied them to the Accident and Emergency department.

Recruitment

Every child who was identified as needing a clinical procedure and who fulfilled the inclusion criteria was approached to take part in the evaluation project. The recruitment occurred in ‘chunks’ of time between April 2021 and June 2022 when the staff involved in the project were working within the department. During peaks of the COVID-19 pandemic, recruitment was paused.

Children and their parent/carers eligible to take part were be provided with the short information leaflets about the project by a member of their clinical team. The children and their parent/carers were given 5 minutes to read the sheet and decide if they would like to take part. If they were happy to take part, they were handed either the short paper pre-video questionnaire to complete before being handed the tablet with the pre-loaded videos or provided with a short questionnaire seeking information on why they were not keen to watch one of the WWCiH videos. It was made clear to the families that they could access the videos regardless of whether they chose to participate or not and there was reassured that there was no judgement if they preferred not to watch one of the videos.

Data collection

The paper questionnaire was completed by children and their parents/carers immediately before they watched the WWCiH procedural video, after they watched the procedural video and then again after their procedure. Those who chose not to watch a video were handed a questionnaire seeking information on why they chose not to watch a video. The questionnaires were carefully designed to be short and child-friendly in recognition that the children may have been injured or unwell. The questionnaire design has been used in previous work with children and was designed with input from children and young people. It was made very clear to those taking part, that the completed questionnaire would not be seen by the clinical staff. The completed questionnaires were placed in a sealed envelope as a ‘set’ (child and parent together and all time points together) into a sealed box and collected by the evaluation team at a later date.

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Questionnaire for parent/carers before watching the video

We are collecting information before you and your child watch the What? Why? Children in hospital video about the procedure they are due to have. It is important you write down honestly what you think. This information will **NOT** be shared with the nurses, doctors or other health professionals you have seen today. Below are some questions which ask you to draw on a scale what you think about something. An example of this is. How much do you like chocolate ice cream?

012345678910

I hate itI love it

This person really likes chocolate ice cream as they have drawn a line at number 8.

How you feel about your child's procedure

How anxious or worried are you about your child's procedure? The scale is from 0-10 with 0 being 'not at all anxious or worried' at all and 10 being 'very anxious or worried'. Can you mark on the scale how anxious you are about your child's procedure?

012345678910

Not at all anxious or worriedVery anxious or worried

Before watching the video parent questionnaire - Version 2 - 9th November 2020

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Questionnaire for children after the procedure

These questions about what you think, it is important you write down honestly what you think. This information will **NOT** be shared with the nurses, doctors or other health professionals you look after you.

How do you feel about your procedure now?

This question is asking you how you feel **now** about the procedure you had today. The scale is from 0-10 with 0 being 'completely relaxed and calm' and 10 being 'completely worried and anxious'. Draw on the scale how you feel now.

012345678910

completely calm and relaxedcompletely worried and anxious

How happy are you about what happened during your procedure?

This question is asking you how satisfied or happy you are with what happened during your procedure. The scale is from 0-10 with 0 being 'not at all happy/satisfied' and 10 being 'completely happy/satisfied'. Draw on the scale how satisfied or happy you are with what happened today.

012345678910

Not at all happy or satisfiedCompletely happy and satisfied

Did you have enough information about the procedure you had today?

☐ Yes

☐ No

☐ Don't know

If you didn't have enough information, what else would you have liked to have known?

After the procedure questionnaire children - Version 2 - 9th November 2020

How do you feel about the procedure you have just had?

What went well?

What could have been better?

Did watching the video help you today with your procedure?

Thank you for taking part and sharing your opinions and ideas!!!! Please put this questionnaire back in the sealed envelope and when all questionnaires have been completed hand the sealed envelope to the nurse.

After the procedure questionnaire children - Version 2 - 9th November 2020

The short questionnaire was completed by the children and their parents/carers who chose to watch a WWCiH video at three time-points; before watching the WWCiH video (TP1), immediately after watching the procedural video (TP2) and after the procedure is completed (TP3).

The questionnaires focussed on children and parent/carer’s reported procedural knowledge and anxiety, their views of the content and impact of the videos on their procedural experiences (Table 1).

Table 1; Data collection at different points in the procedural visit.

Time point 1 Before watching the WWCiH procedural videos	Children	Self-reported procedural anxiety Self-reported knowledge about the procedure
	Parents	Self-reported procedural anxiety Self-reported knowledge about the procedure
Time point 2 After watching the WWCiH procedural videos	Children	Self-reported procedural anxiety Self-reported knowledge about the procedure, Opinions of the video. Demographic information (age, gender, procedure undergoing, video watched & previous procedures a child has had)
	Parents	Self-reported procedural anxiety Self-reported knowledge about the procedure, Opinions of the video.
Time point 3 After having the procedure	Children	Perceptions of the impact of the WWCiH video on procedural experience, knowledge gained and positive and negative aspects of watching the procedural videos
	Parents	Perceptions of the impact of the WWCiH video on procedural experience, knowledge gained and positive and negative aspects of watching the procedural videos



Analysis

The questionnaire data were analysed using descriptive statistics (frequencies and percentages). Comparisons between self-reported before and after scores of procedural knowledge and anxiety were examined using inferential statistics (t-test). The written answers were short and were tabulated and analysed using content analysis (Hseih & Shannon, 2005) to provide some further understanding of the participants' closed question responses.

Ethical considerations

The project was deemed service evaluation according to the Health Research Authority decision making tool (<http://www.hra-decisiontools.org.uk/research>). Ethical approval was obtained through the Faculty of Health, Social Care and Medicine ethics committee (CYPF26) and approved locally by Southport & Ormskirk research and development department.

Consent and assent for children and their parents taking part in this project was assumed by the completion and return of the questionnaires to the evaluation team.

The project was designed to make sure that the collection of information did not add too much burden to families attending the accident and emergency department, the questionnaires were short and could be answered at the child and parent/carers convenience.



Findings

Participants

- 38 questionnaires were completed by children
- 54 questionnaires were completed by parent/carers

The children who responded were aged 6–15 years old (mean age 9.05 years), with 22 of the children being boys and 16 girls. The children were having a range of procedures including an X-Ray (n= 24), having an inhaler (n=3), an ECG (n=3) and blood test (n=5). Two children did not respond to identify which procedure they were having, and one response was illegible.

We did not receive any completed questionnaires from parents who chose for their child to not watch a video.

Previous procedural experiences of the children

The children who completed the questionnaires reported a range of previous experiences of being in hospital and having planned procedures. 25 of the children who completed a questionnaire had been in hospital more than 3 times, 11 children had been in hospital less than 3 times and 2 children did not provide a response.

The children who completed the questionnaires reported a range of previous experiences of the procedure they were having. 26 of the children had had the procedure before, 10 had not had the procedure before and 2 did not respond.

From the 38 children involved, 9 children reported looking at procedural information in addition to the WWCiH videos about their procedure, 28 children had not looked at any other information about their procedure and 1 did not respond. The reported information from children closely matched the information shared by their parents, who stated that 8 had looked at procedural information in addition to the WWCiH videos with their child, 43 had not and 3 did not respond.

The findings from the project will be reported according to children and parents’ self-reported procedural anxiety, procedural knowledge, views of the WWCiH videos and reported impact of the videos on procedural experiences.

Self-reported procedural anxiety

Children’s self-reported procedural anxiety before watching the video

Children were asked to rate how they felt about the procedure they were due to have before they watched the relevant WWCiH video on the tablet. They were asked to rate their feelings on a Likert scale from 0–10 with the anchors of 0 being completely calm and relaxed and 10 being completely worried and anxious.

The children reported a wide range of anticipatory anxiety in relation to their procedure with a mean of 3.625 (SD 2.99, range 1–10) (Table 2)

Table 2; Children’s self-reported procedural anxiety before and after watching the WWCiH videos

Anxiety Scores 0–10	Number of Child Responses before watching the WWCiH video (N=38)	Number of Child Responses after watching the WWCiH video (N=38)
0	5	8
1	6	7
2	4	3
3	2	3
4	2	3
5	5	3
6	2	0
7	1	2
8	2	1
9	2	1
10	1	1
Missing	6	6

32 of the children added open text to provide an additional description of their anxiety score. Many of the children described feeling ‘*scared and worried*’ (n=2), ‘*nervous*’ (n=4), ‘*confused*’ (n=2) and ‘*worried*’ (n=5), ‘*sad*’ (n=2) or had mixed feelings of being scared and calm (n=3). Some of the children who described feeling scared provided additional information that they were scared that something would ‘*go inside them*’ or ‘*touch them*’ to take the x-ray (n=2), scared that the procedure was ‘*going to hurt them*’ (n=2) and ‘*scared that they were injured inside*’ (n=1). Other children described how they were not worried about the procedure, using words such as feeling ‘*fine*’ (n=2), ‘*alright*’ (n=2) ‘*not bothered*’ (n=1) or ‘*calm*’ (n=2) or reported that they felt ‘*confident*’ (n=1) as they had had the procedure before.

Children's self-reported procedural anxiety after watching the video

The children were then asked to self-rate their anxiety again after watching the WWCiH video on the same 10 point Likert scale (anchors 0 completely calm and relaxed to 10 completely worried and anxious). Following watching the videos the level of children’s reported anxiety decreased (mean 2.82, SD, 2.84 range 0–10) (Table 3)

Children's self-reported procedural anxiety after completion of the procedure

After the procedure had been completed, children were asked again to self-rate their procedural anxiety levels on the 0–10 Likert scale (anchors 0 = completely calm and relaxed 10 completely worried and anxious). As expected, the scores were lower than previous ratings before the procedure (mean 2.82, SD, 2.84 range 0–10). However, some children did still report that they were anxious.

Comparing the mean self-reported anxiety scores, indicates that watching the WWCiH videos reduced children’s anticipatory anxiety (Table 3).

Table 3; comparison of children’s mean score of self-reported procedural anxiety before and after watching the WWCiH videos

Child’s mean self-reported anxiety level before watching the WWCiH video	Child’s mean self-reported anxiety level after watching the WWCiH video
3.62	2.82

Inferential statistics were performed on the data with a two tailed t test being performed. The results from the children's pre-video self-reported anxiety rating (M = 3.62, SD = 2.99) and post-video anxiety rating (M = 2.82, SD = 2.84) indicate that the video resulted in a reduction of procedural anxiety, $t(31) = 2.2145$ 3.1, $p = .353$. By conventional criteria, **this difference is considered to be statistically significant.**

Parents' self-reported procedural anxiety before watching the video

Parents were asked to self-report how they felt about their child’s procedure before they watched the WWCiH video on a 10 point Likert scale (anchors 0 = Not at all anxious or worried to 10 very anxious or worried). The parents’ mean average (mean 2.625, SD= 2.411 range 0-10) was lower than the average children’s self-report of their anxiety level 3.625 (SD 2.99, range 1-10 (table 4).

Table 4; Parents’ self-reported procedural anxiety before and after watching the WWCiH videos

Anxiety Scores 0-10	Number of Parent Respondents before watching the WWCiH video (N=54)	Number of Parent Respondents after watching the WWCiH video (N=54)
0	13	16
1	9	11
2	9	4
3	3	6
4	7	2
5	4	4
6	4	0
7	2	1
8	1	2
9	0	0
10	2	2
Missing	6	6

Parents were asked to rate their procedural anxiety again on the same Likert scale after they had watched the WWCih preparation videos with their child. The mean reported anxiety levels were lower with a mean of 2.240. SD= 2.723 (range 0-10) (table 4).

Table 5; Comparison of parents' mean score of self-reported procedural anxiety

Parents' mean self-reported anxiety level before watching the WWCiH video	Parents' mean self- reported anxiety level after watching the WWCiH video
2.625	2.240

Inferential statistics were performed on the data with a two tailed t test being performed. The results from the pre-video rating (M = 2.625, SD = 2.411) and post-video rating (M =2.240, SD = 2.723) for self-rating of procedural anxiety indicate that whilst there is a decrease in parents’ reported anxiety levels, there is not a statistically significant difference in these results, t(47) =1.494, p = 0.1418.

Self-reported procedural knowledge

Children’s self-reported knowledge about their procedure

Before watching the videos, the children were asked to self-report how much they knew about what would happen during their procedure on a Likert scale from 0-10 with the anchors; 0= I know Nothing to 10= I know everything.

The children reported a range of knowledge of their procedure with a mean score of 5.97 SD= 2.99 and a range from 0-10 (table 6).

Table 6; Children’s self-reported procedural knowledge levels before and after watching the WWCiH videos

Self-reported knowledge levels 0-10	Number of Child Respondents before watching the WWCiH video (N=38)	Number of Child Respondents after watching the WWCiH video (N=38)
0	2	2
1	1	2
2	2	0
3	2	2
4	2	0
5	5	4
6	5	3
7	3	1
8	2	7
9	4	5
10	5	7
Missing	5	5

Children were asked again after watching the video to rate their procedural knowledge on the same 0-10 Likert scale (anchors 0= I know nothing 10 = I know everything). Children self-reported knowledge increased to a mean rating of 6.79 Sd= 3.11 (range 0-10) (Table 6).

Self-reported procedural knowledge

Children’s self-reported knowledge about their procedure

Before watching the videos, the children were asked to self-report how much they knew about what would happen during their procedure on a Likert scale from 0-10 with the anchors; 0= I know Nothing to 10= I know everything.

The children reported a range of knowledge of their procedure with a mean score of 6.05 SD= 2.99 and a range from 0-10 (table 6).

Table 6; Children’s self-reported procedural knowledge levels before and after watching the WWCiH videos

Self-reported knowledge levels 0-10	Number of Child Respondents before watching the WWCiH video (N=38)	Number of Child Respondents after watching the WWCiH video (N=38)
0	2	2
1	2	1
2	0	3
3	2	2
4	0	2
5	4	5
6	3	6
7	1	3
8	7	3
9	5	5
10	7	6
Missing	5	0

Children were asked again after watching the video to rate their procedural knowledge on the same 0-10 Likert scale (anchors 0= I know nothing 10 = I know everything). Children self-reported knowledge increased to a mean rating of 6.79 Sd= 3.11 (range 0-10) (Table 6).

Comparing the mean self-reported procedural knowledge scores indicates that watching the WWCiH videos increased children’s self-reported procedural knowledge (Table 7).

Table 7; Comparison of children’s self-reported procedural knowledge before and after watching the WWCiH videos

Children's mean self-reported knowledge levels before watching the WWCiH video	Children's mean self-reported knowledge levels after watching the WWCiH video
5.97 (SD=2.99)	6.79 (SD= 3.11)

After the procedure had been completed, the survey asked children to ‘think back’ to whether they felt that had had enough information about the procedure they had today. 27 of the 30 children who answered this question felt they had had enough information, 1 child felt they had not had enough information but had encountered problems with the internet connection, 3 did not know and 8 did not answer the question.

Inferential statistics were performed on the mean scores of the pre and post knowledge rating data. A two tailed t test was performed. The results from the pre-video rating (M = 5.97, SD = 2.99) and post-video rating (M =6.79, SD = 3.11) for children's self-rating of procedural knowledge indicate that whilst there is an increase in children's reported knowledge levels, this is not a statistically significant difference $t(32) = 1.6921, p = 0.1004$.

Parents self-reported procedural knowledge

Parents were asked to self-report on a 10-point Likert scale (anchors 0= I know nothing, 10= I know everything) their knowledge of the procedure their child was due to have before they watched the video. The average reported procedural knowledge was 7.29 (SD2.26 (range 2–10) (Table 8).

Table 8; Parents' self-reported procedural knowledge levels before and after watching the WWCiH videos

Self-reported knowledge levels 0-10	Number of Parent Responses before watching the WWCiH video (N=54)	Number of Parent Responses after watching the WWCiH video (N=54)
0	0	0
1	0	1
2	2	0
3	1	0
4	2	0
5	7	4
6	5	4
7	4	2
8	14	11
9	6	9
10	12	17
Missing	1	6

Parents were asked to rate their procedural knowledge again after watching the WWCiH videos on the same Likert scale. The mean knowledge level was higher after watching the video (mean 8.30, SD 1.96 range 1-10) (Table 9).

Table 9; Comparison of parents' self-reported procedural knowledge before and after watching the WWCiH videos

Parents' mean self-reported knowledge levels before watching the WWCiH video	Parents' mean self-reported knowledge levels after watching the WWCiH video
7.28 (SD = 2.28)	8.30 (SD = 1.96)

Inferential statistics were performed on the mean scores of the pre and post knowledge rating data (Table 9). A two tailed t test was performed. The results from the pre-video rating (M = 7.28, SD = 2.28) and post-video rating (M =8.30, SD = 1.96) for parents' self-rating of procedural knowledge indicate that the video resulted in an increase in parent's procedural knowledge from the results analysed, $t(46) = 4.2821$, $p = 0.0001$. By conventional criteria, **this difference is considered to be extremely statistically significant.**

Parents were additionally asked if they thought they knew enough about the procedure their child was due to have by agreeing or disagreeing with the following statement ‘I know enough about the procedure my child is having today’. 47 parents agreed with the statement, 1 responded they did not know and 6 did not respond. After the procedure, parents were asked ‘Did you have enough information about your child’s procedure?’ 48 of the parents answered ‘yes’, the remaining parents (n=6) did not respond.

Views about the WWCiH videos

Children’s views of the WWCH videos

The children were asked to tick how good they thought the video was that they had watched. Most children felt that the video was either very good (n=9, 24%) or quite good (n=21, 55%), with only one child (3%) feeling that the video was not so good (Table 10).

Table 10; Children’s views of the WWCiH videos

Child’s self-reported views	Children N=38	%age
Very good	9	24%
Quite good	21	55%
Not so good	1	3%
Not sure	4	10%
Missing	3	8%

"I liked that it was a kid showing me" (child 36)

"Very informational, but quite targeted to younger audiences" (child 14)

'I am non-verbal and find it helpful to watch things first' (child 23)

Parent/carer’s views of the procedural videos

The parents were also asked to self-report how good they thought the WWCiH videos were. The majority of parents rated that the video was either very good (n=37, 67%) or quite good (n=13, 25%), with only one parent rating that the video was not good (Table 11).

Table 11; Parent’s views of the WWCiH videos.

Parents' self-reported views	Parent N=54	%age
Very good	37	67%
Quite good	13	25%
Not so good	1	2%
Not sure	1	2%
Missing	2	4%

Parents were asked to add additional information about why they had provided their particular rating of the video. The positive comments related to watching the videos, the content of the videos and the impact of the videos on their child’s procedure.

Parents commented that the videos were *‘quick to watch’, ‘simple and straightforward’,* the information included in the videos and how it had *‘explained the procedure clearly’, ‘was informative’* (n=6) and included a *‘really clear explanation’* (n=2) of the procedure *‘step by step’*. The videos were perceived as good as they helped a child *‘see all the equipment before they go in the room’* and were good as they are from the *‘perspective of the child’*. The videos were reported as making sure a child *‘didn’t go in blind’* to their procedure and could *‘visualise what would happen’*. Some parents wrote that the videos were good as they would *‘help people who were nervous about procedures see what would happen’* and one parent recognised how the videos helped parents as well as children, *‘it made me feel less anxious as a mum knowing what my child was about to have’*. The positive effect of having information and knowing what would happen was reported as helping *‘ease any worries’, ‘make them less anxious’,* helping children to feel *‘more comfortable’, ‘less scared’* and *‘calm their nerves’*.

Some comments were made linked to more negative experiences of watching the video in the Emergency Department in that *‘my daughter felt slightly awkward sat watching it while everyone sat waiting’* and that *‘I thought it was good but not age appropriate to my pre teenage girl’*.

Self-reported impact of the WWCiH video on their child's procedure.

Parents were asked in an open text format if they thought that watching the WWCiH video had helped their child with their procedure. 47 parents answered this question and from these, 36/47 (77%) parents described a positive impact of the videos they watched on their child's procedure including that it *'helped them understand'*, *'it prepared them for what would happen'*, *'helped put them in the picture'*, *'helped ease their mind'* and *'stopped them being scared'*. Four of the responses indicated that the video did not help their child that much as *'they have had it lots of times before'*, *'she has had it before and so wasn't concerned'* and *'we already knew what to expect'*. Two parents reported difficulty in getting the videos to play in the department.

"It helped them see all the equipment before they go in the room" (parent 37)

"It made me feel less anxious as a mum knowing what my child was about to have" (parent 8)

Procedural satisfaction

Children's satisfaction with their procedure

After the procedure had been completed, the survey asked children to report how happy they had been about what had happened during their procedure, their levels of satisfaction, on a Likert scale from 0-10 (0= Not at all happy or satisfied, 10= completely happy and satisfied). The average score was 8.28, SD 2.52 with a range of 0-10 (table 12). As can be seen in the table there were 2 of the children who rated their satisfaction as 1 and below, indicating a poor experience.

Table 12; Children’s reported satisfaction with their procedure

Self-reported satisfaction levels 0-10	Number of Children N=38
0	1
1	1
2	0
3	0
4	0
5	2
6	2
7	2
8	2
9	8
10	14
Missing	6

The children were asked in an open text box to comment on what had gone well during their procedure. 26 children answered this question with the responses including that the procedure went well as they *‘didn’t cry’* (n=1), that everything went well (n=5), went *‘smoothly’* (n=2), *‘went okay’* (n=2) or went quickly (n=4). Several children commented that the procedure had gone well as it *‘hadn’t hurt’* (n=2) or they had had *‘no pain’* (n=2). Three children specifically mentioned that the videos had helped them *‘know what was going to happen’*, *‘see what was going to happen’* and *‘understand more’* about their procedure.

Some children specifically mentioned that during the procedure, it had been the staff who had helped it go well; as staff had been *‘friendly’* (n=3), *‘nice’* (n=3), *‘lovely’* (n=1) had been *‘kind and let me help’* (n=1). Other children specifically mentioned that they had got *‘stickers’* (n=3) at the end of their procedure. Children were also asked what could have worked better during their procedure, some children reported that a *‘better internet connection’* would have helped (n=2) or one child mentioned *‘maybe a break during the procedure’*.

"A better internet connection would help" (child 2)

"It helped me know what was going to happen" (parent 44)


Parent self-reported procedural satisfaction

After a child’s procedure had been completed, the survey asked parents to report how happy they had been about what had happened during their child’s procedure, their levels of satisfaction, on a Likert scale from 0–10 (0= Not at all happy or satisfied, 10= completely happy and satisfied). The average score was 8.02, with a range of 0–10 (table 13).

Table 13; Parents' self-reported satisfaction with their child's procedure

Self-reported satisfaction levels 0–10	Number of Parents N=54
0	0
1	0
2	0
3	0
4	0
5	0
6	1
7	1
8	3
9	5
10	38
Missing	6

The parent/carers were asked in an open text box to comment on what had gone well during their child’s procedure. 45 parents answered this question with many responses being orientated to the health professionals being calm (n=2), great (n=2), helpful (n=5), friendly (n=6), lovely (n=3) and patient (n=2). Some of the comments specifically related to the procedure being helped by them and their child having watched the video, for example ‘*the nurses were great, and the video really helped him understand what was going to happen*’ and ‘*she knew from the video she had to keep very still, and she wasn’t scared at all*’. Many of the responses simply stated that ‘*everything had gone well*’ (n=9) or had gone fine (n=2). Other parents linked the appointment going well to short waiting times (n=4).




The parents were asked in a separate question what could have been better in relation to their child's appointment. Ten parents answered this open text question, sharing a range of views. Some comments related to factors within the department, for example '*a chair for mum*', '*more polite staff*' and a quicker appointment. Some of the comments related specifically to the WWCiH videos, detailing that a '*stronger internet connection*' would have helped view the videos better and that there were '*differences in what the video showed and what they had*' with a finger prick rather than a venous blood sample.

Limitations

Whilst all children who were due to have a procedure and were offered the tablet with the WWCiH videos were approached to take part in the project, we did not record the number of families who chose not to complete a questionnaire. Therefore the sample was self-selecting and this may influence the findings by them not being representative of the population being studied. We did not receive any completed questionnaires from those parents who chose not to watch the procedural videos with their child.

Conclusion

- The videos were reported by children and their parents as of value within the Accident and Emergency Department setting. The videos were reported as helping children know what would happen during their procedure and made them feel less scared and anxious.
 - There were a few issues identified with using the videos. These included poor internet access, differences between the video content and the reality of the procedure and the videos being perceived as more suitable for younger children.
 - Parents reported having more knowledge (statistically significant increase) and less anxiety about their child's procedure after watching the WWCiH videos.
 - Children reported having more knowledge and less anxiety (statistically significant reduction) about their procedure after watching the WWCiH videos.
 - The majority of children and parents rated the WWCiH videos as either very good or quite good.
 - Many children and parents linked positive procedural experiences to having watched the WWCiH videos.
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References

- Bray, L., Carter, B. and Snodin, J., 2016. Holding children for clinical procedures: perseverance in spite of or persevering to be child-centered. *Research in Nursing & Health*, 39(1), pp.30-41.
- Bray, L., Carter, B., Ford, K., Dickinson, A., Water, T. and Blake, L., 2018. Holding children for procedures: an international survey of health professionals. *Journal of Child Health Care*, 22(2), pp.205-215.
- Bray, L., Appleton, V. and Sharpe, A., 2019. The information needs of children having clinical procedures in hospital: Will it hurt? Will I feel scared? What can I do to stay calm?. *Child: care, health and development*, 45(5), pp.737-743.
- Copanitsanou, P. and Valkeapää, K., 2014. Effects of education of paediatric patients undergoing elective surgical procedures on their anxiety-a systematic review. *Journal of clinical nursing*, 23(7-8), pp.940-954.
- Bray, L., Booth, L., Gray, V., Maden, M., Thompson, J. and Saron, H., 2022. Interventions and methods to prepare, educate or familiarise children and young people for radiological procedures: a scoping review. *Insights into imaging*, 13(1), pp.1-33.
- Boot, M et al., 2015 Report on the Parent Survey 'Preparing for Hospital'
<https://www.whatwhychildreninhospital.org.uk/files/ParentSurveyReportFinal.pdf>
- Hsieh H-F, Shannon SE. 2005. Three Approaches to Qualitative Content Analysis. *Qualitative Health Research*. 15(9):1277-1288.
- Kim, J., Chiesa, N., Raazi, M. and Wright, K.D., 2019. A systematic review of technology-based preoperative preparation interventions for child and parent anxiety. *Canadian Journal of Anesthesia/Journal canadien d'anesthésie*, 66(8), pp.966-986.
- WWCIH website