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A qualitative study of health professionals' views on the holding of children for clinical procedures: Constructing a balanced approach.

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Abstract

Children undergoing clinical procedures can experience fear, uncertainty and anxiety which can cause them to become upset and resist procedures. This study aimed to capture an international perspective of how health professionals report they would act if a child was upset and resisted a procedure. An online questionnaire, distributed through network sampling, used three vignettes to elicit qualitative open text responses from health professionals. Seven hundred and twelve professionals participated, resulting in 2072 pieces of text across the three vignettes. Many professionals reported that they would use distraction and spend time to inform and engage children in making choices about their procedure. However, most professionals indicated that if a child became uncooperative they would hold or instruct the holding of the child in order to get the procedure done 'as quickly as possible'. The findings demonstrate that professionals experience difficulty in balancing the different agendas, rights and priorities within the momentum which can build during a clinical procedure; often resulting in the child's voice and rights being undermined. A more balanced approach could be facilitated by a 'clinical pause' which would equip professionals with the time to consider children's expressed wishes and explore alternative approaches to holding.

Key words

Clinical procedures, holding, agency, clinical pause, children

Background

Children can experience fear, anxiety, uncertainty and upset prior to and during procedures such as blood tests, immunisations, radiological examinations and medicine administration (Jaaniste et al 2007, Pelander et al 2010, McCarthy et al 2014, Bray et al 2015, Carter et al 2014). Evidence shows that procedural anxiety can cause children to become distressed and resist procedures (Duff et al 2012, Sparks et al, 2007). This can be particularly pronounced in younger children, or those who have experienced difficult procedures in the past (Duff et al 2012). Despite the use of distraction, guided imagery and analgesia, if a child is upset and uncooperative they are often physically held to facilitate a clinical procedure being completed (Brenner 2007; Bray et al 2015). **This holding may**

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3 range from a child being cuddled tightly on a mother's knee to restrict their movement to a child
4 having their arms and legs held by a parent and/or health professional in order for a procedure to
5 be completed. There is a lack of consensus and consistency in how holding is defined within the
6 literature and professional guidance, with a range of terms and definitions being used including
7 clinical holding (Lambrenos & McArthur 2003), therapeutic holding (RCN 2010) immobilisation
8 (Darby & Cardwell 2011, Graham & Hardy 2004) and restraint (Brenner 2007, Hull & Clarke 2010,
9 Homer & Bass 2010). The range of definitions and terms has contributed towards a lack of shared
10 understanding between professionals as to what constitutes holding practices (Svendsen et al 2017,
11 Authors 2018). There is however, some evidence that the forceful holding of a child for a procedure
12 can cause that child to experience short and long-term psychological distress and a reluctance to
13 undergo further procedures (Duff et al 2012) and can also impact on parents who report high levels
14 of stress and anxiety when they are called upon to hold their child (Bray et al 2015).
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23 The literature highlights that when it has been decided a child needs a clinical procedure, health
24 professionals' experience a degree of uncertainty around the best course of action to take if the
25 child is uncooperative. Some evidence suggests that health professionals do not look to policy or
26 guidance to inform their practice in relation to holding children (Kirwan & Coyne 2017), but are
27 guided by local practices, colleagues and their own personal judgements (Bray et al 2012, Valler-
28 Jones & Shinnick 2005). The actions and decisions of professionals during clinical procedures can
29 also be guided by the expressed wishes of parents to complete their child's procedure quickly (Bray
30 et al 2015). Health professionals report that holding a child for a procedure can be stressful and
31 upsetting to them and can erode the trusting relationship they have with a child (McGrath et al
32 2002, Brenner et al 2014 Bray et al 2015, Kirwan and Coyne 2017). Despite these reports, health
33 professionals describe children being held for procedures as an accepted and expected part of
34 paediatric practice (Kirwan & Coyne, 2017, Bray et al 2015, Tomlinson 2004, Homer & Bass 2010,
35 Page & McDonell 2013) and holding children is often not a practice of 'last resort' as indicated
36 within the limited professional guidance available (British Medical Association 2010, Royal College
37 of Nursing 2010, Ministry of Health 2008, The Royal Australasian College of Physicians 2005,
38 Macintyre et al 2010).
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50 Most of the literature focussing on children being held for procedures originates from single
51 country studies and primarily from the United Kingdom and there is a lack of international research
52 examining holding practices. This study aimed to gain an international view of health professionals'
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3 reported practice. The research question underpinning this study was, what are the reported
4 practices of health professionals when a child is resisting a clinical procedure?
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8 **Methods**

9 A short anonymous, self-administered electronic questionnaire composed of closed and open
10 questions and three vignettes was used to obtain the views and perceptions of health professionals.
11 This design was chosen as it has been demonstrated to be an acceptable and appropriate way to
12 elicit the views and opinions of health professionals (Holt et al 2013, Carter et al 2015). The
13 questionnaire was administered and collated using Survey Monkey™ software. This electronic
14 software is compatible with information and technology systems globally, does not require large
15 downloads and is not blocked by professional firewalls. The questionnaire was designed to be short
16 and focused in nature, as this has been shown to improve response rates (Dillman et al 2014). The
17 questionnaire consisted of 16 questions. Thirteen questions used structured, closed yes/no or Likert
18 scale responses relating to the professionals' demographic details; the reported frequency of
19 holding children for procedures; awareness of policies, procedures and professional guidance;
20 attendance at formal training; and the alternatives to holding used by the respondent (Bray et al
21 2017). This paper reports on and discusses the findings from the open text responses to the three
22 vignettes of clinical situations.
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32 The vignettes aimed to explore health professionals' reported beliefs and responses to clinical
33 situations that may lead to a child being held in order for a procedure to be conducted (Figure 1).
34 The vignettes aimed to follow guidance from Mah et al (2014) by presenting a short 'snapshot' of a
35 procedure, detailing key information and attempting to convey a sense of story. Vignettes have
36 been used within research to explore the decision-making practices of health professionals (Evans
37 et al 2015) and are seen as particularly relevant when exploring professional beliefs and values
38 (Mah et al 2014) as well as practices which may be seen as contentious (Brenner et al 2013). By
39 using hypothetical but realistic vignettes, we were able to ensure anonymity in regard to the
40 individual health professional and service and we aimed to prompt authentic responses as to how
41 health professionals would respond in identical situations. The vignettes were developed based on
42 the key themes from the literature, the clinical experience of the team and to represent different
43 genders and developmental levels of children. The scenarios aimed to be authentic and resonate
44 with the day to day experiences of health professionals. This authenticity is described as essential to
45 ensure respondents are able to see their own 'lived experiences' of practice in the vignettes (Mah
46 et al 2014). The questionnaire presented the vignette followed by a single question; *how would you*
47 *deal with this situation?*
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3 The vignettes were pre-tested and piloted with 18 health professionals known to the project team
4 (6 nurses, 6 doctors, 6 allied health professionals) across the UK, New Zealand and Australia. The
5 pre-testing resulted in some of the sentences within the vignettes being altered and the layout of
6 the vignettes within the questionnaire being revised.
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VIGNETTE 1

14 **Rose, aged 6, requires a finger prick for a blood test. Her parents have not told her the reason**
15 **she is attending clinic and she has not previously had a blood test. When Rose enters the room**
16 **she becomes anxious and starts to cry and her mother automatically lifts Rose onto her knee**
17 **and holds her around her middle. Rose is given some explanation by the phlebotomist but is**
18 **now crying that she ‘does not want it done’ and is sitting on her hands.**

VIGNETTE 2

24 **Danny, aged 3, needs to have an X-ray for a suspected broken arm. He has been given a**
25 **magazine by his parents to look at while it is done, which he is holding in his ‘good hand’, but**
26 **he is sobbing quietly, looks anxious and will not keep his arm still when the X-ray is to be**
27 **taken. His dad is holding Danny’s fingers and upper arm but this is hurting Danny. His dad**
28 **offers to hold Danny more firmly so as to get the X-ray over and done with quickly.**

VIGNETTE 3

34 **Kim, aged 13, needs to have a blood test as part of her on-going hospital treatment. Kim is**
35 **upset and refusing to let the procedure take place. The medical team want the results**
36 **“quickly” so that they can determine the course of Kim’s treatment over the next hours and**
37 **days. Kim’s parents have told you to “Just go ahead and get it done with”. Kim says “Go away,**
38 **leave me alone, I don’t want it done”. Kim’s dad says “Look, I’ll hold Kim’s arm so that you can**
39 **get on with it”**

44 Figure 1: Vignettes as presented in the questionnaire.
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49 Sampling

51 Network and snowball sampling were used to distribute the electronic questionnaire. This approach
52 to sampling is described as a good approach when the study is seeking a broad range of data on
53 behaviors and perceptions (Dragan & Isaic-Maniu 2013). Information on the study and the link to
54 the questionnaire was distributed through professional networks (Royal College of Nursing,
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3 Children and Young People's Forum, Children's Healthcare Australasia, Paediatric Forum at the
4 Royal Children's Hospital Melbourne, Paediatric Society of New Zealand) and personal
5 communications with key organisations (College of Child and Youth Nurses (CCYN), New Zealand
6 Nurse Organisation (NZNO). Snowballing of the questionnaire was encouraged and distribution also
7 occurred through the research team's personal and professional networks and through social media
8 (e.g. closed professional Facebook pages and professional twitter accounts).
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12 **Ethics approval**

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15 Ethics approval was obtained from committees in the UK (FREC SC 22), New Zealand (AUTEC
16 15/414) and Australia (H0015373) (home countries of team members).
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19 **Analysis**

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22 The text responses to the scenarios were analysed using content analysis (Hsieh & Shannon 2005)
23 to gain understanding and knowledge of the phenomenon under investigation (Downe-Wamboldt
24 1992). Analysis was inductive (Kondracki & Wellman 2002) with initial analysis focussing on
25 highlighting words and phrases within the text that captured key thoughts or concepts. These were
26 then grouped into codes to form a coding scheme (Hsieh and Shannon 2005). Analysis and the
27 development of codes and categories was undertaken initially by members of the research team
28 within each of the lead countries involved (UK, NZ, Australia). The coding scheme, categories and
29 explanations were then discussed in a full team meeting which resulted in further refinement and
30 development.
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38 **Findings**

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40 In total 2072 pieces of text were analysed; 712 participants responded to vignette 1, 667 to vignette
41 2 and 648 to vignette 3. The responses were from a range of health professionals (nurses, doctors,
42 play specialists and allied health professionals (radiographers, radiologists, technicians) currently
43 practicing in the United Kingdom, New Zealand, Australia, Sweden, United States of America,
44 Greece, Malaysia, Norway, Qatar, Austria and Canada (see table 1). Quotations are presented
45 verbatim and identified by country, profession, and participant number (PN).
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51 Despite nuanced differences in legislation, professional guidance and education, there were few
52 between-country differences noted; levels of uncertainty and a wide range of approaches were
53 reported by the professionals who responded to these vignettes. Evidence-based guidance was not
54 mentioned as informing practice in any of the responses to the vignettes.
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Constructing a balanced approach to children's procedures

The key finding relates to how professionals reported weighing up and trying to balance different agendas and outcomes in order to decide how to proceed when a child was resisting a procedure. The findings show that, in the main, professionals considered children's choices, children's developing agency and the benefits of using child-centred practices. However, there were factors such as parents' agendas, service demands and the perceived benefits of getting a procedure completed quickly which could tip the balance towards professionals overriding children's expressed choices and using or instructing the use of holding practices. Professionals described that they found it hard to know how best to proceed when all the approaches to engage a child had failed, the child was resisting and the procedure needed to be completed. An example which typified this was expressed by a professional who had acknowledged the need to work in a child-centred way, but when presented with an uncooperative child described holding as inevitable and the only way forward.

Stop and let everyone take a breather. Explain the importance to Kim for her treatment and ask what has helped in the past, emla, distraction and allow her to have some control, set a time limit and stick to it. Needs to be done and Kim can assist to help make the inevitable quicker and less painful - When all else fails - "Take the NIKE approach and just DO IT!" (Australia, Nurse PN 723)

It was clear that there is inherent skill in balancing the competing demands, interests and outcomes within the complex interaction which underpins a procedure. This concept of balancing is further discussed within the following themes: i) balancing the time to prepare, inform and engage with children against service demands; ii) balancing children's right to make choices and have control against the rights of their parents; and iii) balancing the perceived need to 'get it done quickly' against stepping back and considering children's long-term outcomes.

Balancing the time to prepare, inform and engage with children against service demands

Health professionals described that spending time to prepare and inform children about their procedure reduced the need for holding practices. Time was seen as an investment in 'gaining the child's trust', 'listening to and hearing the child' and trying to 'build a story with them about what

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3 *was going to happen*'. These stories were described as being adapted according to the individual
4 child.
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7 *Tell her (Rose) that I'm sure she's really brave and that there will be a surprise for her in the*
8 *'treasure chest' once the blood has been collected, tell her that she has princess blood or*
9 *fairy blood and that it is very precious (Australia, Nurse PN 1029)*
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12 Professionals described methods they would use to help a child understand what was going to
13 happen during a procedure, for instance one respondent described how they would use their phone
14 to *'show Danny that taking an X-ray is just the same as taking a photo'* (New Zealand, Paediatrician,
15 PN 79). Some professionals identified how they would use well known games such as *'statues'* or
16 *'who can stay still the longest'* for distraction and to gain the child's cooperation alongside
17 techniques such as *'stories, starlight box and bubbles'* (UK, Nurse, PN 88). Professionals described
18 having to purposefully *'allow time'* and *'make time'* to inform and prepare children and how it was
19 difficult to balance this against service demands and the quick throughput of patients; *'if we have*
20 *time then we could prepare her and it may not be necessary to hold her [Rose]'* (UK, Nurse, PN 319).
21 The lack of time and service demands were also seen to constrain the time children had to *'process*
22 *what was going to happen'* (New Zealand, Educator, PN 902) and many professionals stated that it
23 *'would be nice'* and *'would make a difference'* to involve play specialists more and have *'more hands*
24 *on deck'* (UK, Nurse, PN 431).
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34 Many of the professionals recognised that the short-nature of many interactions with children
35 meant that parents had an important role in preparing and distracting their child during procedures
36 and professionals described how they would coach parents to influence future interactions.
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39 *I would also discuss with mum how important it is to prepare children for procedures. I*
40 *would still discuss this with mum even if Rose let the blood test take place as it is not known*
41 *how often Rose will come into contact with health care professionals in the future (UK,*
42 *Nurse, PN 38).*
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46 Some professionals who responded to the questionnaire did not report that they would attempt to
47 inform and/or distract a child who was upset; in these cases the perceived inevitability of *'having to*
48 *hold'*, the benefits of getting the procedure completed quickly or the time pressures within a service
49 eroded the professionals' ability or decision to prioritise the child's needs.
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54 **Balancing children's rights to make choices and have control against the rights of their parents**

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3 Many of the responses focussed on how facilitating children's choices for certain parts of their
4 procedure could help improve cooperation and reduce the need for holding. These choices included
5 letting children 'choose where to sit', 'which book to look at' and 'who they want to hold their hand'.
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9 *I would make a plan with Rose about how she would like the procedure to occur - let her*
10 *make choices where possible e.g. would you like to sit on mum's lap or on the chair? Which*
11 *finger would you like to use for the test? (Australia, Play therapist, PN 1036)*
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15 Professionals reported that it was important to 'make sure that the choices offered were realistic'
16 (UK, Doctor, PN 992). There was consensus that Rose would not be allowed to decide if the
17 procedure went ahead or not but could be offered choices over where and how a procedure may
18 be carried out. In many circumstances the parent's choices and interests were described as
19 outweighing the child's, for example 'If Dad wants to force the child it is his choice' (Australia,
20 Nurse, PN 591), or by health professionals seeming to include the child in the procedure almost as
21 an afterthought.
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28 *Talk to Dad to check he still wants the X-ray to continue ...he may want to just 'get it done'.*
29 *Then talk to Danny and show him what is going to be done. (Australia, Nurse, PN 175).*
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33 Some health professionals described how they would provide coaching to try and influence parents'
34 actions during a procedure by 'advising Dad that holding Danny more firmly will only hurt him and
35 scare him' (Australia, Nurse, PN 901). In this way professionals recognised that in a difficult situation
36 parents may not always act in the best interests of their child.
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41 The approach taken and the choices afforded to a child appeared to be influenced by their age. In
42 vignette 3, where the child was older, professionals were more likely to report that they would
43 engage the child in a more active and collaborative way to 'ask her to help find a solution to 'our'
44 problem' (Australia, Doctor, PN 112). Older children were described as more rational and more able
45 to engage in decision making, and therefore afforded a higher level of autonomy.
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49 *She is at an age where she will be trying to assert some control over her own health and*
50 *needs to be given opportunity to do this...stop and let Kim feel like she is in control. Get her*
51 *to voice her concerns and fears and ensure she feels like she is being listened to, negotiate*
52 *with her and include her in the decision (New Zealand, Nurse, PN 53).*
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3 However, there was variation in the level of autonomy afforded. Some respondents reflected that
4 *'adolescents with chronic conditions are hard to deal with. I would try to make a deal with her then*
5 *tell her this has to be done - you do not have the option'* (Greece, Doctor, PN 607). In these cases the
6 adolescent was told what was going to happen and either agreed to *'help'* and *'go along'* with the
7 professionals' or parents' plan or was held still. The decisions of the parents and professionals in
8 these instances outweighed the adolescents' expressed wishes, **their dissent was over-ruled** and
9 the balance was tipped towards the child being held.
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16 **Balancing the perceived need to 'get it done quickly' against stepping back and considering** 17 **children's long-term outcomes.** 18

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20 Many respondents stated that they would take time to assess the urgency and necessity of the
21 planned procedure before proceeding to hold or instruct the holding of a child and some stated
22 that they may stop and reassess their initial decision during the procedure should the child become
23 too distressed. Many respondents stated that they would *'not force a child to undergo a procedure*
24 *against their will'* (NZ, Nurse, PN 335) or *'holding a child forcefully would be a last resort'* (Australia,
25 Nurse, PN 691). Health professionals reasoned that it was important to have time for a calm and
26 considered approach, balancing holding a distressed child to complete the procedure against the
27 effects of this distress on any subsequent future procedures.
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34 *I'd explain to the parent that forcing her [Kim] to go through with the test and traumatising*
35 *her is not a good idea for her ongoing treatment.* (Australia, Doctor, PN 332)
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37 The impact of distress and holding on future procedures was discussed mainly in relation to Kim's
38 vignette which overtly highlighted the ongoing nature of her treatment. However, the possible
39 long-term implications of holding a distressed child for a procedure was also acknowledged in
40 relation to all three scenarios. Decisions to proceed or not proceed were informed by not wanting
41 to cause long-lasting harm; to *'scar her for life'* (Australia, Nurse, PN 355).
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45 However, many decided that in reality *'not doing it is NOT an option'* (Australia, Doctor, PN 593)
46 and completion of the procedure was non-negotiable and seen as inevitable. In some cases,
47 particularly in response to the scenarios with younger children, the professionals identified that it
48 was expected that a child would be *'upset and uncooperative'* and *'at 6 there really is no reasoning*
49 *once the child has decided no'* (UK, Nurse, PN 605). This perception made professionals less likely to
50 prioritise spending time preparing and engaging the child in distraction and more likely to report
51 the need for holding in order to complete the procedure.
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3 *If Rose will not calm down and assent to the procedure, explain to her that it had to be done*
4 *now. Rose would then be held while the procedure occurred. (Australia, Nurse PN 985)*
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7 Sometimes holding was seen to facilitate a better experience for a child as *'holding still will mean*
8 *that the procedure will be less painful and faster'* (Australia, Nurse, PN 367). In many cases
9 professionals described that getting *'it over and done with is best'* (NZ, Nurse, PN 781) and that this
10 was facilitated by the use of firm holding and speed. When faced with a distressed child and a
11 procedure to be completed, the balance for some health professionals tipped towards holding and
12 completing the procedure with less consideration for the child's long-term outcomes.
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16 17 18 **Discussion**

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21 The amount of detailed commentary health care professionals provided indicates a high degree of
22 interest in what is acknowledged to be a difficult and stressful part of children's health care for
23 everyone involved (Brenner 2007, Brenner et al 2014, Bray et al 2015). The findings indicate that
24 professional practice during children's procedures is a fine balance of weighing up different
25 agendas, views and priorities. Within this study professionals described that when attempts to
26 distract and engage a child failed, in most cases they would persist in completing a procedure
27 despite the child expressing resistance and dissent. The responses of professionals indicate that
28 children, especially younger children, were often positioned as less agentic, passive recipients of
29 care with their rights **and expressed dissent** carrying less weight or importance than those of their
30 parents, professionals and the demands of the clinical service. Although many of the professionals
31 stated that it was important to work in a child-centred way, in reality the rights of a child to be
32 listened to and their views taken seriously (UN Rights of the Child 1989) seemed difficult to uphold
33 when balanced against the parents' **consent to proceed** and parents' and health professionals'
34 perceived need for a procedure to be completed. This study supports other findings that show that
35 despite children's rights and agency being increasingly acknowledged within healthcare (Montreuil
36 & Carnevale 2016, Rasmussen et al 2017), they are still likely to be overshadowed by the opinions,
37 **permissions** and agendas of the adults who surround them (Livesley & Long 2013, Feenstra et al
38 2014). **Previous work has shown that children are less likely to be asked by professionals for their**
39 **permission to proceed (assent) with a procedure than their parents (Authors 2018).** The child's
40 perspective and experience of being held during clinical procedures is currently lacking within the
41 evidence and literature; there is a need for children's voices to be prioritised to prevent adult
42 agendas dominating debate and opinion within this field.
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5 The vignettes presented what are generally considered as straightforward clinical procedures, but
6 the responses of professionals indicate that a child's resistance can prompt them to have to weigh
7 up different views, priorities and cues in order to make a decision about whether to proceed with a
8 procedure or not. This weighing up seemed to become more difficult during the stressful conditions
9 of a procedure when time was short and options were perceived as limited. The short timeline of
10 many procedures and the momentum gained during the interaction, seemed to lead to the decision
11 to *'adopt the Nike approach and just do it'*. This building of a collective momentum in procedures
12 has been noted in previous work within this field (Bray et al 2016). Professionals in this study
13 demonstrated that they were often 'thinking on their feet' within pressurised services and when
14 their attempts to engage with a child did not work, the perceived inevitability of a procedure being
15 completed tipped the balance towards a child being held. This resonates with the notion of 'fast
16 thinking' (Kahneman, 2011), where a professional does not, or does not feel able to pause and
17 consider alternatives but works according to established norms. Holding a child in order to
18 complete a procedure is often an established norm, it is an accepted and expected part of practice
19 (Bray et al 2015, Coyne & Scott 2014, Kirwan & Coyne 2017). Our findings support previous work
20 which shows that professionals' actions or decisions within this context are generally informed by
21 personal and professional experience and judgement rather than by guidance, evidence or critical
22 debate (Kirwan & Coyne 2017, Bray et al 2017).
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35 Our findings suggest that when health professionals continue to undertake a procedure despite a
36 child's resistance, it is difficult for them to pause the momentum, stop and weigh up options and
37 reconstruct a balanced approach allowing children's expressed wishes to be considered. Benefits of
38 pausing are evident in other fields such as leadership where enacting the 'pause principle' is seen as
39 'a conscious, intentional process of stepping back to reflect and deliberate' to then move 'forward
40 with greater clarity, authenticity, purpose, and contribution' (Cashman 2012). Since this 'pause
41 point' (Cashman 2012) or 'clinical pause' (stepping back from a situation) is more difficult to enact
42 as the momentum of a clinical procedure progresses, we propose that it would be best placed
43 before a procedure begins. This 'clinical pause' would facilitate a discussion including the child, to
44 try and construct a balanced approach to the procedure; acknowledging what will happen, the
45 different roles and priorities of those present, how the child can be best supported and which cues
46 will prompt a reassessment of the procedure. Enacting this clinical pause requires professionals and
47 services to value the time spent preparing, informing and facilitating children to make choices and
48 acknowledge children's agency within health care procedures. Despite being more challenging, a
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3 'clinical pause' should also be enacted if a child becomes distressed, once the procedure is
4 underway as it could enable professionals and parents to reassess the procedure, their actions and
5 how the different agendas are being balanced.
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8 9 **Conclusion**

10 This study has provided an opportunity for reflection and critique of taken for granted practices and
11 professionals' reported decisions and actions relating to an important aspect of children's health
12 care. Our findings highlight that during a clinical procedure there are many factors which can 'tip'
13 the balance towards a child's expressed wishes being undermined and them being held against
14 their will. The need to balance different agendas, rights and priorities within the momentum which
15 can build during a clinical procedure requires professionals to feel equipped to enact a 'clinical
16 pause'; an opportunity to establish a balanced approach which acknowledges children's agency
17 within health care procedures.
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24 25 **References**

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Table 1: Country of respondents.

| Country of respondent | Number of participants n=712 |
|------------------------------|-------------------------------------|
| Australia | 382 |
| New Zealand | 189 |
| United Kingdom | 111 |
| Sweden | 16 |
| Greece | 4 |
| Malaysia | 3 |
| Norway | 3 |
| Qatar | 2 |
| Austria | 1 |
| Canada | 1 |