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Including Children and Young People in Assessments: A Practical Guide

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Abstract

The ability to interact with children and young people (CYP), appropriately examine and competently interpret signs is an essential skill for many medical practitioners and allied healthcare professionals, yet how do we ensure competence in our students and trainees? One method is to include CYP in both formative and summative assessments; this provides an invaluable opportunity for examiners to evaluate the clinical interaction, but also to gain an understanding of the CYP experience and what characteristics they value in a “good children’s doctor”.

This paper explores the benefits and challenges of involving CYP in assessments and provides practical advice for course organisers, assessors and students when encountering CYP in assessment.

Introduction

"Never overlook comments from young people* – they are unlikely to continue to *contribute if you ignore their points" (a young person) [1]

Whilst paediatricians on the specialist register account for only 4% of specialist and GP doctors in the UK, a further 44% are GPs and Emergency Medicine consultants who will have significant contact with paediatric patients.[2,3,4] The ability to assess and treat children and young people (CYP) are therefore essential skills for many doctors and allied healthcare professionals.

Most healthcare students undertake a paediatric placement in order to learn these skills. Yet how do we ensure they reach competence? Methods of assessment include: Supervised Learning Events (SLEs), where students are observed, and given direct feedback by the examiner; and Objective Structured Clinical Examinations (OSCEs), where they may be required to demonstrate skills on a simulated patient or manikin, or less frequently real CYP. For many, this is their final opportunity to develop, practise and demonstrate competence in paediatric communication and examination skills, before encountering paediatric patients during clinical practice.

Those who plan curricula, training programmes and assessments need to ensure there is opportunity to develop and demonstrate appropriate skills to work with CYP, recognising the challenges in ensuring competence and knowing what, from the CYP's perspective, constitutes a 'good children's doctor'.

The aims of this paper are to:

- Explore the benefits and challenges of involving CYP in assessments
- Describe the practicalities of different forms of assessment

- Provide practical advice and tips for students, assessors and course organisers when involving CYP.

Issues and challenges vary according to age of child. Infants, toddler and preschool children (0-5 years) will need parents with them, and are unpredictable in how they will engage with candidates; younger primary school (5-11 year old) children will need parents, while the older end of this range will participate happily with chaperone support; secondary school and college CYP (11-18 years) may be embarrassed/sensitive due to puberty, and absence from school becomes increasingly difficult in senior years. In this paper we have generally considered CYP together, highlighting particular age-related issues where relevant. It is important to consider the impact of age throughout.

Why involve children in assessments?

Including CYP in assessment has many advantages for both the CYP and the trainee (Figure 1), while providing an invaluable opportunity for examiners to assess the core clinical skills of interacting with CYP. Healthy children can participate, as well as those who are acutely or chronically unwell (Box 1).

[Figure 1]

[Box 1]

What's in it for the Child or Young Person?

Well CYP have participated in clinical examination courses and examinations for many years, and have found it to be an enjoyable and overwhelmingly positive experience.[5,6] Benefits include learning about the role of doctors in a supportive environment, which can then allay fears or anxieties surrounding future healthcare encounters.

Two further benefits for CYP with acute and/or chronic illness are patient empowerment and patient education. Children and adolescents with chronic illness have reported feeling a loss of control during hospital admission or when attending appointments and making decisions

regarding their care.[7,8,9] Involvement in teaching and assessment empowers the patient as an individual, through seeking permission and their feedback on the student/trainee's approach.

Education is also essential in the transition of a young patient to an independent adult patient; preparing adolescents for this is a key priority in paediatric practice[10]. Without adequate preparation and support, adolescents may fail to engage with services.[11,12] Through involvement in assessment, CYP may learn more about their conditions, improving self-management.[13]

There are potential disadvantages that need to be considered when involving any CYP in assessment (Figure 2). Missed school is of particular concern when considering CYP with chronic illness as this compounds absence due to illness, hospital admissions or appointments. Inclusion of the more stable CYP or alternative scheduling (e.g. evenings /weekends, as utilised by the Royal College of Paediatrics and Child Health for their membership examinations) allows for CYP involvement without further impact on education. For well CYP, time out of school has been shown to be educationally beneficial, especially when combined with prior involvement from the paediatric team with the school's educational programme, with parental feedback stating "it was good for his own learning and development".[5]

[Figure 2]

What's in it for the trainee?

With a move away from traditional, paternalistic practice to a healthcare system that values autonomy, patient empowerment and patient-centred care, it is essential that healthcare professionals are able to form quality relationships with their patients. In adult medicine there has long been recognition of the value of understanding the patient experience and how it can be used to improve one's practice, with an emphasis on optimising clinical interactions and

developing attributes in doctors that their patients value (Figure 3).[14] Similarly, we need to hear, value and learn from the patient voice in paediatrics, to improve education and training in paediatric practice. The inclusion of CYP in assessment is one method of doing so, especially when students, trainees and examiners can hear their views on the encounter, facilitating development of a 'good children's doctor'.[15] This is important, since we know that CYP's views and priorities often differ from those of their parents and the professionals caring for them.[9] It is appropriate that most mark-schemes reward trainees who ensure children are comfortable and happy, so trainees need to prioritise this (Box 2).

[Box 2]

How can we involve children in assessment?

CYP can participate in virtually any clinical assessment format (both formative and summative) ranging from workplace-based assessments, through to short and long cases, and OSCEs. However, there are particular practical and ethical considerations (Figure 4).

[Figure 4]

Summative assessments

OSCEs are the most common form of summative assessment. They may vary from relatively small examinations, through to very large examinations with multiple circuits running simultaneously. In general, the smaller the event the easier it is to involve CYP, but careful planning is always required. Where there are only a few circuits, it is practical to recruit real patients with similar symptoms or signs. These patients are often recruited through clinician-teachers working in hospital or community environments. They may assist with history-taking or physical examination stations. History taking can be done with parents, older children, or simulated patients. It can be difficult to recruit sufficiently similar patients for larger exams, or for rarer and more complicated clinical problems. Many medical schools have moved from smaller specialty-based exams to larger, integrated year-wide OSCEs, with more robust psychometrics and reliability.[16,17] Such exams may make it more difficult to involve CYP, due

to the challenges of recruiting sufficient numbers and practicalities of bringing CYP into such a demanding environment. In these circumstances, alternative strategies may be appropriate (Figure 5).[18]

[Figure 5]

We have shown that it is feasible, and a positive experience, for 8-11 year old children to participate in a large OSCE, through partnership with a local school [5,15]. In further work we showed that there was a significant correlation between examiner prediction of child's score, and the child's actual score (Pearson 0.40, $p < 0.001$), but that paediatriicans could not accurately predict this score.[19,20] We concluded that it is appropriate for children to award a mark to the candidate.[19,20] Children are not asked to simulate illness, although stations can be framed around a concern has been raised (for example a possible cardiac murmur), and the construct of the examination station is to conduct the examination with this in mind (e.g. to perform a cardiovascular examination).

Some units do very small scale exams, with only one or two candidates examining children present on the wards, either in a long case or short case format. These are easier to organise, and authenticity and face validity are good.[21] However reliability is generally poor, and standard-setting more open to question.[22]

Formative assessments

Most clinical teaching involves an element of assessment. Often basic competence is acquired in a simulated clinical environment, and then the student performs the skill in the workplace under gradually reducing supervision. These observed encounters may be formalised into work-place based assessments (WBAs). These are primarily formative, but may be used cumulatively to demonstrate appropriate experience and mastery of skills. Clinical tasks may be selected by the student/trainee or the teacher/supervisor, or jointly, but there may be an overall 'blue-printing' requirement to demonstrate skill-proficiency on a certain number of occasions, or in a selected range of skills to satisfy curricular requirements. The RCPCH

requires trainees to complete particular WBAs in a range of skills aligned to the curriculum and stage of training.[23] Because WBAs are completed with CYP in the clinical environment, they have high face validity, but may suffer from lower reliability, especially if used for decisions about progression.[24,25] With planning and prioritisation, they can be productively fitted into busy clinical schedules (Box 3).

[Box 3]

There is increasing recognition that the child or adolescent's voice should be captured within such assessments[15], to provide richer feedback to students and trainees, and as part of on-going '360 degree' feedback for consultant appraisal and revalidation. Tools to do this are being developed and validated[26,27,28,29], and in general, children aged 8 years and above can provide useful feedback.[28] Adolescent patients with chronic conditions are often experienced and can provide very pertinent feedback. Further work is needed on whether and how CYP can contribute to marking in high stakes OSCE assessments. Previous work in outpatient settings raised concerns about reliability[26,27], but this is very different from the OSCE setting.

How do we overcome the challenges of involving CYP in assessment?

Consent

School-aged children should be asked to consent or assent to participate in assessments, but this is only valid if children understand what is being asked of them. This is difficult for young children, those with developmental delay or learning difficulties. It must be clear that care will not be compromised, should children/families choose not to be involved in teaching or assessment. Pressure to take part invalidates any consent given.[30]

Remuneration

It is not unusual for participants in formal examinations and teaching sessions to be reimbursed for their time. In the US, reimbursements for adult participation vary from $15/hr[31] to $40/hr (the latter for those undergoing more intimate examinations).[32] In the UK, patients may take part on a voluntary basis, receiving only expenses[33], whilst others are paid

unadvertised amounts[5,34]. Children in the UK might typically receive £5 for a half-day session in an undergraduate or membership examination, in addition to travel expenses[35]. Participants should be aware of financial arrangements prior to volunteering. CYP and their families may see involvement in exams as a way of giving something back to the health system.

Participant Advocates

We encourage the inclusion of a parent/chaperone whenever CYP are involved in assessments. This should be someone separate to the examination process, who is present purely to advocate for the child/young person. Their role is to ensure comfort and dignity throughout the examination process.

Potential Stressors for Participants (Box 4)

Assessments are stressful for candidates, and children may sense this and experience distress as a result. Younger children acting as simulated patients are at greater risk of experiencing negative emotions, particularly if they misunderstand their role[36]. In a child who is old enough to understand, it may be beneficial to reinforce that repeated examination is merely to test several students and not because there are concerns about their health.

[Box 4]

It is questionable whether CYP should be taught to simulate illness for the purposes of assessment, in case this could foster illness behaviour later. Even if it is ethical for a CYP to simulate psychological or psychiatric conditions, examiners and course organisers must be aware that this may be distressing, particularly to adolescents who may have experience of these issues.[27] It is therefore important that young people are given full opportunity to opt out of these simulations.

Younger children may also be distressed if they overhear students discussing treatments and prognoses for the condition they are simulating, for example an awareness that children may

die, which may not have previously been considered by that young person.[27] Equally, an incorrect answer or diagnosis given by a candidate may upset or worry a child or their caregiver.

Rest, play and time with family are all important parts of a child's convalescence. Time spent giving a history to a student or being examined may detract from this. For a child with a short admission, this may not be a particular concern, but in children with long-term conditions (who are more likely to have reliable clinical signs and thus be asked repeatedly to participate in WBA), this may become more of a problem. To avoid excessive intrusion, ask patients and parents whether and how they might help, and preferred timing, before any planned session. This may also increase their feelings of empowerment/control over their condition and hospitalisation.

Be careful about multiple visits by students and trainees to see "an interesting case"; this may leave a child and their family feeling like a circus exhibit, and increase patient anxiety and distress.[37]

Conclusion

The challenges of involving CYP in the assessment process are outweighed by the potential benefits, both to students/trainees, assessors and the CYP themselves. In an age where we are actively listening to the patient voice, it is important that we do not exclude some of our youngest and arguably most vulnerable patients. Children and young people can provide rich, instinctive feedback about our interactions with them and in return, they can feel empowered and valued by the process. Ultimately, their involvement can help to hone our skills as communicators and holistic clinicians and nurture a generation of doctors and health professionals who are more attuned and responsive to their patients' needs.

Competing interests: None declared.

Figures

Figure 1: The benefits of including children in assessments

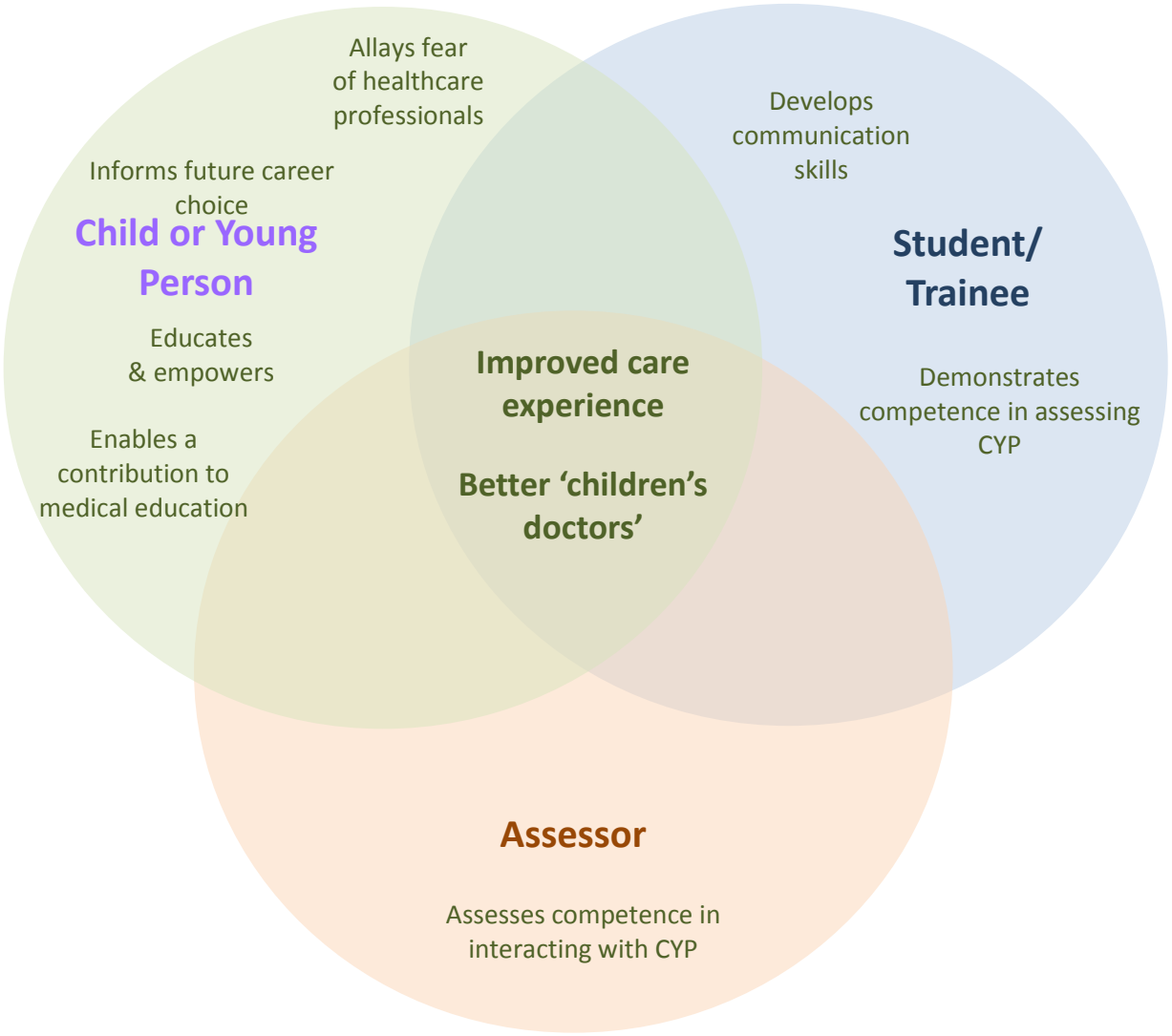


Figure 2: Potential disadvantages when involving a CYP in assessment: the 3 'D's

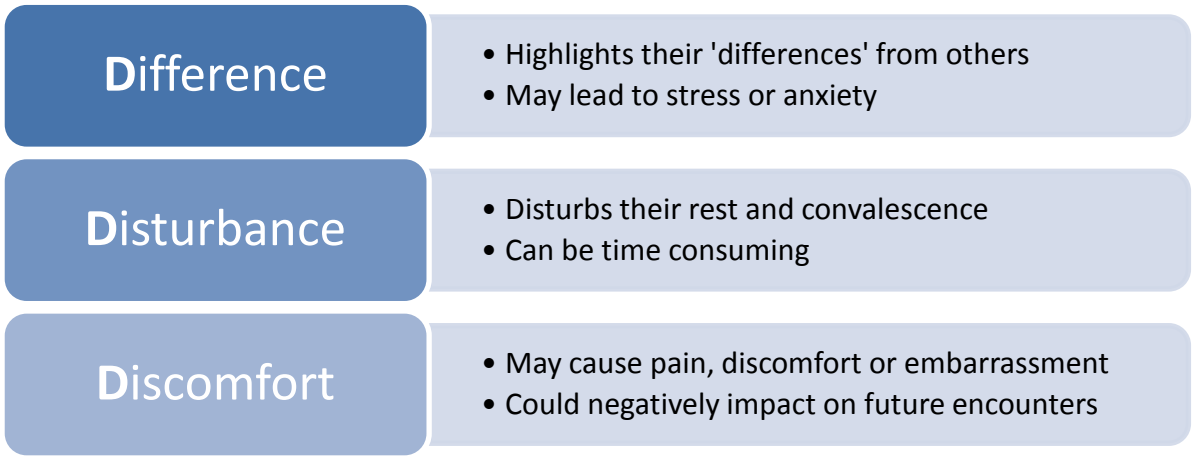


Figure 3: The role of the 'patient voice' in improving service provision and delivery of care

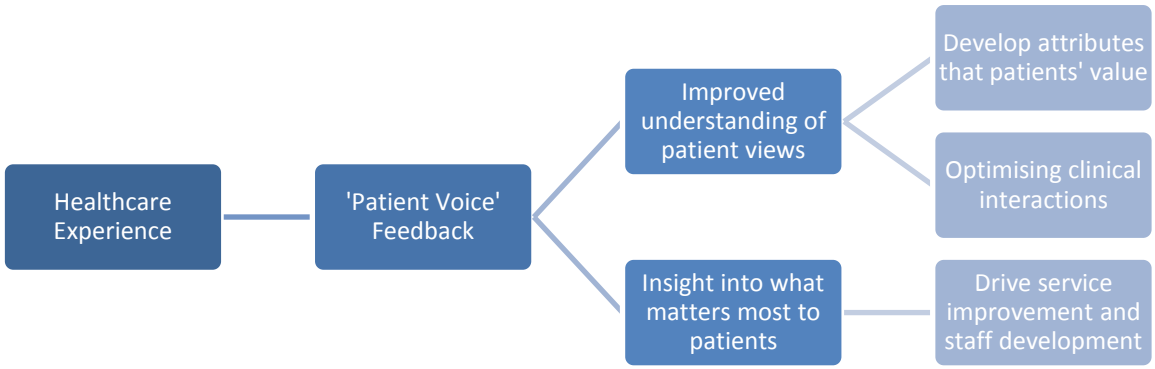


Figure 4: Top tips for involving CYP in assessment

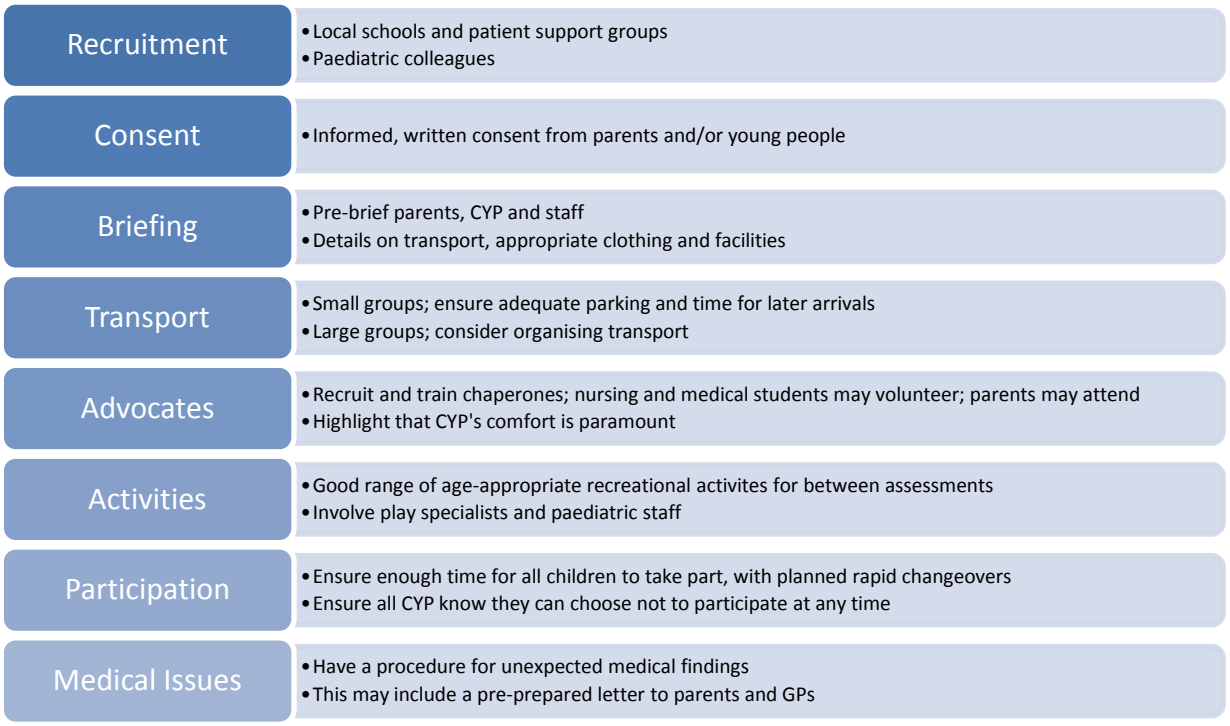
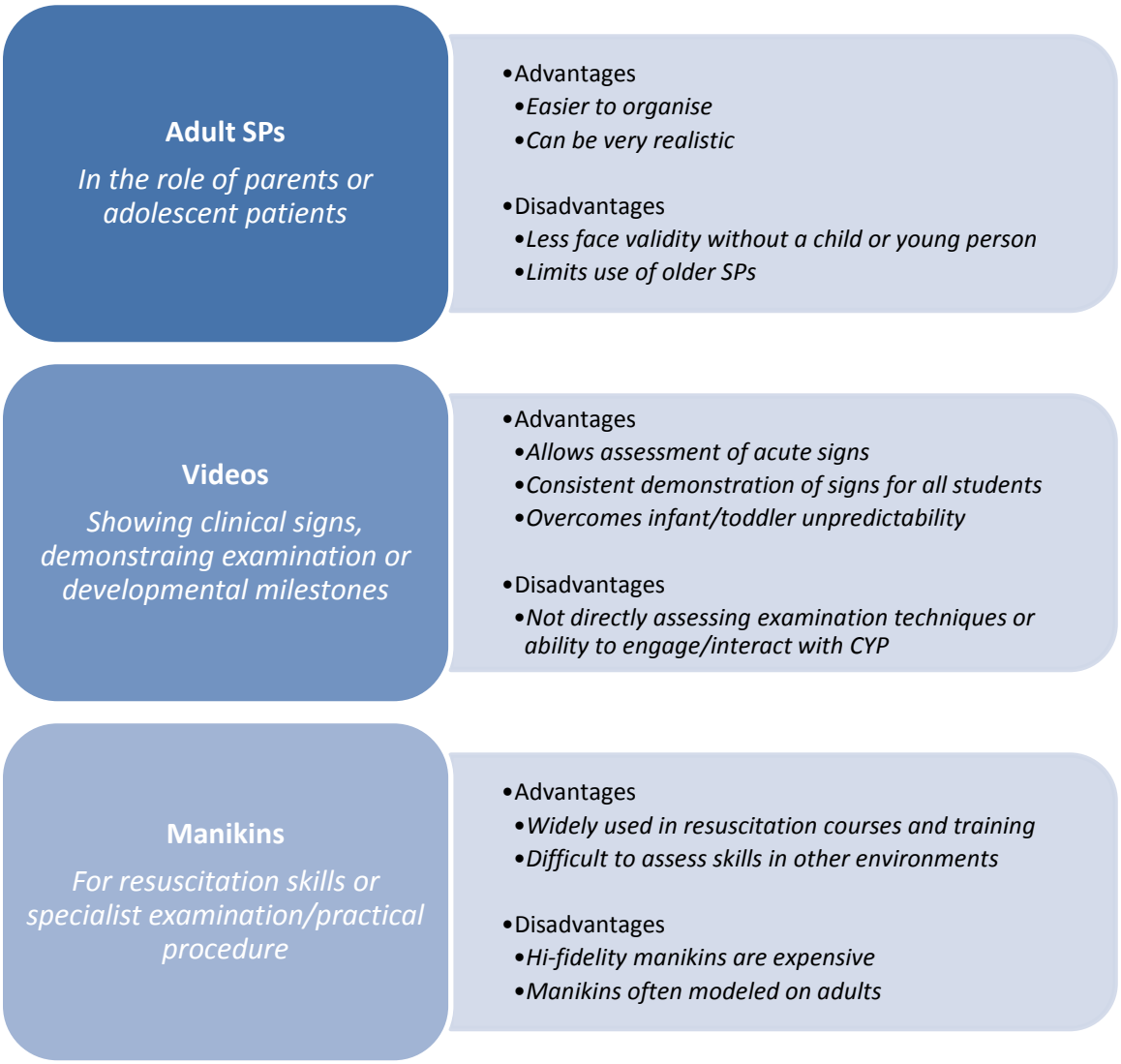


Figure 5: Alternatives to using CYP in assessments



Boxes

Box 1: Who can take part in assessment?	
Well CYP	To assess communication skills and basic examination techniques
CYP admitted acutely	To assess examination skills and interpretation of acute clinical signs
CYP with chronic illnesses	To assess examination skills, interpretation of clinical signs and longer-term care planning

Box 2: 10 top tips for trainees when examining a CYP

- ✓ Remember their name
- ✓ Get down to their level and build a rapport
- ✓ Pretend to examine mum or teddy first if they are unsure
- ✓ Keep interacting with them – "So are you missing school today?"
- ✓ Make it a game – "Let's see if I can feel what you've had for breakfast?"
- ✓ Use parents and toys to distract them
- ✓ Keep checking they are ok or if anything hurts

- × *DON'T* persist in trying to examine a screaming child – let them calm down
- × *DON'T* undress them all at once – limit to what is necessary
- × *DON'T use cold hands!*

Box 3: Example: Including workplace based assessments in a ward round

Setting: you are on a busy ward round and still have 10 patients to see. You are accompanied by a paediatric trainee and two medical students.

Assessment Opportunity	Suggested Structure
You are due to see a 14 year old with cystic fibrosis; you ask whether he would be willing to be seen by the students first, either for physical examination or discussion about his treatment regime and life with cystic fibrosis. You give them 30 minutes, continue the ward round in the meantime, then return to join the students.	1. Ask students to present their findings and give differential diagnoses. *2. Ask patient to feedback on the students'* professionalism and communication skills. 3. You feedback to the student with specific comments on what was done well (including reinforcing positive patient feedback), then one or two specific suggestions on things that could be improved.
You have just seen a baby with bronchiolitis, who is accompanied by his mum and 4-year old sister. You leave your 2 students (if the mother and child are happy) to do a developmental assessment on the 4-year old, observed or assisted by the trainee. You re-join them 10-15 minutes later. You may lead the feedback, or ask the trainee to do this (this acts as a learning experience for both the trainee and the students).	1. Ask the students to present their findings and conclusions. 2. Ask the 4-year old to feedback, using 'thumbs up' (thumbs up if they were good, double thumbs up if they were really good, or thumbs down if they could be better). Ask them what they liked in particular - children will often comment that they were 'smiley' or 'kind' or 'funny'. (In our experience, children often give an enthusiastic double thumbs up, which delights the students, and makes them more receptive to feedback). 3. Feedback *constructively on the students'* performance (with input from, or led by the trainee).

Box 4: Potential stressors for CYP involved in assessment	
Transferred stress or anxiety	Assessments are stressful experiences – CYP may detect professional anxieties and become distressed themselves
Repeated examination	CYP may misunderstand their role as simulated patient, and become concern regarding their own health
Poor examination techniques	Poor communication skills or examination technique may result in psychological upset or physical discomfort
Simulating disease	Concerns about encouraging illness behaviours or risk of stress related to prior health experience
Poor prognosis and death	Discussion of treatment and prognosis may be misunderstood, causing undue worry regarding their own health and future

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