Assessing and treating paediatric patients

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James talks to Dr Chris Elliot and Dr Kylie Yates about assessing and treating paediatric patients.

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About Dr Chris Elliot

Chris Elliot is a Consultant Paediatrician who works in a teaching hospital in Sydney and in private rooms. As well as clinical Medicine he is enthusiastic about health communication and teaching. Chris is a Conjoint Lecturer for the University of New South Wales and writes the occasional article on child health for mainstream media. He also teaches Advanced Paediatric Life Support and sits on the Editorial Board of the Journal of Paediatrics and Child Health. Chris completed his Internship at Bankstown Hospital and Paediatric training through the Sydney Children's Hospitals Network. On the days when he is not at work he enjoys playing with his children, and also when they play by themselves.

About Dr Kylie Yates

Kylie Yates is a staff specialist general Paediatrician at St George Hospital. She is an APLS instructor and co-developer of their Paediatric units simulation based training programme. Kylie is enthusiastic about introducing new ideas to hospital practice but still thinks talking to families is the best bit of the job. She graduated from the University of Sydney and was trained in Paediatrics at Children's Hospital Westmead.

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With Dr Chris Elliot and Dr Kylie Yates, Consultant Paediatricians at teaching hospitals in Sydney, New South Wales, Australia

Introduction

Assessing paediatric patients is a daunting task for doctors, especially for junior doctors. Children are not just small adults, and therefore a different approach is needed when assessing and treating them.
Children are physically smaller, sustain different types of injuries, require different drug doses, are physiologically different, get illnesses that don't tend to occur in adults such as bronchiolitis and croup and are psychologically different. This podcast teaches junior doctors a 'bag of tricks' to enable them to examine children, get on their level and deal with the fear and uncertainty that children have in unfamiliar environments in order to have a

really positive experience when assessing children. This podcast should be accessed in conjunction with Dr Arjun Rao's Podcast "The approach to a sick child"

1. Initially approaching the parent and child

- Children take all of their initial cues from their parents, therefore addressing parents' concerns and building credibility with parents is the fastest way to build credibility with the child.
- Can ignore the child initially on entering the room as they don't want the doctor's attention and in fact might be terrified of the doctor.
- Speak directly to the parent, sit down with them, cut to the heart of what's worrying them, take their concerns seriously and demonstrate that you have the time and skills to manage their child.
- Parents will start to feel comfortable in the interaction and the child will pick up on that immediately.
- If the doctor is dismissive, combative or judgmental, and the parent then becomes hostile, then that child will never allow the doctor to do a thorough examination.
- While taking the history from the parent, start to use some non-verbal communication strategies (glance, wave or smile) to acknowledge the child, then return to talking to the parent – if you do this in the first few minutes, you become part of the social group in the room, rather than a stranger.

2. Tips and tricks for examination of the child

- You must gain the child's permission to enter their personal space.
    - Children are physically smaller than adults and used to having their personal space invaded without their consent, e.g. bigger kids in the playground pushing them over, adults picking them up to put them in the bath. They might tolerate that from a parent, but not from a stranger. Therefore you must gain their permission to invade their space. Tricks for gaining non-verbal permission:
        - **Interact with kids over the logos or colours on their clothing**. E.g."I notice you're wearing a Spiderman top – how cool is that?"
        - **Undermine yourself in a way that gives children control**. E.g. mistaking Thomas the Tank Engine for Lightning McQueen, naming their shoes the wrong colour. If you're wrong and they're right and you can encourage them to correct you, you've put them into a situation of control. You can undermine yourself a couple of times.
        - **Use humour**, e.g. when holding the stethoscope, ask the child "Does this go on your nose? Your knees?" and they often find this hilarious and help you put it on their chest.

        - **Make them feel involved in the process**, e.g. if they have a toy, ask a question about it "Who is this?" Even if they don't respond, they might look at the toy or wait for you to examine the toy. You can say "I'd really like to look in toy's ears, I wonder what we might find. Do you think we'll find lollies?" Get child to help hold the toy, ask if they would like to look in toy's ear, and ask what they see.

- You need to be flexible and opportunistic with the structure of your examination.
    - Unlike examining adults, there is no set structure when examining children.
    - Remember that kids will likely become distressed regardless of how good your technique and rapport is.
    - Much can be gained by observing the child whilst you are talking to the parents – colour, level of interaction, work of breathing.
    - Do as much as you can without touching the child, then with them settled and dressed, then undress at the end as this may distress them.
    - Give the child permission to be scared and assure them it will be over soon.
    - Examining the throat
        - Best done when they cry or scream (they will inevitably get distressed and scream at some point).
        - Other strategies – "How loud can you roar?", "What did you eat for breakfast – can I see it?"
    - Examining ears
        - Avoid asking questions that they might answer with a 'no', i.e. don't ask "Can I look in your ears?" but rather, give them control by asking "Which ear should I look in first?"
        - Get them familiar with equipment – allow them to see the otoscope.
        - Look in mum and dad's ears first.
        - Have parent cuddle them tightly on their lap while you look in their ears.
    - Auscultate their back while cuddled into parent.
    - Props to aid examination
        - Use what they have brought with them, e.g. toys, iPad, iPhone.
        - Toys, torches, bubbles and stickers if you have access to them.

- De-brief and explanation at the end.
    - Frame distress as a sign of courage.
        - For older kids "You can't be brave unless you're afraid. You were afraid and brave so you're the superhero in the room."
        - For smaller kids "Well done" or reframing it for the parents, so that the parents can use your language at a later point "What a great job Danielle did – make sure when I leave that you give her a big hug and a reward or treat."

- Remind them of the things they did well.

Case

A 2-year-old girl has been brought to the Emergency Department by her father with a 3-day history of cough, runny nose and fevers. She is off her food and passing less urine than normal. Her father is anxious about what might be wrong.

1. Initial assessment of the sick child – end of the bed initial assessment to triage your concern

- Initial ABCD
    - **Airway** – coughing therefore has an airway.
    - **Breathing** – assess if any difficulty breathing, RR, O_2sats.
    - **Circulation** – HR, capillary refill, BP (hypotension is a late sign in children).
    - **Disability** – how engaged and interested the child is.
    - Most children pass ABCD easily.
- Second ABCD based on toxicity to determine if they are septic.
    - **Activity** – grisly, irritable or normal self is better than lethargic, unresponsive or not interested in things they are normally interested in.
    - **Breathing** – ask parents if they think their child is having trouble breathing; even if all obs are normal, if breathing is abnormal then the child is probably sicker than you think.
    - **Colour** – flushed, red, sweaty are ok; blue around lips or tongue is a serious sign of being unwell. If mottled or pale, ask parents if this is normal for them.
    - **Drinking**– if they can drink half of what they normally would and pass urine 3-4 times a day, they are not dangerously dehydrated and safe to be at home. Conversely, if they can't drink half of what they normally would and can't pass urine 3-4 times a day, then they're not safe to be managed at home.
- Respiratory examination
    - Expose, inspect, palpate, percuss, auscultate.
    - Signs of increased work of breathing: tracheal tug, accessory muscle use, suprasternal/intercostal/subcostal recessions, grunting, nasal flaring, head bobbing.
    - RR and O_2sats.
- Hydration examination
    - Can be well hydrated or mildly (3%), moderately (5%) or severely (10%) dehydrated.
    - Signs of dehydration: dry mucous membranes, sunken eyes, reduced urine output, reduced amount of fluid intake, weight loss (compare to

recent weight e.g. with GP recently to determine % of body weight lost).

2. Differential diagnoses

- Think about the most likely diagnosis and what serious diagnoses not to miss.
- Likely – cold, flu, bronchiolitis.
- Serious, do not miss – severe bronchiolitis requiring oxygen or fluid support, pneumonia requiring antibiotics.

3. Tips and tricks for performing investigations and procedures

- Give the child control and context to avoid trauma.
    - Being traumatised comes from feeling out of control.
    - Resilience is built when you go through an experience which is appropriately graded to your ability to tolerate it and you can contextualise and understand the experience.
    - When something is forced upon you unexpectedly, which far outweighs your ability to contain and has no context, you get traumatised.
    - Traumatising a child on the first visit means they are harder to examine and investigate on their next visit as they don't trust anyone.
- Use the ONE VOICE mnemonic – a checklist to make procedures as pleasant and safe as possible.
    - **O – only one voice speaking at a time during the procedure.**
    - **N – need parental involvement**, as there is good evidence that having parents involved results in a more positive outcome for parents, children and ultimately for the doctor.
    - **E – educate child before procedure about what is going to happen.**
    - **V – validate the child** (e.g. that was really brave, nice work) and parent (e.g. it was really unpleasant, great work, thanks for being here to talk with your child, it made the world of difference) **with words.**
    - **O – offer a comfortable, non-threatening position.**
    - **I –individualise your game plan.**
        - Liase with parents about what works for the child.
        - Ask about their favourite things – would they rather watch Peppa Pig or Thomas?
        - With autism it can be challenging to explain and get their co-operation, so ask parents what works and use picture cues if non-verbal.
    - **C –choose appropriate distractions** (books, posters, stories, songs).

    - **E –eliminate unnecessary people.**
- Venepuncture and cannulation
    - Plan beforehand.
    - Take them to another room to keep their bed a safe space.
    - Be honest with child and parent to give you more credibility and avoid trauma and distrust.
        - “This is not because you’ve been naughty.”
        - “This will hurt, but only for 30 seconds, like when you fall over and scratch your knee.”
    - Talk them through what is happening and give them control over things they can control.
    - Give the child some strategies to manage so that they have some power e.g. “If you hold your hand really still it will hurt less”, “After 3 seconds I want you to take a big breath and that’s when the scratch happens.”
    - Show them a cannula (with the needle removed). Let them hold it. Show them it’s flexible. Explain it’s like having a straw in your hand like a milkshake, “We will use this to give you some great medicine”. Explain you will tape their hand to a pillow to keep it still (explanation is for the benefit of the child and their parents).
    - Use distraction techniques (smart phones are great).
    - Think about positioning – cuddling with an arm out is best; wrapping them up and putting them on the bed is very disempowering.
    - Cannulas can be difficult and you should not have more than 2 attempts before seeking help.
    - For babies, consider breastfeeding during procedures as well as oral sucrose for pain.

Take home messages

- Most of the diagnosis in paediatrics is in the history and examination – investigations play a very small role in determining whether kids are sick or not.
- When examining kids, ‘fake it ‘til you make it’ by building rapport with parents, non-verbal communication with children, asking permission to enter the child’s space and engaging them in the examination.
- ONE VOICE 4 Kids is a useful checklist for ensuring procedures/investigations are done in the best possible way, recognising your own limitations, the importance of context and control for children for now and in the future and engaging the parents so that everyone’s on the same page.

References

- ONE VOICE 4 Kids website
- The approach to a sick child by Dr Arjun Rao

Related Podcasts

- The sick neonate
- The sick child
- Communication in paediatrics

Tags: #airway,#breathing,#circulation,#communication,#hydration,#paediatric examination,#paediatrician,#paediatrics,#sick neonate,#talk to kids,#the sick child,#tipsfornewdocs,#treating paediatric patients