

PedsCases Podcast Scripts

This is a text version of a podcast from PedsCases.com on the "Approach to Pediatric Anemia and Pallor." These podcasts are designed to give medical students an overview of key topics in pediatrics. The audio versions are accessible on iTunes or at www.pedcases.com/podcasts.

Pediatric History Taking

Developed by Alanna Chomyn and Dr. Karen Forbes for PedsCases.com.
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Introduction:

Hello this is Alanna Chomyn and I am a 4th year medical student at the University of Alberta. This podcast was created with Dr. Karen Forbes, a pediatrician and medical educator at the University of Alberta and the Stollery Children's Hospital.

In this podcast, we will review the components of a complete pediatric history tailored to the age of the child. By the end of this podcast you should understand the importance of certain components of the pediatric history at different ages, and have an age-appropriate approach to pediatric history taking.

We will start off this podcast by reviewing the major elements of a complete pediatric history, and later will compare and contrast specific elements required when taking a history for patients at different ages. At the end, we will provide tips and tricks for conducting a pediatric interview, as offered by a range of experienced pediatricians at the Stollery Children's Hospital.

Our discussion will begin with a brief scenario. You are a third year clerk on your pediatrics rotation at an ambulatory clinic. Your preceptor asks you to see Katie, a 3-month-old girl presenting with her mother for her well-baby check. What are the important components of the history for Katie?

The basic components of a pediatric history are as follows: history of presenting illness, past history including prenatal, birth, and postnatal history, past medical history, surgical history, growth and developmental, medications, allergies, immunizations, family history, social history and review of systems. We will now discuss each of these components in further detail.

History of Presenting Illness:

Similar to history taking in the adult population, the history of presenting illness in a pediatric history explores the patient's primary concern or concerns, and must be tailored to the individual presenting complaint. Generally, you will want to try to characterize the symptoms of concern and get a sense of the onset, timing, aggravating and alleviating factors, associated symptoms, and if anything similar has happened to

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the patient before. In a well-child visit, the HPI may be focused on concerns the family has had regarding the health and development of the child and a follow up on previously addressed issues.

Past History:

The past history establishes a complete picture of the child's health to date, and should cover events from the prenatal period until the child's current presentation. The prenatal history includes inquiring about maternal age, and number of previous pregnancies and the outcomes of those pregnancies. It may be relevant to ask if the child is a product of natural conception, or if assistive reproductive technology was required. Ask about whether prenatal care was accessed, and if there were any abnormal results or concerns identified on routine screening or ultrasounds. You may inquire into if there were any complications in the pregnancy such as infections, diabetes, hypertension, or bleeding. Specifically, asking about group B strep screening in late pregnancy, as well as maternal symptoms of herpes simplex infection are important for newborns presenting with symptoms that may be concerning for neonatal sepsis. Asking about prenatal exposures including prescription medications, substances, and other toxins can be a sensitive topic, but can provide important insight into possible teratogens the child may have been exposed to, as well as potential ongoing risks to the child. Start with asking about least threatening exposures first, and working your way towards more sensitive topics such as alcohol or drug use during pregnancy. Approaching this topic in a non-judgmental fashion is key in both obtaining a reliable history and maintaining rapport with the family. Additional exposures that may be relevant include the mother's occupation, such as working in a daycare during pregnancy, pets, and travel.

The next component of past history is the birth history. You will want to ask about whether onset of labour, was spontaneous or induced, and the gestational age at time of delivery. Intrapartum risk factors should be asked, including duration of rupture of membranes, presence of maternal fever or fetal tachycardia, and whether amniotic fluid was meconium stained. Asking about mode of delivery will clarify if the infant was delivered by vaginal delivery, and if any instrumentation such as forceps or suction were required, or if delivery was by cesarean section. These elements of history provide important information as to potential issues after birth. Furthermore, ask about any complications that may have occurred during delivery.

Following the birth history is the postnatal history, which covers details about the wellbeing of the child immediate postnatal period including APGAR scores if known, birth weight, and if any resuscitation was required. The APGAR scoring system is an assessment tool used to assess the wellbeing of an infant in the minutes immediately after birth. It combines an assessment of the infant's colour, heart rate grimace or reflex, tone and respiratory effort. Each of these 5 components of the APGAR score are graded on a scale of 0-2, and the results are added to provide total score out of 10. Low APGAR scores are an indicator of poor infant wellbeing in the immediate postnatal period. For further information on the APGAR scoring system, please refer to our PedsCases podcast entitled "APGAR scoring system". In asking about the baby's health

in the immediate postnatal period, you may ask if the baby was born healthy, and if there were any health issues in the perinatal period such as respiratory problems or jaundice. One other way to help determine if there were any concerns in the postnatal period is to ask how long the baby was admitted to hospital following delivery, and if the baby required care in the neonatal intensive care unit. Typically, healthy infants in Canada can be discharged home within 1-2 days of a vaginal delivery, or 2-3 days following a cesarean section, as the mother requires a longer stay for monitoring. If the family reports that the baby was in hospital for longer than you would expect, it is important to determine if the stay was extended for maternal or infant reasons, and what the reason for prolonged admission was and how it was managed.

In past medical history, ask the family about any medical conditions the child has had, including any chronic conditions, past hospitalizations or emergency department visits or visits to medical centres or other health care providers. For past surgical history, it may be relevant to include circumcision and/or dental surgeries in an older child.

Growth History:

Growth history is an important part of the pediatric history as prolonged illness or chronic conditions may impact the child's growth and result in deviations from an established growth trajectory. When asking about growth history, the pattern of growth, not just the child's measurement at the present is key as alterations in pattern of growth are often early signs of pathology. Plot the child's growth on a growth chart, and look at both numbers and percentiles. It may be helpful to ask regarding growth and size of family members, as marked deviations in a child's growth from what is expected from family trends could help in distinguishing constitutional or familial variants from a pathologic growth pattern. Healthy children should achieve a minimum growth velocity of 5 cm per year.

Developmental History:

Developmental history consists of the 5 domains of child development: gross motor, fine motor, speech & language, cognitive, and social/emotional development. One mnemonic used frequently at our institution to help remember the 5 domains of development is 'Gotta Find Strong Coffee Soon', a memory aid developed by Peter MacPherson, a former medical student at the University of Alberta. We will not discuss the details of developmental milestones at this time, however, it will be important to familiarize yourself with these milestones for various stages of development in order to screen for developmental delay. There are a variety of developmental tools available that can be used to screen for developmental concerns.

Medication History:

Medication history includes both prescription and non-prescription medications such as over the counter medications, vitamins and supplements. One commonly overlooked group of medications is inhalers, so it might be helpful to ask specifically if the child uses any inhalers. It is also important to ask specifically about herbal or homeopathic remedies, as parents may not report this unless directly asked.

Additionally, do not forget to ask about allergies to any drugs, foods or environmental triggers. If an allergy is endorsed, you should clarify the specific reactions experienced and whether they required management.

Immunization History:

Immunization history is an essential part of the pediatric history. Ask if the child has received all of his/her routine immunizations, as well as if the child has received any additional vaccines such as the seasonal influenza vaccine or travel immunizations. It may be relevant to ask when the child last received a vaccination for various presentations including febrile seizures or fever. If a parent indicates that a child has not received any or all of their immunizations, one should explore the reasons for this in a non-judgmental manner.

Family History:

Next comes family history as it relates to the child's current presentation. Family history may begin with clarifying ethnicity when relevant, and then establishing if any medical conditions have occurred in the family that may relate to the child's current presentation. It may be helpful to draw out a pedigree to better understand the health and relationships between individuals in the family. Again, many items in this component of the pediatric history may be sensitive, and it is important to approach these topics in an open and non-judgmental manner. Specify if siblings have both of the same parents as your patient, and approach the topic of consanguinity for appropriate clinical presentations. There are many sensitive ways to ask about consanguinity, such as "Is there any way that you and your partner could be related other than by marriage?" Asking in a straightforward fashion may be a helpful approach to asking about consanguinity, as it matter-of-fact questioning may help normalize the inquiry.

Social History:

The social history offers us an opportunity to more fully understand the child within the context of the family. Like family history, the social history also includes many sensitive topics such as parental employment status, any financial issues, health coverage and drug plans, and family composition. This part of the history may lead to discussion about the impact of the child's illness on both the child and the family, and can allow the care team to better support the family.

Review of Systems:

Last in the pediatric history is review of systems. Important general items to ask about in a pediatric review of systems are feeding and fluids, sleeping, bowel and bladder function, and vision and hearing. You will want to define the child's diet, as well as oral intake prior to your encounter with the child. You should note that a detailed nutrition history may be part of the HPI for some presentations. Dehydration is common in sick children, and can quickly become a serious medical concern. Including screening for oral intake as well as bladder function as part of the review of systems helps to ensure that dehydration, if present, is identified, and may be further confirmed on physical

examination. We are less likely to complete a “head to toe” review of systems that is often done in adult medicine, as these questions can be difficult for a parent to accurately answer on behalf of their young children.

We will now move on to discuss pediatric history taking in school-aged children, as illustrated by the following case:

You are now on Pediatric CTU and are called by your senior to take an admission history from Oliver, a 6-year-old boy in the Emergency Room, and his father. How will this history differ from Katie’s? What components of this history will you need to emphasize compared to the infant history? Which history components will be of less importance?

| In an infant such as Katie, more important components of the pediatric history tend to include the prenatal, birth, and postnatal history. Events in the prenatal and perinatal period tend to be more directly relevant to the child’s current health status and presentation in infants and toddlers than in older children. Of course, exceptions exist and presentations even late in childhood may relate to events that occurred prenatally or early in development, and these components of the history should be included in all pediatric histories.

For a school-aged child such as Oliver, both the history taking process and the relevance of certain elements of the history will differ slightly from the history in younger children, toddlers, or infants. As the child becomes increasingly verbal, it is important to involve the child as much as possible in the history taking process. You may be surprised by how much even young children can contribute to the history! In addition, when given the opportunity, children may even offer information that the parents are unable to provide.

For Oliver, you will again cover the history of presenting illness, and past history as it relates to the current presenting complaint including prenatal, birth, and postnatal history. Ask about past medical history, surgical history, and growth and development. In school-aged children, school performance may provide further information about the child’s developmental course. Ask the child and family how the child is doing in school, and if the school, parents, or the child have identified any issues. It may also be important to ask if the child has had any problems socially, or if they have a pattern of getting in trouble at school. Asking about the child’s activities and interests may also provide further information about his/her development, and contributes to building an overall picture of the child and his/her context, and how any illness may impact them.

Although the focus of this podcast is on the pediatric history, it is worth mention that there are valuable elements of the physical examination that can be done concurrent with history gathering. This time provides an opportunity for observation, which can be valuable particularly as related to the neurodevelopmental skills of a toddler or young child, and to corroborate the information gathered on the developmental history.

We will now move on to our final scenario: finally, back in clinic you are asked to see Ivy, a 14-year-old girl presenting for her annual check up. Are there any new components of the history that will be important to explore in the adolescent population?

As the child grows older, more remote aspects of the past history such as prenatal history, birth, and postnatal history may or may become less important. As part of the adolescent review of systems, it is important to include a “HEADS” history. A HEADS history is a unique component of the adolescent history that explores many sensitive topics that may arise in adolescence and could potentially have implications for the health and safety of the child. Because HEADS histories cover many very personal topics, confidentiality must be respected and this should be discussed with the adolescent prior to asking them to share this sensitive information. This means that the HEADS history should always begin with a statement of confidentiality, though important exceptions should be explained including the obligation to report physical or sexual abuse, intent to cause harm to others, or if the patient intends harm to himself or herself. This needs to be done with the adolescent patient on their own, gently asking parents or other individuals to leave the room so that you can speak with the patient in private. Topics that are typically covered in a HEADS history are home, education and eating, activity and alcohol, drugs, depression, smoking, sexuality, spirituality, suicide, and safety. For further details on taking an adolescent history, please refer to the PedsCases podcast “Adolescent Medicine”.

We have now covered all of the components of a pediatric history. However, the art of history taking involves more than knowing the components of a history, and individuals may take time to establish their own unique style or approach that allows for a natural flow of the interview and obtains the required information from the family in an efficient, family centered manner. Keeping this in mind, we will finish off this Podcast by tapping into the experience of pediatricians at the Stollery children’s hospital, and have asked 4 pediatricians what tips, tricks, or advice they have for medical students and residents regarding pediatric history taking. These pediatricians were Dr. Lois Sim, Dr. Melanie Lewis, Dr. Jessica Foulds, and Dr. Karen Forbes, and their pearls were as follows:

Dr. Lois Sim suggested that she always tries to obtain her history from her patients, as even young pediatric patients may have an interesting perspective to offer!

Dr. Melanie Lewis also recommended enlisting the patient as much as possible when taking a pediatric history. In addition, Dr. Lewis also advised that asking about finances is crucial, as this provides contextual information that has important implications for patient care. For example, a family may not mention that they do not have money to purchase a prescribed medication, and this choice of therapy may therefore be inappropriate in this context. Therefore, open discussion about finances is important in ensuring the patient receives appropriate therapy that is feasible for the family. Dr. Lewis reinforced that being patient centered involves considering what is acceptable and reasonable for the family. Finally, Dr. Lewis offered that approaching the topic of

immunizations in a non-judgmental manner is crucial, and to be conscious of the magnitude of the Anti-Vax movement and the amount of scary information available on the Internet.

Dr. Jessica Foulds emphasized the importance of learning and using the names of the parents and the patient, as this can go a long way to establish rapport. She encouraged interviewers to ensure that they are at the physical level of the patient when conducting an interview. This means if the patient is seated, sit. Dr. Foulds recommended we allow the patient to tell their story, and to clarify once they have had a chance to be heard. Your agenda and the patients agenda need not compete for time. She also reminded us as interviewers not to forget about asking the patient questions appropriate to their level and to include them and respect the patient as the focus. Finally, Dr. Foulds implored that a thorough review of systems is essential, and the most often forgotten part of the pediatric interview!

Dr. Forbes identified that asking about the impact of a child's illness on the child and family is essential. If you don't ask, you won't find out, and if you don't find out, you won't be able to identify and enlist the supports they may help them navigate their challenges. Regardless if the child has an acute or chronic illness or problem, it is always stressful to families. Keeping a family centered approach in mind is crucial.

That concludes our tips and tricks on pediatric history taking. We would like to thank our contributors for their pearls!

Thank you for listening to our Podcast on pediatric history taking. We hope you have found our discussion on Pediatric History taking helpful. We hope you found it useful in formulating complete, age appropriate histories, and have gained further understanding of the importance of various components of the pediatric history at different ages.