Introduction

Providing medical care for children requires not only knowledge of techniques to communicate with and gain cooperation from the patient but also knowledge of history and exam skills that are specific to children. Acquiring these skills in the field is often difficult due lack of parental/patient cooperation or understanding, concern for patient discomfort, and need for the provider to be able to complete an accurate patient assessment.

Video-based learning is utilized for numerous types of educational activities. It is particularly valuable in teaching challenging material that may be difficult to simulate or replicate such as pediatric histories and exams. In addition, studies have shown we rely heavily on our senses to process information, and the use of multiple senses allows for improved clarity and understanding of a concept. The use of audiovisual material for educational purposes has demonstrated positive outcomes in terms of student attitudes, confidence, and knowledge acquisition.

Developmental Milestones

Objectives:

- Understand the importance of development in the health of a child
- Learn the four major areas of development
- Distinguish normal progression of development from abnormal
- Recognize key features of Autism

Suggested Videos:

- All Milestones
  - http://www.med-u.org/the-library/developmental-milestones
    - MedU > The Library > Tools > Learn the Child Developmental Milestones (Birth to 5 years) > View Tool > Click Here to Use the Interactive Table of Video Clips
    - Table of video clips demonstrating milestone for all ages birth – 5 years
- Language Development in Children
  - https://childdevelopmentinfo.com/child-development/language_development/#.WMAKNH9SLm4
    - Child Development Institute
    - Contains written information on language development in children. Scroll down the page to "Language Development Information from Experts in the Field", which includes 3 videos discussing stages of speech and language development.
  - https://www.youtube.com/watch?v=a7WAfwKi88Q
    - Nancy Tarshis, M.A., M.S., C.C.C.-SLP, Speech-Language Pathologist, Albert Einstein College of Medicine
  - https://www.youtube.com/watch?v=pZSjm0drIGM
    - Lisa Shulman, M.D., Developmental Pediatrician, Albert Einstein College of Medicine
- Motor Development
  - https://www.youtube.com/watch?v=G5wWVNYLBVk
    - Lisa Shulman, M.D., Developmental Pediatrician, Albert Einstein College of Medicine
- Autism
  - https://www.youtube.com/watch?v=YtvP5A5OHpU
    - Early Signs of Autism
    - Rebecca Landa, PhD, CCC-SLP, Centers for Autism and Related Disorders at Kennedy Krieger Institute
  - https://www.youtube.com/watch?v=3w1c4sF4ZTg
    - Diagnostic Criteria for Autism
    -

Activity: After reviewing the developmental milestones, students will have the opportunity to interact with a variety of children and determine their ages based on their mastered milestones.

Growth/Nutrition

- Growth Parameters/Growth Curves
  - https://www.youtube.com/watch?v=ctDE7RCEJ0w&t=21s
    - Example of how to complete a growth chart
  - https://www.youtube.com/watch?v=lNE8jSL7WQk
    - Importance of monitoring growth parameters
- Nutrition
  - https://www.youtube.com/watch?v=X6D5t_xAVY4
    - Children's Hospital of St. Louis
    - Brief overview of infant nutrition
  - https://www.youtube.com/watch?v=TXPny8pzyPw
    - Brief overview of infant nutrition
  - https://www.youtube.com/watch?v=gk51onBkRMU
    - Brief overview of pediatric nutrition
- Breastfeeding/Lactation
  - https://www.youtube.com/watch?v=WuWPEtj__yo
  - http://blausen.com/en-gb/video/breastfeeding/
  - http://www.nucleuscatalog.com/breastfeeding/view-item?ItemID=71394

Anticipatory Guidance

- Safe Sleep
  - https://www.youtube.com/watch?v=0zoQ7n3omqQ
    - Safe Sleep
  - http://dnr.vnr1.com/2016/10/13/aap_safesleep/
    - AAP Back to Sleep Campaign
  - https://www.youtube.com/watch?v=iKtykY3pde0
  - https://www.youtube.com/watch?v=Q9KINMD1Sd0
- Adolescent
  - https://www.youtube.com/watch?v=EGA7ANI4oP8
    - Overview of adolescent anticipatory guidance

Immunizations

- https://www.youtube.com/watch?v=jpfNpFax2Hg
    - The Immunization Schedule
        - Akron Children's Hospital
- https://www.youtube.com/watch?v=-QKyI2ujtvg
    - The Vaccine Schedule
        - Ari Brown, M.D.
- https://www.youtube.com/watch?v=tyqySSFDlPA&list=PL807F3A190A32DF2E&index=41
    - The Immunization Baby Book
        - Centers for Disease Control and Prevention
- https://www.cdc.gov/cdctv/diseaseandconditions/vaccination/get-picture-childhood-immunization.html
    - Get the Picture: Childhood Immunizations
        - Centers for Disease Control and Prevention

Case Based Learning: After reviewing the above information, students will break into groups and work through 3 pediatric cases. After completing the cases, students will share their answers with the class.

Case #1

A 4 month old female infant presents to clinic with her mother for her 4 month check-up.

1. What aspects of the history are important to discuss with mother?
2. During your discussion, mother reports she is breastfeeding. She notes she is considering switching to infant formula. What information can you provide regarding the benefits of breastfeeding?
3. During your exam, you obtain the following growth measurements:
   Head circumference 40.5cm, Length 24.5 inches, Weight 15 pounds
   Plot these on the provided growth chart. What are the percentiles for growth?
4. What developmental milestones do you expect to observe from this infant during your exam?
5. Mother is hesitant for you to administer immunizations to her child because the infant cried and developed fever after her last set of immunizations. What information can you provide to mother about the benefits of immunizations?
6. At the close of the visit, what information will you provide regarding anticipatory guidance?

Case #2

A 3 year old child presents with his mother for evaluation of speech delay.

1. In regards to mother's concern for speech delay, you inquire about the child's speech. What is normal speech development for a 3 year old?
2. Mother focuses on speech delay. However, you are concerned for global delay. At 3 years of age, what additional milestones (gross/fine motor and social) do you expect?
3. Mother states the child attends a mother's morning out program, and his teachers have expressed concern for his lack of interest in playing with other children. Is this concerning, and if so, what additional questions will you ask mother?
4. After a thorough history and exam, you note deficits in communication and social interaction as well as repetitive behaviors and restricted interests. What are you most concerned for?

Case #3

A 15 year old female presents to clinic for evaluation of weight gain.

1. Obtaining a thorough and accurate history is very important during this evaluation. What aspects of the history will you discuss with her?
2. The patient is hesitant to discuss her history with you. She expresses concern you will share her secrets with her mother. How will you explain confidentiality to the patient?
3. Based on the information you obtain during your history and physical exam, you conclude that your patient's weight gain is likely due to a combination of unhealthy diet and lack of exercise. What recommendations do you have for her?
4. At the end of the evaluation, the patient shares with you that she is very excited to receive her driver's license next month because she can go to parties with her older friends and hang out with her boyfriend more often. What anticipatory guidance do you have for her?