PEDIATRIC CLERKSHIP MANUAL SE CAMPUS-FARGO

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Welcome to the 3rd year Pediatric Clerkship where "The care of children is the finest privilege!"

We hope that your eight-week experience in Pediatrics will provide you with a broad and exciting introduction to the care of infants, children, and adolescents. While rotating through Pediatrics, you will have the opportunity to work as part of a team comprised of community attending physicians, nurses, and paramedical personnel.

Our commitment to you: The faculty of the Southeast Campus is composed of volunteer faculty pediatricians under the leadership of Dr. Chris DeCock, pediatric clerkship director. You will be provided prompt feedback to ensure you to optimize your learning experience on Pediatrics.

We expect that as third year medical students you come to the Pediatric Clerkship prepared to give 100% to each patient encounter. We also expect you will conduct yourself in a professional manner. If you have any concerns or problems during your rotation feel free to contact Dr. Chris DeCock, pediatric clerkship director or Kathy Kraft, clerkship coordinator.

CURRICULUM AND OBJECTIVES

The curriculum and objectives for the UND third year medical student rotation in Pediatrics is taken from the Committee on Medical Student Education in Pediatrics (COMSEP). You will find this curriculum in its entirety at the following website:

http://www.comsep.org/Curriculum/CurriculumCompetencies/

The CLIPP (Computer-assisted Learning in Pediatrics Program) cases were tailor made to accommodate your study/reading requirements for this curriculum. The Pediatric Clerkship Learning Objectives are:

PED-01.   Obtain and report valuable patient historical information.

PED-02.   Perform a developmentally appropriate and complete physical exam.

PED-03.   Formulate reasonable differential diagnoses.

PED-04.   Utilize observational assessment skills to determine acuity of illness and disposition.

PED-05.   Assess whether or not a child is growing and developing normally.

PED-06.   Students will know and discuss the importance of immunizations and the data supporting them.

PED-07.   Demonstrate knowledge of the etiology, presenting signs and symptoms, diagnostic evaluation and treatment plan for common pediatric illnesses.

PED-08.   Apply basic science knowledge to clinical situations.

PED-09.   Consider relevant social and cultural factors in patient management and using these to communicate with the patients and families in a culturally and developmentally appropriate manner.

PED-10.   Demonstrate skills required in performing a lumbar puncture utilizing a simulation model.

PED-11.   Demonstrate the ability to use evidence based medical literature in developing a basic management plan in the care of children.

PED-12.   Demonstrate ability to function as a student member of an interprofessional health care team.

PED-13.   Students will identify cases where diversity affects patient care.

PED-14.   Students will demonstrate professional behavior in both the inpatient and outpatient settings. This is in line with our medical school's pillars of excellence and with medical licensing standards in the United States and abroad.

Your eight-week experience in Pediatrics in Fargo should provide you with a broad and exciting introduction to clinical pediatrics. You will be working as a part of a team including pediatric hospitalists and nurse practitioners, community pediatricians, pediatric subspecialists, nurses, therapists, pharmacists, and social workers. Your involvement in patient care will be a graduated experience and will be dependent to a great extent on the individual student's attitude, availability and achievement. The next eight weeks can be a great learning experience for you, varying in scope from pediatric intensive care to ambulatory well child and sick child care to normal and high risk newborn care.

INPATIENT

ORIENTATION/PEDIATRIC NURSES

The pediatric charge nurse or clinical coordinator will conduct an orientation to General and Intensive Care Pediatrics for the students on the first day of the clerkship. Pediatric nurses, by virtue of their specialization in pediatric care, have a great deal of experience and knowledge to offer students. You will find them willing to help in all aspects of your pediatric clinical experience. Students, likewise, should be available and willing to help when such help is requested from the nursing staff.

INTERACTION OF STUDENTS WITH PARENTS

The establishment of proper relationships between physician and parents is extremely important in Pediatrics. The student must always identify himself/herself to the parents as a medical student. Student conversations with parents are to be encouraged. In this way the student can begin to understand the impact of pediatric illness on the family unit. Much valuable information about each child is gained by speaking with the parents on a day-to-day basis. <u>ALL</u> information about each patient is confidential and cannot be communicated to anyone who is not involved in the medical care of the patient. Furthermore, medical information given to the family by the students must be restricted to that which is thoroughly discussed with the patient's attending pediatrician. **Any violation of confidentiality of patient information constitutes grounds for student dismissal.** A brochure, developed by Sanford Children's Hospital entitled "Physicians Providing Care for Your Child", is given to the family when admitted that clearly explains the role of the medical student in their child's care.

INPATIENT EXPERIENCE

Each student will spend two weeks on the Pediatric Unit at Sanford Children's Hospital. The student will work as part of the interdisciplinary pediatric hospital team. The student should work-up and follow 2-3 patients per week. He/she should observe and participate in procedures. Do not use patient names or identifiers as these write-ups are **<u>CONFIDENTIAL</u>**. One write-up per week is required. The student should strive towards complete and pertinent but concisely written write-ups. At the end of each write-up a one to two paragraph learning issue or topic discussion regarding the patient's diagnosis and/or management should be included. Also include your references. Please see the written instructions included in your orientation packet for additional details. You will also meet with Dr. Tiongson during your first week of inpatient to go over the expectations for your formal write ups. Patient write-ups done by the student are not part of the permanent patient record. On the other hand, writing daily patient progress notes in the patient chart is encouraged and should be reviewed and counter-signed by the hospitalist. The hospitalist is the physician responsible for managing the care of most of the

patients that you follow at Sanford Children's Hospital. The hospitalist will include you in daily patient work rounds and may assign patient care and educational responsibilities to you.

It is very important that students become familiar with and strictly adhere to the policies of Pediatric Infection Control and Isolation Procedures. Nosocomial viral and bacterial diseases are a major Infectious Disease problem on any pediatric ward, including rotavirus, RSV, enterovirus, varicella, pertussis and enteric pathogens. Immunosuppressed patients and infants represent those at greatest risk.

PEDIATRIC WORKDAY – SANFORD CHILDREN'S HOSPITAL-FARGO

1. **Pre-rounding – getting the data for rounds**
   - Review the chart, read on your patients. Nursing report happens between 7:00-7:30 am, please do not interrupt them during sign out.
   - Key information to gather: I/Os, VS, nursing notes, labs, parent questions, overall progress.
   - Always get permission from the family before you examine a patient. Don't wake babies! Especially if the nurse or family ask you not to. Please be sure bedrails and crib rails are up. Safety first.

2. **Teaching team rounds—usually with the NP-Hospitalist team**
   - Intermediate Care patients in PICU are rounded on first between 0800-0830. The rest of rounds begins at 8:30 am outside room 901 and then moves toward the higher numbers. The charge nurse, peds pharmacist, and the bedside nurses will join for rounds.
   - Depending on staffing and census changes, sometimes students will be shared or reassigned between teams. The solo hospitalist team rounds in the opposite direction starting in the higher numbers.

3. **Multidisciplinary rounds -- Room 9C at 11:00 am**
   - Includes the charge nurse, discharge nurse, therapies, nutrition, social work, case management, hospitalists. We talk about all the patients including the Heme-Onc kids. Your attending will let you know if you should go.

4. **Afternoon rounds – usually between 3:00-5:00 pm**
   - Team hospitalist only, and be prepared to provide updates from the day, labs, etc. and have a sign out plan ready.

5. **Daily notes/H&PS**
   - Use the "Hermione Granger" template as a model for progress notes and rounds. Enter in EPIC and send to the attending for co-signature. For an admission, use an Admission H&P templates in EPIC and send to the attending.
   - In addition to your daily written work (progress notes, H&Ps), you are also required to submit 2 comprehensive, formal, and academic H&Ps to Dr. Tiongson for grading.

6. **Writing orders**
   - There may be opportunities to enter orders into the EMR under the direct supervision of your attending physician.

7. **Learning issues/topic assignments**
   - Your attending will typically assign you topics to present to the group on rounds or after rounds. Utilize the "Inpatient Teaching Topics" checklist as a guide if you need ideas for topics.

8. On call – in house until 9:00 pm weeknights and weekends
   - You can use the student pager (1955) or your attending may ask you to leave your phone number with them. One hospitalist team may sign out early (~ 5:30 pm) and the night hospitalist takes over at 1900.
   - Be aware that there may not always be an opportunity to get paged or texted, so be around and available

9. Where to be/where to work – try to be around the Intermediate care side of B wing
   - There are computers between each pair of rooms. Your attending may look first for you in this hallway. Also, don't take over the staff lounge, we need to leave enough room for the nursing and other staff.
   - We may use the hospitalist work room for presentations and learning issues, but this space can be very congested during regular work hours, so please use the Intermediate Care hallway or other open computers on the floor.

10. Admissions throughout the day and on call
    - Try and see the kids first or have part of your H&P observed by the attending.

11. Seminars and Grand Rounds
    - Always go to seminars and Grand Rounds even if it conflicts with patient care.

12. Have fun and hang out with your patients!
    - Play, read, paint, build legos, etc. with your kids if you have downtime, especially on call.

Third Year Clerkship Inpatient Teaching Topics

Anemia		Febrile seizure	
Appendicitis		Gastroenteritis/Dehydration	
Asthma		Hyperbilirubinemia	
Bone/jt infections		Kawasaki	
Bronchiolitis		Meningitis	
BRUE/ALTE		Pneumonia	
Cerebral palsy		Pyloric stenosis	
Child abuse		Rule out sepsis (febrile infant)	
Croup		Sepsis/shock/SIRS	
Cystic fibrosis		Suicide/ingestions	
Diabetes		UTI	
Failure to Thrive			

OUTPATIENT

Each student will spend three weeks in a private ambulatory pediatric clinic, either at Essentia Health-South University, Sanford Children's Clinic SW, Sanford Moorhead, Sanford Veterans' Square, or Sanford West Fargo. Students will observe and assist pediatricians, pediatric nurse practitioners and pediatric nurses in the busy office practice of Pediatrics. These patients may include children with acute illnesses, chronic illnesses, behavioral/developmental disorders or children receiving care in subspecialty clinics, as well as infants and children attending well-child care visits. Students will also be assigned to the Children's Walk-in clinic to broaden their exposure to acute illness and injuries.

SUBSPECIALTY CLINIC

You will be assigned to 2 subspecialty experiences/clinics of your Normal Newborn Nursery week. Choice of clinics include:

Pediatric Cardiology
Pediatric Gastroenterology
Pediatric Allergy/Asthma/Immunology
Pediatric Neurology
Pediatric Rheumatology
Pediatric Hematology/Oncology
Pediatric Endocrinology
Pediatric Infectious Disease
Pediatric Genetics
Pediatric Intensive Care (PICU)
Neonatal Intensive Care (NICU)

NORMAL NEWBORN NURSERY

You will spend three mornings (8:00 a.m.-12:00 p.m.) with the community attending pediatrician in the Normal Newborn Nursery. You will examine the assigned newborns, discussing normal and abnormal findings with the pediatricians. Along with the attending pediatrician the student will make daily rounds to the mothers' rooms.
This will provide you with an opportunity to learn about and participate in evaluation and treatment of the newborn condition utilizing patients admitted to the newborn nursery.
Required infection prevention nursery practices:

1.   Personnel should remove rings, watches, and bracelets before washing their hands and entering the nursery area.

2.   Fingernails should be trimmed short and no false fingernails or opaque polish are permitted.

3. Antiseptic preparations should be used for scrubbing before entering the nursery, before and after providing care, before performing invasive procedures and after touching secretions, blood, or equipment.

4. Before handling neonates for the first time (each day), personnel should scrub their hands and arms to a point above the elbow with an antiseptic soap. After (two) minutes of washing, the hands should be rinsed thoroughly and dried with paper towels.

5. A 10-second wash with soap and vigorous rubbing is required before and after handling each neonate and after touching objects whether or not gloves are worn.

6. Alcohol-containing foams and gel satisfactorily kill bacteria when applied to clean hands and require 15 seconds to 2 minutes of contact. Alcohol-containing products are not appropriate for cleaning physically soiled hands.

CTC (Coordinated Treatment Center) CLINIC

CTC clinics are multidisciplinary clinics for pediatric patients being treated for chronic conditions such as Down Syndrome, Muscular Dystrophy, Cystic Fibrosis, Diabetes, Metabolic, Myelodysplasia, Developmental Evaluation, and Neurodevelopmental Coordinated Care. You will be assigned to one of these clinics during your outpatient experience.

Pediatric Clerkship Requirements

1.   Complete 2 inpatient write-ups
2.   Complete 2 outpatient write-ups
3.   Complete 18 Aquifer Pediatrics cases (1, 5, 6, 9, 11, 12, 15, 16, 17, 21, 22, 24, 25, 26, 27, 29, 30, 31) https://www.aquifer.org
4.   Complete 2 Aquifer Radiology cases (#11 and #12) https://www.aquifer.org
5.   Present oral presentation (Pediatric Grand Rounds style)
6.   Complete evaluations (in LEO) of your preceptors, clerkship and seminars
7.   Enter patient encounters into LEO. Groups listed below:

Group A — Well Child Encounters (minimum requirement - 10)
Well child examination
Adolescent examination
Sports physical examination

Group B — Newborn Encounters (minimum requirement - 5)
Newborn nursery examination
Newborn condition

Group C (minimum requirement - 10)

Genetics/Dysmorphology	Poisonings
Evaluation of growth	Evaluation of development
Evaluation of behavior	Evaluation of learning
Evaluation of nutrition	Fluid and electrolyte management
Acute febrile illness	Infectious disease
Ophthalmological condition	Ear, nose, throat condition
Pulmonary condition	Gastrointestinal condition
Genito-urinary condition — male	Genito-urinary condition — female
Muscle/skeletal condition	Dermatological condition
Neurological condition	Lymphatic system condition
Radiological evaluation	Injury
Child abuse	Childhood cancer
Hematology condition	Endocrine condition

Group D – Diversity Encounters (5)
Foreign language (need for translator)
Special needs
Ethnic population (Somali, Native American, et.al.)
Homeless

OUTLINE FOR PEDIATRIC HISTORY & PHYSICAL EXAM

HISTORY

Introductory Statement

This is the (1st, 2nd, 3rd) admission for this age, sex, with a reason for admission.

Chief Complaint (CC) in parents' or child's own words.

History of Present Illness

Information in this section is of greatest importance. Remember that 90% of pediatric diagnoses are made with the history. All of the significant information that supports the differential diagnosis should be found in the HPI. List here all the pertinent, positive and negative direct answers to your questions. The information should be listed chronologically and should include the initial symptom and then the subsequent symptoms. The portions of past history that would be pertinent to the present illness should be included in the information of the HPI. The HPI should contain a number of important details, but these details should be written precisely, concisely, and orderly. Include objective data in your narrative (e.g., x-ray reports and labs obtained in other hospitals) gathered prior to admission that pertain to the patient's need for admission. Information that reflects the severity of illness, for example how the current symptoms affect routine activities is valuable. It is important also to report in the HPI that which reflects the parents' understanding of the problem and their fears and concerns. Finally, note the reason in which the referring physician feels the child actually requires admission rather than treating problem as an outpatient.

Past History

Perinatal and Neonatal Information: More emphasis will be placed on this information especially when it pertains to an infant patient. The information in this section might include birth date, hospital, city, weight, and length and the type of delivery, for example, spontaneous and the type of presentation; vertex or breech. Apgar scores, age of mother, length of gestation, exposures to infectious diseases, and medications, drugs, or alcohol including tobacco used during pregnancy should be recorded if pertinent to the case. Information regarding the newborn, might include hypoglycemia, cyanosis, pallor, seizures, jaundice, skin lesions, muscle skeletal deformities, respiratory distress or feeding problems.

Nutrition: Questions regarding nutrition should be appropriate for the child's age. For example, infants - breast or bottle fed, and if formula is used which type. Also note vitamin supplementation, water source and WIC participation.

Developmental History: Record information regarding a child's current developmental status with regard to each of the four following areas: gross motor, fine motor, social, and language skills. When children are of school age include information regarding academics and physical activities such as sports.

Immunization: Indicate sources of information, dates immunizations given, and which type of immunization was provided. Also include TB testing results and dates if performed. Remember that parents often wrongly assume that their children are" up to date on shots" and it is always best to review vaccine record yourself.

Habits and Personality:

    - Sleep
    - Issues with regard to behavior

Previous Illnesses: Age, severity, complications, and sequelae. Report as a list and include dates. Serious childhood illnesses, injuries and fractures, and hospitalizations must be reported.

Surgical Procedures: List with approximate dates, and complications

Allergies (Medication and Others)

    -Type of reaction

Current Medications: Create numbered list, including name of medication, dose, route, frequency and indication for the medication.

Family/Genetic History

Record all known significant diseases in first degree relatives (parents, grandparents, aunts, uncles, and siblings). Record all deaths in these first degree relatives. Examples that might be included in this section would be diabetes, cancer, epilepsy, allergies, hereditary blood dyscrasia, early coronary artery disease, hyperlipidemia, mental retardation, dystrophies, congenital anomalies, degenerative diseases, cystic fibrosis, and celiac disease. Report the condition relationship to the patient (for example: maternal uncle has glycogen storage disease type 1.)

Social History

- Living circumstances: place and nature of dwelling, sleeping arrangements, daycare arrangements.
- Economic circumstances
- Parents occupations and marital status
- Household pets
- Potential exposures to toxins in home, for example, cigarette smoke exposure
- Age of home of children less than 3 (possible lead exposure)

Review of Systems

Review each of the following systems and include all positive answers to questions. (Remember that this is a review of systems and not review of symptoms. Do not repeat HPI information in this section). Include at least one item in each system and be sure not to use the short-cut of "negative" or "unremarkable."

- General
    - HEENT
    - Respiratory
    - Cardiovascular
    - Gastrointestinal
    - Genitourinary
    - Skin
    - Muscle/Skeletal
    - Hematologic/Lymphoid
    - Endocrine & Growth
    - Neurologic
    - Psychiatric

PHYSICAL EXAMINATION

All positive physical findings should be recorded and pertinent negative findings to that specific differential diagnosis should also be included in the physical examination. The following list of physical findings contains examples of those things that might be included.

A successful pediatric examination varies with the age of the patient. Very young infants and neonates are often easiest to examine on the examining table. From several months to preschool age it is often more effective to have the patients lie or sit on the mother's lap. It may be best to interview and examine adolescents without the parents present. If a parent is not present during the examination a student should have a nurse or the attending physician present at the time of examination or have parental permission to examine the child.

Observe the child under ideal circumstances, for example, while in mother's lap and leave the more painful and uncomfortable parts of the examination until last, for example, throat and ears.

Vital Signs: Record vital signs which include temperature, pulse, respiratory rate, and blood pressure (arm and legs). Weight, height, and head circumference should be measured, preferably using the metric system, and should include percentiles. Record BMI and percentile for all children 2 years and older. Plot these parameters on a growth chart if not previously done. Record O_2 saturations and the amount of oxygen delivered if appropriate.

General Appearance: For example any obvious deformities, size appropriate for age, respiratory distress or pain, and hydration and general nutrition status.

Head: Normal or abnormal facies and normal or abnormal head shape. Fontanel size if open (anterior and posterior).

Eyes: Include all positive findings on eye examination and include proptosis, sclerae, conjunctivae, strabismus, photophobia, and funduscopic exam.

Ears: Hearing, external canal, discharge, tympanic membrane appearance.

Nose: Air movement, mucosa, septum, turbinate appearance, perinasal sinus tenderness.

Mouth and Throat: Color, dryness, fissure; appearance, teeth – number, presence of caries, gum - color and hypertrophy, epiglottis - appearance, tonsils - size and appearance.

Neck: Flexibility, masses. Thyroid - size.

Lymph node: If abnormal in size or texture record location, consistency, tenderness, size in centimeters.

Spine: Scoliosis, mobility, tenderness.

Thorax: Appearance and contour, respiratory rate and effort, regularity of breathing, symmetrical chest movement, character of respirations such as retractions.

Lungs: Percussion, palpation, fremitus, auscultation.

Cardiovascular:

- Inspection, precordial bulge, apical heave, auscultation, rhythm, character and quality of sounds.
- Palpation: PMI, thrills, heaves.
- Auscultation: quality and intensity of heart sounds, murmurs, for example, timing, duration, intensity, location, radiation.
- Pulses: radial and femoral pulses, rate and rhythm.

Abdomen:

- Inspection, contour, umbilicus, distention, veins, visible peristalsis, hernia.
- Percussion: fluid wave, shifting dullness, tympany, liver size, spleen size, Costovertebral angle tenderness, abnormal masses.
- Palpation: tenderness, rebound, guarding, masses.

Genitalia:

Record Tanner Stage
- Male: circumcised, testes - appearance and size, hydrocele - presence hernia.
- Female: external genitalia, appearance of vulva, clitoris, hymen.

Breasts:

Tanner Stage

Rectal (only if indicated):

Fissures, hemorrhoids, prolapse, sphincter tone, stool in ampulla, abnormal masses.

Skin:

Texture, color, turgor, temperature, moisture, icterus, cyanosis, eruptions, lesions, scars, ecchymoses, petechiae, spider nevi, desquamation, hemangiomata, mongolian spots, nevi.

Extremities:

Tone, color, warmth, clubbing, cyanosis, mobility, Ortalani and Barlow maneuvers in newborns and infants, deformities, joint swelling or tenderness.

Neurologic:

- Mental status: affect, level of consciousness, speech.
- Motor: station and gait, muscle strength, tone, tics, ataxia.
- Cranial nerves: testing 2-12
- Deep tendon reflexes: 2+ is average when recording.
    - Record if Babinski present.
- Infants note premature reflexes such as grasp, suck, Moro, rooting, stepping, placing.
- Abnormal sensory findings.
- Meningeal signs

CLINICAL DECISION MAKING

Problem list

Create a comprehensive list of problems on admission for your patient, such as dehydration and pneumonia. Be as specific as possible. Include some information about the severity or seriousness of each problem. Don't forgot problems like incomplete vaccination status or obesity that could be addressed after discharge.

Summary Statement

Write one or two sentences concisely summarizing pertinent historical and objective information. The first half should include the key historical information and the second half focusing on the objective findings (exam and lab). The summary statement should balance being complete and concise from which a differential diagnosis is created.

Differential Diagnosis

Using your summary statement (not just each problem in your problem list) as your point of origin, develop a differential diagnosis for your patient. Ideally there would be 4-6 items to consider in your differential. If the diagnosis is known on admission, consider other possibilities as well. For a known infection, like bronchiolitis, consider not only other pathologic processes (like heart disease, airway abnormalities) or which infectious agents could be the culprit (RSV, adenovirus, pertussis, etc.).

Clinical Impression

Which of your possible diagnoses do you think is most likely and which are less likely? Show your clinical reasoning and be convincing.

MANAGEMENT

Management Plan

Use your problem list to generate your plan to be sure you cover everything that is important for your patient. Use specific doses of medications, including mg/kg if applicable. For IV fluids, include the composition and rate. For labs and radiology, include specific tests and what you hope to learn from the results. Patient and family education goals prior to discharge should be considered part of the plan A outstanding plan includes contingency planning (if-then, when to escalate work up or care) and could refer to a clinical guideline applicable to your patient.

Addendum

Pertinent subsequent lab results or change in patient status after your admission H and P that you may desire to report.

LEARNING ISSUE

Write a short, one to two paragraphs in your own words on something you found interesting about your patient that you wanted to learn more about. Report on a specific medical topic that pertains to this patient. This might be from the differential diagnoses or problem list. Use evidence-based literature to support your information and document your references.

FEEDBACK NOTES

Attending evaluation

In addition to meeting the clerkship requirements for professionalism, a part of your preceptor evaluation will be based on how well you do with your write ups. You will be asked to complete at least 2 full inpatient write ups. You may be asked to complete a third write up if needed to demonstrate competency in this area. We are looking for completeness, evidence of clinical reasoning, and ability to incorporate feedback into improvement.

PHAPPEE Rubic
The clerkship uses the PHAPPEE rubric for evaluation. This rubric was developed and validated by the national group of pediatric clerkship educators and is similar to the oral case presentation evaluation form used for Professor Rounds. The scale goes from 1-5 (5 being the highest) with the goal of being at a level of 3 by the end of third year.

Due dates

H&Ps are due before 11:59 pm two days before our scheduled time for the Written Case Presentation Session.   That will give Dr. Tiongson enough time to review them and generate meaningful feedback for you. Email your write-ups chris.tiongson@sanfordhealth.org

MEDICAL STUDENT INPATIENT PROGRESS NOTES: PEDIATRICS

Subjective: Start with an introductory statement: age of patient and reason for admission. Report updated information from the last note from the patient and family perspective, like changes in symptoms related to the reason for admission. This may also include patient/family reported pain ratings. Information gathered from nursing, therapies, and social services would fit here as well.

Objective:

Vital Signs: start with most recent set including weight, Tmax over the last 24 hrs, range of pulse, resp rate, BPs, Oxygen saturations (with FiO2)

Intake: include all sources (IV, PO, NG, etc) & for infants PO intake as % of maintenance

Output: include all sources (urine, stool, drains, etc) with urine output in ml/kg/hr

Other objective scores/scales (as needed): e.g. Finnegan scores (neonatal abstinence)

Physical Exam:

General appearance: on all patients

Other systems based on relevance to medical issues

Lab/Radiology:

Include a summary of new information from prior note like cultures, lab, x rays, etc.

Assessment:

Include the working diagnosis and relevant problems. State why the child needs continued hospitalization and update the child's overall progress. This is more than just a cut and paste of the problem list For example...

> *4-month-old male with bronchiolitis admitted for resp distress, poor feeding and hypoxia. Still requiring frequent suctioning, supplemental oxygen and IV fluids. Improving over the last 24 hrs with decreased O2 need from 2 lpm to ½ lpm, no fever, and improved oral intake.*

Discussion:

In this section include the differential diagnosis and why the clinical course is favoring one over the others. Include your thinking as to why the patient is improving, stable or worsening. Try to show in writing how you are improving at "thinking like a doctor."

Plan:

Use a problem-based plan to make sure all relevant areas of the patient's care are considered. In addition, include SOCIAL and DISCHARGE PLANNING on every patient

For SOCIAL: include information about updating parents and any issues related to family support, legal or social service issues.

For DISCHARGE PLANNING: include the goals to be met before discharge, equipment needs, Rxs, any potential barriers to discharge to be met, and follow-up appts and tests/scans to be completed after discharge.

Signature: don't forget to sign your note, for example…
Hermione Granger, MSIII

Outpatient Write-Up Expectations

-2 write-ups per rotation (a 3rd will be required if not enough improvement has been determined by the preceptor)

-Problem focused note: The goal is learning to include pertinent parts of the history and physical exam

-Provide a copy for your preceptor, email or print, email by Sunday so they can give you feedback before the next write-up

Format:

-Introductory statement and chief complaint (36 month old otherwise healthy child here with fever and cough)

-History of present illness

-Past history

-Meds/Allergies/Immunizations

-Social history and Family History (if pertinent)

-Review of Systems (Pertinent)

-Physical exam (always include vital signs, general impression, and all positive findings and pertinent negative findings)

-Labs/imaging

-Summary statement-summarize the key clinical data to include the history, physical and lab findings (36 month-old with 4 days of fever and cough. He has tachypnea, hypoxemia to 94%, crackles in left base, and infiltrate on chest X-ray.

-Impression - (e.g., pneumonia)

-Plan

Useful Websites:

https://www.m-chat.org/

The Modified Checklist for Autism in Toddlers (M-CHAT) is a validated developmental screening tool for toddlers between 16 and 30 months of age. It is designed to identify children who may benefit from a more thorough developmental and autism evaluation. This is administered at our 18 and 24 month check-up.

http://agesandstages.com/

The ASQ is a screening tool used at check-ups at 9, 18, and 24 months. This form is filled out by parents prior to the visit then scored by nursing staff. It screens for developmental and social-emotional delays. The form is usually ready for you to review just before seeing the patient.

http://www.immunize.org/

The Immunization Action Coalition works to improve vaccine rates and provide information on vaccine preventable diseases to healthcare professionals and the public. This is a great resource for parents with concerns about vaccines. There is an excellent section on personal testimonies by parents who lost children to influenza, pertussis, pneumococcal meningitis and more.

http://www.healthychildren.org/

A website designed for parents by the American Academy of Pediatrics. There is information on parenting, safety and prevention, development, nutrition, medical and mental health issues. This is useful for well child visits and general parenting advice.

http://www.cdc.gov/vaccines/schedules/

Current vaccine schedule. Includes links to catch up schedule.

ORAL CASE PRIMER

The development of outstanding oral presentation skills is one of the most important aspects of clinical training in medical school. Good communication skills are integral to good patient care. Furthermore, a good oral case presentation goes beyond simple transmission of information to give the audience insight into the presenter's thought process and, indirectly, skill as a clinician. This module will discuss the components of an excellent oral presentation, with opportunities to practice each.

Students often struggle with expectations regarding oral case presentations. In one study comparing the perceived expectations of third-year medical students and their preceptors, students "described and conducted the presentation as a rule-based, data-storage activity governed by order and structure". Preceptors, on the other hand, viewed the presentation as a "flexible means of communication and a method for constructing the details of a case into a diagnostic or therapeutic plan." [Haber RJ, Lingard LA. J Gen Int Med. 2001; 16(5):308] Therefore, while certain rules are universal, the definition of a "good" oral presentation will depend on the situation. The complete oral presentation that you might give to a teaching attending in a classroom setting may not be very different from your written presentation, which details everything you know about your patient. Oral presentations on work rounds will be considerably shorter, however. Inpatient presentations may differ in style from those in the outpatient setting. **This primer will focus most specifically on the focused, problem-based inpatient case presentation given on work rounds, where a premium is placed on brevity and clinical decision-making.**

Keys to an efficient, informative presentation include:
(1) good data collection
(2) selection of the most pertinent information
(3) organization

Data collection is the subject of interviewing courses. This primer will focus on selection of pertinent information and organization. To demonstrate some important principles, we'll use a series of case examples.

WHAT'S PERTINENT

 "Pertinent" information is that which helps to answer a question. Pertinence, therefore, may be considered under several different criteria:

- What's the Dx?
- How sick is this patient?
- Is the patient getting better or worse?
- Does the patient have predisposing conditions or risk factors?
- Are there barriers to treatment/follow-up?

For any piece of information that you include in your focused oral presentation, you should have an answer if your preceptor asks, "Why did you tell me that?"

ORGANIZATION

Most physicians have been trained to present information in a standard order. Once trained, they process information best when presented to them in the same, anticipated order.

Chief Complaint
Some people like the direct quote:
Example: "He can't breathe right"
This style is often used in triage setting (e.g. nurse records at the top of form for ED or illness visit). This is also how you would start a presentation in case-based learning session. In either setting, this short, literal statement sets a tone of discovery: we need to uncover the information to explain why our patient is "not breathing right". This is the most objective way to start a presentation, starting with the problem as identified by the patient and transitioning ultimately to the assessment (i.e. problem(s) as identified by the physician). Emphasis here is placed on accurate <u>reporting</u>, and this is the way that many/most medical students are taught to record their initial written H&P note.

Other preceptors/institutions may expect a sentence (sometimes referred to as an identifying statement) that includes demographics and the reason for presentation:
Example: Armon is a 4 month-old former 28 week premature male infant with a history of chronic lung disease presenting with increased work of breathing.
This statement (1) requires additional knowledge about the patient and (2) has translated the patient's chief complaint into "increased work of breathing". Both of these changes demonstrate <u>interpretive</u> work on the part of the speaker: deciding what demographic information to include in the identifying statement, and eliciting enough information to better define what the patient meant by "can't breathe right' →could have meant labored breathing, rapid breathing, noisy breathing, or not breathing at all! Simply changing this first sentence has increased the efficiency of communication by shifting the conversation from breathing problems in general to a focus on Armon's problem.

Whichever style is preferred, the most important point is that your listener understands <u>from the very first line</u> the context in which they are listening to the story.

Bad Example:
Armon is a 4 month old former 28 weeker with a history of gastroesophageal reflux, status post G tube and gastric fundoplication, chronic lung disease, intraventricular hemorrhage and developmental delay. He was intubated in the delivery room and admitted to the NICU. He was extubated after 3 weeks, but remained in the hospital for an additional two months on

supplemental oxygen. His mother brought him to the ED last night because she was worried that he was breathing hard.

While there is a lot of important information here, this identifying statement includes too much information that is extraneous to the primary problem, yet excludes the chief complaint. It is not until the 4th sentence that the listener knows why the patient is here now. Your listeners will begin the process of clinical problem-solving from the first sentence of your presentation, but only if you have defined the problem that they are trying to solve.

History of Present Illness (HPI)

This will be the most important and most detailed part of the history. It should be chronological and tell an easy-to-follow story.

Important Considerations:

- Where to start the story?
  Consider the impact that the order of the presentation has in the case of Johnny:
  CC: Johnny is a 9 y.o. boy with right arm pain.

  HPI: The pain began 4 days prior to admission just above the elbow. By the next day, Mrs. J. noticed that the area was red. By the evening of admission, the area of redness had doubled in size and was exquisitely tender, and Johnny had developed fever.
  If you are the listener, how broad is your differential at this point?

  Three months prior to admission, Johnny fell off of the monkey bars and sustained a supracondylar fracture of his right humerus. He was admitted for surgical repair of the fracture, requiring placement of three pins. 7 days ago he was re-admitted for removal of the pins, and went home the next day.
  As a listener, how would you have processed the story differently if you had heard this paragraph first, before the preceding paragraph? Though Johnny's mother may have told the story exactly as listed above, you may decide that the HPI truly begins three months ago. In contrast, if Johnny had had appendicitis 3 months ago (a clearly unrelated problem), the HPI for his arm pain would begin 4 days prior to admission, and his appendectomy would be relegated to PMH, since it is unlikely to be relevant to the chief complaint. HPI vs. PMH, therefore, is not defined by a prescribed time interval, but rather by relevance to the primary problem.
  While taking your history, you might ask "When was the last day that he was completely healthy?" or "What was the first thing you noticed that was wrong with him?" When preparing to report the history for an acute illness, try to complete the sentence "He was well until…" (may not work as easily for a patient with a chronic complaint/illness)

- Chronology

  Shania is a 10 month old girl with chief complaint of left ear pain. Her pain started 3 days ago. She was seen that day at the ED, where she was told that her ears looked fine, but her pain worsened today, so she was brought back to the ED. She developed URI symptoms 5 days ago. Her fever started yesterday morning. Mom was worried about an ear infection, so for the last3 days she has been giving Shania some amoxicillin that was left over from her last ear infection.

  How easy was it to follow the progression of Shania's illness? Though ear pain is identified as the chief complaint, this illness appears to have started 5 days ago – start there and build a timeline.

  Shania is a 10 month old girl with chief complaint of left ear pain. She was well until 5 days ago, when she developed URI symptoms. 3 days ago she developed left ear pain. She was seen at the ED and told that her ear exam was normal. Nevertheless, mom was concerned about otitis and started Shania on Amoxicillin left over from a previous ear infection. Despite this therapy, Shania's ear pain has persisted, with onset of fever yesterday. She returned to the ED today.

- Stick to the HPI when presenting the HPI (…then the exam, etc)

  Note the phrases below that should be included in other sections of the presentation, not the HPI:

  Shania is a 10 month old girl with chief complaint of left ear pain. She was well until 5 days ago, when she developed URI symptoms, ~~but I didn't think that her nose seemed very congested.~~[physical exam] *3 days ago she developed left ear pain. She was seen at the ED and told that her ear exam was normal, ~~but I thought that the eardrum looked red on my exam last night.~~*[also physical exam]

- Avoid editorializing

  Nevertheless, mom was concerned about otitis and started Shania on Amoxicillin left over from a previous ear infection. ~~I explained to mom that using old prescriptions isn't a good idea. I'm also not sure why she wouldn't have finished the prescription last time.~~

  Best to keep HPI as objective as possible. Opinions belong in the assessment, where you might comment on any thoughts you have, for example, about patient education around prescription medication use.

- Level of detail

  While the details of the HPI are, almost by definition, pertinent to the patient's illness, it is still possible to report too many details:

  Shania's fevers started yesterday. Fever was initially 102.2; mom gave a teaspoon of acetaminophen, and the fever came down to 99. The fever went back up again the next day, but only to 101.7, and resolved again with acetaminophen. By the day of admission, fever went as high as 103; mom had run out of acetaminophen, so she gave ibuprofen this time.

  Could be stated more succinctly as:

Shania has had two days of intermittent fevers, reaching a maximum of 103 today and treated with acetaminophen and ibuprofen.

[Note: in this example, asking mom about dosage and frequency of over the counter meds is a great question, and you would report this information if you were concerned that the dosing was inappropriate. If dosing is okay, however, then this info adds little meaning to the story]

- Where does HPI end?
  The HPI is everything that happens before your patient reaches you. On an inpatient service, this often includes a trip to a medical office/urgent care/emergency room before admission. These visits to other physicians before arrival at your service are part of the HPI (typically the last part). These visits should be encapsulated as succinctly as possible and should follow the same format as the larger presentation (general appearance / most salient exam findings / labs, studies done / interventions).
  In the ED, Shania was in moderate discomfort, febrile to 40.2 and tachycardic. She was diagnosed with left otitis media and noted to be moderately dehydrated. She vomited after attempting to drink liquids, so an IV was placed, she was given a normal saline bolus and ampicillin, and she was admitted for further management.

  If a piece of data is critical to the progression of the story, report it. Consider the case of Antwan:
  In the ED, Antwan was in moderate discomfort, febrile to 40.2 and tachycardic. He had a rigid abdomen and was moderately dehydrated. His white blood cell count was 12.2, CRP 12, and Abdominal CT showed a peri-appendiceal abscess. He received a normal saline bolus, morphine, and piptazobactam and was admitted for management of suspected ruptured appendicitis"
  In this example, *"the CT scan at outside ED showed a peri-appendiceal abscess, and patient was admitted for management of suspected ruptured appendicitis"* is more informative to your audience than *"a CT scan was done and the patient was admitted"*, yet many students will withhold the CT findings because they have been drilled to include this only when they get to the data section

PMH

As mentioned above, the HPI is, by definition, pertinent to the patient's problem.

The components of the past medical history (PMH), in contrast, may or may not be contributory to the patient's immediate problem.
The team will generally want to know about all medical conditions (even if the patient was not admitted for that problem), medications and allergies, but the level of detail required will be determined by relevance to the patient's current medical problem.

If Susie is a 6 y.o. girl with a one-week history of worsening cough, then her history of asthma is quite pertinent and would be mentioned in the HPI, then presented in detail in the PMH:
…Susie was diagnosed with asthma at age 2. She was hospitalized at the time of her initial diagnosis, but has had no subsequent hospital admissions. In the past year she has had no ED visits for asthma and has had one course of oral steroids. She takes inhaled fluticasone twice daily and as needed albuterol, which she uses approximately once per month. Her usual triggers include URI's and exposure to cats.

However, if this same PMH had been elicited for Johnny (the 9 year old boy with arm pain), the team still needs to know that Johnny has asthma, but this information could be stated more succinctly:
…Johnny has a history of asthma which is well-controlled with inhaled fluticasone and prn albuterol.

SOCIAL Hx / FAMILY Hx
Too often, **social history** is undervalued. Patient's illnesses do not occur in a vacuum, and their home situation, employment, access to health care, relationships, and religious/cultural beliefs will all impact their health. This information, therefore, should be routinely elicited, but relevance to the focused oral presentation may be hard to define (recognize that some attendings will want a social backdrop painted for all patient presentations).
As a general rule, consider whether social history helps to define:
- risk factors for illness (e.g. patient with asthma has a cat),
- desired treatment options (e.g. Jehovah's witness preparing for surgery), or
- logistics of ongoing care (e.g. single parent, as sole source of income for household, told to schedule multiple outpatient follow-up appointments).

Family history is most pertinent when it helps diagnose the etiology of the chief complaint.
"*Susie's father has asthma*" is
- very important if Susie is presenting for evaluation of recurrent cough of unknown etiology,
- less important if Susie is a known asthmatic having an exacerbation, and
- not contributory if Susie was admitted for cellulitis.

REVIEW OF SYSTEMS
Review of Systems (ROS) should never be presented in its entirety (but should be recorded in the written note). In fact, since most pertinent findings (positive and negative) are in the HPI, it is not uncommon to omit the ROS entirely from a focused oral presentation.

PHYSICAL EXAM
The physical exam should be presented in a predictable (generally head-to-toe) order. A few things should always be included:

- **General appearance**
    - Well/ill/toxic
    - General statement should be pertinent to chief complaint: if the patient presented with a respiratory complaint, the general statement beginning the physical exam should note whether he/she is in respiratory distress. If the patient presented with pain, describe his/her apparent degree of discomfort.
- **Vital signs**
    - They are called "vital" for a reason.
    - If you are reporting on a patient that you have followed over time, trends are often more helpful than ranges:

        For example, stating that "*the heart rate has ranged from 80-150"* could mean many different things. Compare the following:
        - *The heart rate has improved from 150 on admission to 80 this morning*
        - *The heart rate has risen from 80 to 150*
        - *The heart rate has been in the 80's except for isolated tachycardia to 150 associated with a fever to 104F*

- **All abnormal findings**
    - Trends are also helpful here; if you have examined the patient multiple times, has the finding evolved (for better or worse)?

- **Normal findings that pertain to the patient's medical issues**
    - If the patient is admitted with dyspnea, then reporting that the patient *"has symmetric breath sounds with good aeration bilaterally and no wheezes or rales"* is an appropriately level of detail for the lung exam, even though these are all normal findings.

        However, if the patient presents with a limp, then reporting that the patient *"has symmetric breath sounds with good aeration bilaterally and no wheezes or rales"* provides a level of detail that is unnecessary. Either state simply that the *"lungs are clear to auscultation",* or omit the lung exam from your oral presentation altogether (of course you listened to your patient, you are just not reporting it!)

Some attendings may ask you to mention every organ system (even if just to acknowledge that it was examined and is normal). Even in that case, the items above should be emphasized (what some would call a "verbal highlighter") by amount of detail reported and tone of voice.

LABS/STUDIES

Unlike the physical exam, there is no generally accepted order in which labs/test results should be reported. Start with those most pertinent to your patient's condition. Though there are many shorthand techniques for reporting numbers in written notes, avoid using these techniques while speaking:

"CBC showed 12.2, 11.7 and 34, 250K" may look like the order in which CBC results were written in your note, but it is very hard to listen to. Make sure that results presented verbally are clear: "white blood cell count was 12.2, hemoglobin 11.7 and platelets 250,000".

SUMMARY STATEMENT

A **summary statement** is a one or two sentence synthesis of the key features of the patient's condition. The ideal summary statement provides the basis for developing an appropriate differential diagnosis (DDx).

The key components of a syndrome statement are:

(1) Epidemiology

Demographics – age, gender, race

Predisposing conditions – conditions that are intrinsic to the patient (e.g. hypertension, obesity, prematurity)

Risk factors – factors that are extrinsic to the patient but may contribute to pathophysiology (e.g. smoking, unprotected sex)

[note: include only the details that are important to your diagnostic reasoning]

(2) Key Clinical Features

Symptoms – uncovered by history

Signs – found on exam

Data – labs, radiographs, etc.

(3) Semantic qualifiers

Semantic qualifiers are adjectives or adverbs that describe the key features. These qualifiers are often (but not always) dichotomous. Several attributes used to characterize key features are listed below, with examples of common qualifiers:

- Location (unilateral vs. bilateral; diffuse vs localized; radiating; migratory)
- Quality (burning; stabbing; throbbing; dull)
- Severity (mild vs. moderate vs. severe)
- Chronology (acute vs. subacute vs. chronic; worsening/escalating vs. resolving; constant vs. colicky/intermittent/episodic; insidious/gradual vs. paroxysmal/abrupt onset)
- Setting (post-prandial; nocturnal; exertional)
- Aggravating/alleviating factors
- Associated manifestations ("complicated by…" if one condition leads to another)

"A 12 y.o. boy with chronic, recurrent colicky abdominal pain" conjures up a different thought pattern than *"A 12 y.o. boy with acute onset of sharp RLQ pain".* Though both

boys had a chief complaint of abdominal pain, the two different sets of qualifiers trigger very different differential diagnoses for these two patients. The purpose of using semantic qualifiers, therefore, is to narrow the DDx under consideration.

(4) Transformation

Good summary statements transform lay language (e.g. swelling) and or discrete data (HR = 180bpm, Na = 125 mEq/dL) into more meaningful medical jargon: (swelling → edema, HR 180 → tachycardia, Na 125 → hyponatremia).

Groups of findings may also be transformed into unifying medical concepts: e.g. decreased urine output + tachycardia + dry mucous membranes → dehydration

Putting it all together

A Summary Statement identifies who a patient is and what their major problems are, adding descriptive terms to define these problems better in terms of severity or diagnostic considerations.

Consider the following two examples of summary statements:
 "Zander is a 5 week old boy with 3 weeks of vomiting after meals. He has tried many different formulas, but his vomiting is getting worse. Vomitus has had no bile. His exam is notable for HR 182, decreased weight, sunken fontanel, and cool extremities."
This statement is good. The ability to identify highlights is the most important first step. However, there is no use of semantic qualifiers or transformation.

 A better summary statement might sound like:
"Zander is a 5 week-old boy with moderate dehydration due to progressive, non-bilious, post-prandial vomiting unresponsive to formula changes."
This example transforms highlights into problems: *tachycardia + decreased weight + sunken fontanel + cool extremities* (findings presumably already reported in your physical exam) = *moderate dehydration*. The use of semantic qualifiers sets the stage for the differential diagnosis for this child's other problem, i.e. vomiting: *after meals* becomes *post-prandial; progressive* clearly communicates that he is getting worse; *non-bilious* helps to narrow the potential causes of his vomiting. All of these descriptors should change the way that you and your audience think about the etiology of this patient's vomiting.

In some cases, the problem will be reported as a **symptom**. In other cases, when established by the data you have already collected, the problem will be reported as a **diagnosis**. In the example above, if Zander has had an ultrasound showing an enlarged pyloric muscle, then his problem it no longer "vomiting" (with discussion of differential diagnosis to follow); his problem is "pyloric stenosis". As your understanding of the problem gets more refined, it should be renamed in the most accurate language possible.

In the following examples, note how the summary statement evolves from the chief complaint as more information is acquired:

- *CC: Abdominal pain and vomiting*
  Adam is a 15 year old boy who presents with abdominal pain and vomiting. His pain started yesterday and occurs primarily after eating. He has had no diarrhea.
  Adam is a 15 year old boy with acute post-prandial vomiting and abdominal pain in the absence of diarrhea
  PMH is notable for sickle cell disease complicated by multiple pain crises and one episode of acute chest syndrome.
  Adam is a 15 year old boy with sickle cell disease, now with acute post-prandial vomiting and abdominal pain in the absence of diarrhea
  His exam is notable for well-localized tenderness to palpation in the RUQ.
  Adam is a 15 year old boy with sickle cell disease, now with acute post-prandial vomiting and RUQ pain
  GGT, alkaline phosphatase and bilirubin are elevated
  Adam is a 15 year old boy with sickle cell disease, now with acute post-prandial vomiting, RUQ pain and labs consistent with cholestatic disease

- *CC: Abdominal pain and vomiting*
  Beth is a 15 year old girl with onset of lower abdominal pain 4 days ago. She has progressive amounts of vaginal discharge, and yesterday developed fever to 102F. She vomited twice today and has had decreased appetite. She has had sex with two partners and does not use any form of birth control.
  Beth is a 15 year old girl with h/o unprotected sex presenting with vaginal discharge, acute pelvic pain, fever, and vomiting
  She walks slowly across the room, complaining that her pain worsens with each step. She has no tenderness over her upper abdomen, but she is tender to palpation in both lower quadrants and in suprapubic region, and she winces when you shake her hips. She has copious yellow vaginal discharge and exquisite tenderness with movement of her cervix.
  Beth is a 15 year old girl with h/o unprotected sex presenting with purulent vaginal discharge, fever, cervical motion tenderness and focal peritoneal signs

  Though each of these patients presents with abdominal pain, Adam's syndrome statement is ultimately quite suggestive of cholecystitis, whereas pelvic inflammatory disease is a leading consideration for Beth.

ASSESSMENT/ PLANS
Though a summary statement can be constructed at any point in a case, it is often offered as the introduction to the assessment. The summary statement identifies a patient's major problems; an **assessment** includes a diagnosis or differential diagnosis for each problem. As noted above,

name each problem in the most specific language possible – this will facilitate a differential diagnosis that is as narrow and specific to your patient as possible. If the diagnosis is still in question, the use of words such as "probable…suspected/likely…possible…less likely…unlikely" allow the presenter to communicate degrees of certainty while discussing the differential in order from most likely to least likely diagnoses.

In addition to discussing a differential diagnosis (if applicable) for each problem, an assessment should include a description of problem severity and clinical progression (i.e. getting better, getting worse, staying the same).

Following the assessment, each problem should have its own plan. **Plans** include both diagnostic and therapeutic interventions.

Finally, discuss all active problems in order of descending importance. Do not use system labels as the headers for discussion in your A/P or discuss each patient in a head-to-toe systems order. "Vomiting" is a problem; "GI" is a system label. While a systems-based approach is a nice review (to make sure that you didn't overlook a problem), a problem-based approach is much more effective and appropriate.

Let's look at an assessment for Zander:
"Zander is a 5 week-old boy with moderate dehydration due to chronic, progressive, non-bilious post-prandial vomiting.

The most likely cause of his vomiting is pyloric stenosis in light of his age, gender, the progressive nature of his vomiting and the absence of other symptoms such as fever or diarrhea. Milk protein intolerance is also common at this age and can present with progressive symptoms, but Zander's lack of response to multiple formula changes makes this less likely for him. Gastroenteritis seems less likely in the absence of diarrhea and in light of the duration of his symptoms, We need to remember that CNS injuries can present with vomiting in the absence of fever or diarrhea, but the duration of symptoms and sunken fontanel on exam make this less likely as well.

My plan is to order a pyloric ultrasound to confirm or exclude pyloric stenosis. If the pyloric ultrasound is normal, we could offer him Pedialyte to take formula intolerance out of the equation.

Regardless of the cause of vomiting, Zander is moderately dehydrated. We should place an IV, obtain blood for serum electrolytes, and give him 20 mL/kg of normal saline. I would like to see the results of his electrolytes and his response to the first fluid bolus (particularly his heart rate) before I write further fluid orders. I want to keep him NPO until we can get the pyloric ultrasound done."

The syndrome statement identifies two major problems: (1) vomiting and (2) dehydration. Note that each problem has a discussion and plan. The discussion for vomiting is focused on diagnostic reasoning (*Why is he vomiting and how can we find out?*), while the discussion for dehydration is more therapeutic in nature (*How severe is the problem? Are there associated problems, such as electrolyte abnormalities? How are we going to monitor response to therapy?*).

Oral Case Presentation Template

Purpose

The purpose of the oral case presentation exercise is for the student to learn time management on rounds and how to think and communicate like a "doctor." The desired skill for which the student is to learn during the oral case presentation exercise is different than the communication skills learned in writing a comprehensive H&P.

Objectives

At the end of this exercise the student will:
1. understand the process used in clinical reasoning
2. organize an oral case presentation in a logical and concise manner
3. describe that information which should be included and that information which should be excluded when communicating a patient case orally.

Learning activities:

1. At the **Week 1** preparation meeting the student will be given explicit instructions to the student on the expectations for oral case presentation to be given at the **second week's** meeting.
2. The student will receive an oral case presentation primer which gives excellent examples of both good and bad oral case presentations. It is necessary for you to read this primer prior to presenting your first case.
3. At the second week meeting the student will give an oral case presentation following the template below.

   Keep the following in mind:

   a. The oral case presentation should be given within a two-minute time frame.

   b. It is permissible to use the same patient case that you are using for a comprehensive written H&P.

   c. It is very important for you to write down your oral case presentation so that it can be read aloud.

   d. Practice the oral presentation so that all the necessary elements are included.

   e. Do not attempt to memorize or to present "off the top of your head."

There are **six elements** in an oral case presentation:

1. HPI (there should be no or little past medical history or review of systems)
2. Focused physical exam
3. Summary statement
4. Focused differential diagnosis
5. Clinical impression (working diagnosis)
6. Management plan (generalized not specific details)

The **history of present illness** should be:

1. Logical and chronological
2. Contain detailed symptoms of the illness discriminators
3. The HPI should give a picture of the severity of patient illness (this is usually best described as the effect of the illness on routine daily activity)
4. Include information from all sources in addition to family and patient. Information from medical sources is particularly important. If the patient has been seen by another physician prior to admission, it is important to describe not just what the physician did but what the physician thought.
5. Always include what is on the parents' mind, especially if they have a fear or worry. It is very difficult to successfully manage the patient without understanding the parents' concern.
6. Justify why the patient needs to be admitted to the hospital and cannot be management as outpatient.
7. Omit past medical history and review of systems information unless it explicitly pertains to the reason that the patient is admitted to the hospital. Or that that information is so important to the patient's overall health that it cannot be omitted.

The **physical exam** always needs to contain the vital signs and grown information including percentiles. Otherwise, the remainder of the physical examination should pertain only to organ systems for which clinical information is relevant. Physical exam details should be very complete and comprehensive for those organ systems and even though the physical exam should be thorough and complete reporting the information should be very focused to "where is the money."

The **summary statement** translates all of the information of the HPI and physical exam into two sentences. This is a very difficult skill to learn but is extremely important to be able to summarize everything to this point into a "two sentence nugget." In the

summary statement in which physical exam information is being translated use terms such as "tachypnea and tachycardia" instead of specific numbers like "respiratory rate of 50 and heart rate of 160."

Following the summary statement, you should write a **short and focused list of diagnoses** that are realistic and possible. (Keep in mind that during the time in which you are performing history interviews that your **differential diagnosis** should be very long. It is during the history interview that you compare and contrast illness scripts and then from that you ask additional questions. The purpose of the summary statement is to help you then shorten and narrow your differential diagnosis to only a few possible realistic conditions. These conditions should be supported by your HPI and physical exam. It should also be kept in mind that experienced clinicians have short differential diagnoses and then latter expand their differential diagnosis list if the clinical course requires.

Following your differential diagnosis commit to a **single diagnosis**. Simply state that diagnosis and do not write a justification for your choice as you might do in the written H&P.

Following this clinical impression or working diagnosis, write a **general management plan**. This is in contrast to your written H&P management plan. In the written H&P management plan you should have a very detailed and comprehensive list as one would when writing admission orders. In the oral case presentation, the management plan is presented in a general manner. The student should, however, know the details of the admission orders so that if asked by the attending could answer any management plan question detail.

In **Week 3** the students will learn the skill of **patient handoffs** at the time of evening checkout and the skill of **requesting subspecialty consultations.**

PROFESSOR ROUNDS

Professor Rounds will be held weekly with Dr. Chris DeCock. He will assign 2 students per week to present one of their cases. He will evaluate the presentations using the OPCRS Rating Form (see below).

OPCRS Rating Form

History	1	2	3	4	5	Comments
2. Chief complaint noted either before HPI or as part of introductory sentence	No Chief complaint noted		Chief complaint mentioned		Chief complaint clear	

	1	2	3	4	5	Comments
3. HPI starts with clear patient introduction including patient's age, gender, pertinent active medical Problems, and reason for admission	No introductory sentence		Intro included most pertinent information		Intro painted a clear picture of patient	☐ too much ☐ too little

	1	2	3	4	5	Comments
4. HPI is organized so that chronology of important events is clear	Sequence of events unclear		Sequence of major events is clear		Sequence of all events is clear	☐ too much ☐ too little

	1	2	3	4	5	Comments
5. The PMH, FH, SH, and ROS include only elements related to active medical problems	Info has no clear connection to active problems		Information adequately describes the patient's active problems		Info completely/ concisely describes all active problems	☐ too much ☐ too little

Physical exam and diagnostic study results	1	2	3	4	5	Comments
6. Begins with a general statement	General statement poor or missing		Mostly clear general statement		Succinct statement creates clear picture of patient	☐ too much ☐ too little

	1	2	3	4	5	Comments
7. Presents all vital signs (and growth parameters if patient is a child)	Vitals inappropriately incomplete		VS & growth parameters mostly complete		All vitals signs/growth parameters given	☐ too much ☐ too little

	1	2	3	4	5	Comments
8. Includes a targeted physical exam stating the positive and negative findings that distinguish the diagnoses under consideration and any other abnormal findings	Either too much or too little information given		Most important info given		All important elements of PE given	☐ too much ☐ too little

	1	2	3	4	5	Comments
9. Organizes laboratory data/ results of diagnostic tests to distinguish between possible diagnoses	Irrelevant test results presented or significant results omitted		Most relevant results reported; few omissions or extra results included		All results relevant to possible diagnoses are presented	□ too much □ too little

Summary statement	1	2	3	4	5	Comments
10. Begins assessment with a summary statement that synthesizes the critical elements of the patient's history, physical examination, and diagnostic studies into 1 sentence	No summary statement or restatement of story without synthesis		Most pertinent information synthesized; may repeat some unnecessary information		Summary statement concisely synthesizes all key information	□ too much □ too little

	1	2	3	4	5	Comments
11. Includes a prioritized problem list (by systems only if appropriate) including all active problems	No problem list or poorly organized list or used systems when inappropriate		Most important problems included and prioritized on problem list; systems if appropriate		Complete problem list appropriately prioritized; systems if appropriate	□ too much □ too little

	1	2	3	4	5	Comments
12. Provides an appropriate differential diagnosis for each problem	No differential diagnoses are given		A ddx with several possibilities is given for major problems		Extensive ddx for all problems given	□ too much □ too little

	1	2	3	4	5	Comments
13. States the diagnostic/therapeutic plan that targets each problem; each item in the plan relates to something listed on the problem list	Patient plan is not described or is unrelated to the problem list		Plan for the patient addresses most important issues, may omit active but lower priority problems		Patient plan is complete and relates directly to the problem list; all active issues are included	□ too much □ too little

Clinical reasoning/synthesis of information	1	2	3	4	5	Comments
14. The presentation included the pertinent positives and negatives from the H&P to support the differential diagnosis and plan	Key positives and negatives were not included		Key pertinent positives and negatives were presented at some point in the presentation		Most pertinent positives and negatives were included at logical points	

	1	2	3	4	5	Comments
15. At the end of the presentation I had a clear picture of this patient's situation and what needed to be done next	Much ambiguity remained		The picture was clear for the major issue(s)		The picture was complete and all issues were clear	

General aspects	1	2	3	4	5	Comments
16. Overall organization	Poorly organized and hard to follow		Mostly well-organized		Very well organized	

	1	2	3	4	5	Comments
17. Speaking style	Difficult to understand		Mostly understandable and engaging		Understandable and engaging speaking style	

	1	2	3	4	5	Comments
18. Able to answer questions during and immediately after presentation	Unable to answer questions		Moderately able to answer questions		Answers questions fully and responsively	

	1	2	3	4	5	6	7	8	9	Comments
20. Overall assessment of presentation	Needs significant help		Needs some help		**Mostly on target**		Above expectations		Well above expectations	

MIDCLERKSHIP FEEDBACK

Midclerkship feedback is held with Dr. Chris DeCock. You will receive a notice from LEO to complete a mid-clerkship self-assessment form sometime during the third week of the rotation. Complete the form before your scheduled meeting with Dr. DeCock.

Midclerkship Student Self-Assessment and Preceptor Feedback

Self-Assessment Skill Level	Worried/ Need Help (explain below) 1	Probably Okay	Confident	Could Teach Others
Scale		2	3	4
History Gathering				
Physical Exam				
Differential Diagnosis				
Summary Statement				
Inpatient H&P				
Daily Notes				
Problem Focused Note				
Oral Case Presentation				
Medical Decision Making				
Communication-Patient				
Communication-Staff				
Feedback Seeking				
Professionalism				
Assignment Timeliness				
Respectfulness				
Vaccine Schedule				
Growth Chart Interpretation				
Neurodevelopment				
Sexual Maturity Assessment				
Newborn Care				
Well child Care				
Routine Screening				
Med Lit search (PICO)				

Name three areas in which you would like to improve and your strategy for improvement:
1.
2.
3.
___ Number of Aquifer Cases Completed
___ Number of Newborn Exams
___ Number of Well Child Exams
___ Number of Acute Child Exams
___ Number of Diversity Cases
___ Discuss the importance of immunizations and the data supporting them

OBSERVED HISTORY AND PHYSICAL

Each student is required to have one observed History and Physical during the rotation. Each section needs to be signed off by one or more of the preceptors. The completed form is due by the end of the rotation.

Observed Pediatric History & Physical

Student Name: _____

History	
HPI	
Additional History, PMH, FM, SH, Immunizations, Development	
ROS	
Physical	
HEENT	
Cardiovascular	
Respiratory	
Abdomen	
Skin	
Neuro	
Gentiourinary	
	Signatures/Dates

IMMUNIZATIONS

Due to the importance of childhood immunizations, during the rotation, students will be either observed educating families on the importance of vaccines and the data supporting them or will do a mock encounter.

AQUIFER CASES

Aqiufer Pediatrics is a 32 interactive computer-based cases designed to cover the core content of the suggested curriculum in Pediatrics. These cases will ensure a comprehensive exposure to the essential issues in pediatrics that will complement your particular clinical experience. Completion of 18 Aquifer Pediatrics cases (1, 5, 6, 9, 11, 12, 15, 16, 17, 21, 22, 24, 25, 26, 27, 29, 30, 31) is required. You are also required to complete 2 Aquifer Radiology cases (11 and 12). To register for these courses go to https://www.aquifer.org. Click "Sign In" at the top of the page. This will take you to another Sign in page. To Register enter your und.edu email address and click "Register."

2020-2021 Pediatric Clerkship Grading Policy

1. The passing score on the subject examination will be determined by the NBME "Hofstee Compromise." **This academic year the passing score is "59."**
2. The clerkship grade will be weighted 50% preceptor grades, 30% subject examination, 15% clinical assignments, and 5% professionalism.
3. Grades, including honors, need to be submitted to Student Affairs for recording and reported to the student within 6 weeks of the last day of the clerkship.

2020-2021 Honors Designation Guidelines

Bismarck -   Minimum preceptor score – 92, shelf – 85 (EPCSS) and completed clinical assignments and professionalism portions of grade.

Fargo -   Minimum preceptor score – 92, shelf – 85 (EPCSS) and completed clinical assignments and professionalism portions of grade.

Grand Forks - Minimum preceptor score – 92, shelf – 85 (EPCSS) and completed clinical assignments and professionalism portions of grade.

ROME -   Minimum shelf – 85 (EPCSS) and completed clinical assignments and professionalism portions of grade. Preceptor minimum score depends on which campus the students are assigned for the traditional 4 week pediatrics clerkship.

MILE (Minot) - Minimum shelf – 85 (EPCSS) and completed clinical assignments and professionalism portions of grade. Minimum preceptor score will be determined at end of academic year when preceptor evaluations are submitted to the department.

Clinical Assignments will be weighted one-third for Aquifer cases, one-third for write-ups and one-third for oral case presentations. All or nothing, meaning meeting all the requirements listed above. If even one requirement not met, 15% will be deducted from final grade.

Professionalism is worth 5% of the total grade. Violations may result in not receiving honors. Repetitive and egregious violations may result in failure of the rotation.

Grades, including honors, need to be submitted to Student Affairs for recording and reported to the student within 6 weeks of the last day of the clerkship.