

Telehealth Pediatric Nephrology Presenting

1. SCOPE

- 1.1. MCHS Telepresenters
- 1.2. Facilities and departments included in the scope listed above are further defined in the [Scope Definition Resource Guide](#) if not specifically outlined above.

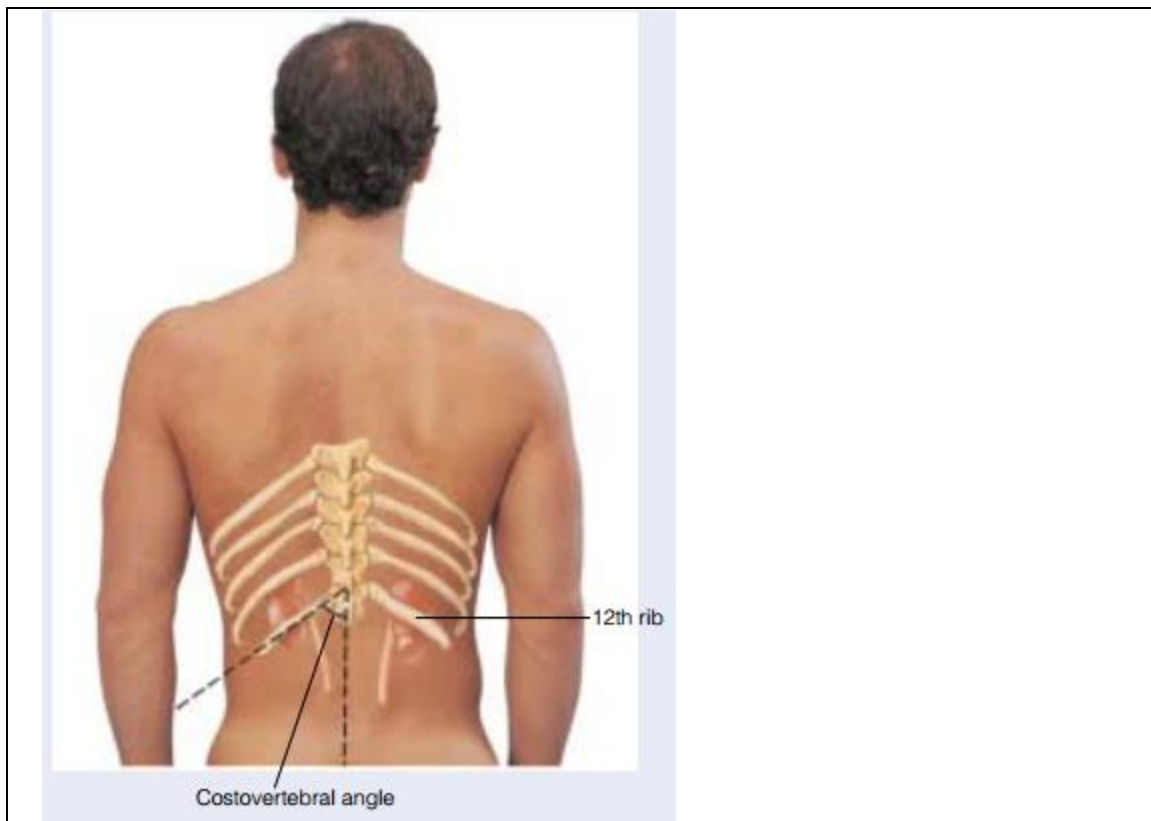
2. DEFINITIONS & EXPLANATIONS OF TERMS

- 2.1. Abbreviations
 - CVA – Costovertebral Angle
 - LPN – Licensed Practical Nurse
 - MA – Medical Assistant
 - MCHS – Marshfield Clinic Health System
 - mm – millimeter
 - PMI – Point of Maximum Impulse
 - RN – Registered Nurse

PROCEDURE

2.2. Definitions

- CVA – The costovertebral angle is the acute angle formed on either side of the human back between the twelfth rib and the vertebral column.



- Aortic valve – is at the second right intercostal space at the sternal border
- Pulmonic valve – is at the second left intercostal space at the sternal border
- Secondary aortic – is at the third left intercostal space at the sternal border
- Tricuspid valve – is at the fifth left intercostal space at the sternal border
- Point of Maximal Impulse (PMI) – is at the apex; fifth left intercostal space at the midclavicular line
- Edema – 1+= slight pitting – no visible change in the shape of the leg (skin indents 2mm), 2+= somewhat deeper pitting; no marked change in the shape of the leg (skin indents 4mm), 3+= pitting is deep; leg is full and swollen (skin indents 6mm), 4+= pitting is very deep; leg is very swollen (skin indents 8mm +)
- Telepresenter – An RN, LPN, or MA who is trained to use technology, such as a digital stethoscope, otoscope, examination camera, etc., to facilitate comprehensive exams under provider guidance
- Thyroid lobes – The lobes are somewhat harder to feel than the isthmus. The anterior surface of a lateral lobe is approximately the size of the distal phalanx of the thumb and feels somewhat rubbery
- Thyroid isthmus – lies across the trachea below the cricoid

3. PROCEDURE BODY

All clinical staff responsible for the presenting of patients to Pediatric Nephrology or any provider who may need a component of a nephrology history or physical exam will be proficient in providing nephrology exam data via Telehealth technologies while working within scope of practice.

3.1. Pre-Consult Preparation

a. See [Core Telepresenting Procedure](#)

Vitals

- Height
- Weight
- Temp
- Blood Pressure

3.2. Directed Physical Exam: Under direction of the provider, the Telepresenter will assist with following physical exam while ensuring that patient is always framed appropriately so provider can see all aspects of exam

a. Ears

- Use otoscope for ear examination, provider will want to see the eardrum

b. Mouth

- Use exam camera to show provider inside of patient's mouth
 - May need flashlight or penlight if no light on exam camera

c. Neck

- Thyroid Assessment: With the hand held camera or room camera, assist the provider to inspect the neck for the thyroid gland
- Palpate patient's neck and assess thyroid for enlargement and lymph node enlargement
- The thyroid is located just below the cricoid cartilage
- Direct peripheral lighting with goose neck lamp at the front of patient's neck to allow the provider to inspect the region below the cricoid cartilage (located just below the thyroid cartilage [Adam's apple]). The thyroid is located just below the cricoid cartilage. The lower border of the large thyroid gland will be outlined with peripheral lighting
- With the patient's head tipped back, instruct the patient to sip some water
- The patient's thyroid will move up under your fingers as they swallow
- The provider will be watching for upward movement of the thyroid gland,

noting its contour and symmetry

- If the provider requests the Telehealth nurse palpate the thyroid gland:
 - Have the patient in a sitting position
 - Instruct the patient to sit up straight and bend their head slightly forward and to the right to relax the muscles
 - Stand behind the patient
 - Place the fingertips of both hands on either side of the trachea just below the cricoid cartilage
 - Use the fingers on your left hand to push the trachea slightly to the right



- Instruct the patient to sip some water
- Feel the thyroid isthmus rise up under the finger pads. Please note it is often not palpable
 - Repeat the exam in the same fashion on the left
- Report surface (lumpy or hard), enlargement (right > left), consistency of the gland, along with any nodules or tenderness

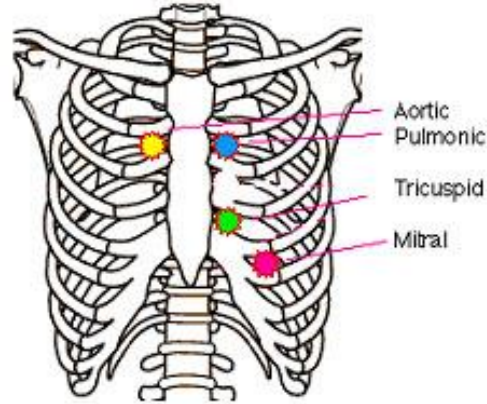
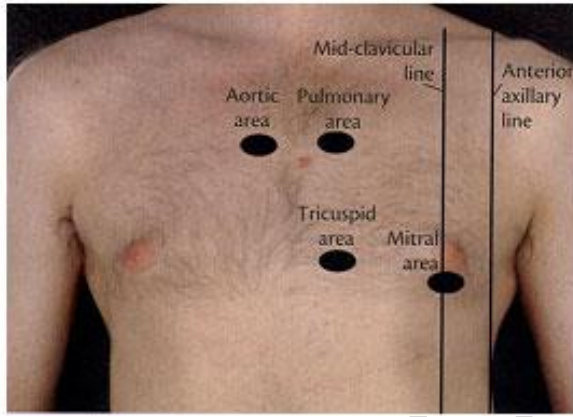
d. Lung assessment

- Position patient so his or her posterior side is to the room camera
- Place limited pressure with the digital stethoscope at the six posterior lung fields for two complete breaths or until prompted by provider to switch landmarks.
- Begin with upper lobes of lung, moving the diaphragm of the stethoscope in a ladder-like pattern, from one side to the other. This will allow the provider to identify patterns of breath sounds and compare symmetric areas of the lungs.
- Position patient with anterior side facing the room camera. Use the digital stethoscope to auscultate two anterior lung fields or until prompted by provider to switch landmarks

e. Heart Assessment

- Position patient's anterior side to room camera and apply limited pressure to the digital stethoscope to auscultate in the four landmarks below.

- Aortic valve
- Pulmonic valve
- Tricuspid valve
- Mitral Valve/Point of Maximal Impulse (PMI)



- Watch the provider for cues to move to the next landmark

f. Abdomen

- If patient has had kidney transplant you may be asked to auscultate area where kidney has been transplanted, (you should not hear any sound).
- Lay patient supine on exam table and expose abdomen
- Palpate abdomen using pads of fingers
 - Assess for enlargement of liver

Palpate over liver area- Liver border(s) should not be palpable

Place your left hand behind the patient, parallel to and supporting the right 11th and 12th ribs and lift up to support abdominal contents

Remind the patient to relax into your hand if necessary

Press your left hand forward so the liver may be easily felt



Place your right hand on the patient's right upper quadrant with your fingers lateral to the rectus muscle

Gently press in and up

Ask the patient to take a deep breath and try to feel the edges of the liver

If the liver is palpable, the edge should be soft, sharp, and regular with a smooth surface

- Assess for enlargement of spleen

Palpate over spleen area- Spleen border(s) should not be palpable

With your left hand, reach over and around the patient to support and press forward the lower rib cage

With your right hand below the left costal margin, press in towards the spleen



Begin palpation at the pelvis so you can feel a possible enlarged spleen

Ask the patient to take a deep breath and try to feel the spleen edge

- You should not feel anything firm
- Abdomen should feel soft

Report any abnormalities

- If patient has had a Kidney transplanted in abdomen you may feel something hard and abnormal on side where kidney was transplanted.

g. **Kidney Percussion** (CVA Tenderness Assessment) **ONLY AT REQUEST & DIRECTION of PROVIDER**

- http://wps.prenhall.com/wps/media/objects/737/755395/assessment_of_kidneys.pdf
- Percussion of the kidneys helps assess pain or tenderness.
- Patient in sitting position and in view of provider
- Stand behind the patient
- For **indirect percussion**, place the palm of your non-dominant hand over the costovertebral angle (see figures below).
- Strike this area with the ulnar surface of your dominant hand, curled into a fist (see figures below).



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- For **direct percussion**, strike the area over the costovertebral angle with the ulnar surface of your dominant hand, curled into a fist.
- Repeat the technique for the other kidney as directed
- You should do percussion of the kidneys with only enough force so the client feels a gentle thud.

h. Edema Assessment: Use the handheld

- Palpate legs, knees, calves and ankle and assess for edema (1-4+)
- How far up the leg does it go?
- Severity of edema, (1-4+) pitting
 - Provider may ask to see if there is pitting edema
- You may be asked to check if edema around upper extremities

3.3. Post Physical Exam

- a. See [Core Telepresenting Procedure Document](#)

3.4. Post Consult Considerations

- a. See [Core Telepresenting Procedure Document](#)

PROCEDURE

4. ADDITIONAL RESOURCES

4.1. References:

- http://wps.prenhall.com/wps/media/objects/737/755395/assessment_of_kidneys.pdf
- Bickley, L. Bates' Guide to Physical Examination and History Taking. 10th ed. Philadelphia, PA: Lippincott Williams & Wilkins; 2009.

4.2. Supporting documents available:

- [Core Telepresenting Procedure Document](#)

5. DOCUMENT HISTORY

Version No.	Revision Description
1.0	New Document
2.0	Administrative Override: Removed Marshfield Clinic Logo, Updated Quick Part in Header, Reformat of Section 2. Updated Scope with appropriate MCHS and added 1.2. Reformat of Section 2. No Content Change.

6. DOCUMENT PROPERTIES

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