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Developing a Quick Reference Guide for Staff on CT Policies and Protocols

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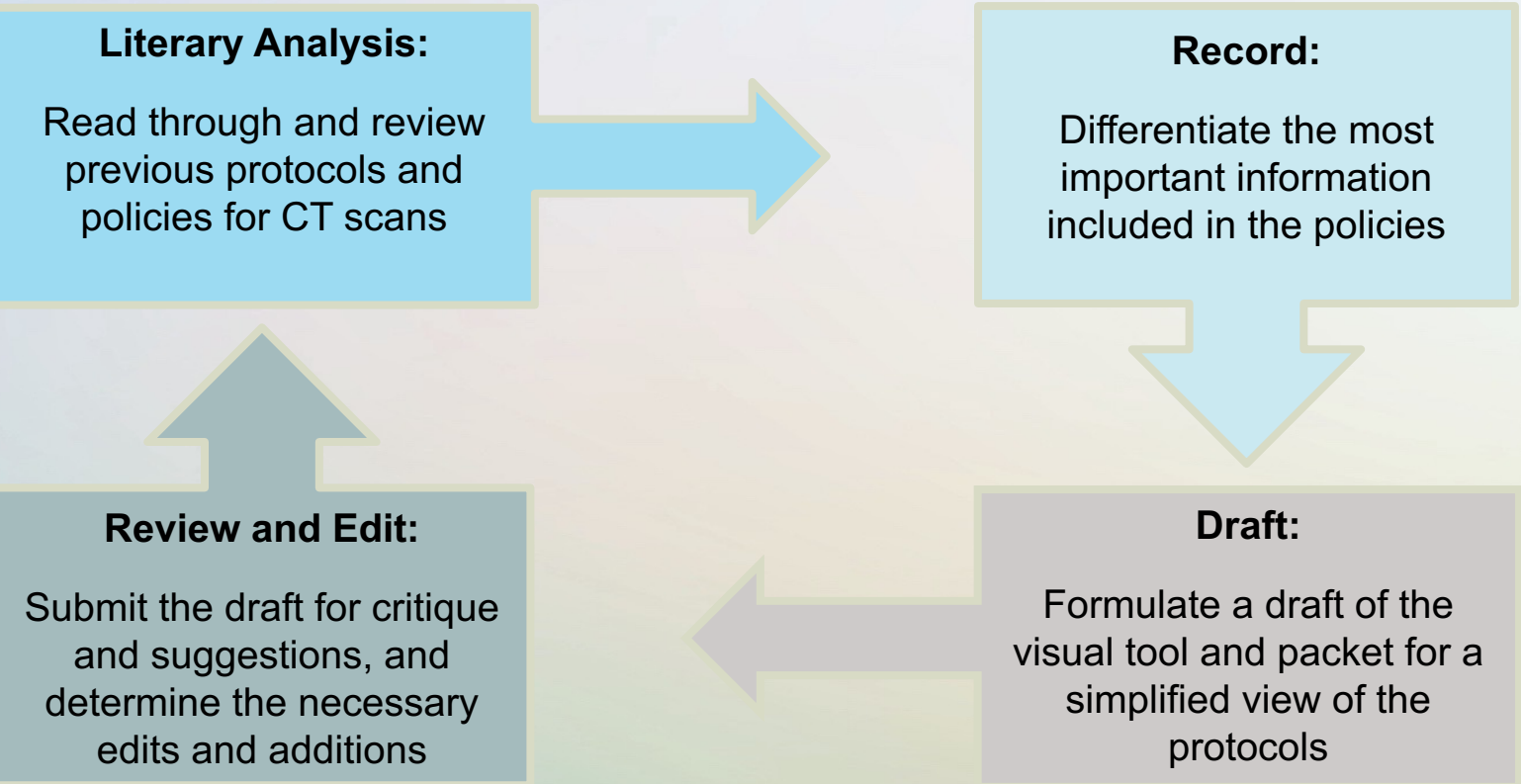
Background and Objectives

With ED staff, there has been some confusion related to established CT protocols, especially regarding IV and PO contrast, and when it is appropriate or contraindicated.

- The established protocols, while comprehensive, can make it difficult to rapidly access common information

The main objective of this project is to create quick-access reference guides for staff to more efficiently determine up-to-date protocols regarding what is appropriate for their patient when preparing for and completing CT scans.

Methods



Lehigh Valley Health Network, Allentown, Pennsylvania

Results

CT Policies and Protocols

If the patient had a prior reaction or an allergy to iodine, contact the Radiologist before proceeding with oral administration of contrast.

- If a new patient is currently exhibiting any signs of a reaction, administer appropriate treatment according to ACR guidelines and observe for a period of time (length of which determined by attending radiologist or supervising provider)

If CT is needed regardless of prior reaction:

- Mild to moderate allergic-like reaction; consult premedication guidelines
- Severe contrast or allergic reaction; consult radiologist, consider scan without contrast

Oral contrast dose formula;

- Omnipaque dose = 0.86cc/kg * weight (kg)
- Total volume = Omnipaque dose * 30cc
- Volume of diluent = total volume - volume omnipaque

Total volume should be drank over a period of time, depending on weight.

- 0-10kg: 30 minutes
- 10-20kg: 1 hour
- 20kg or greater: 1.5 hours

***If administering barium, amount to give = total volume for omnipaque calculation**

****If the patient is >35kg, they should be treated as an adult for dosing levels. Consider IV contrast.**

All patients between the ages 12-55 that are able to become pregnant **must** be questioned as to their state of pregnancy.

- If patient is unable to answer, consult patient's nurse or review their medical record

Until pregnancy has been ruled out, there are a number of radiological exams **not to be performed**, which can be found on page 14.

- If one of such exams is ordered without concrete confirmation of pregnancy status, consult the referring physician to determine the course of action

If patient is a pregnant minor they can sign the verification form, but the examination must not be completed until the patient's competency is evaluated.

If the patient has any of the following CIN risk factors, they should have labs completed **within 60 days** of the scheduled CT scan with IV contrast.

- Age >60yrs, on metformin/metformin-containing drug combinations, pre-existing renal dysfunction, hypertension following medical therapy, prior kidney surgery, or diabetes mellitus
- If labs are outside of the recommended window, CT tech will contact clinician/radiologist

Truly urgent study should never be withheld for laboratory data or risk.

After obtaining appropriate labs, proceed as advised in published policy.

There are special situations for patients who may be in need of a CT scan, and their respective alterations can be found in the general CT Policy on pages 5 & 6.

- Contraindications to receiving IV contrast, acute renal failure, severe chronic renal disease, metformin, chemotherapy, possible need for repeat injection
- Special situations are outlined on pages 5 and 6

Generally, patients should not eat anything up to 3 hours prior to their examination, though clear liquids are permitted.

Figure: The first page, acting as the main reference guide, of the submitted policy packet

Conclusion

- While there is the ability to shorten and simplify the overall policies onto a single sheet of paper as a **reference guide**, there is still a need for the full policies and packets of information to provide the best possible care.
- Having both the single-sheet guide and the full packet with the policies included allows for quick access while encouraging comprehensive review

Future Directions

1. Send draft to the radiologists, CT Department Management, and Nursing Management for approval
2. Receive any necessary feedback and make requested alterations
3. Include the guide in policy tech and distribute hard copies around the ED (single sheet and packet copies)
4. Survey or research understanding, satisfaction, and success of the reference guide in terms of efficiency and effectiveness

REFERENCES

- Lehigh Valley Health Network Department Manual, *Administration of Oral Contrast During Abdominal CT in Pediatric Patients*
- Lehigh Valley Health Network Department Manual, *Allergic-Like Reactions and Premedication Prior to CT with Iodinated Intravenous Contrast*
- Lehigh Valley Health Network Department Manual, *Directions for Administration of Oral Contrast*
- Lehigh Valley Health Network Department Manual, *IV Contrast CT Policy*
- Lehigh Valley Health Network Department Manual, *Observing Patients Who Have Had Contrast Reactions*
- Lehigh Valley Health Network Department Manual, *Policies Regarding Pregnancy and Use of IV Iodinated Contrast and Use of Premedication*
- Lehigh Valley Health Network Department Manual, *Radiological Studies in the Questionable Pregnant Patient*

See the full
packet here:

