Clinical Guideline for the use of oral contrast including CT evaluation of appendicitis

BACKGROUND: There is mounting evidence and sufficient body of literature in Radiology, Surgery and ED literature that oral contrast is not needed and can delay care in certain ED patients. There has been a general understanding between Radiology, Surgery and the ED that oral contrast would not be required as a routine.

Radiologists should avoid the inappropriate routine use of statements like "Limited by lack of Oral Contrast". In the presence of bowel obstruction, there is sufficient fluid in the bowel to act as a negative contrast agent. When the BMI is elevated, there is sufficient separation of bowel loops to visualize and evaluate the bowel wall when IV contrast is used. However, when the bowel is collapsed, there is no oral contrast, and little intra-abdominal fat, the phrase "Limited by lack of Oral Contrast" is appropriate. In most patients with elevated BMI the patient will have sufficient intra-abdominal fat for the study to be diagnostic without the need for oral contrast.

We aim to reduce the time to diagnosis for patients with suspected appendicitis and other abdominal conditions without sacrificing diagnostic accuracy.

Oral contrast is only required in the acutely ill ED patient in the following circumstances:
- BMI < 27
- Post-op bowel surgery, fistula
- Crohn's disease (use low density Enterography contrast when IV contrast is given, use high density oral contrast if IV contrast is not administered)
- When IV contrast is contraindicated.
- In some pediatric patients (low BMI, little intra-abdominal fat)

Patients with the following characteristics should be considered for a CT protocol of IV but **NO** oral contrast:
1. History and physical exam suggestive of appendicitis
2. Patients with signs & symptoms of bowel obstruction (or patients vomiting, unable to tolerate contrast)
3. BMI > 27
4. No contraindications to IV contrast
5. No significant abdominal surgeries in the past

Patients with undifferentiated or generalized abdominal pain, those that are thin, and those that cannot receive IV contrast should receive oral contrast at the discretion of the radiologist.

If a patient has a CT result that is equivocal for appendicitis, oral contrast is not expected to provide further information, and exposure to repeat CT scanning may not be appropriate.

Prior to ordering a CT for the indication of rule-out appendicitis, the following clinical pathways should be considered:
1. In male patients with a classic clinical picture and physical exam, some of our surgeons are comfortable transferring the patient to the OR without imaging. This should be discussed with the surgery team in appropriate patients.
2. Ultrasound as first line imaging should be considered in patients without large body habitus.