ASCLS Mission:

The mission of ASCLS is to make a positive impact in health care through leadership that will assure excellence in the practice of laboratory medicine.

Laboratory Patient Safety Tips:

Vitamin D Information For Providers

Your Safety and Service Experience Are Important To Us!
Vitamin D – When is testing medically indicated?

- Vitamin D is a broad term and includes several metabolically interrelated sterol substances that have hormonal activity. Vitamin D has two distinctive forms: Vitamin D2 and Vitamin D3.
- Vitamin D’s chief biologic function is to maintain serum calcium and phosphorus concentrations within normal range by enhancing intestinal absorption of calcium and release of calcium and phosphorus from bone.
- 25-hydroxyvitamin D is the test to order to assess nutritional adequacy most accurately. Decreased in: Vitamin D deficiency, liver disease, kidney disease, digestive system malabsorption syndromes, pancreatitis, inadequate sun exposure and other conditions.
- 1,25 dihydroxyvitamin D is the most potent vitamin D metabolite, but is NOT the test to be ordered to assess vitamin D stores.
- The Endocrine Society clinical practice guideline recommends screening for vitamin D deficiency only in individuals with other clinical conditions that place them at elevated risk for deficiency. The task force also does not recommend population screening in individuals who are not at risk.
- US Preventative Services Task Force (USPSTF) documents that the effect of vitamin D levels on health outcomes is difficult to evaluate and found no studies that evaluated the direct benefit of screening for vitamin D deficiency in adults.

When is testing medically indicated? (continued)

- American Society for Clinical Pathology (Choosing Wisely campaign-2013): Vitamin D deficiency is common in many population, particularly in patients at higher latitudes, during winter months and in those with limited sun exposure. Additional recommendations:
  - Routine testing of 1,25 dihydroxyvitamin D should not be performed unless the patient has hypercalcinia or decreased kidney function.
  - Over the counter vitamin D supplements and increased summer sun exposure are sufficient for otherwise healthy patients.
  - Laboratory testing may be appropriate in higher risk patients when results will be used to institute more aggressive therapy.

When may vitamin D testing be considered medically necessary and covered by third party payers?

- Because vitamin D supplementation in the general adult population is safe, it is reasonable to advise that routine testing of vitamin D levels (25-hydroxyvitamin D) is not medically necessary prior to or after starting vitamin D supplementation.
- Vitamin D (25-hydroxyvitamin D) testing may be considered medically necessary in patients with a clinically documented underlying disease or condition which is specifically associated with vitamin D deficiency, toxicity, or decreased bone density/osteoporosis. Primary examples include:
  - Osteoporosis
  - Hyperparathyroidism
  - Glycogen storage disease
  - HIV
  - Osteogenesis Imperfecta
  - Systemic Lupus Erythematosus
  - Granuloma forming disorders
  - Digestive system malabsorption syndromes
  - Chronic Kidney Disease (stage III or greater)

Medically necessary testing (continued) -

- 1,25 dihydroxyvitamin D testing may be considered medically necessary in the following primary examples:
  - Unexplained hypercalcemia or hypercalciuria (suspected granulomatous disease or lymphoma)
  - Suspected tumor-induced osteomalacia
  - Nephrolithiasis or hypercalcemia
  - Suspected genetic childhood rickets

Testing and screening for vitamin D deficiency is usually considered not medically necessary for all other indications.

What is considered a normal Vitamin D level?

- Optimal serum concentrations of 25-hydroxyvitamin D for bone and general health have not been established; they are likely to vary at each stage of life and for different geographical regions.
- Current published reference ranges fall in a general range of 20-30ng/mL for the lower limit and 40-50 ng/mL for the higher limit.

Does my patient need to undergo any special preparations to have the test performed?

- No, a blood draw is all that is required. The patient does not need to be fasting.

If I would like more information, what are some reputable resources?

https://labtestsonline.org/
https://ods.od.nih.gov/factsheets/VitaminD-HealthProfessional/
http://www.choosingwisely.org/clinician-lists/
https://www.uspreventiveservicestaskforce.org/Page/Name/recommendations
http://www.choosingwisely.org/clinician-lists/endocrine-society-vitamin-d-testing/