

OREGON HEALTH LEADERSHIP COUNCIL

Vitamin D Testing Clinical Guidelines

November 2019



Recommendations of the
OHLC Best Practice Committee

Introduction

The OHLC Best Practice Committee (BPC) recommends and executes community and/or statewide evidence based best practice strategies aimed improving quality, increasing value, promoting appropriate utilization and enhancing provider satisfaction. Work considered are areas of high variation where applying evidence or best practices can support reducing low value care, improving quality or reducing harm to patients. BPC members include physicians from commercial health plans, CCO's, health systems and provider groups. Other key partners include the Oregon Association of Hospital and Health Systems (OAHHS), Oregon Medical Association (OMA) and the Oregon Health Authority (OHA).

This guideline was developed in collaboration with payers and health system leaders, and is based on the best available clinical evidence and consensus of expert opinion.

Vitamin D testing

There is insufficient evidence that Vitamin D testing in healthy asymptomatic individuals, or for conditions not specifically associated with vitamin D deficiency improves health outcomes. There are no evidence-based clinical practice guidelines that recommend routine vitamin D testing for screening of asymptomatic individuals. A recent review of Vitamin D testing was conducted utilizing the Oregon All Payer Claims Database for 2016-2018. The results demonstrated that more than 25% of tests ordered (284,350) were potentially unnecessary.

Clinical Scenarios and Vitamin D - What we know and don't know:

- Elderly and fall risk: Most recent evaluation does not show benefit to fall risk with supplementation. (BMJ 2016;353:i1419)
- Musculoskeletal pain: There are no randomized controlled trials that show notable changes in outcomes after repletion of Vitamin D.

NB: Medicare is significantly restricting coverage for Vitamin D testing. They are not covering Vitamin D levels for screening purposes and will only cover testing for the indications below.

Clinical Recommendations

25 OH Vitamin D: Screening is medically necessary and covered for patients with the following risk factors for Vitamin D Deficiency:

- A. Chronic kidney disease stage III or greater
- B. Cirrhosis
- C. Hypocalcemia
- D. Hypercalcemia
- E. Hypercalciuria
- F. Hypervitaminosis D
- G. Parathyroid disorders
- H. Malabsorption states
- I. Obstructive jaundice
- J. Osteomalacia
- K. Osteoporosis if:
 - 1. T score on DEXA scan $<-2/5$; **or**
 - 2. History of fragility fractures; **or**
 - 3. FRAX $>3\%$ (any fracture) with T-score <-1.5 ; **or**
 - 4. Initiating bisphosphonate therapy (vitamin D level should be determined and managed as necessary before bisphosphonate is initiated)
- L. Osteosclerosis/petrosis
- M. Rickets
- N. Vitamin D deficiency on replacement therapy related to a condition listed above; to monitor the efficacy of treatment.

1,25-OH Vitamin D: This is a *significantly more expensive* test, and is only considered medically necessary and covered for patients in the setting of the following conditions:

- A. Unexplained hypercalcemia (suspected granulomatous disease or lymphoma)
- B. Unexplained hypercalciuria (suspected granulomatous or lymphoma)
- C. Suspected genetic childhood rickets
- D. Suspected tumor induced osteomalacia
- E. Nephrolithiasis or hypercalciuria
- F. End stage renal disease

Review of Evidence

U.S. Preventive Services Task Force (USPSTF):

In 2014, the USPSTF published evidence-based clinical practice guidelines regarding the efficacy of vitamin D screening in adults, which recommended the following:

“The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of screening for vitamin D deficiency in asymptomatic adults.”

American Society of Clinical Pathology (ASCP)

In 2013, the ASCP contributed the following recommendation to Choosing Wisely:

“Don’t perform population-based screening for 25-OH-Vitamin D deficiency.”

Vitamin D deficiency is common in many populations, particularly in patients at higher latitudes, during winter months and in those with limited sun exposure. Over the counter Vitamin D supplements and increased summer sun exposure are sufficient for most otherwise healthy patients. Laboratory testing is appropriate in higher risk patients when results will be used to institute more aggressive therapy (e.g., osteoporosis, chronic kidney disease, malabsorption, some infections, obese individuals).”

Endocrine Society

In 2013, the Endocrine Society contributed the following recommendation to Choosing Wisely:

“Don’t routinely measure 1,25-dihydroxyvitamin D unless the patient has hypercalcemia or decreased kidney function. We recommend screening for vitamin D deficiency in individuals at risk for deficiency. We do not recommend population screening for vitamin D deficiency in individuals who are not at risk”.

Case Study

In 2018, Providence Health Plan implemented a Vitamin D assay testing policy based on Medicare guidelines. Providence Medical Group subsequently distributed individual provider utilization for Vitamin D testing. In addition, targeted provider education was provided, as well as focused side by side provider detailing. Site leadership has monitored utilization on an ongoing basis and addressed outliers.

Results:

	<u>2018</u>	<u>2019*</u>	<u>Reduction</u>
Test Quantity	74,708	43,868	30,840
Charge Dollars	\$7.0 M	\$4.2M	\$2.8M

*annualized projection based on Q1 2019 results

Operational Considerations

Patient Education:

The following is a patient flyer developed by Choosing Wisely that explains Vitamin D testing.

Vitamin-D-patient flyer

 <p>Choosing Wisely An initiative of the ABIM Foundation</p>	 <p>ABIM FOUNDATION</p>  <p>ASCP STRONGERTOGETHER</p>
<h3>Vitamin D tests</h3>	<p>Even if you are at risk for other diseases, like Type 2 diabetes and heart disease, a vitamin D test isn't usually helpful. The test results are unlikely to change the advice from your doctor. It is much more important for you to make lifestyle changes first—to stop smoking, aim for a healthy weight, and be physically active. And, like most other Americans, you should try to get enough vitamin D from sun and foods. And talk to your doctor about whether a supplement is needed.</p> <p>Extra tests lead to extra treatments and costs. Getting tests that you don't need often leads to treatments you don't need, or treatments that can even be harmful. For example, if you take too much vitamin D, it can damage your kidneys and other organs.</p> <p>One blood test for vitamin D does not cost much. But doctors are ordering tests more often than ever, and the vitamin D test is now the fifth most popular lab test for older adults. All of these tests add up. In 2015, Medicare spent \$337 million on vitamin D tests for seniors, up from \$323 million the year before.</p> <p>When should you have a vitamin D test? Talk to your doctor about your risks. If you have one of these conditions, you might need a vitamin D test:</p> <ul style="list-style-type: none"> • Osteoporosis: This disease makes your bones weak, so they are more likely to break. • A disease that damages your body's ability to use vitamin D: These are usually serious and ongoing diseases of the digestive system, such as inflammatory bowel disease, celiac disease, kidney disease, liver disease, pancreatitis, and others. <p>If your doctor suggests getting a vitamin D test, ask about your risks. If your risk is high, you should get the test. If your risk is low, ask if you can avoid the test. Ask if you can boost your vitamin D with sunlight and food, and possibly supplements.</p> <p>If your doctor does need to keep track of your vitamin D levels, make sure the same test is used each time. Ask your doctor which tests are best.</p> <div data-bbox="1128 1081 1388 1207" style="border: 1px solid black; padding: 5px;"> <p>This report is for you to use when talking with your healthcare provider. It is not a substitute for medical advice and treatment. Use of this report is at your own risk. © 2017 Consumer Reports. Developed in cooperation with the American Society for Clinical Pathology. To learn more about the sources used in this report and terms and conditions of use, visit www.choosingwisely.org/patient-resources</p> </div>
<p>When you need them—and when you don't</p>	
<p>Many people don't have enough vitamin D in their bodies. Low vitamin D increases the risk of broken bones. It may also contribute to other health problems. That's why doctors often order a blood test to measure vitamin D.</p> <p>But many people do not need the test. Here's why:</p> <p>A test usually does not improve treatment. Many people have low levels of vitamin D, but few have seriously low levels. Most of us don't need a vitamin D test. We just need to make simple changes to get enough vitamin D. We need to get a little more sun and follow the other advice on the next page.</p>	

Computerized Order Sets

Consider removing Vitamin D tests from clinical order sets

References

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2. Centers for Medicare & Medicaid Services. LCA A55373. LCA Title: Response to Comments: Vitamin D Assay Testing. Effective: 02/03/2017. <https://www.cms.gov/medicare-coverage-database/details/articledetails.aspx>
3. U.S. Preventive Task Force. Vitamin D Deficiency Screening. Release Date: November 2014. Final Update Summary: September 2016. <https://uspreventiveservicetaskforce.org/Page/Document/UpdateSummaryFinal/vitamin-d-deficiency-screening>
4. Choosing Wisely®. American Society for Clinical Pathology. Recommendations on screening for Vitamin D deficiency. Released February 21, 2013 <http://www.choosingwisely.org/clinician-lists/american-society-clinical-pathology-population-based-screening-for-vitamin-d-deficiency/>
5. Choosing Wisely®. Endocrine Society. Recommendation on 1,25-dihydroxyvitamin D testing. Released October 16, 2013. <http://www.choosingwisely.org/clinician-lists/endocrine-society- vitamin-d-testing/>
6. Holick MF, Binkley NC, Bischoff-Ferrari HA, et al. Evaluation, treatment, and prevention of vitamin D deficiency: an Endocrine Society clinical practice guideline. The Journal of clinical endocrinology and metabolism. 2011;96(7):1911-1930. <https://academic.oup.com/jcem/article/96/7/1911/2833671>