

**Prince Sultan Cardiac Center in Riyadh – Kingdom of Saudi Arabia**  
**Reducing Vitamin D Laboratory Testing at Outpatient Clinics in a Tertiary Cardiac Centre**  
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**Background:** A systematic review published by the United States Preventive Services Task Force in 2021 did not identify any studies that showed vitamin D screening improved health outcomes or caused any direct harms. The costs of vitamin D testing is high and estimated to be £17m in the UK, \$104.7m in Australia, \$30m in Canada, and \$293m in the US per year. High percentage of laboratory testing requests for vitamin D level has been noted in which had an impact on hospital resources where the cost of laboratory testing for vitamin D level equals 350 Saudi Riyals ( around 100 US dollars) based on MODHS (Ministry of Defense Health Services) pricing strategy.

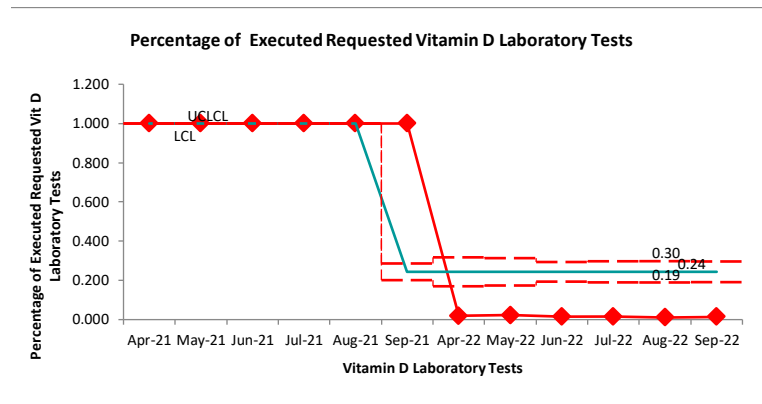
**Aim:** Reducing the percentage of inappropriate Vit D test requests in the Outpatient Clinics by 70% by end of 2022

**Action Plan:**

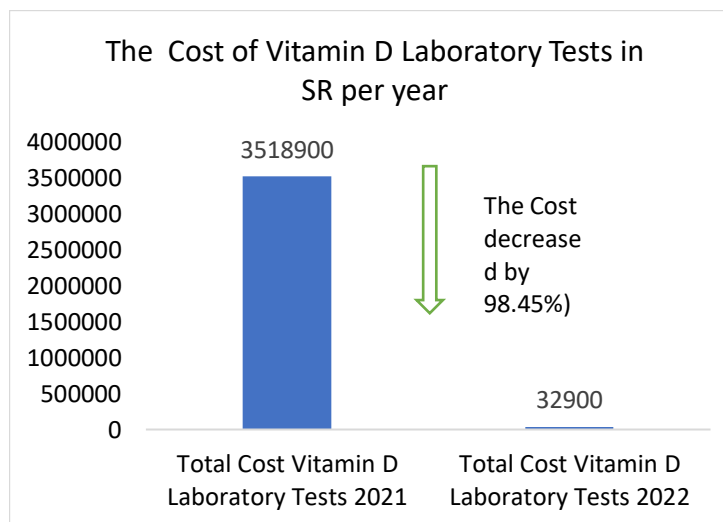
Key Improvement Area	Improvement Step	Who	When
Guideline on vitamin D testing based on the most recent evidence.	Development of Guideline on vitamin D testing based on the most recent evidence	Medical administration (Dr Assad Allah Romi)	1st of Feb 2022
Education of all Clinicians about The Guideline on vitamin D testing	-Preparing an educational session for requesting physicians and laboratory staff - Guidelines to be posted on the organization’s website. - Clinicians to be notified about the guideline through an informational email.	Outpatient cardiology department (Dr Mesha Almutairi)	1st of MAR 2022

**Results:**

*-The percentage of executed requested vitamin D laboratory tests has been reduced by 98.45 % (only 1.55% of vitamin D laboratory requests were processed by lab service due to rejection as per the guidelines).*



-The cost savings as per implementing vitamin D laboratory testing guidelines was 3,486,000 SR by comparing volume of executed vitamin D laboratory tests in 2021 and 2022



**-Balancing Measure:**

No detrimental effects on serum calcium and phosphate levels were noted in patients for whom were requested at the same time vitamin D test was requested.

**Conclusion:**

Adopting and implementing evidence-based vitamin D laboratory testing is very important and lead to cost savings. Staff engagement is crucial in any change where staff can accept the change if they are involved from the beginning and being part of it.