Vitamin D: supplementation, measurement and treatment in primary care

Vitamin D supplementation for people ‘at risk’ of vitamin D deficiency WILL NOT be routinely funded.

Individuals in at risk groups (including pregnant women, parents of babies and young children, people who have low exposure to sunlight etc.) should be advised on regular sunlight exposure, dietary sources and the use of over-the-counter Vitamin D preparations.

Vitamin D measurement WILL NOT be routinely funded for asymptomatic individuals, including those who belong to an at risk group. Testing for vitamin D deficiency WILL BE funded ONLY for the following indications:

- The patient has symptoms indicative of osteomalacia or rickets
- The patient exhibits symptomatic hypocalcaemia (i.e. severe aching in bone AND muscles and proximal muscle weakness making standing up and walking difficult and painful, with marked waddling gait)

Patients found to have vitamin D levels below 25nmol/L should be offered treatment with cholecalciferol. Treatment WILL BE funded until levels have normalised. Patients should then be advised to continue supplementation with over the counter vitamin D preparations. Monitoring of vitamin D levels in primary care WILL BE funded for patients while they remain on high-dose treatment for deficiency.

NOTE: the prescription of vitamin D plus calcium to reduce the risk of fracture in post-menopausal women and older men, particularly in high risk populations resident in institutions, is outwith the scope of this policy.

### Strength of Evidence

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<th>Clinical Effectiveness</th>
<th>Cost Effectiveness</th>
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<td>On the basis of currently available evidence, DHSC supports the advice of Public Health England that all adults should consider taking Vitamin D supplementation, especially in the winter months. DHSC considers it appropriate that patients are asked to purchase low dose supplements for prevention of vitamin D deficiency or maintenance of vitamin D levels following high dose treatment.</td>
<td>There is no cost-effectiveness data available on the wide-spread testing of the population. There is a lack of robust evidence to link health outcomes to vitamin D levels and reference nutrient intakes (RNI). The results from testing a large proportion of the population will vary between seasons and do not correlate well to clinical outcomes.</td>
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The clinical effectiveness of population supplementation (either of the general population or members of at risk groups) to improve a range of health outcomes remains unclear. Clinical trial data is limited by small trials which exhibit bias, demonstrate inconclusive results or cannot be extrapolated to our population. The available data are insufficient to make DHSC funding for vitamin D supplementation in any population group or sub-group a priority, given all other calls on DHSC resources.

Sub-optimum levels of vitamin D are very common (although there is debate about how levels should be defined). A recent prevalence survey of adults across the UK indicated that over 50% had insufficient levels of vitamin D during winter and spring. There is known to be a gradient of prevalence across the UK with higher rates in Scotland, Northern England and Northern Ireland. However, adherence to supplementation is known to be low and there is no evidence that testing for insufficiency (through any strategy including population screening, opportunistic testing, etc) improves this.

NICE notes that there is emerging evidence that vitamin D deficiency/insufficiency may increase the propensity for falling in older people. However, there is currently inadequate evidence to support routine testing and treatment for older people who have fallen or are at risk of falling. NICE has listed vitamin D as an intervention that is not recommended in its ‘Falls in Older People’ pathway.

The provision of free supplements in England has met with varying degrees of uptake, and has not been shown to be cost-effective as a stand-alone strategy. The strongest evidence for both vitamin D testing and vitamin D supplementation is in the prevention and treatment of rickets and osteomalacia. Supplementation of patients at risk of fractures, with combined calcium and vitamin D products is outside the remit of this paper, but appears to have stronger evidence to support its use.

Given the cheap, widely available supplements from pharmacies and retail outlets, NHS funding cannot be viewed as a DHSC priority.
Summary of evidence

Coventry and Warwickshire Area Prescribing Committee Clinical Guideline CG019: Vitamin D Prescribing Guidelines – Adults (June 2017)
http://www.coventrywarksapc.nhs.uk/DocLib/d0244f67-513b-4583-b7df-6a3188efa422

Lancashire Medicines Management Group, Guideline on Diagnosis and Management of Vitamin D Deficiency for Non-Specialists in Primary Care (2013)

Public Health England: Advice on Vitamin D (2016)

NICE Public Health Guidance 56. 2014. Vitamin D: increasing supplement use in at risk groups. Available at: https://www.nice.org.uk/guidance/ph56?unlid=29198792201612233240


Avenell A, Mak JCS, and O’Connell D. Cochrane Review: Vitamin D and related vitamin D compounds for preventing fractures resulting from osteoporosis in older people. 2014. Available at: http://www.cochrane.org/CD000227/MUSKINJ_vitamin-d-and-related-vitamin-d-compounds-preventing-fractures-resulting-osteoporosis-older-people

NICE Interactive Pathway: Falls in Older People – interventions that are not recommended: Vitamin D [accessed 11 July 2017]
https://pathways.nice.org.uk/pathways/falls-in-older-people#content=view-node%3Anodes-interventions-that-are-not-recommended
Supporting documents:


Tomlin S, Kirk E, editors. Paediatric Formulary. 9th ed. London: Guy’s & St. Thomas’ NHS Foundation Trust; 2012, Colecalciferol p. 113


Reason for requesting a policy recommendation:

To update and replace existing policies: CRC 'Vitamin D supplementation for children and mothers’ (2010) and ‘Vitamin D provision’ (2012).

Where a patient is considered to have exceptional need for and capacity to benefit from a treatment that is not routinely funded, a request for individual funding may be made to the Individual Funding Requests Panel. The patient must be made aware that the Panel may not support the request and must not be given any expectation that they will be able to have the treatment until a decision to fund has been received in writing from the Panel.

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