Berkshire West Area Prescribing Committee Policy Statement

Drug Name	Vitamin D preparations (Scriptswitch to list cost effective brands)
Indication under review	Vitamin D deficiency (excludes renal failure patients)
Policy No:	APC 027
Date of Issue:	November 2013
Review Date:	November 2015, November 2018

Policy Statement:
The National Osteoporosis Society (NOS) guidelines should be adopted within practices in Berkshire West.

Traffic Light Status	**Green**

Key Points considered: A summary of the NOS guidelines are produced below

- Measurement of serum 25OHD (serum 25 hydroxyvitamin D) is the best way of estimating vitamin D status.
- Serum 25OHD measurement is recommended for:
  1. patients with bone diseases that may be improved with vitamin D treatment
  2. patients with bone diseases, prior to specific treatment where correcting vitamin D deficiency is appropriate
  3. patients with musculoskeletal symptoms that could be attributed to vitamin D deficiency.
  4. Routine vitamin D testing may be unnecessary in patients with osteoporosis or fragility fracture, who may be co-prescribed vitamin D supplementation with an oral antiresorptive treatment.
- In agreement with the Institute of Medicine (IOM), the NOS propose that the following vitamin D thresholds are adopted by UK practitioners in respect to bone health:
  - **serum 25OHD < 30 nmol/L is deficient and treatment is recommended**
  - **serum 25OHD of 30–50 nmol/L may be inadequate in some people.** Treatment is recommended in high risk patinets and those who have previous fragility fractures/osteoporosis.
  - **serum 25OHD > 50 nmol/L is sufficient for almost the whole population.** These patients should be reassured and given lifestyle advice
- Oral vitamin D3 is the treatment of choice in vitamin D deficiency.
- Where rapid correction of vitamin D deficiency is required, such as in patients with symptomatic disease or about to start treatment with a potent antiresorptive agent (zoledronate or denosumab), the recommended treatment regimen is based on fixed loading doses followed by regular maintenance therapy.

Loading Doses of Vitamin D of 300,000 international units (IU) should be given over 6-12 weeks. **Please note 1 IU is equivalent to 0.025 mcg cholecalciferol or ergocalciferol**.

Dose	Frequency	Duration	Total dose
50,000 IU	Once weekly	6 weeks	300,000 IU
20,000 IU	Twice weekly	7 weeks	280,000 IU
1000 IU	Four a day	10 weeks	280,000 IU
800 IU	Five a day	10 weeks	280,000 IU

Scriptswitch to advise on current cost effective brands

Maintenance regimens may be considered 1 month after loading with doses equivalent to 800 to 2000 IU daily (occasionally up to 4,000 IU daily), given either daily or intermittently at a higher equivalent dose.

High risk groups (no need to routinely test if asymptomatic)

- All pregnant and breastfeeding women, especially teenagers and young women
- Patients under the age of 5 or aged 65 years and over
- Patients not exposed to sunshine, e.g. those who cover their skin for cultural reasons, who are housebound or confined indoors for long periods.
- Ethnic minorities with darker skin due to their bodies producing less vitamin D
- Obese people (BMI>30)
- Medical risk factors such as renal and hepatic disease, malabsorption.
- Lifestyle risk factors such as alcoholics, vegetarians and vegans.
- Medication –patients taking anticonvulsants or Highly Active Antiretroviral Treatment

Lifestyle Measures- ALL PATIENTS SHOULD BE GIVEN THIS ADVICE

People at high risk of Vitamin D deficiency should be advised to supplement their Vitamin D levels by following the measures below:
Increase UV sunlight exposure(face and forearms)between 9am and 3pm for 30 minutes twice a week from April to October (double for heavily pigmented skin). Sun safety advice to be given.
Increase dietary Vitamin D or over the counter vitamin D supplementation
Foods containing Vitamin D – oily fish, egg yolks, cod liver oil and fresh meat
Food fortified with Vitamin D – cereals and some dairy products.
Note increasing dietary vitamin D intake will not avoid the need for supplementation in patients with vitamin D deficiency.

General Points

- Where correction of vitamin D deficiency is less urgent and when co-prescribing vitamin D supplements with an oral antiresorptive agent, maintenance therapy may be started without the use of loading doses.
- Adjusted serum calcium should be checked 1 month after completing the loading regimen or after starting vitamin D supplementation in case primary hyperparathyroidism has been unmasked.
- Routine monitoring of serum 25OHD is generally unnecessary but may be appropriate in patients with symptomatic vitamin D deficiency or malabsorption and where poor compliance with medication is suspected.
- All patients taking bisphosphonates or antiresptive drugs should be taking regular calcium supplements (1-1.3g calcium plus colecalciferol 800 to 2,000IU daily) unless the clinician is confident that dietary calcium is adequate and the patient is calcium replete.

References:
Francis R et al. Vitamin D and bone health: A practical clinical guideline for patient management. National Osteoporosis Society guidelines. April 2013.
Treatment options and maintenance advice adapted with permission from NHS Wiltshire CCG Medicines Management Team (original by Dr Zoe Cole)

Date taken to APC:	6th November 2013, 5th November 2014, 4th May 2016
Date Ratified by MOC on Behalf of the Board:	18th May 2016