Reviewer’s report

Title: Effects of vitamin D in the elderly population: current status and perspectives

Version: 1 Date: 12 May 2014

Reviewer: Nicholas Harvey

Reviewer’s report:

This is an excellent overview of the evidence pertaining to vitamin D in older people. I just have a few minor comments:

Section 2, 2nd paragraph: this paragraph starts talking about patients with kidney, bone and phospho-calcic disorders but then mentions randomised controlled trials on fracture/fall prevention. It is not entirely clear which population is being addressed here. In the same section, doses are quoted up to 600,000 units per month—it would be helpful to insert a comment referring to the later section on problems associated with high bolus doses.

Section 2, 3rd paragraph: my understanding is that the reason for LC MS is greater accuracy and pick up of both D2 and D3, rather than high throughput. LC MS techniques require more operator input and therefore are not generally suitable for high throughput assays.

Section 2 last paragraph—it would be helpful to mention that there is substantial heterogeneity in the functional threshold is derived from the PTH and calcium absorption studies the study by Sai in JCEM in which these studies were reviewed is helpful here.

In section 6 after the list of bullet points, it would be helpful to add a few sentences just giving a little more detail on potential caveats to the interpretation of observational studies, spelling out issues of reverse causality and confounding.

Level of interest: An article of outstanding merit and interest in its field

Quality of written English: Acceptable

Declaration of competing interests:

No competing interests