

Appendix A

Summary of new evidence from 2-year surveillance	Summary of new intelligence from 2-year surveillance (from topic experts or initial internal intelligence gathering)	Impact
PH56 Vitamin D: increasing supplement use in at-risk groups		
<p>None</p>	<p>Initial intelligence gathering and topic experts identified the following: Vitamin D and Health SACN report (2016)</p> <p>SACN advice has been amended to state that all population groups over the age of 4 years need to have the same Recommended Nutrient Intake (RNI) of Vitamin D throughout the year. The SACN list of 'at risk' groups has been amended and pregnant and breastfeeding women, children under the age of 5 and all people over 65 are no longer highlighted as 'at risk'. 'At-risk' groups that are common between the SACN report and PH56 are people who have low or no exposure to the sun, for example, those who cover their skin for cultural reasons, who are housebound or confined indoors for long periods and people who have darker skin, for example, people of African, African–Caribbean and South Asian origin.</p>	<p>New evidence was identified that has an impact on the guideline.</p> <p>As PH56 consists of recommendations for at risk groups highlighted within the SACN report but also for other population groups that are no longer considered at specific risk, it is proposed that the title of the guideline should be amended to 'Vitamin D: supplement use in specific population groups'. This will ensure that the recommendations remain relevant in their current format and that an update will not be required around implementation of guidelines for the entire population. Focusing on the entire population would be out of scope, and beyond the original Department of Health remit: the current scope states that NICE 'has been asked by the Department of Health (DH) to develop guidance to help safely implement existing evidence-based recommendations on the prevention of vitamin D deficiency. It will focus on at-risk groups including infants and children aged under 5, pregnant and breastfeeding women, older people, people with dark skin and those who have limited exposure to the sun. These groups are no longer all at risk as the entire population are recommended the same RNI amount.' No evidence has been presented that would indicate there is an evidence-base on which to develop recommendations for supplementation within the general population</p>

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		that would add to the current recommendations within PH56. Therefore it is suggested that the title be amended to read 'Vitamin D supplement use in specific population groups' and the wording 'at risk groups' should be amended to state 'specific population groups'.
PH56 Overview		
None	<p>Initial intelligence gathering and topic experts identified the following: Vitamin D and Health SACN report (2016)</p> <p>The 2016 SACN report states that children aged 4 and above are considered to require the same RNI as the general population.</p> <p>Population groups deemed at risk no longer include pregnant and breastfeeding women, children under the age of 5 and all people over 65.</p>	<p>New evidence was identified that has an impact on the guideline.</p> <p>This section currently states that 'This guideline covers vitamin D supplement use. It aims to prevent vitamin D deficiency among at-risk groups including infants and children aged under 4, pregnant and breastfeeding women, particularly teenagers and young women, people over 65, people who have low or no exposure to the sun and people with darker skin'. There should be a change from the use of 'at-risk groups' to 'specific population groups'.</p> <p>There should be a paragraph in this section that explains what amendments have been made to the guideline and why.</p>
PH56 What is the guideline about?		
None	Initial intelligence gathering and topic experts identified the following: Vitamin D and Health SACN report (2016)	<p>New evidence was identified that has an impact on the guideline.</p> <p>This section discusses the previous SACN</p>

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	<p>The SACN report 2016 has been published and therefore references need to be amended.</p>	<p>review published in 2007 and notes that SACN are currently reviewing their dietary reference values for vitamin D intake. Any reference to the 2007 SACN report or to future SACN work should be updated and readers should be directed to the recently published 2016 SACN report.</p> <p>A sentence should be added that states ‘The Scientific Advisory Committee on Nutrition (SACN) reviewed the dietary reference values for vitamin D intake in the UK population in 2016. They recommend that Vitamin D supplements are made available for the entire population (4 years old and above) throughout the year. This guideline’s recommendations should be read in conjunction with The SACN vitamin D and health report 2016’.</p> <p>We also need to amend the introduction by stating that ‘This guideline aims to increase supplement use to prevent vitamin D deficiency among specific population groups’.</p> <p>We need to amend the wording ‘mid-October’ to ‘October’.</p>
<p>PH56 Recommendation 1 Increase access to vitamin D supplements evidence statements 1.11, 1.14, 1.15, 1.16</p>		
None	Initial intelligence gathering and topic experts identified the following: Vitamin D and Health SACN report (2016)	<p>New evidence was identified that has an impact on the guideline.</p> <p>This recommendation looks at providing access to vitamin D supplements for at risk groups and</p>

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	<p>According to the 2016 SACN report children aged 4 and above are considered to require the same RNI as the general population.</p> <p>Population groups deemed at risk no longer include pregnant and breastfeeding women, children under the age of 5 and all people over 65.</p>	<p>people with particular dietary needs. The mention of 'at risk groups' should be amended to 'specific population groups' and the list of population groups should be amended to include infants and children aged under 4 instead of under 5.</p>
<p>PH56 Recommendation 2 Clarify existing guidance evidence statements 1.10, 2.12; IDE</p>		
None	None	<p>No evidence identified other than PHE suggested that we should amend the wording 'mid-October' to 'October'.</p>
<p>PH56 Recommendation 3 Develop national activities to increase awareness about vitamin D evidence statements 1.1, 1.10, 1.11; 2.12; IDE</p>		
None	<p>Initial intelligence gathering and topic experts identified the following: Vitamin D and Health SACN report (2016)</p> <p>The 2016 SACN report states that population groups deemed at risk no longer include pregnant and breastfeeding women, children under the age of 5 and all people over 65.</p>	<p>New evidence was identified that has an impact on the guideline.</p> <p>This recommendation looks at awareness raising of the importance of Vitamin D supplements. As we are proposing to remove the wording 'at risk groups' due to the fact that all the population are in need of supplements, then the recommendation 'Emphasise the importance of a daily supplement providing the reference nutrient intake for identified at-risk groups' should remove the words 'for identified at-risk groups'.</p>

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PH56 Recommendation 4 Ensure a consistent multiagency approach evidence statements 1.1, 1.3, 1.10, 1.11, 1.14, 1.15, 2.10, 2.13		
None	<p>Initial intelligence gathering and topic experts identified the following: Vitamin D and Health SACN report (2016)</p> <p>The 2016 SACN report states that population groups deemed at risk no longer include pregnant and breastfeeding women, children under the age of 5 and all people over 65.</p>	<p>New evidence was identified that has an impact on the guideline.</p> <p>This recommendation is specifically for Directors of Public Health to improve their local population's vitamin D status. As we are proposing to remove the wording 'at risk groups' due to the fact that all the population are in need of supplements, then the recommendation 'ensure a consistent, multiagency approach is adopted to improve the vitamin D status of local at risk groups' should be amended to read 'Ensure a consistent, multiagency approach is adopted to improve the vitamin D status of the local population'.</p> <p>All other mention of "at risk groups" should be amended to state 'specific population groups'.</p>
PH56 Recommendation 5 Increase local availability of vitamin D supplements for at-risk groups evidence statements 1.1, 1.3, 1.5, 1.7, 1.9, 1.11, 1.14, 1.15, 1.16, 2.10; EM		
None	<p>Initial intelligence gathering and topic experts identified the following: Vitamin D and Health SACN report (2016)</p> <p>The 2016 SACN report states that population groups deemed at risk no longer include pregnant and breastfeeding women, children under the age of 5 and all people over 65.</p>	<p>New evidence was identified that has an impact on the guideline.</p> <p>This recommendation is for Local authorities to improve their local population's vitamin D status. As we are proposing to remove the wording 'at risk groups' then the recommendation 'local authorities should ensure vitamin D supplements containing the recommended</p>

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		<p>reference nutrient intake are widely available for all at-risk groups by' should be amended to read 'local authorities should ensure vitamin D supplements containing the recommended reference nutrient intake are widely available'.</p> <p>All other mention of 'at risk groups' should be amended to state 'specific population groups'.</p>
<p>PH56 Recommendation 6 Improve access to Healthy Start supplements evidence statements 1.1, 1.3, 1.5, 1.7, 1.8, 1.9, 1.11, 1.12, 1.13, 1.14, 1.15, 1.16, 2.2; EM</p>		
None	<p>Initial intelligence gathering and topic experts identified the following: Vitamin D and Health SACN report (2016)</p> <p>According to the 2016 SACN report children aged 4 and above are considered to require the same RNI as the general population.</p> <p>The 2016 SACN report also states that population groups deemed at risk no longer include pregnant and breastfeeding women, children under the age of 5 and all people over 65.</p>	<p>New evidence was identified that has an impact on the guideline.</p> <p>This recommendation looks at the accessibility, availability and uptake of healthy start supplements to those at risk groups. The recommendation should be amended so that any mention of children under 5 is changed to children under 4.</p> <p>All mention of 'at risk groups' should be amended to state 'specific population groups'.</p>
<p>PH56 Recommendation 7 Only test vitamin D status if someone has symptoms of deficiency or is at very high risk evidence statements 1.7; EM; IDE</p>		
None	None	None

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PH56 Recommendation 8 Ensure health professionals recommend vitamin D supplements evidence statements 1.10, 1.11, 2.2, 2.9		
<p>Initial evidence from the 6 year review identified the following:</p> <p>In a cross sectional survey, 256 children and parent dyads were analysed in regard to their adherence to taking vitamin D supplements. The mean adherence over 3 months was 84%. Adherence was positively associated with parents' taking vitamin D supplements themselves (p=0.008) and combined child and parent responsibility for taking the supplement (p=0.03). Parents' beliefs about vitamin D were not significantly associated with adherence¹.</p>	<p>Initial intelligence gathering and topic experts identified the following: Vitamin D and Health SACN report (2016)</p> <p>The 2016 SACN report states that population groups deemed at risk no longer include pregnant and breastfeeding women, children under the age of 5 and all people over 65.</p>	<p>New evidence was identified that does not have an impact on the recommendation.</p> <p>This recommendation looks at monitoring, recording and recommending Vitamin D supplements.</p> <p>New evidence from 1 cross sectional survey¹ was identified which reported that children's adherence to taking vitamin D supplements was high and positively associated with parents' taking vitamin D supplements themselves and combined child and parent responsibility for taking the supplement. Parents' beliefs about vitamin D were not significantly associated with adherence. The findings from this evidence are in line with the recommendation that vitamin D supplements should also be recommended to family members.</p> <p>All mention of 'at risk groups' should be amended to state 'specific population groups'.</p>
PH56 Recommendation 9 Raise awareness among health, social care and other relevant practitioners of the importance of vitamin D evidence statements 1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 1.10, 1.11, 2.3, 2.4, 2.5, 2.13		
<p>None</p>	<p>Initial intelligence gathering and topic experts identified the following: Vitamin D and Health SACN report (2016)</p> <p>The 2016 SACN report states that</p>	<p>New evidence was identified that has an impact on the guideline.</p> <p>This recommendation looks at raising awareness and providing information around the</p>

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	population groups deemed at risk no longer include pregnant and breastfeeding women, children under the age of 5 and all people over 65.	importance of Vitamin D. All mention of 'at risk groups' should be amended to state 'specific population groups'.
PH56 Recommendation 10 Raise awareness of the importance of vitamin D supplements among the local population evidence statements 1.10, 1.11, 1.12, 2.14		
None	Initial intelligence gathering and topic experts identified the following: Vitamin D and Health SACN report (2016) The 2016 SACN report states that population groups deemed at risk no longer include pregnant and breastfeeding women, children under the age of 5 and all people over 65.	New evidence was identified that has an impact on the guideline. This recommendation looks at raising awareness and providing information around the importance of Vitamin D supplements to the whole population. All mention of 'at risk groups' should be amended to state 'specific population groups'.
PH56 Recommendation 11 Monitor and evaluate the provision and uptake of vitamin D supplements evidence statement 2.6; IDE		
None	Initial intelligence gathering and topic experts identified the following: Vitamin D and Health SACN report (2016) The 2016 SACN report states that population groups deemed at risk no longer include pregnant and breastfeeding women, children under the age of 5 and all people over 65.	New evidence was identified that has an impact on the guideline. This recommendation looks at monitoring and evaluating the awareness of, access to and uptake of Vitamin D supplements. All mention of 'at risk groups' should be amended to state 'specific population groups'.

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PH56 Context (Background)		
None	<p>Initial intelligence gathering and topic experts identified the following: Vitamin D and Health SACN report (2016)</p> <p>The SACN 2016 report has published</p>	<p>New evidence was identified that has an impact on the guideline.</p> <p>This section discusses the background behind the guideline and mentions the 1991 Committee on Medical Aspects of food policy (COMA) reference nutrient intakes (RNI) for Vitamin D. It states that SACN are currently reviewing the advice from COMA. Reference to COMA and SACN should be removed because their considerations have been published and are no longer in development. The RNI recommendations have been agreed and will be published in our guideline in the glossary section.</p> <p>We need to amend the wording ‘mid-October’ to ‘October’.</p>
PH56 Considerations section		
None	<p>Initial intelligence gathering and topic experts identified the following: Vitamin D and Health SACN report (2016)</p> <p>The 2016 SACN report states that population groups deemed at risk no longer include pregnant and breastfeeding women, children under the age of 5 and all people over 65.</p>	<p>New evidence was identified that has an impact on the guideline.</p> <p>All mention of ‘at risk groups’ should be amended to state ‘specific population groups’.</p>

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PH56 Recommendations for research section		
None	<p>Initial intelligence gathering and topic experts identified the following: Vitamin D and Health SACN report (2016)</p> <p>The 2016 SACN report states that population groups deemed at risk no longer include pregnant and breastfeeding women, children under the age of 5 and all people over 65.</p>	<p>New evidence was identified that has an impact on the guideline.</p> <p>All mention of 'at risk groups' should be amended to state 'specific population groups'.</p>
PH56 Glossary section		
None	<p>Initial intelligence gathering and topic experts identified the following: Vitamin D and Health SACN report (2016)</p> <p>According to the 2016 SACN report children aged 4 and above are considered to require the same RNI as the general population.</p> <p>The 2016 SACN report also states that population groups deemed at risk no longer include pregnant and breastfeeding women, children under the age of 5 and all people over 65.</p> <p>The 2016 SACN report states that populations should follow these recommended RNIs</p> <ul style="list-style-type: none"> • a reference nutrient intake (RNI) of 10 micrograms of vitamin D per day, throughout the year, for everyone in the 	<p>New evidence was identified that has an impact on the guideline.</p> <p>As we are suggesting amending the use of 'At risk groups' to 'Specific Population Groups' there should be a new section here for 'Specific Population Groups'. The content will need to state</p> <ul style="list-style-type: none"> • All pregnant and breastfeeding women, particularly teenagers and young women • Infants and children under 4 years both breast fed, non-breast fed and mixed fed • People over 65 • Plus all those considered 'at risk' <p>The glossary should note that groups who are now at risk are: People who have low or no</p>

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	<p>general population aged 4 years and older</p> <ul style="list-style-type: none"> • an RNI of 10 micrograms of vitamin D per day for pregnant and lactating women and population groups at increased risk of vitamin D deficiency • a 'safe intake' of 8.5 to 10 micrograms per day for all infants from birth to 1 year of age • a 'safe intake' of 10 micrograms per day for children aged 1 to 4 years 	<p>exposure to the sun. For example, those who cover their skin for cultural reasons, who are housebound or confined indoors for long periods and People who have darker skin, for example, people of African, African–Caribbean and South Asian origin.</p> <p>Any reference to children under 5 years should also be amended to state 'children under 4 years'.</p> <p>The Reference Nutrient Intake section needs to be updated so it is in line with the SACN recommendations which are as follows:</p> <ul style="list-style-type: none"> • a reference nutrient intake (RNI) of 10 micrograms of vitamin D per day, throughout the year, for everyone in the general population aged 4 years and older • an RNI of 10 micrograms of vitamin D per day for pregnant and lactating women and population groups at increased risk of vitamin D deficiency <p>As 'safe intakes' are different to RNIs then a new section should be added to this part of the glossary and titled 'Safe Intake'.</p> <p>It would be helpful to fully explain the differences between the two in this glossary using the following link: https://www.nutrition.org.uk/attachments/article/234/Nutrition%20Requirements Revised%20Oct%202016.pdf</p>

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		<ul style="list-style-type: none"> • a 'safe intake' of 8.5 to 10 micrograms per day for all infants from birth to 1 year of age • a 'safe intake' of 10 micrograms per day for children aged 1 to 4 years <p>The following two paragraphs should also be removed from this section as they are no longer correct: 'Currently there is no reference nutrient intake for people aged between 4 and 65 years. It is assumed that the action of sunlight on skin will provide adequate vitamin D, except for specific at-risk groups, such as women whose clothing conceals them fully or those confined indoors. ('Dietary reference values for food energy and nutrients for the United Kingdom. Report of the panel on dietary reference values of the Committee on Medical Aspects of food policy' Department of Health.)'</p> <p>'The Scientific Advisory Committee on Nutrition is currently considering whether to amend the reference nutrient intake'.</p> <p>This paragraph should also be amended 'At-risk groups are currently advised to take a supplement that meets 100% of the reference nutrient intake for their age group (as above). The reference nutrient intake for at-risk groups is 10 micrograms/day (1 microgram=40 international units, so 10 micrograms=400 IU)'. This should now read 'All population groups are currently advised to take a supplement that meets 100% of the reference nutrient intake for their age group (as above). The reference</p>

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		<p>nutrient intake for population groups over the age of 4 years is 10 micrograms/day (1 microgram=40 international units, so 10 micrograms=400 IU).</p> <p>The Existing recommendations on Vitamin D section should ensure that mention of the SACN report is linked to the 2016 updated version of the report.</p>
Research recommendations		
<p>RR – 01 How effective and cost effective are interventions to increase vitamin D access, uptake, adherence or status among identified at-risk groups? Does effectiveness vary by age, gender, ethnicity, socioeconomic or other specific population characteristics (such as depression or a disability)? The following could be considered: availability and uptake of supplements (including the impact of the cost of supplements); type of supplements provided and how that impacts on adherence; knowledge and attitudes (of both the public and health and social care practitioners).</p>		
No evidence identified	No evidence identified	None
<p>RR – 02 How cost effective are preventive approaches to vitamin D deficiency among all at-risk groups, compared with the cost of testing and treatment? This should include a comparison of universal provision of free supplements with the provision of low or standard cost supplements for different at-risk groups. (If there is any new legislation allowing for the sale of Healthy Start supplements, this would provide an opportunity to test this question.)</p>		
No evidence identified	No evidence identified	None

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RR – 03 How can a multiagency approach to improving awareness, availability and uptake of vitamin D supplements best be established, improved and sustained? For example, what are the key components, who are the key partners and how does the local context affect effectiveness? The latter may include local population characteristics (such as age, ethnicity or levels of deprivation), setting and the approach to commissioning. Research should be conceived, developed and implemented as a collaboration between academics and local practitioners or the local community.		
No evidence identified	No evidence identified	None
RR – 04 What type of training and awareness-raising can improve how health and social care practitioners: promote vitamin D supplements among at-risk groups; improve the local population's awareness of, and attitudes towards, vitamin D supplements; uptake of vitamin D supplements?		
No evidence identified	No evidence identified	None
RR – 05 What is the best way of monitoring the local system for distributing vitamin D supplements? Assessments of methods that enable robust data collection – such as computerised data capture systems – would be particularly useful. (The aim would be to use that data to improve the service.)		
No evidence identified	No evidence identified	None

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Gaps in the evidence		
Gap 01 - There is a lack of good quality interventions aiming to increase Vitamin D supplement use among at-risk groups in England.		
No evidence	No evidence	None
Gap 02 - There is a lack of good quality evidence on the relative impact of the following on the uptake of vitamin D supplements among at-risk groups: awareness-raising activities, health professional training and supplement provision.		
No evidence	No evidence	None
Gap 03 - There is a lack of good quality evidence on whether making a free or low cost vitamin D-only supplement available affects uptake among at-risk groups.		
No evidence	No evidence	None
Gap 04 - There is a lack of evidence on whether the following affect the effectiveness of interventions to increase vitamin D supplement use among at-risk groups: sexual orientation, disability, religion, place of residence, occupation, education, socioeconomic position or a sense of community (or 'social capital').		
No evidence	No evidence	None
Gap 05 - There is a lack of evidence on what strategies may encourage people to take a vitamin D supplement on a regular basis.		
No evidence	No evidence	None
Gap 06 - There is a lack of evidence on whether health professional training leads to more effective interventions to improve uptake of vitamin D supplements among at-risk groups.		

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No evidence	No evidence	None

