National Institute for Health and Care Excellence

Health and Social Care

Review proposal: January 2015

Consideration of an update of the public health guideline on:

Promoting physical activity, active play and sport for pre-school and school-age children and young people in family, pre-school, school and community settings (PH17)

1 Background information

Guidance issue date: January 2009

First guidance review date: April 2012

Second guidance review: January 2015

The guideline can be found at: http://www.nice.org.uk/ph17

2 Recommendation

The guideline should not be updated.

3 Process for updating guidelines

The process for reviewing public health guidelines is as follows:

- NICE convenes an expert panel to consider whether any new evidence or significant changes in policy and practice would be likely to lead to substantively different recommendations. The panel may consist of members of the original committee (including co-optees) that developed

the guidance, key experts in the area and representatives of relevant government departments.

- NICE consults with stakeholders on its proposal.
- NICE may amend its proposal, in light of feedback from stakeholder consultation.
- NICE determines where any guidance update fits within its work programme, alongside other priorities.

In this case, the review of the guideline has been aligned with the production of an **Evidence Update** in the same topic area. The Evidence Update Advisory Group (EUAG) fulfilled the functions of the 'expert panel'.

Evidence Updates are produced by NICE and are published on NICE Evidence Search. They are based on the scope of the guideline they relate to and provide a commentary on a selection of new articles published since the guideline was issued. Evidence is highlighted that supports the current guideline or where new evidence that may be of interest to practitioners. The Evidence Update does not replace the guideline or provide formal practice recommendations.

More information on the process and methods used to produce Evidence Updates is available on NICE Evidence.

The Evidence Update for this topic is due to publish in March 2015.

4 Consideration of the evidence and practice

The original inclusion criteria, methods and considerations used to develop the original guideline (PH17) were used to create a project brief, outlining the scope and search parameters for the Evidence Update.

Searches of bibliographic databases (see below) were undertaken to identify primary research and reviews relevant to the refined brief.

The Evidence Update project team prepared a shortlist of identified records (49), according to explicit criteria. The Chair of the EUAG further prioritised papers (25) for consideration by the Group ahead of the EUAG meeting on 20 November 2014. The EUAG met to discuss the papers and agree which were to be included in the Evidence Update.

Literature sources searched, selection criteria and references of the included papers can be found in Appendix 1–3, respectively.

In addition to selecting papers for the Evidence Update, the EUAG was also asked to advise NICE on the need to update the guideline. Recommendations from PH17 were considered within themes relating to the papers identified. Key questions for the EUAG were:

- Is there significant new evidence that would substantively change or add to this recommendation?
- Is this recommendation still relevant and useful?
- Do any changes in policy or practice substantively affect this recommendation?

Summaries of the evidence are below.

Facilities and equipment (recommendations 4 & 10)

The EUAG considered 6 papers, 3 systematic reviews (Dobbins et al. 2013, Erwin et al. 2014, Lai et al. 2014; all International), 2 non-randomised controlled trials (Elinder et al. 2012; Sweden and Gesell et al. 2013; US) and 1 cost-benefit assessment (Kanters et al. 2014; US). The EUAG did not identify any new evidence that would impact on the existing recommendations, though they noted that one paper (Erwin et al. 2014) may allow some detail to be added to recommendation 4 about the availability of school facilities and after school use. However, it noted recent changes within the educational system in the UK which were not always reflected in this evidence.

Active travel (recommendations 5 & 12, and part of 15)

The EUAG considered 1 observational study of the Safe Routes to School programme over a 5 year period in 4 states in the United States (McDonald et al. 2014). The EUAG did not identify any new evidence that would impact on the existing recommendations. It noted that the evidence presented showed that in younger age groups the interventions increased in effectiveness the longer they were in place (McDonald et al. 2014). Since the guideline was published there has been increased emphasis on active travel.

Younger children (recommendation 13)

The EUAG considered 6 papers, 3 papers covered interventions to improve fundamental movement skills and 3 interventions to increase physical activity. Interventions to improve fundamental movement skills where evaluated in a systematic review with meta-analysis in primary school children (Morgan et al. 2013; International), and in pre-school children by a RCT (Favazza et al. 2013; US) and the 3 year follow up from a controlled trial (Zask et al. 2012; Australia).

Interventions to increase physical activity were evaluated in a systematic review with meta-analysis of pre-school children (Gordon et al. 2013; International) and in a RCT (Bonis et al. 2014; US), and in primary schools in a cluster RCT (Engelen et al. 2013; Australia).

The EUAG concluded that the new evidence supported the existing recommendation particularly with regard to unstructured spontaneous play and outdoor play (Engelen et al. 2013 and Gordon et al. 2013). The evidence also supported taking a balanced approach to exposure to risk during play (recommendation 10) and the range of skills that play leaders should possess (recommendations 7 & 8).

Leadership and training (recommendations 7 & 8)

The EUAG considered that 1 systematic review (Dobbins et al. 2013; International) and a before and after study (Beets et al. 2013; US) supported the existing recommendations. The EUAG identified a need for bullet 1 in

recommendation 7 to be clearer that the term ‘sector standards’ refers to the standards for child protection and health and safety, equality and diversity, as there are no physical activity leadership sector standards.

Family and community (recommendation 15)

The EUAG considered 4 systematic reviews on family and community interventions, two of which evaluated interventions to increase physical activity (Dellert and Johnson 2014; International, and van Sluijs et al. 2011; International), a third evaluated interventions to reduce sedentary behaviours (Marsh et al. 2014; International) and the fourth investigated factors associated with screening viewing time (Jago et al. 2013; International). They did not identify any new evidence that would impact on the existing recommendations.

The EUAG noted that the CMO’s physical activity guidelines have been updated since PH17 was published and now recommend a reduction in sedentary time, so this should be noted in PH17. Two further papers focused on sedentary behaviours, a cross sectional study of epidemiology and associations (Klitsie et al. 2013; UK) and a review of reviews (Biddle et al. 2013; International). As in the 2012 review of PH17, the EUAG concluded that there was emerging evidence about factors associated with sedentary behaviour (Klitsie et al. 2013; UK), but there was no evidence of an effective intervention (Biddle et al. 2013; International).

On-line interventions

There were no recommendations about online interventions in PH17. The EUAG considered 3 papers, a cluster randomised controlled trial of a computer based, tailored intervention (Prins et al. 2012; Netherlands), a randomised controlled trial of an internet based intervention (Cullen et al. 2013; US) and a paper reporting the moderators of effect from a European study published in 2008 of an internet based, computer tailored intervention and therefore out of the range of dates searched for (Cook et al. 2014; European). As in the 2012 review of the guideline, the EUAG noted a lack of

robust evidence in this area. It expressed concerns about the speed of technological obsolescence which results in the technology evaluated rapidly falling out of common use.

Other recommendations (1, 2, 3, 6, 9, 11 & 14)

The EUAG did not identify any new evidence that would impact on the remaining recommendations. It discussed whether recent evidence suggested a need to reduce the lower age in the range for girls in recommendation 11 & 14 but concluded this was unnecessary.

The EUAG noted the 'Everybody Active' campaign of Public Health England and the Public Health Wales initiatives which would need reflecting if a technical refresh of the guideline was undertaken.

The EUAG concluded that the guideline did not require updating.

5 Related NICE guidance

Published (since 2012)

Walking and cycling: local measures to promote walking and cycling as forms of travel or recreation. NICE public health guidance 41 (2012)

6 Equality and diversity considerations

There is a small amount of new evidence on specific vulnerable groups such as children and young people who are disabled (Favazza et al. 2013). However, the new evidence supported the existing recommendations.

7 Recommendation

The guideline does not need updating at this time. It is recommended that it is reviewed in 2 years.

Meanwhile, the guideline should undergo a minor technical refresh to reflect current policy context and delivery structures.

8 Next steps

Following consultation on this review proposal, a final recommendation will be made to NICE's Guidance Executive. Following that, the final review decision will be made available on the NICE website.

Appendices

1. Databases

The following databases were searched 1 October 2011 to 11 August 2014:

- AMED (Allied and Complementary Medicine Database)
- CDSR (Cochrane Database of Systematic Reviews)
- CENTRAL (Cochrane Central Register of Controlled Trials)
- DoPHER (Database of Promoting Health Effectiveness Reviews)
- MEDLINE (Medical Literature Analysis and Retrieval System Online)
- MEDLINE In-Process
- NHS EED (Economic Evaluation Database)
- PsycINFO
- PubMed
- SPORTDiscus
- TRANSPORT
- TRoPHI (Trials Register of Promoting Health Interventions)
- Web of Science

In addition, citation searches were undertaken for articles included in the 4 effectiveness reviews, and 2 systematic reviews on sedentary correlates (from the background information reviews). A call for evidence was also made to the Evidence Update Advisory Group.

2. Selection

Studies controlled or non-controlled which include an element of analysis of effect of interventions relevant to the intervention area specified in the project brief. Non-analytical studies (including case reports and case series) were excluded.

The searches resulted in 12744 non duplicate records; 3333 remained after first and 264 after second screening stages (one additional reference was suggested by EUAG) and 25 records were reviewed and discussed by EUAG and it agreed to include 13 papers in the Evidence Update.

3. Included papers

Beets MW, Huberty J, Beighle A (2013) Systematic observation of physical activity in afterschool programs: preliminary findings from Movin' Afterschool intervention. Journal of Physical Activity & Health 10(7): 74-81

Biddle SJH, Petrolini I, Pearson N (2013) Interventions designed to reduce sedentary behaviours in young people: a review of reviews. British Journal of Sports Medicine (online first) p1-5

Bonis M, Loftin M, Ward D et al. (2014) Improving physical activity in daycare interventions. Childhood Obesity 10(4): 334-41

Cook TL, De Bourdeaudhuij I, Maes L et al. (2014) Moderators of the effectiveness of a web-based tailored intervention promoting physical activity in adolescents: the HELENA Activ-O-Meter. Journal of School Health 84(4): 256-66

Cullen KW, Thompson D, Boushey C et al. (2013) Evaluation of a web-based program promoting healthy eating and physical activity for adolescents: Teen Choice: Food and Fitness. Health Education Research 28(4): 704-14

Dellert JC, Johnson P (2014) Interventions with children and parents to improve physical activity and body mass index: a meta-analysis. American Journal of Health Promotion 28(4): 259-67

Dobbins M, Husson H, Decorby K et al. (2013) School-based physical activity programs for promoting physical activity and fitness in children and adolescents aged 6 to 18, Cochrane Database of Systematic Reviews

Elinder LS, Heinemans N, Hagberg J et al. (2012) A participatory and capacity-building approach to healthy eating and physical activity- SCIP-school: a 2-year controlled trial. International Journal of Behavioral Nutrition and Physical Activity 9: 145

Engelen L, Bundy AC, Naughton G et al. (2013) Increasing physical activity in young primary school children - it's child's play: a cluster randomised controlled trial. Preventive Medicine 56(3): 19-25

Erwin HE, Ickes M, Ahn S et al. (2014) Impact of recess interventions on children's physical activity--a meta-analysis. American Journal of Health Promotion 28(3): 159-67

Favazza PC, Siperstein GN, Zeisel SA et al. (2013) Young Athletes program: impact on motor development. Adapted Physical Activity Quarterly 30(3): 235-53

Gesell SB, Sommer EC, Lambert EW et al. (2013) Comparative effectiveness of after-school programs to increase physical activity. Journal of Obesity

Gordon ES, Tucker P, Burke SM et al. (2013) Effectiveness of Physical Activity Interventions for Preschoolers: A Meta-Analysis. Research Quarterly for Exercise and Sport 84(3): 287-94

Jago R, Edwards MJ, Urbanski CR et al. (2013) General and Specific Approaches to Media Parenting: A Systematic Review of Current Measures, Associations with Screen-Viewing, and Measurement Implications. Child Obesity 9(S1): S51-72

Kanters MA, Bocarro JN, Filardo M et al. (2014) Shared use of school facilities with community organizations and afterschool physical activity program participation: a cost-benefit assessment. Journal of School Health 84(5): 302-9

Klitsie T, Corder K, Visscher TLS et al. (2013) Children's sedentary behaviour: descriptive epidemiology and associations with objectively-measured sedentary time. BMC Public Health 13: 1092

Lai SK, Costigan SA, Morgan PJ et al. (2014) Do school-based interventions focusing on physical activity, fitness, or fundamental movement skill competency produce a sustained impact in these outcomes in children and adolescents? A systematic review of follow-up studies. Sports Medicine 44(1): 67-79

Marsh S, Foley LS, Wilks DC et al. (2014) Family-based interventions for reducing sedentary time in youth: a systematic review of randomized controlled trials. Obesity Reviews 15(2): 117-33

McDonald N, Steiner R, Lee C et al. (2014) Impact of the safe routes to school program on walking and bicycling. Journal of the American Planning Association 80(2): 153-67

Morgan PJ, Barnett LM, Cliff DP et al. (2013) Fundamental movement skill interventions in youth: a systematic review and meta-analysis. Pediatrics 132(5): e1361-83

Prins RG, Brug J, van Empelen P et al. (2012) Effectiveness of YouRAction, an intervention to promote adolescent physical activity using personal and environmental feedback: a cluster RCT. PLOS One 7(3): e32682

Robertson-Wilson JE, Dargavel MD, Bryden PJ et al. (2012) Physical activity policies and legislation in schools: a systematic review. American Journal of Preventive Medicine 43(6): 643-9

van Sluijs EMF, Kriemler S, McMinn AM (2011) The effect of community and family interventions on young people's physical activity levels: a review of reviews and updated systematic review. British Journal of Sports Medicine 45: 914-22

Van Stralen MM, Yildrim M, te Velde SJ et al. (2011) What works in school-based energy balance behaviour interventions and what does not? A systematic review of mediating mechanisms. International Journal of Obesity 35(10): 1251-65

Zask A, Barnett LM, Rose L et al. (2012) Three year follow-up of an early childhood intervention: is movement skill sustained? International Journal of Behavioral Nutrition and Physical Activity 9:127