National Institute for Health and Care Excellence

Centre for Public Health and Social Care

Report for Guidance Executive 1st December 2015

Consideration of an update on two public health guidelines on preventing unintentional injuries among under 15s: Strategies (PH29) and Home (PH30)

1 Recommendation

Guidance Executive is asked to agree the following review proposal:

The guidelines on preventing unintentional injuries in under 15s: strategies (PH29) and home (PH30) should not be updated at this point in time.

Following Guidance Executive's approval of the proposal not to update, this will be stated on the NICE website. This will not be subject to a stakeholder consultation.

2 Background information

Guideline issue date: November 2010

First review date: February 2014

Second review date: November 2015

The current guidelines can be found at:

- Strategies http://www.nice.org.uk/ph29
- Home http://www.nice.org.uk/ph30

3 Process for the surveillance of guidelines

Public health guidelines were previously reviewed at 3 year intervals after publication to determine whether all or part of it should be updated. In line with Developing NICE guidelines: the manual, the process for deciding whether guidelines need updating is now usually undertaken every 2 years.

At the last review in 2014, PH29, PH30 and PH31 (Unintentional injuries on the road: interventions for under 15s) were reviewed by an expert panel with representation from the Department of Health, Public Health England, members of the committee who developed the guidance, and the Royal Society for the Prevention of Accidents. The panel highlighted published and ongoing research that may influence two of the recommendations in PH29 and two of the recommendations in PH30 and indicated that this should be looked at again in 12 months' time. The panel highlighted that there was no new or ongoing evidence that was likely to impact PH31.

The focus of this surveillance review was primarily to determine whether the evidence identified at the last review had published and if so how it may impact upon the recommendations within PH29 and PH30. As such, views of experts were not sought at this review.

4 Consideration of the evidence

A formal search process was not deemed necessary as key studies had been identified at the previous review in 2014.

Impact of the new evidence on the guideline

The previous review in 2014 indicated that there was upcoming evidence that had the potential to influence 4 recommendations:

- PH29 Recommendation 9: Installation and maintenance of permanent safety equipment in social and rented dwellings
- PH29 Recommendation 10: Incorporating guidance on home safety assessments within relevant national initiatives
- PH30 Recommendation 1: Prioritising households at greatest risk
- PH30 Recommendation 3: Co-ordinated delivery

An assessment of how the new evidence may influence these recommendations is provided below in Table 1. A summary of how each individual study may influence recommendations is available in Appendix 1.

Table 1 Summary of evidence impact on guideline

Evidence grouped by intervention	Likely to impact guideline	Recommendation	Type of impact
General safety equipment (8 studies)	✗	PH29: Recommendation 9	Unlikely to impact – new evidence supports recommendation
Home safety assessments (2 study)	✗	PH29: Recommendation 10	Unlikely to impact – new evidence does not alter recommendation
Identifying families at greatest risk (3 study)	✗	PH30: Recommendation 1	Unlikely to impact – new evidence does not alter recommendation
Co-ordinated delivery of safety equipment (7 studies)	✗	PH30: Recommendation 3	Unlikely to impact – new evidence supports recommendation.

5 Related NICE guidance

Of particular relevance to PH29 and PH30 is 'preventing unintentional injuries among under 15s: road design' (PH31).

This guideline is not impacted by this review decision.

6 Related quality standards

A quality standard on 'preventing unintentional injuries among children and young people aged under 15' is currently in development (due to publish in January 2016). This quality standard is anticipated to draw on evidence from PH29 and PH30.

As the decision is not to update PH29 or PH30 there is no anticipated impact on this quality standard.

7 Equality and diversity considerations

There has been no evidence to indicate that these guidelines do not comply with anti-discrimination and equalities legislation.

8 Implementation considerations

Implementation feedback in November 2013 indicated that feedback was mixed with some users finding the guidelines helpful and others not specific enough or too lengthy.

9 Stakeholder consultation

Following Guidance Executive approval the surveillance decision will not undergo stakeholder consultation in line with Developing NICE guidelines: the manual, which does not require stakeholder consultation at this time point.

10 Discussion

The PHSCC Surveillance and Methodology team believe that the guideline should not be updated at this point in time as no identified evidence is unlikely to impact on the recommendations.

In reviewing the evidence a resource was identified (Preventing unintentional to the under fives: a guide for practitioners) that may support the uptake of some of PH29 and PH30 recommendations, and may also support the quality standard. This resource is being assessed by the NICE endorsement programme.

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Appendix 1 Summary of key evidence and potential impact on the guideline

Evidence	Potential impact on guideline recommendations
Study: Achana et al, The effectiveness of different interventions to promote poison prevention behaviours in households with children: a network meta-analysis Design & setting: Network meta-analysis Population: Households with children Intervention: poison prevention interventions Comparator: usual care or other interventions Results: 28 studies identified were included in the analysis. Compared to usual care intervention, the intervention with education and low cost/free equipment elements was most effective in promoting safe storage of medicines (odds ratio 2.51, 95% CrI1.01 to 6.00) while interventions with education, low cost/free equipment, home safety inspection and fitting components were most effective in promoting safe storage of other household products (2.52, 1.12 to 7.13), safe storage of poisons (11.10, 1.60 to 141.50) and possession of PCC number (38.82, 2.19 to 687.10). No one intervention package was more effective than the others in promoting safe storage of poisonous plants. Conclusion: The most effective interventions varied by poison prevention practice, but education alone was not the most effective intervention for any poison prevention practice. Education and low cost/free equipment was most effective in promoting safe storage of medicines. Education, low cost/free equipment, home safety inspection and fitting was most effective in promoting safe storage of household products and poisons. Education, low cost/free equipment and home inspection were most effective in promoting possession of a poison control centre number. None of the intervention packages was more effective than the others in promoting safe storage of poisonous plants.	This study provides new supportive evidence on providing different levels of safety interventions based on a needs assessment. . This evidence does not alter PH29 recommendation 9.
Study: Baker et al, Identification of incident poisoning, fracture and burn events using linked primary care, secondary care and mortality data from England: implications for research and surveillance. Design & setting: Cohort study set in England Population: 2,147,853 incidence of poisonings, fractures and burns in 0-24 year olds Intervention: NA Comparator: NA Results: 42 985 poisoning, 185 517 fracture and 36 719 burn events were identified in linked CPRD-HES-ONS data. Conclusion: Linked data that is routinely collected could offer an immediate and affordable mechanism for injury surveillance and analyses of population-based injury epidemiology in England.	This study provides new evidence of linked primary, secondary and mortality data. This evidence is unlikely to alter PH30 recommendation 1.
Study: Hayes, M., Kendrick, D., Deave T., 2014. Injury Prevention Briefing. Preventing unintentional injuries to the under fives: a guide for practitioners. Keeping Children Safe at Home. The University of Nottingham http://www.nottingham.ac.uk/research/groups/injuryresearch/projects/kcs/index.aspx Design & setting: An educational briefing drawing from evidence from interviews, surveys, studies, systematic reviews, economic assessments, workshops and trials. Population: Managers and practitioners of organisations such as children's centre, health visiting teams, family support agencies and fire and rescue services. Overview of study: This briefing is focused on helping families, and professionals who work with children, keep their children as safe as possible in their homes. The briefing gives ways to plan, implement and evaluate a series of activities to help prevent the four specific accident types: poisonings; scalds; falls and fire-related injuries. This briefing encourages awareness of children's development aspects and is an educational approach to injury prevention, enabling the target audience to	This study provides new evidence of how to conduct a home safety assessment. This evidence does not alter PH29 recommendation 9.

understand how and why injuries can happen and providing them with evidence based information about how to prevent them.	
Study: Hubbard et al, Network meta-analysis to evaluate the effectiveness of interventions to prevent falls in children under age 5 years Design & setting: Network meta-analysis Population: Children aged under 5 Interventions: interventions to increase the possession of safety equipment or behaviours to prevent falls in under 5s Comparator: usual care or other intervention Results: 29 studies were included, of which 16 studies were included in the network meta-analyses. The most intensive intervention (including education, low cost/free home safety equipment, home safety inspection and fitting) was the most likely to be the most effective for increasing use of fitted stair gates, with an OR versus usual care of 7.80 (95% CrI 3.08 to 21.3). Education only was most likely to be most effective for reducing possession or use of a baby walker, with an OR versus usual care of 0.48 (95% CrI 0.31 to 0.84). Little difference was found between interventions for possession of window locks and for not leaving a child alone on a high surface, and there was insufficient evidence for use of bath mats. Conclusions: These results provide information on the most effective components of interventions and can also be used in cost-effectiveness analyses.	This study provides new evidence of specific interventions to prevent falls in children. This evidence supports PH29 recommendation 9 and PH30 recommendation 3 and is unlikely to change either recommendation.
Study: Kendrick D et al 2011, Randomised controlled trial of thermostatic mixer valves (TMV) in reducing bath hot tap water temperature in families with young children in social housing Design & setting: Pragmatic parallel arm randomised controlled trial, Scotland Population: families with at least one child under 5 years Intervention: A TMV fitted by a qualified plumber and educational leaflets before and at the time of TMV fitting Comparator: normal bath fixtures Results: Intervention arm families (n=62) had a significantly lower bath hot water temperature at 3-month and 12-month follow-up than families in the control arm (3 months: intervention arm median 45.0°C, control arm median 56.0°C, difference between medians, -11.0, 95% CI -14.3 to -7.7); 12 months: intervention arm median 46.0°C, control arm median 55.0°C, difference between medians -9.0, 95% CI -11.8 to -6.2) They were significantly more likely to be happy or very happy with their bath hot water temperature (RR 1.43, 95% CI 1.05 to 1.93), significantly less likely to report the temperature as being too hot (RR 0.33, 95% CI 0.16 to 0.68) and significantly less likely to report checking the temperature of every bath (RR 0.84, 95% CI 0.73 to 0.97). Conclusions: TMVs and accompanying educational leaflets are effective at reducing bath hot tap water temperatures in the short and longer term and are acceptable to families.	This study provides new evidence of specific interventions to prevent scalds in children. This evidence supports PH29 recommendation 9 and PH30 recommendation 3 on the installation of TMVs in social and rented dwellings.
Study: Kendrick et al, Parenting interventions for the prevention of unintentional injuries in childhood. Design & setting: Systematic review including RCTs, non-RCTs and controlled before and after studies. Population: Parents of under 18s Intervention: parenting education with or without other support Comparator: usual care or other intervention Results: 20 studies were included in the review. Ten RCTs involving 5074 participants were included in the meta-analysis, which found that intervention families had a statistically significant lower risk of injury than control families (RR 0.83, 95% CI 0.73 to 0.94). Most of the studies reporting home safety practices, home hazards or composite home safety scores found statistically significant effects favouring intervention arm families Conclusion: Parenting interventions within the home using multi-faceted interventions are effective in reducing child injury and also improve home safety.	This study provides new evidence of specific interventions to reduce unintentional injuries in children. This evidence supports PH29 recommendation 9 and PH30 recommendation 3.

5 Study protocols in 3 references for case-control studies identified at last review Protocol: Kendrick et al 2012, Keeping children safe at home: protocol for three matched case-control studies of modifiable risk factors for falls Objective: To estimate ORs from falls on stairs, on one level and from furniture in relation to safety equipment, safety behaviours and hazard reduction. Design & setting : 3 case-control studies in UK hospitals. Population: children aged 0-4 years with a medically attended fall injury occurring at home. Protocol; Majsak-Newman G et al, Keeping children safe at home: protocol for a matched case-control study of modifiable risk factors for poisoning Objectives: To estimate ORs for medically attended poisonings in children for items of safety equipment, home hazards and parental safety practices aimed at preventing poisoning, Design and setting: A multicentre case-control study in UK hospitals Population: 0-4 years old with a medically attended poisoning occurring at home Protocol: Wynn P et al, Keeping children safe at home: protocol for a case-control study of modifiable risk factors for scalds. Objectives: To determine the relationship between a range of modifiable risk factors for medically attended scalds in children under the age of 5 years Design and setting: A multicentre case-control study in UK hospitals and minor injury units Population: 0-4 years old with a medically attended scald injury which occurred in their home or garden	These 5 case control studies were indicated at the last review as potential new evidence. To date only 1 study has published (see below).
Study: Kendrick et al, Risk and protective factors for falls from furniture in young children: multicenter case-control study. Design & setting: Multicenter matched case-control study at hospitals, minor injury units, and general practices UK Population: children aged 0-4 years Case: 672 children with falls from furniture Control: 2648 control participants matched on age, sex, calendar time, and study center Results: Parents of cases were significantly more likely not to use safety gates in the home (adjusted odds ratio [AOR], 1.65; 95% CI, 1.29-2.12) and not to have taught their children rules about climbing on kitchen objects (AOR, 1.58; 95% CI, 1.16-2.15). Cases aged 0 to 12 months were significantly more likely to have been left on raised surfaces (AOR, 5.62; 95% CI, 3.62-8.72), had their diapers changed on raised surfaces (AOR, 1.89; 95% CI, 1.24-2.88), and been put in car/bouncing seats on raised surfaces (AOR, 2.05; 95% CI, 1.29-3.27). Cases 3 years and older were significantly more likely to have played or climbed on furniture (AOR, 9.25; 95% CI, 1.22-70.07). Cases were significantly less likely to have played or climbed on garden furniture (AOR, 0.74; 95% CI, 0.56-0.97). Conclusion: If estimated associations are causal, some falls from furniture may be prevented by incorporating advice into child health contacts, personal child health records, and home safety assessments about use of safety gates; not leaving children, changing diapers, or putting children in car/bouncing seats on raised surfaces; allowing children to play or climb on furniture; and teaching children safety rules about climbing on objects.	This study provides new evidence supporting the guideline recommendations related to fall prevention in children. This evidence supports PH29 recommendation 9 and PH30 recommendation 3.
Study: Mytton et al, The feasibility of using a parenting programme for the prevention of unintentional home injuries in the under-fives: a cluster randomised controlled trial Design & setting: Feasibility multicentre, cluster, randomised, unblinded trial England Population: parents (n=96) of preschool children who had sustained an unintentional injury requiring medical attention in the previous 12 months	This study provides new preliminary evidence on targeting interventions. This evidence is unlikely to alter PH30 recommendation 1 which already indicates

Intervention: The First-aid Advice and Safety Training (FAST) parent programme, comprising parenting support and skills combined with first aid and home safety advice. Comparator: usual care Results: 51 parents were recruited (40 meeting eligibility criteria plus 11 following 'open invite' to participate); 15 parents completed the FAST parent programme and 49 provided data at baseline and during follow-up. Completion of the programme was significantly greater for participants using the 'open invite' approach (85%) than for those recruited using the original eligibility criteria (31%) Conclusion: This feasibility study has developed an innovative injury prevention intervention and a tool to record parent-reported injuries in preschool children. It was not feasible to recruit parents of children who had sustained a recent injury, or to ask health visitor teams to identify potential participants and to deliver the programme. The trial authors concluded that the follow on trial should target all families attending children's centres in disadvantaged areas.	that households based on where children and young people aged under 15 are at greatest risk of unintentional injury based should be prioritised for interventions. The guideline indicates that this should be from existing lists or databases and could include those with children aged under 5, families living in rented or overcrowded conditions or families living on a low income.
Study: Orton et al, Persistence of health inequalities in childhood injury in the UK: a population-based cohort study of children under 5. Design & setting: Cohort study set in UK general practices Population: all children (n=979,383) under 5 in 495 UK GP general practices Intervention: NA Comparator: NA Results: 20,804 fractures, 15,880 burns and 10,155 poisonings, equating to an incidence of 75.8/10,000 person-years (95% CI 74.8-76.9) for fractures, 57.9 (57.0-58.9) for burns and 37.3 (35.6-38.0) for poisonings. Incidence rates decreased over time for burns and poisonings and increased for fractures ($p<0.001$ test for trend for each injury). They were significantly higher in more deprived households (IRR test for trend $p<0.001$ for each injury type) and these gradients persisted over time. Conclusion; The incidence of burns and poisonings declined between 1990 and 2009 but increased for fractures. Strong socio-economic inequalities were apparent and have potentially resulted in an estimated 9,000 additional medically-attended injuries per year in under-5s.	This study provides new evidence which is consistent with the recommendations to target interventions at families that are in the lower socio-economic classes. This evidence is unlikely to alter PH30 recommendation 1.
Study: Saramago et al, Cost-effectiveness of interventions for increasing the possession of functioning smoke alarms in households with pre-school children: a modelling study. Design & setting: decision model-based probabilistic cost-effectiveness analysis UK Population: Children aged under 5 Intervention: seven interventions, ranging from usual care to more complex interventions comprising of education, free/low cost equipment giveaway, equipment fitting and/or home safety inspection. Comparator: NA Results: Education and free/low cost equipment was the most cost-effective intervention with an estimated incremental cost-effectiveness ratio of £34,200 per QALY gained compared to usual care. This was reduced to approximately £4,500 per QALY gained when 1.8 children under the age of 5 were assumed per household. Conclusion: By assessing cost-effectiveness, as well as effectiveness, the more effective interventions were not necessarily the most cost-effective. Education and free/low cost equipment in households with children under 1.8years was cost effective.	This study provides new evidence of specific interventions to prevent deaths due to fire in children. This evidence supports PH29 recommendation 9 and PH30 recommendation 3 on the provision of smoke detectors.
Study: Young et al, Preventing childhood falls within the home: overview of systematic reviews and a systematic review of primary studies. Design & setting: Systematic review of reviews and primary studies Population: Intervention: Home safety interventions aimed at reducing childhood falls Comparator: usual care or other interventions	This study provides new evidence of specific interventions to prevent falls in children. This evidence supports PH29 recommendation 9 and PH30

Results: 13 reviews plus 5 additional primary studies not included in the reviews. Evidence of the effect of interventions on falls or fall injuries was limited, with only one of three primary studies reporting this outcome finding a reduction in falls. Interventions were effective in promoting the use of safety gates and furniture corner covers. There was some evidence of a reduction in baby walker use. The effect on the use of window safety devices, non-slip bath mats/decals and the reduction of tripping hazards was mixed. Conclusion: Policy makers and practitioners should promote use of safety gates and furniture covers and restriction of baby walker use.	recommendation 3.
Study: Zou et al 2015 Preventing childhood scalds within the home: Overview of systematic reviews and a systematic review of primary studies Design & setting: an overview of systematic reviews and a systematic review of primary studies Population: children aged 0–19 and their families Intervention: interventions to prevent scalding including multifaceted interventions: home safety inspections, education or counselling, provision of educational materials and safety devices Comparator: usual care or other intervention Results: 14 systematic reviews and 39 primary studies were included. There was little evidence that interventions are effective in reducing the incidence of scalds in children. More evidence was found that inventions are effective in promoting safe hot tap water temperature, especially when home safety education, home safety checks and discounted or free safety equipment including thermometers and thermostatic mixing valves were provided. No consistent evidence was found for the effectiveness of interventions on the safe handling of hot food or drinks nor improving kitchen safety practices. Conclusion: Education, home safety checks along with thermometers or thermostatic mixing valves should be promoted to reduce tap water scalds. It was difficult to evaluate the effectiveness of interventions on scald injuries and to disentangle the effects of multifaceted interventions on scald injuries and safety practices.	This study provides new evidence of specific interventions to prevent scalds in children. This evidence supports PH29 recommendation 9 and PH30 recommendation 3.

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