Authors' objectives
To update the 1993 report (see Other Publications of Related Interest) from the Canadian Task Force on the Periodic Health Examination (PHE), now the Canadian Task Force on Preventive Health Care. The report was updated by reviewing interventions aimed at preventing child maltreatment, which were described in the scientific literature over the past 6 years.

Searching
MEDLINE, Healthstar, PsycINFO and ERIC were searched for studies published between 1993 and February 1999; the search terms were reported. Additional searches of Current Contents were performed from 1993 to 1999.

Study selection
Study designs of evaluations included in the review
Study design was not specified a priori. However, the study designs reported in the review included randomised controlled trials (RCTs), non-randomised controlled trials, systematic reviews, cohort studies, cross-sectional surveys, case-control studies and well-designed observational studies. Practice guidelines were also identified.

Specific interventions included in the review
Screening using a variety of techniques such as the assessment of risk indicators and prevention. Prevention included the following: home visitation; comprehensive health care programmes; parent education and support; and combined services and programmes specifically aimed at preventing sexual abuse.

Reference standard test against which the new test was compared
The review did not include any diagnostic accuracy studies that compared the performance of the index test with a reference standard of diagnosis.

Participants included in the review
Children and their families were included. No further details were reported.

Outcomes assessed in the review
The occurrence of one or more of the following subcategories of physical abuse, sexual abuse, neglect or emotional abuse in childhood.

How were decisions on the relevance of primary studies made?
The reviewed articles were systematically reviewed using the methodology of the Canadian Task Force on Preventive Health Care. [A:One author reviewed the studies and selected papers for further assessment.]

Assessment of study quality
The criteria for judging the quality of the individual studies were generally not reported, although aspects such as randomisation, blinding and follow-up were reported for some studies. For each different intervention type, however, the evidence from the studies was graded according to the methodology of the Canadian Task Force on Preventive Health Care. The levels of evidence ranged from I (evidence from at least one well-designed RCT) to III (opinions of respected authorities, based on clinical experience; descriptive studies or reports of expert committees). The recommendations made on the basis of this evidence were then graded from A to E, according to the available evidence for the inclusion or exclusion of the condition or manoeuvre. Grade A and E recommendations corresponded to good evidence to support the recommendations that the condition or manoeuvre be specifically considered in the PHE (grade A) or specifically excluded from the PHE (grade E). The reviewed articles were systematically reviewed using the methodology of the Canadian Task Force on Preventive Health Care. [A:This involved group review and debate of the...
Data extraction
The reviewed articles were systematically reviewed using the methodology of the Canadian Task Force on Preventive Health Care. The authors do not state how the data were extracted for the review, or how many of the reviewers performed the data extraction.

The studies were generally described in a narrative summary, incorporating such details as study design, bibliographic details, intervention type, setting, results and conclusions.

Methods of synthesis
How were the studies combined?
A narrative synthesis was undertaken.

How were differences between studies investigated?
The differences between the studies were briefly described in the narrative. The authors stated that a meta-analysis was not performed because of the heterogeneity between the studies.

Results of the review
A total of 34 studies were included (number of participants not stated).

Screening for risk of child maltreatment (2 cohort studies and 1 cross-sectional survey).
One study examined the correlation between staff assessment and a self-report measure (Child Abuse Potential Inventory), but the predictive ability of this approach was not determined. The remaining 2 studies examined the risk assessment of future maltreatment and followed families prospectively. However, as described in the previous paper (see Other Publications of Related Interest), the main difficulty with this approach was the unacceptably high level of false-positive results.

Risk indicators (1 systematic review and 4 well-designed observational studies).
The studies identified the following new risk indicators for physical abuse: male gender, recent life stressors, maternal psychiatric impairment, low maternal education level, lack of attendance at prenatal classes, substance abuse and low religious attendance. The risk indicators for neglect included parental sociopathic behaviour and substance abuse. The risk indicators for sexual abuse included low maternal age and parental death.

Perinatal and early childhood programmes for the prevention of physical abuse and neglect (4 systematic reviews).
One review concluded that although many programmes did not show a reduction in these two outcome measures, there was evidence that extended home visitation was effective in preventing physical abuse and neglect among disadvantaged families. A second review of controlled trials also showed that early intervention holds the potential to avert such outcomes in high-risk families. The third review concluded that studies of programmes for competency enhancement among high-risk parents showed 'fairly consistent gains', but cautioned that firm conclusions awaited further evaluation. The final review, a meta-analysis, showed that home visitation had a significant preventive effect on the occurrence of childhood injury. Pooled effect estimates were not given for those outcomes relating to child abuse, due to concern about the potential for bias in reporting outcomes.

Home visitation (5 RCTs).
Two RCTs evaluated home visitation by nurses. Four-year data from the first trial suggested that the differences in the rates of child abuse and neglect seen at 2 years were not evident 2 years later. However, after 4 years, the children in families visited by nurses showed a 40% reduction in injuries and ingestions. Recent 15-year follow-up data from the same trial also showed fewer reports of abuse and neglect among those families visited prenatally and through infancy.
The second RCT replicated the first trial in a population of African-American, low-income and unmarried first-time mothers in Memphis Tennessee. A similar reduced incidence of injuries and ingestions (incidence 0.43 versus 0.56; p=0.05) was observed in the visitation group, compared with the control group, at 2 years. The number of days that children were hospitalised because of injuries and ingestions was also lowered in the visitation group (0.04 versus 0.18 days; p<0.001). The remaining 3 RCTs examined home visits by paraprofessional (or lay) home visitors; these showed no statistically-significant differences between the control and intervention groups. These studies also suffered from a number of methodological problems, which precluded any overall conclusions from being drawn.

Comprehensive health care programmes (1 RCT).

The authors concluded that a surveillance bias (the intervention group made twice as many paediatric visits on average as the control group) was responsible for the findings. The results suggested a non statistically-significant increase in the number of reports of physical abuse (9.2 versus 6.6%; p non significant) and neglect (10.6 versus 4.1%; relative risk 2.79; p<0.05), for children in the intervention group versus the control group.

Parent education and support programmes (1 non-randomised controlled trial).

The trial was set primarily in a population of urban African-American unmarried teenage mothers. Methodological weaknesses associated with this trial prevented any overall conclusions from being drawn.

Combination of services (1 non-randomised controlled trial).

This trial examined the Community Infant Project, in which nurse-clinician teams provided a range of home-based services such as case management, psychotherapy and health education. Methodological weaknesses associated with this trial prevented any overall conclusions from being drawn.

Education programmes for children to prevent sexual abuse (2 systematic reviews, 7 RCTs and 1 cohort study). One review concluded that education programmes can improve the knowledge and prevention skills of children under experimental conditions. However, whether this leads to a reduction in abuse was not established. A second review, featuring a meta-analysis, indicated that victimisation prevention programmes were successful in teaching children sexual abuse concepts and self-protection skills; however, the transfer of these skills to real-life situations has not been proven. None of the RCTs addressed the outcome of a reduction in the occurrence of sexual abuse, and so they were not reviewed in detail. The cohort study suggested exposure to such prevention programmes was not associated with any decrease in self-reported victimisation.

Authors’ conclusions
Since the task force’s 1993 update, there is further evidence against screening approaches for child maltreatment and in favour of home visitation for first-time high-risk mothers, although the actual level of evidence for these manoeuvres has not changed. Three additional manoeuvres were assessed for the prevention of physical abuse and neglect; however, there was insufficient evidence to recommend the inclusion of any of these strategies in a PHE.

CRD commentary
This appeared to be a reasonable review, but a lack of information regarding the methodology of the review precludes any firm conclusions being drawn about its quality. This was an update of a previous review and so only brief details of the inclusion and exclusion criteria were provided in this document. In addition, although the authors stated that the review was carried out systematically, they provided few details and made reference to the methodology of the Canadian Task Force on Preventive Health Care.

The majority of the details of the included studies were reported in a narrative summary; more extensive documentation would have been preferable. Summary tables would have been helpful as it was not always clear how many studies, what design and how many participants were included for each intervention type. In addition, issues of study quality were not always presented for each study, even though the evidence and recommendations outlined in the review were
classified in terms of a [A:hierarchy of evidence scale which places emphasis on study designs that are less vulnerable to bias and errors of influence.] The authors stated that a meta-analysis was inappropriate due to heterogeneity between the studies; a narrative summary was used instead, which seemed appropriate. The authors' conclusions seem reasonable considering the data presented. However, it is not possible to confirm the quality of the review due to the limited methodological details presented.

**Implications of the review for practice and research**

Practice: [A: 1. There is evidence of fair quality to exclude screening procedures (checklists, questionnaires, or interviews) aimed at identifying individuals at risk of experiencing or committing child maltreatment. 2. There is good evidence to continue recommending a programme of home visitation during the perinatal period extending through infancy to prevent child abuse and neglect for disadvantaged families. The strongest evidence is for an intensive programme of home visitation delivered by nurses beginning prenatally and extending until the child's second birthday. 3. There is insufficient evidence to recommend a comprehensive health care programme, a parent education and support programme, or a combination of home-based services as a strategy for preventing child maltreatment, but these interventions may be recommended for other reasons. 4. There is insufficient evidence to recommend education programmes of children for the prevention of sexual abuse; whether such programmes reduce the incidence of sexual abuse has not been established.]

Research: The authors identify a number of areas for further research.

1. The development of approaches to measure the prevalence and correlation of two major categories of child maltreatment, i.e. neglect and emotional abuse.

2. The extent to which one of the programmes describing home visitations by nurses can be replicated in populations with different characteristics, e.g. multiparous women.

3. The degree to which modification (e.g. duration, frequency and content) of the home visitation programmes conducted by nurses alters the effectiveness of the intervention.

4. Whether education programmes actually prevent the occurrence of sexual abuse.

5. The identification of other promising interventions aimed at preventing one or more types of child maltreatment, since a combination of approaches (universal and targeted) will most likely be required to reduce this serious public health problem.

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**Other publications of related interest**


This additional published commentary may also be of interest. Hayward S. Review: home visitation by nurses beginning
prenatally and extending through infancy prevents child abuse and neglect. Evid Based Nurs 2001;4:80.

**Indexing Status**
Subject indexing assigned by NLM

**MeSH**
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