NHS Greater Glasgow and Clyde Health Visiting Review: Critique of the Evidence Base

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Executive summary

- This document provides a critical appraisal of the evidence base used to support the NHS Greater Glasgow and Clyde Health Visiting Review 2007.
- The documentary evidence reviewed is:
    A. The draft Evidence Review summary posted on the Review website, the Review Report and the original text of the cited references (34 documents)
    B. Published and unpublished papers, policy reports and presentations appearing on the Review website (an additional 26 documents)
    C. This Critique also separately presents other evidence relevant to the review following a systematic literature search
- The draft Evidence Review is incomplete and is watermarked “work in progress”. Strong recommendations are made on the basis of this document. It is unclear how continuing work on the Evidence Review can influence the recommendations already made.
- The methodology of the Evidence Review is unclear but both the Review Report and the introduction to the Evidence Review make it clear that the approach taken is a “selective review of available literature and other evidence” and that the search areas were “guided by the questions posed by the steering group as part of their deliberations” rather than a comprehensive and open-minded approach
- Among the 60 documents identified in A or B above, 31 report empirical evidence. Most of the empirical evidence is inadequate to justify major organisational change. Only one study provides high quality evidence on any of the Review recommendations about primary care teams: a randomised trial confirming the superiority of nurse home visiting programmes over paraprofessional visiting.
- The conclusions relevant to primary care teams from appraisal of the evidence produced in A and B above are:
    - No evidence is presented for any advantage of geographical team working over practice attachment in terms of benefit for children, families, or the community.
    - The only evidence regarding the effect of corporate working on clients suggests that it is more likely to cause harm than good.
    - No evidence is presented that the development of joint children’s service teams benefits children or families. Joint children’s team development is complex and expensive. It is viewed positively by managers.
    - Uptake of home visiting by nurses is much more likely to be accepted and visits are more likely to be effective in delivering benefit to families compared with home visiting by non-nurses. Although working in skill mix teams is widespread in the UK, evidence supporting any particular team configuration is weak.
    - Health visitors are better trained and more likely to update their knowledge about immunisation than practice nurses. There is some weak evidence that health visiting interventions can increase immunisation uptake rates although unfocussed home visiting does not increase uptake.
- The conclusions relevant to the primary care team emerging from a critical appraisal of all the evidence obtained in A, B and C above are:
    - Health visitors should maintain their practice attachment and further improvements in communication between health visitors and the primary care team should be encouraged.
    - Health visitors should continue to hold personal caseloads, but be supported by strong peer relationships and good quality supervision in line with that provided in the Solihull approach
    - Health visitors should maintain a clear identification with the health service
    - The skill mix in health visiting services should be developed, but in the context of a rigorous evaluation of benefits to clients
    - Health Visitors should continue to give immunisation injections in practices. Immunisation consultations should be longer in order to allow health visitors to evaluate parent-child relationships and to offer support to families

GENERAL INTRODUCTION

The NHS Greater Glasgow and Clyde Health visiting review posted its final document (the Review Report), a draft evidence review summary (the Evidence Review) and a range of supporting documents on its website (www.phru.net/phn/healthvisitingreview/default.aspx) in August 2007. The introduction to the Review Report states that the review body was established to "propose evidence based changes". This Critique examines the way that the Evidence Review and supporting documents were used to support the recommendations made in the Review Report, appraises the methodology and presents some evidence omitted from the Evidence Review which does not support the recommendations.

The key recommendations of the Review Report which impact upon the functioning of the Primary Care Team, and which form the focus of this critique, are:

- *Health visitors should have a geographical rather than practice focus.*
- *Health visitors should work as part of a team to enable flexibility to respond to fluctuations in workload and staff absence ('corporate caseload')*
- *Health visitors should be part of integrated and joint children's service teams*
- *The skill mix within teams should be developed to reflect the local needs profile to provide the universal service and support the targeted service*
- *Health Visitors should no longer be involved in giving immunisation injections in practices. A clear transition plan will be developed to move from current arrangements without impacting on immunisation rates.*

The draft Evidence Review is clearly incomplete and is watermarked "*work in progress*". It is interesting that very strong recommendations are made on the basis of a very incomplete piece of work. It is difficult to understand how continuing work on the Evidence Review can influence recommendations that have already been made. The methodology of the Evidence Review is unclear but both the Review Report and the introduction to the Evidence Review make it clear that the approach taken is a "*selective review of available literature and other evidence*" and that the search areas were "*guided by the questions posed by the steering group as part of their deliberations*" rather than a comprehensive and open-minded approach

This critique will discuss the:

- Selection of literature by the Evidence Review
- Analysis of the selected literature
- Recommendations emerging from literature not selected by the Evidence Review

SELECTION OF LITERATURE BY THE EVIDENCE REVIEW

The author states *"Due to limited resources this review is not a systematic one in the formal sense but a selective review of the literature"*. While it is clearly true that the review is selective the plea about limited resources is difficult to understand. With the help of a University librarian for a single day, the author of this Critique was able to find a great deal of other highly relevant literature, as described below.

Inclusion criteria used in the Evidence Review.

The Evidence Review includes "*reports and case studies of similar reviews, policy documents and conference presentations as well as peer reviewed published data … some systematic reviews and grey literature are also included*". The Evidence Review "*includes material recommended and/or reviewed by members of the review group*" and "s*pecific searches for additional literature*" were also made by members of the review group.

The literature appears as citations in the Evidence Review document, as files on the Review website or both[a]. The types of literature appearing in each way are presented in table 1 below.

[a] All the documents cited in the Evidence Review or available on the website were studied for this Critique, with the following exceptions:
Four citations listed were not available – a CPHVA professional briefing[1], an unpublished evaluation of corporate caseload management[2], the unpublished GGNHSB Campanile Action Plan and one file
Footnote continued on next page

	No. of papers cited in the Evidence Review and available on the website	No. of papers cited in the Evidence Review but not available on the website:	No of papers on the website but not cited in the Evidence Review:	Total number of papers
Peer-reviewed original research articles	2 [5;6]	6 [3;7-11]	4 [12-15]	**12**
Non-peer reviewed articles reporting new findings or experiences	0	3 [16-18]	0	**3**
Peer-reviewed editorials and opinion articles	1 [19]	2 [20;21]	2 [22;23]	**5**
Peer-reviewed meta-analyses &/or systematic reviews	5 [24-28]	2[b] [29;30]	1 [31]	**8**
Other systematic review	0	0	1 [4]	**1**
Peer-reviewed selective reviews	2 [32;33]	1 [34]	3 [35-37]	**6**
Government policy reports		3 [38-40]	4 [41-44]	**7**
Other policy reports	2 [45;46]	0	2 [47;48]	**4**
Other published reports	1 [49]	3 [50-52]	6 [53-58]	**10**
Unpublished reports	1 [59]	0	1 [60]	**2**
Powerpoint presentations	0	0	2 [61;62]	**2**
TOTAL	**14**	**20**	**26**	**60**

Table 1. Types of document cited

Evidence for change in the health service in Scotland is normally graded using the SIGN guideline system. The grades are tabulated in table 2 below:

A	Requires at least one randomised controlled trial as part of a body of literature of overall good quality and consistency addressing the specific recommendation. *(Evidence levels Ia, Ib)*
B	Requires the availability of well conducted studies but no randomised trials on the topic of recommendation. *(Evidence levels IIa, IIb, III)*
C	Requires evidence obtained from expert committee reports or opinions and/or experiences of respected authorities. Indicates an absence of directly applicable studies of good quality. *(Evidence level IV)*

Table 2. SIGN grades of evidence

Using this method for classifying the quality of evidence, the documents fall into the categories laid out in table 3:

present on the Review website (enuresis service article) was unreadable. One article[3] stated to have been "ordered for review" was obtained by the author of this Critique. Only the child and adolescent health section of the review of systematic reviews of community nursing[4] was downloaded for appraisal from the Scottish Executive website.

[b] The Evidence Review cites the abstract of one systematic review and meta-analysis[29] but does not refer to the freely available full review. This is surprising because the full review has a useful discussion of the impact on immunisation uptake of the profession of home visitors, the intensity of visiting and the availability of immunisation in the home.

		No. of papers cited in the Evidence Review and available on the website	No. of papers cited in the Evidence Review but not available on the website:	No of papers on the website but not cited in the Evidence Review:	Total number of papers
A	**1a. Meta-analysis of randomised controlled trials.**	5 [24-28]	2 [29;30]	2 [4;31]	**9**
	1b. Randomised controlled trial.	2 [5;6]	2 [8;34]	0	**4**
B	**2a. Controlled study without randomisation**	0	1 [7]	0	**1**
	2b Other type of quasi-experimental study.	0	0	0	**0**
	3. Non-experimental descriptive studies, such as comparative studies, correlation studies and case studies	2 [49;59]	7 [3;9-11;16-18;50]	6 [12-15;53;55;57;58]	**17**
C	**4. Expert committee reports or opinions and/or experiences of respected authorities.**	5 [19;32;33;45;46]	6 [20;21;38-40;51;52]	16 [22;23;35-37;41-44;47;54;56;61;62]	**27**
	(Other opinion pieces)			2 [48;60]	**2**
	Total	**14**	**20**	**24**	**60**

Table 3. Quality of evidence in cited documents.

It can be seen that the general quality of evidence is low, with only four randomised controlled trials and nine systematic reviews being either cited in the Evidence Review or present on the website. High quality evidence thus forms less than one quarter of the total. The vast majority of the cited documents are descriptive studies, expert committee reports, policy documents or personal opinions. None of the randomised controlled trials or meta-analyses deals with any of the recommendations of the Review Report concerning corporate caseloads, practice attachment and joint children's service teams. One randomised trial deals with skill mix issues[34;63] and one of the meta-analyses deals with the impact of home visiting services on immunisation uptake rates[29].

As an example of the sort of approach that should (in the author's view) be taken to literature searching, references on management of child emotional and behaviour problems by community nurses was sought in the databases CINAHL, PsychoInfo, Medline, Embase, the Australian Education Index, ASSIA, ERIC, CSA Social Services Abstracts, ChildData, Science Direct, CommunityWise and SCIE Social Care Online using the search strategy: ("school nurs*" or "health visit*" or "community nurs*" or "community health nurs*") AND ("child*" or "pupil*" or "parent*" or "adolescent*" or "teen*") AND ("mental health" or "psychiatr*" or "psychol* or "behav*"). A total of 2835 references were retrieved. After elimination of opinion and educational articles and material irrelevant to the area of the work of school nurses and health visitors in the field of the mental health of children and young people, 58 articles reporting original data relevant to this field (much more limited than that covered by the Review) remained. Clearly a similar search involving other important areas such as infant feeding, immunisation, or child abuse would have produced thousands more references and a substantial number of important papers.

Exclusion criteria used in the Evidence Review.

It is stated that work published before 1995 was excluded. Interestingly, one paper from 1994 seems to have slipped through the net – an opinion piece in a non-peer reviewed magazine which produced the only (anecdotal) evidence that some clients might favour corporate workloads[18].

There is also a statement that "The focus has been on literature relating to work in the UK. Where the situation in other countries is comparable or relevant literature referring to this is included". In fact, work from only one other country is included to any significant extent in the Evidence Review[c]. This is the United States, a country with no universal public health nursing service. This literature is without

[c] Some of the reviews[36;37] do include discussion of papers from other countries

doubt extremely important – but it reports the (generally very positive) impact of home visitation compared with nothing at all. Therefore while it provides a ringing endorsement of the value of health visiting, it is absolutely useless in evaluating changes to a universally available service such as we have in the UK.

It might have been more useful to consider literature from public health nursing services in other countries: near-universal community-based service to preschool children and their parents are available in Ireland [64], the four Scandinavian nations [65-68], Australia [69], New Zealand [70], the Netherlands, France and Italy [71]. Home visiting is a key component of services in these countries, but the number of visits and their timing varies between the nations [71]: clinic-based immunisation and child health surveillance services provided by nurses are more generally available.

ANALYSIS OF THE SELECTED LITERATURE

It is not possible to assess how the 26 papers appearing on the website but not cited in the Review documentation might have influenced the author of the Evidence Review or members of the review body since they are not discussed. They are, nevertheless, reviewed here.

We can see from the data presented in table 3 and the discussion following it that the grade of evidence relating to any of the key Review Report recommendations is generally at level C – insufficient to warrant a change in practice.

Rather than adopt the rigorous approach used by SIGN, the author states the following:

> *"In community nursing research methodology alone cannot represent the quality of knowledge presented. The research context often conspires against methodological force. Therefore, assessing the quality of evidence can be problematic.*
>
> *In the absence of a definitive quality assessment tool the review team agreed the need for a framework against which to rate the level of knowledge/evidence. Based around the principles endorsed by the Open University (PROMPT) and the Social Care Institute of Excellence (TAPUPAS), this framework poses questions that are used to inform decisions around quality assessment. It is intended to act as a supplement to experience, to avoid mere assumption and ensure a consistency of evidence.*
>
> *Framework for quality assurance*
>
Relevance:	*is this relevant to the questions we are asking?*
Transparency :	*is it clear and detailed enough about its aims, theoretical framework, methodology and analysis?*
Purposivity:	*are the methods used appropriate for the questions posed?*
Accuracy:	*are its claims and recommendations grounded in the findings?*
Provenance:	*who produced it? Is there an inherent bias?"*

Assuming for now that this "framework for quality assurance" is reasonable, the quality of the cited documents is tabulated in relation to the key recommendations of the Review Report in table 4:

	Is this relevant to the questions we are asking?	***Is it clear and detailed enough about its aims, theoretical framework, methodology and analysis***		***Are the methods used appropriate for the questions posed?***		***Are its claims and recommend ations grounded in the findings?***		***Is there an inherent bias?"***		
	Yes	**Yes**	**NK**	**Yes**	**NK or NA**	**Yes**	**NK or NA**	**Yes**	**No**	**NK or NA**
Practice attached *Vs* geographical working	5 [8;11;42;44;49]	5 [8;11;42;44;49]		3 [8;11;49]	2 [42;44]	3 [8;11;49]	2 [42;44]		4 [8;11;42;49]	1 [44]
Corporate caseload	9 [1;2;11;17;18;20;21;44;49;59]	7 [11;17;18;20;21;44;49;59]	2 [1;2]	3 [11;21;49;59]	6 [1;2;17;18;20;44]	4 [11;18;21;49;59]	5 [1;2;17;20;44]	2 [20;21]	4 [11;17;18;49;59]	3 [1;2;44]
Joint children's service teams	6 [14;19;23;33;37;52]	6 [14;19;23;33;37;52]		2 [14;52]	4 [19;23;33;37]	2 [14;52]	4 [19;23;33;37]		6 [14;19;23;33;37;52]	
Skill mix	14 [3-5;8;11;24;28;29;35;36;41;42;44;63]	14 [3-5;8;11;24;28;29;35;36;41;42;44;63]		10 [3-5;8;11;24;28;29;36;63]	4 [35;41;42;44]	12 [3-5;8;11;24;28;29;35;36;41;63]	2 [42;44]	1 [35]	11 [3-5;8;11;24;28;29;36;42;63]	2 [41;44]
Immunisation	3 [4;10;29]	3 [4;10;29]		3 [4;10;29]		3 [4;10;29]			3 [4;10;29]	

Table 4. Relevance and quality of documentary evidence to the key recommendations.

Twenty nine documents were relevant to the key recommendations relating to primary care teams. Fourteen of these papers fail to reach the quality standards set by the author of the Evidence Review. Thirty one documents were not relevant to any of the key recommendations [6;9;12;13;15;16;22;25-27;30;31;38-40;43;45-48;50;51;53-58;60-62].

Using the 29 relevant documents, the evidence presented for each of the five key recommendations is briefly appraised in the following sections.

<u>Practice attached Vs geographical working</u>

The documentary evidence consists of:

- A randomised trial of provision of additional intensive support health visiting services over and above normal NHS provision to mothers in a deprived area of London[8]. The intervention produced no benefits in terms of the primary outcomes of the trial, but increased use of NHS health visiting services and reduced GP attendance.
- A survey of UK health visitors[11] describing the patterns of geographical (7% of respondents) or practice-based caseloads (73%). No conclusions are drawn about the benefits or otherwise of either approach.
- The report of the DoH Health Visitor Review Working Group[42] which gives a neutral recommendation in relation to practice or geographical attachment
- The draft report of the Scottish Executive Review of Nursing in the Community[44]. This document recommending an end to provision of specialist children's nurses in the community is still under consultation. It favours geographically-based teams.
- A process evaluation of a move towards geographical team working in Derby[49]. No data are presented that can be related to outcomes for children or families.

In summary, no evidence is presented for any advantage of geographical team working over practice attachment in terms of benefit for children, families, or the community.

<u>Corporate caseload</u>

The documentary evidence consists of:

- A survey of UK health visitors[11] showing that 35% work with corporate caseloads. No conclusions are drawn about the benefits or otherwise of this approach.
- A process description of the development of a small corporate caseload team in a single health centre[17]. No client-related outcomes are presented
- A 1994 process description of the development of a small corporate caseload team in a single health centre[18]. No evaluation was attempted but the authors do state that some clients favour speed of access to a HV over speaking to an individual
- A concept analysis of corporate working[20] presenting no empirical data
- A report about a workshop with HVs[21] on how to introduce corporate working
- The draft report of the Scottish Executive Review of Nursing in the Community[44]. This document recommending an end to provision of specialist children's nurses in the community is still under consultation. It favours corporate working.
- A process evaluation of a move towards corporate working in Derby[49]. No data are presented that can be related to outcomes for children or families.
- An unpublished evaluation of the introduction of a corporate caseload in Glasgow. The main findings were that corporate working appeared to be very stressful and did not improve quality of client service or increase public health nursing activity.

In summary, the only document reporting an evaluation of the effect of corporate working on clients suggests that it is more likely to cause harm than good.

Joint children's service teams

The documentary evidence consists of:

- An interview study of children's services managers in English Children's Trusts[14]. No data are presented on outcomes for children or families although the development of the Trusts was clearly appreciated by the managers.
- A theoretical paper about joint working[19]
- An editorial about integrating children's services[23]
- A theoretical paper about integration of services[33]
- A descriptive paper about the configuration of children's services in Europe[37]
- An evaluation of the process of development of English Children's Trusts[52]. No data are presented on outcomes for children or families, but the process of change was noted to be complex and resource-intensive

In summary, no evidence is presented that the development of joint children's service teams would benefit children or families. Joint team development is however complex and expensive. It is viewed positively by managers.

Skill mix

The documentary evidence consists of:

- An English study of new mothers who did and did not take up the offer of home-visiting support from a community volunteer[3]. 59% did not take up the offer. They were more socially, educationally and economically disadvantaged and lived in more disadvantaged neighbourhoods. Those who received support were more likely to have larger families, no local support network, or had family members with health or mental health problems. Mothers who did not take up the offer of support reported changing their mind, wanting to cope without help and in some cases feeling that the support offered did not meet their specific needs.
- A review published in 2000 of systematic reviews of community nursing[4]. Some of the reviews have relevance to team development:
    - paraprofessionals trained by nutritionists can improve the diet of school-aged children
    - Health visitors are relatively ineffective in testing for vision defects compared with orthoptists.
    - There is insufficient evidence of the effectiveness of health visitors versus any other professions in detecting speech problems.

- A US randomised controlled trial comparing home visitation programmes using nurses and paraprofessionals. Paraprofessional-visited mother-child pairs in which the mother had low psychological resources interacted with one another more responsively than their control-group counterparts. There were no other statistically significant paraprofessional effects. Nurse-visited smokers had greater reductions in smoking from intake to the end of pregnancy than controls; by the study child's second birthday, women visited by nurses had fewer subsequent pregnancies and births; they delayed subsequent pregnancies for longer intervals; and during the second year after the birth of their first child, they worked more than women in the control group. Nurse-visited mother-child pairs interacted with one another more responsively than those in the control group. At 6 months of age, nurse-visited infants, in contrast to their control group counterparts, were less likely to exhibit emotional vulnerability in response to fear stimuli and nurse-visited infants born to women with low psychological resources were less likely to exhibit low emotional vitality in response to joy and anger stimuli. At 21 months, nurse-visited children born to women with low psychological resources were less likely to exhibit language delays; and at 24 months, they exhibited superior mental development than their control-group counterparts.
- A randomised trial of provision of additional intensive support health visiting (SHV) services or community group support (CGS) over and above normal NHS provision to mothers in a deprived area of London[8]. At 12 and 18 months, there was little impact for either intervention on the main outcomes: child injury, maternal smoking or maternal depression. SHV women had different patterns of health service use (with fewer taking their children to the GP) and had less anxious experiences of motherhood than control women. User satisfaction with the SHV intervention was high. Uptake of the CGS intervention was low: 19%, compared with 94% for the SHV intervention.
- A survey of UK health visitors[11] showing that almost half of the respondents work with nursery nurses or junior colleagues. No conclusions are drawn about the benefits or otherwise of this.
- A meta-analysis of US home visitation programmes[24]. Staff type was inconsistently related to effect sizes across outcome groups. For child cognitive outcomes, professional home visitors were associated with higher effect sizes than were non-professional home visitors. No differences were found between performance of professionals and paraprofessionals, even though home visiting programs designed to enhance children's cognitive abilities tend to espouse the paraprofessional as most capable of changing parents' behaviours. In the potential child abuse outcome group, paraprofessionals were associated with higher effect sizes than were professional and non-professional home visitors, providing some support for the notion that individuals who were once themselves helped by home visiting programs are better able to help parents in home visiting programs. This support is weakened, however, by the lack of significant findings across the child cognitive, parenting behaviour, parenting attitudes, and maternal education outcome groups.
- A systematic review of the effectiveness of home visiting[28] to mothers with alcohol or drug problems. The visitors included community health nurses, paediatric nurses, trained counsellors, paraprofessional advocates, midwives and lay African-American women. None of the studies produced any measurable benefit.
- A systematic review and meta-analysis of the effect of home visiting programmes on immunisation uptake[29]. Programmes were not shown to be effective in increasing uptake, regardless of the professional group doing the visits.
- An overview of the evidence base supporting the Triple-P parenting programme[35]. It describes the roles of primary care services as well as child and adolescent mental health service workers in a community-wide parenting programme. While no trial data are presented compared delivery by different professions, the author advocates a flexible approach across professional boundaries.
- A review by David Olds[36] of randomised trials of parenting interventions for infants and toddlers carried out since 2000. Of all of the parenting interventions studied, those that send nurses into the homes of high-risk families, focusing on the improvement of prenatal health, the child's health and development, and parents' own economic self-sufficiency, have the strongest evidentiary foundation. Simply using nurses as home visitors was insufficient to affect important maternal and child outcomes. This conclusion is driven home by a study in which the control group received a minimal dose of traditional public health nursing and a

structured programme produced clinically important outcomes on maternal substance use and childhood injuries. One of the reasons nurses work so well at this phase in the life cycle (beginning during pregnancy or the perinatal period) is that families find nurses valuable. In a Denver trial, families visited by paraprofessionals dropped out of the programme more frequently if they were visited by paraprofessionals and they opened their doors less to paraprofessionals. Given that the differences in programme impact between nurses and paraprofessionals were not explained simply by the amount of programme received, nurses probably carry with them greater persuasive power by virtue of their well-established roles as caring and competent service providers for pregnant women and parents of young children. Simply having nurses deliver the service, however, is insufficient.

- The Nursing for Health report[41] advocates the development of multi-disciplinary networks but does not make any specific recommendations
- The recent English review of health visiting[42] also advocates multi-skilled teamwork but no specific recommendations are made
- The recent draft Scottish Executive review of community nursing[44] also advocates skill mix within geographically-based community nursing teams, but recommends that specialised nursing roles in relation to children are subsumed into a generic approach to nursing.
- Olds' 2004 paper[63] is a follow-up of his 2002 randomised trial[5] comparing nursing and paraprofessional home visiting. Several outcomes are reported as being beneficially affected by nurse visitation but the only statistically significant benefit to mother-child pairs from paraprofessional visits was when the mother had low psychological resources. In this situation, the mother-child dyad interacted more responsively than their control-group counterparts. For most outcomes on which either visitor produced significant effects, the paraprofessionals typically had effects that were about half the size of those produced by nurses.

In summary, uptake of home visiting by nurses is much more likely both to be accepted and to be effective in delivering benefit to families than home visiting by non-nurses. Nurses are less likely to deliver visual and speech screening effectively than some other professionals. Although working in skill mix teams is widespread in the UK, there is a weak evidence base in support of any particular pattern.

Immunisation

The documentary evidence consists of:

- A review published in 2000 of systematic reviews of community nursing[4]. There is weak evidence that health visiting increases the uptake of immunisation and preventive services, especially among socially deprived families
- A survey in NHS Highland[10] demonstrating that HVs were better trained and were more likely to update their knowledge about immunisation than practice nurses.
- A systematic review and meta-analysis of the effect of home visiting programmes (not specifically focussed on immunisation) on immunisation uptake[29]. Programmes were not shown to be effective in increasing uptake.

In summary, health visitors are better trained and more likely to update their knowledge about immunisation than practice nurses. There is some weak evidence that health visiting interventions can increase immunisation uptake rates although home visiting alone does not increase uptake.

RECOMMENDATIONS EMERGING FROM LITERATURE NOT SELECTED BY THE EVIDENCE REVIEW

Using secondary references from the papers cited above, references obtained in the literature search described on page 4, some of the author's own work and some older literature, the key points discussed above are addressed here briefly.

Practice attached Vs geographical working

Even if there were favourable empirical studies directly comparing practice-based and geographical working, which there are not, the recommendations of the Review Report about Hall 4 and immunisation practice together with Wright's recent findings from the Starting Well dataset[53] reveal a great potential danger to Glasgow's children. Wright's paper makes it clear that, even in the context of

an intensive home visiting programme in Glasgow, health visitors are not able to make accurate judgements of the risk to children by the age of 8 weeks. Indeed only 50% of those families who were ever rated as having the highest level of risk had been recorded as such by 13 weeks and it took over 39 weeks to have almost 80% of them identified for the first time. It is therefore crucial for the health visitor to have some means of evaluating the family situation on a continuing basis after 8 weeks. If routine immunisation and child health surveillance contacts are lost, the only source of relevant information until the child enters nursery or day care provision will be the general practitioner. GPs in Glasgow see babies frequently in the first year of life[72;73] and are very likely to know about major difficulties within the family such as mental illness, parental discord or violence (even when not associated with police involvement). General practice is also the repository of all data relating to hospital or Accident and Emergency Department attendance[74]. This can be crucial in, for example, a situation where a child is taken to A&E with repeated minor injuries over a few weeks. In the absence of other 'alarm bells' this is not a situation where GPs would initiate a referral to the Social Work department, but most GPs would discuss the case to an attached HV and an appropriately sensitive way to assess the risk to the child would be planned. If the risk was thought to be significant, a social worker would be contacted at that stage[d]. General practice is the only organisation with knowledge of the wellbeing of almost all children, and the ties between health visiting and practices are, in general, of great value to children[e]. These ties should be strengthened, in line with Nursing for Health[41] recommendations which advocated, for example, shared software systems between community nursing and general practice.

Corporate caseload

All the literature cited above acknowledges that corporate working leads to a loss of continuity of care. The relationship between nurse and patient is without doubt the key to the effectiveness of health visiting interventions. To quote Gow: *"In a synthesis of 14 qualitative studies of nurses experiences of home visits and observation studies (McNaughton 2000[75]) it was found that the nurse-client relationship forms the context of the visit and is built over time. The nursing role is in getting to know the client and offering interventions; the clients role is to make choices based on her perception of the nurse and health needs and that goals or outcomes concern health promotion, enhanced client self worth, self efficacy and decision making and the clients participation in the relationship with the nurse."*

Recent empirical work eliciting the views of nurses both in the UK as a whole[11] and in Glasgow[76] confirms the view that continuity of care is crucial to the effectiveness of community nursing. A recent analysis of randomised trial data from the United States (David Olds, paper in preparation, personal communication 24/8/07) confirms that attrition rates rise markedly in home visitation services following a change of visiting nurse. By contrast, in her defence of corporate caseloads, Houston dismisses the value of continuity of care with a statement defining the characteristics of single caseloads *"Strong personal relationship with clients. Long-term work, no respite from difficult cases can lead to `professional dangerousness.'"* This is reminiscent of the anti-attachment philosophy promoted in the residential settings shown to cause so much damage to children by Barbara Tizard[77] among others.

Continuity of care can indeed sometimes be painful, as Houston suggests. A classic dysfunctional way to reduce this anxiety is through the "collusion of anonymity" described by Balint[78] and elaborated beautifully in relation to nursing by Isabel Menzies in her seminal work "The functioning of social systems as a defence against anxiety"[79]. A far better and more creative way to contain anxiety among professionals is peer support and high quality supervision. One highly effective model advocated by the recent Scottish Infant Mental Health Report[47] is the Solihull approach[7;16;80-82] where health visitors are trained and strongly supported with the aim of improving infant mental health.

It is important to acknowledge that practice-based nurses, at least in Glasgow, already have a strong set of peer relationships, with varying degrees of structure and formality[76]. These peer relationships appear to be crucial in making sense of difficult cases and in reducing occupational stress. Practice attachment with personal caseloads is perfectly compatible with good working relationships between health visitors in a local area.

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[d] The Review Report states *"GPs have reported some difficulties with the current model in accessing the wider children's services teams, such as social work."* The author found this statement rather odd, and has not heard this comment from colleagues except when relating to Social Work Department switchboard operation.

[e] Discussions with GP colleagues have suggested that relationships between geographically-attached HVs and GPs are rarely functional.

Existing informal peer networks are not managed by team leaders and they allow health visitors to operate as autonomous professionals. This system enables HVs to make their own decisions about which families may need services additional to those provided in the universal programme, but with the help of clinically-grounded colleagues. There is a strong risk that a "top-down" approach to the establishment of corporate caseloads with the appointment of team leaders will de-skill the existing professional workforce. It is notable that the only two cited documents reporting empirical data suggesting that corporate working reduces stress[17;18] describe situations in which very small groups of health visitors made autonomous decisions to start to work together. The recent Glasgow report describing an increased level of health visitor stress[59] with corporate caseloads describes a much larger group of health visitors who, presumably, were asked to change to corporate working. During the evaluation the Glasgow participants commented that other HVs would be reluctant to accept a change to corporate working. This echoes the statements of Brocklehurst[21] and Horwath[33] that the workforce must see the benefit of the change if it is to succeed.

Joint children's service teams

We have seen in the discussion above that no empirical data are produced to support the view that joint children's service teams provide benefit to children, families or the community. There is, however, robust evidence that integration in the Sure Start initiative worsens outcomes for the most needy and high-risk families[83]. It is also noteworthy that the Sure Start evaluation found that the most successful programmes are health visitor led: *"The lead agency correlated consistently with the effectiveness of programmes: SSLPs [Sure Start Local Programmes] led by health visitors had better outcomes than programmes led by other agencies. Health led SSLPs resulted in greater involvement by fathers of children aged 9 months than programmes led by local authorities (P = 0.02) and other agencies (P = 0.05); fewer accidents for children aged 36 months than local authority led programmes (P = 0.009); more positive area ratings by mothers of children aged 9 months than local authority led programmes (P = 0.03); and more positive area ratings by mothers of children aged 36 months than programmes led by other agencies (P = 0.02)."* It is possible that the lack of stigma associated with health visiting, compared with local authority social services is a mediator of this effect[84].

None of this is to deny the crucial importance of good communication across agencies – the SNAP research report "Only Connect[84]" describes some of the ways in which communication between health, education and social work services can go wrong and other ways in which it can be made to work well. Acknowledgement of the unique contribution of each of the professions, respect for each others' skills and a strong commitment to inter-professional communication are better guarantors of successful collaboration than forcing professions into jointly managed teams. In particular, the roles of health visiting and social work must be seen as complementary but distinct not only by the professions themselves but also by the public.

Skill mix

Although skill mix is clearly a reality in UK health visiting[11], we have seen above that there is weak evidence in favour of any particular configuration of staff groups. Cowley observes that "*Reducing scheduled home visits did not seem to free up time for practitioners to develop group and community work. Instead, the more home visits that were scheduled, the more likely it seemed that groups would be developed, usually with the assistance of junior colleagues. Programmes using paraprofessionals have proved less effective than those delivered by professionals, so the effect of this substitution needs evaluation."*

It should be noted in passing that the Review Report appears to advocate a merging of school nursing and health visiting services. The functions of these two professions are quite distinct at present and there is evidence of a substantial difference in the type of problems they deal with[84;85]. In line with the comment made above about joint children's service teams, communication across the professions is clearly crucial but it is not clear whether any benefit to children would result from a merger.

Immunisation

While it is undoubtedly true that "*giving the immunisation injections does not require the specialist skills and training of a health visitor*" the review document appears to ignore two crucial benefits of health visitors delivering immunisations – continuity of contact with families and the opportunity to evaluate and support parent-child relationships.

The crucial nature of continuity of care is discussed above in the section on corporate caseloads. Contact between parents and health visitors in Glasgow is currently routine practice at 2, 3, 4, 12, 13 and 40-60 months. Even though the mechanical task of giving the injection does not require

enormous skill, parents often use the contact as a setting in which to raise concerns – and in a busy clinic the health visitor is likely to arrange a further contact if this should happen[76].

Perhaps of greater potential value is the opportunity afforded by immunisation to observe parent-child attachment patterns. Attachment systems are activated in stressful situations and can only be assessed by careful observation of the child's reaction to stress and the carer's capacity to help the child moderate his or her discomfort. Infant immunisation offers an opportunity to observe attachment behaviours. Because insecure attachment is a powerful predictor both of psychopathology in later life and of more general difficulties in social integration, there is a strong argument both for training of health visitors in its assessment (there is great enthusiasm for such training[76]) and for adequate time to be made available in immunisation sessions for assessment to be performed.

Finally, Kendrick's meta-analysis[29], while supporting the view that home visits do not in themselves increase immunisation uptake rates, does suggest that the offer of home immunisation to defaulters might be beneficial in increasing uptake rates.

CONCLUSIONS

The recommendations made in the Review Report concerning the relationship of health visiting to primary care teams are not supported by the evidence presented in the Evidence Review or the documents available on the Review website. Review of this evidence together with additional published work leads to the following recommendations:

- Health visitors should maintain their practice attachment and further improvements in communication between health visitors and the primary care team should be encouraged.
- Health visitors should continue to hold personal caseloads, but be supported by strong peer relationships and good quality supervision like that provided in the Solihull approach
- Health visitors should maintain a clear identification with the health service
- The skill mix in health visiting services should be developed, but in the context of rigorous evaluation of benefits to clients
- Health Visitors should continue to give immunisation injections in practices. Immunisation consultations should be longer in order to allow health visitors to evaluate parent-child relationships and to offer support to families

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