A funding model for health visiting: baseline requirements – part 1

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Abstract
A funding model proposed in two papers will outline the health visiting resource, including team skill mix, required to deliver the recommended approach of 'progressive universalism,' taking account of health inequalities, best evidence and impact on outcomes that might be anticipated. The model has been discussed as far as possible across the professional networks of both the Community Practitioners' and Health Visitors' Association (CPHVA) and United Kingdom Public Health Association (UKPHA), and is a consensus statement agreed by all who have participated.

Key words
Funding model, service organisation, health visiting, universal service

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Background

Health visitors have used both home visiting and community outreach as the 'twin pillars of practice',[1] in a service delivered to all families with a new baby since long before the advent of the NHS.[2] zzThis starting point for the service has been shown to be well-founded.

Early child development (internationally defined as 0-8 year's old), long acknowledged as key to later health, has recently been acknowledged as a social determinant of health and health inequalities.[3]

The importance of the family and community within which children grow shapes their health and early development, showing measurable differences through school age and into later life.[3,4]

In line with this observation, a meta-analysis of preventive programmes has shown that a multi-component, strengths-based approach to service delivery, involving both home visiting and group or community-based activities, is most effective at improving family well-being and reducing child maltreatment.[5]

Health visitors commonly use their contacts with all families who have a new baby as a base from which to reach out to a wider community, and to a range of ages and vulnerable groups.[6] This approach, intended to influence the wider context in which children develop, as well as reaching out to vulnerable individuals, has been threatened by reductions in staff numbers.[6] Importantly, too, discussions about the need for a universally available service have polarised opinions. As shown in Box 1, many argue that the public health case for universality is clear,[7,8] but the up-front costs may appear prohibitive. Also, economic studies are few and far between, mainly based on American intensive home visiting programmes.

A major analysis by the Rand Corporation in 2005 emphasised the greater gains from programmes targeted at deprived populations,[9] but still identified a net cost-benefit to society from universally delivered programmes.

These authors suggest that a universal programme, specifically designed to meet the needs of a general population, could have an equally high cost-benefit ratio, equivalent to that found for the targeted programmes.

Although health visiting services have developed to meet the needs of a general population, they have not been well specified, nor usually designed as specific programmes, which causes difficulties for commissioners and for research.

The Cabinet Office Social Exclusion Taskforce (SETF)[14] describes the principles that should underpin all family support, including the notion of 'progressive univer-

Box 1. Why a universal service?

Epidemiology
A large number of people exposed to a small risk may generate many more cases than a small number exposed to a high risk.[10]

Economics
In the Nurse-Family Partnership home visiting program,[11] the return for each dollar invested was $5.70 for the higher-risk population, but only $1.26 for the lower-risk population.[9]
The net benefits for society as a whole in universal pre-school studies are estimated to be positive, and the corresponding benefit-cost ratios exceed 1.[9]
A universal program may be less costly to administer because there is no requirement to determine eligibility.[12]

Acceptability
Universal programs avoid the potential stigma associated with targeted programs and may receive broader support.[9]
Universal health visiting services are well established, widely accepted and wanted by service users.[13]

Box 2. The government's approach to family support[14,16]

Effective services that support children and families should follow three principles

Rights and responsibilities

- While parents have primary responsibility for the outcomes of their children, there is a growing acknowledgement that parents have a right to support from government to help them meet their responsibilities
- All families are entitled to high quality public services, which complement the role of parents and the community in supporting children.

Progressive universalism

- The government's approach is to offer extra support for some families within a universal framework of support for all parents, in line with the principle of progressive universalism.
- All parents should receive support at certain points, and at key transitions such as birth and the first year of a child's life, with the greatest level of support and intervention for those who need it most, for example, families living in challenging circumstances
- Government should provide support for all and more support for those with greater need, delivered through personalised, integrated services and a skilled workforce
- Before the start of school, health is the primary universal service for families and children.

Prevention

- Supporting parents from the start to reinforce positive parenting styles and early learning that underpin good outcomes for children.
- All universal services should have a strong preventative element and there also needs to be dedicated preventative services for specific groups.

salism' which assumes that some support is offered to all families where there is a new baby, with more for those in greater need (see Box 2).

The SETF planned to develop commissioning guidance to encourage the spread of best practice nationally, and the health visiting review[15] also recommended that this should happen.

A funding model is proposed in two papers, to provide interim guidance until the wider research required to underpin these promised government directives is complete.

This paper concentrates on funding required for a service for families with new babies and the first year of life. Practical implications, anticipated impact, policy priorities and the wider service issues are addressed in the second paper.

Developing the model

A universal service at three levels

Box 3. Levels of prevention[17,18]

1. Universal prevention is defined as those interventions that are targeted at the general public or to a whole population group that has not been identified on the basis of increased risk. This is the basis for providing 'support for all' through a universal health visiting service, as part of progressive universalism.
2. Selective prevention targets individuals or subgroups of the population whose risk of developing a disorder is significantly higher than average, as evidenced by biological, psychological or social risk factors. A service based on progressive universalism will provide additional, proactive support in areas of multiple deprivation, possibly through dedicated, specialist provision for high-risk populations.
3. Indicated prevention targets high-risk people who are identified as having minimal but detectable signs or symptoms indicating predisposition for disorder, but who do not meet diagnostic criteria for disorder at that time. This is the progressive element of 'more support for those who need more.' Once individuals or families have been assessed as having specific needs, they will be offered extra health visiting services (i.e., above the basic, universal provision) focused on those specific needs.

The funding model is designed to take account of different levels of need, of evidence about which approaches are known to work, of policy expectations and professional knowledge about feasibility and best practice.

Taken together, these lead to a model for calculating how much staff time is needed, and some idea of the anticipated impact of the service. The funding model is neither a basic minimum, nor a protocol for service delivery. Instead, it aims to provide a way to calculate the amount of staff time required to deliver this service, based on normative assumptions about needs and local priorities (what needs doing?), evidence of effectiveness and existing policy guidance (how should it be done?) and skills and knowledge to deliver the service (who should do it?). The notion of 'progressive universalism' is translated into a model of service provision that operates at three levels of prevention: universal, indicated and selective.[17,18] See Box 3.

A service based on need

The funding model is based on assessments of need carried out at two levels: first at an area level, then implemented flexibly to take into account professional assessments made in partnership with clients at an individual and family level (see Box 4).

The combination of 'top-down' (area-based) and 'bottom-up' (individual and family) needs assessments is seen as an ideal mechanism for improving health and health inequalities.[19]

The funding model is based on three assumptions.

The first is that average levels of need can be predicted at an area level with some degree of accuracy, using known indicators of deprivation and family need.[6,20,21]

Second, it is assumed that needs vary within areas, so services will need to vary according to individual/family assessments.

Third, it is assumed that the number of families requiring greater than average service provision will approximate to those needing less than average. These assumptions mean the model allows both flexibility and sufficient precision to ensure enough staff time to meet the needs.

Assessing the level of 'anticipated need' within a local area provides a basis for varying the intensity of universal service according to the extent of deprivation, both within and between Primary Care Trusts. The Index of Multiple Deprivation (IMD 2004)[25]

Box 4. Needs assessed at two levels

1. An assessment of the extent of need within an area gives the overall level of service provision required, eg:

a. Greater provision is needed in areas of deprivation[5]

- Families living in poverty or need require around twice as much health visiting time as those in affluent areas and up to seven times as many other services (so it is not only health visiting provision that is needed)[22]
- Data from the Family and Children Survey show key 'family disadvantage' indicators, associated with far worse outcomes for children, and concentrated in areas of deprivation.[4]

b. Services for children may be limited, eg:

- Where a high elderly population uses the majority of NHS and social services funding-
- Where services are not deemed widely necessary (eg, no Sure Start or local area development programmes)
- 'Referral on' is not always possible in these places, so health visiting services may need a proportionately greater capacity than where wider services are available.

c. Specialist services may be needed for vulnerable population groups not reached by universal services, eg, asylum seekers, homeless populations, travellers.

2. The service is implemented flexibly following an individual, personalised assessment of need for each family, based on partnership and professional judgement, because:

- Most families in need do not live in areas of marked deprivation
- Many health needs arise across the social gradient, eg, domestic violence, children with special/complex needs, postnatal depression
- Need for support varies across time; it may be more or less than predicted for short periods.
- Assessments carried out in partnership with clients (families, children and parents)[23,24] provide the basis for a strengths-based, empowerment approach to service delivery, which leads to the best outcomes.[5]

Figure 1. Family disadvantage

Percentage of families experiencing indicators of family disadvantage (mid-range) by area deprivation (IMD score). Adapted from Family and Children Survey data in 'Think Family'[4]

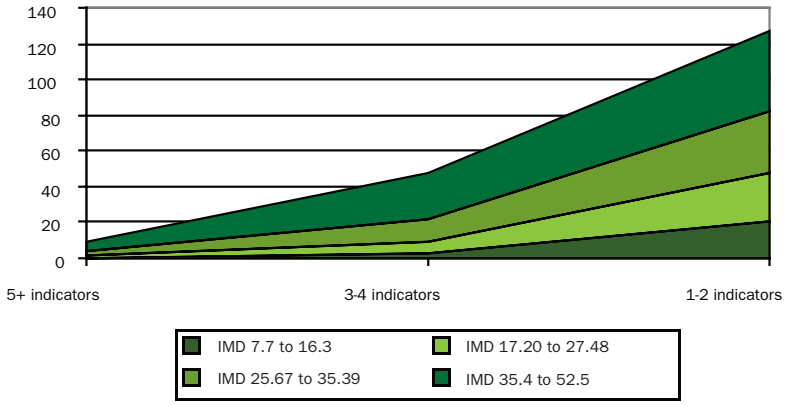

Table 1. Family disadvantage and areas of deprivation

Group	Family disadvantage indicators by Index of Multiple Deprivation (IMD) scores		5+ indicators (mid-range)	3-4 indicators (mid-range)	1-2 indicators (mid-range)
A	IMD 35.4 to 52.5	Most deprived 10%	5.5%	26%	45%
B	IMD 25.67 to 35.69	70-90th centiles	2.9%	13%	35%
C	IMD 17.20 to 27.46	40-60th centiles	0.6%	6.6%	27.4%
D	IMD 7.7 to 16.3	Least deprived 30%	0.5%	2.4%	20%

provides a link to the extent of family disadvantage to be expected. The seven key indicators of family disadvantage are:

- Neither parent is in work
- Family lives in poor quality or overcrowded housing
- No parent has qualifications
- Mother has mental health problems
- At least one parent has longstanding limiting illness, disability or infirmity
- Family has low income below 60% of median
- Family cannot afford a number of food or clothing items.[5]

At least one of these is experienced by around 76% of families living in deprived areas, and up to 26% of families in areas of advantage. See Figure 1. A marked increase in negative outcomes occurs in the presence of even one or two indicators of family disadvantage.

Families experiencing five or more disadvantages are concentrated in the 10% most deprived areas, and their children are at high risk of adverse long term outcomes. In these situations, not only health visiting, but a wide range of other child and family support services are needed.

Individualised assessment is needed as well, because family disadvantage indicators occur disproportionately in certain vulnerable groups such as young and/or single parents, some minority ethnic groups and larger families, who may reside in areas of relative affluence.

A universal service based on evidence

There is a vast literature and range of evidence about which interventions best support needs arising during infancy and early parenthood.

There is wide agreement about the value of promoting healthy early child development, providing support to new parents and offering early interventions as soon as possible, after risks are identified.[3,9,20,21,26]

This international evidence needs, urgently, to be systematically collated and reviewed along with the British literature, to identify the best ways of organising a universal service for all parents with infants and pre-school children.

Until such a study is funded and available, information is drawn from three selected research papers[5,6,27] which, in combination with professional knowledge and experience, provide a firm basis for the recommendations included here. Box 5 summarises the rationale for selecting these particular papers.

Box 5. Rationale for selected studies

Macleod J and Nelson G[5]

1. Review and meta-analysis of 56 pre-school programmes, including but not limited to home visiting
2. Includes both family wellness and child maltreatment
3. Includes programmes of universal, selective and indicated prevention

Bull J, McCormick G, Swann C, Mulvihill C[27]

1. Review of nine international reviews
2. Includes Cochrane reviews, meta-analyses and systematic reviews
3. British-based analysis of the literature

Cowley S, Caan W, Dowling S, Weir H[6]

1. National (UK-wide) survey of 1,459 health visitors (response 46%) about service organisation and implementation in 2005
2. Identifies feasibility and perceived impact of visiting frequency and skill mix.

The collected evidence in the two review papers[5,27] shows a wide range of different approaches to service delivery, with home visiting as a key focus.

No exact prescription for the intensity and duration of home visiting programmes was found within this evidence, but some key themes run throughout. The best results accrue from delivering a multi-component programme, with a minimum of 12 home visits over a period of 6-12 months.

A strengths-based, empowerment approach shows better results, as does including families from a mixture of socio-economic groups, rather than low-income groups only. A comprehensive approach, in which the multiple needs of families are addressed, shows better results than programmes with a more restricted focus.

The national survey of service organisation identified that a multi-faceted model of health visiting service delivery, spread over a period of more than six months, is already in place in parts of the United Kingdom.[6]

This 'comprehensive service' included routinely offering up to six home visits (at least one antenatally, one between 10 and 14 days after the baby's birth and one to four further visits over the next four to six months), invitations to well baby clinics and various group or community activities, such as parenting support or baby massage groups.

Health visitors providing a minimum of six visits, along with group and clinic contacts, considered this was sufficient to meet the needs of most of the families on their caseload.[6] If delivered as a universal, preventive service, therefore, it is likely to reduce the need for 'extra health visiting' to those assessed as having specific health needs (ie, indicated prevention, discussed below), but will provide a platform from which these needs can be identified.

Further, this kind of programme meets the main requirements for promoting family wellness and preventing child abuse, according to the research cited above.[5,27] It is used as a basis for developing the funding model.

A central tenet of this model is flexible service delivery according to need, including need for health promotion. If too few contacts are made, the service will not meet the requirements for effectiveness identified in the research, which is analogous to providing medication at a sub-therapeutic level.

Reducing the universal service below the specified minimum is likely to lead to dissatisfaction on the part of parents whose risks may be low, but who nevertheless have self-expressed needs.[28,29] It also reduces the likelihood of the universal service meeting the majority of needs in an area, so additional costs will be incurred in providing extra health visiting or other services.[6]

The funding model

Universal prevention

The model allows time for all families with a new baby to receive a health visiting service, with the basis of that service varying according to levels of deprivation. Bearing in mind information about evidence of what works in promoting family wellness, as outlined above, and the spread of family disadvantage factors across different levels of deprivation, four different levels of universal service are proposed (Table 2).

Within a single primary care trust or

Table 2. Service funding according to deprivation level, to age 1 year

Group	Family disadvantage indicators by index of multiple deprivation (IMD) scores		Funded number of home visits	Contacts at base (group or clinic)	Assumed hours of service received by family	Hours of staff time required (without administrative or travelling time etc)
A	IMD 35.4 to 52.5	Most deprived 10%	14	12	25	20
B	IMD 25.67 to 35.69	70-90th centiles	10	12	21	12
C	IMD 17.20 to 27.46	40-60th centiles	7	12	18	10
D	IMD 7.7 to 16.3	Least deprived 30%	4	8	12	8

commissioning area, it is likely that there are variations in deprivation, so the service level will vary somewhat within, as well as between Trusts.

However, the basic tenets should be universally consistent to meet the requirements of evidence (at least 12 contacts over a period exceeding six months, in the context of a multi-component, strengths-based service[5]), of policy expectations and guidance, and to allow individual assessment of needs through a partnership between the family and health visitor.

The information needed to calculate how much staff time is needed to deliver a universal service per infant is illustrated in Table 3 for the median area of deprivation (ie in the 40th-60th centiles) where some 35% of families experience at least one indicator of family disadvantage. This number should then be multiplied by the number of births in an area, before taking other service factors into account.

The assumed frequency of the visits should be varied according to the extent of deprivation within an area, and calculations made accordingly. The amount of time in each visit is flexible; for example, a shorter antenatal visit may mean that the new birth visit is correspondingly longer.

Box 7. Time needed for indicated prevention

1. Time for safeguarding/child protection; bearing in mind that much health visiting time is focused on the 'grey areas' (ie, families of concern/children in need); this may exceed the time needed for those registered with social services as being at risk of significant harm.[30]
2. Postnatal depression: anticipate identifying this in around 10-15% of parturient women and allow time for at least six to eight 'listening visits';[31] more in deprived areas.
3. Parenting and child mental health support: eg, through European Early Promotion Project[32] or other evidence based approaches.
4. Sleep, behaviour groups/clinics: cost of running groups, supervision and additional support where behavioural concerns/early indications of child mental health problems are high (eg Tier 2 CAMHS support); cost of suitable rooms for group to meet.
5. Feeding/nutrition advice: specified interventions, eg for childhood obesity (NICE guidelines).
6. Additional support for disability/children with complex needs. One in 20 children under 16 years' old is disabled; increasing numbers of children with complex needs.[33]
7. Other mental health issues: parent and/or child. Autistic Spectrum Disorders affect around 60 children in 10,000 under eight years old; other mental health issues in young children are far more common than previously realised.[34]
8. Domestic abuse/interpersonal violence and relationship support.
9. Primary healthcare/quick access clinics for 'normal illness,' spots and rashes etc.
10. On call ('duty') systems for improved accessibility.

Box 6. Anticipated impact of universal prevention

1. Promotes family wellness: key evidence-based criteria – allows 12+ contacts, including around six home visits; multi-faceted programme delivered over 12 months

2. Child Health Promotion Programme:
   a. 'Being healthy' (*Every Child Matters* (ECM)), immunisation
   b. Key milestones – identify, promote health and development
   c. Early interventions: assess indicated needs; prevention and anticipation (n.b. increase in prematurity, multiple births, special and complex needs, identified and unidentified disabilities)

3. Promotes perinatal mental health and forward planning beyond one year
   a. PND/maternal depression (assessment antenatally and at eight-week visit – NICE guidance)
   b. Parenting styles and attachment (assess/support, eg Braselton assessment)
   c. Mentally healthy children and family; 'make a positive contribution' (ECM)
   d. Promote positive parenting; groups and home visits
   e. Promotion of positive inter-parental relationships (One plus One)[34]
   f. Promotion of physical activity to promote mental health (NICE)

4. Promote physical well-being:
   a. Promote healthy choices (ECM; *Choosing health*); 'facilitate health enhancing activities'
   b. 'Healthy Start' – breastfeeding; nutrition/diet; prevention obesity; family food and diet; (NICE guidance)
   c. Smoking, drugs etc
   d. Promote safety/reduce accidents: staying safe (ECM)

5. Promote social well-being
   a. 'Enjoy and achieve' (ECM)
   b. Early learning; Bookstart, physical activity, finance (advice to parents re: benefits etc)
   c. School readiness
   d. Liaison with social services, local authority re: housing, facilities for children and young people

Except in the most deprived 40% of areas, evidence that at least 12 home visits are required during the first year[5,27] has been interpreted in the light of feasibility and professional knowledge that a similar number of contacts spread between the client's home and the centre or base might suffice. Also, the baselines suggested in the model are intended as a guide for funding purposes, but service delivery should take account of individual professional judgement[23] and assessment of health needs,[24] so that services can be personalised.

The level of contact provides an opportunity for delivery of a strengths-based service that promotes resilience, as well as incorporating specified, embedded programmes. (See Box 6.)

Home visiting is needed to enable the kind of professional/client relationship that supports full partnership and a meaningful assessment of health needs, for example using the Family Partnership model,[24] or a similar evidence based approach.

A comprehensive assessment of needs is integral to the universal service, which allows delivery of additional services to meet any indicated needs identified this way.

The universal service alone should not be expected to meet the needs of the most excluded and deprived populations, for whom additional, selective prevention (e.g. intensive home visiting, specialist health

Table 3. Calculating service costs per infant (example)

Deprivation group C (see tables 1-2) IMD 17.20 to 27.46	Example timetable/type of service delivery	Hours of service received by client	Hours of staff time needed to deliver
Home visits: Exact timing of visit and time taken for each will vary according to individual assessment of family needs, birth order, local factors (other services, distances) etc	Antenatal 90 minutes New birth visit 40 minutes New birth follow-up 30 minutes 6-8 weeks 30 minutes 4-6 months 40 minutes 7-9 months 40 minutes 1 year 30 minutes	5 hours	5 hours + travelling and administrative time (5-10 hours, depending on area)
Group contacts: Through community or centre-based provision eg post-natal or parenting support, baby massage, breastfeeding peer support etc. Exact type of collective provision tailored to area need	Offer of two different types of group, each running (for example) for 6 weeks, 1 hour each week 12 x 1 hour sessions	12 hours	Assume 6 clients per group and 2 staff members (eg, one health visitor, one nursery nurse or support worker) 24 hours staff time divided by 6 clients = 4 hours per client Funding for cost of rooms to hold events, soft drinks etc for clients.
Well baby clinics: and 'on call' availability by telephone at specified times of day	Assumed attendance 4-6 times through first year; roughly 10 minutes per visit (more if less group provision is available)	1 hour	Assumes clinic time is all used in seeing clients. 1 hour + travelling and administrative time Funding for clinic space and equipment.
		18 hours	10 hours, plus administrative and travelling time

visitor for asylum seekers/travellers etc) would be needed. The funding model needs to include both indicated and selective prevention; these are discussed below.

Extra health visiting: Indicated prevention

Where universal prevention (above) is fully funded, it is likely that the amount of additional support will be less than if a more restricted programme is offered, although there will be some needs for which extra health visiting time is needed. A more restricted service than set out above is likely to lead to a need for far more additional time to provide services for indicated prevention (that is, where early needs have been identified), because needs will be identified later, so require more time. In areas of multiple deprivation, time for both the comprehensive programme and extra health visiting is needed. Specific issues to include, along with any key needs identified in the local area, are included in Box 7.

Selective prevention

The needs of very disadvantaged families cannot be met by health visiting services alone, and planning across the children's services is essential.

Specific funding may be available, for example to follow Olds' intensive home visiting scheme,[11] or for Sure Start Local Programmes. However, for disadvantaged families resident in middle class areas, the generic funding model should make an allowance for these particular needs.

Special efforts are needed to ensure that services are tailored to those least likely to seek them out for themselves, for example:

- Young (teenage) mothers
- Homeless families
- Asylum seekers
- Minority ethnic groups, especially needing interpreters
- Looked after children
- Those in refuges/domestic violence
- Parents with learning difficulties
- Travellers.

Engaging specialist health visitors as part of the team is known to work well in meeting such needs, particularly where the size of the vulnerable population is large enough to justify a dedicated position.

Alternatively, where there are pockets of deprivation or circumscribed areas of need within the locality, health visitors covering a smaller generic caseload can take on additional responsibilities for specialist needs.

Conclusion

Both more research and wider discussions are needed to establish a firm basis for commissioning health visiting services.

Hopefully, these will be forthcoming from government sources, as promised.[14,15] In the meantime, this paper is a professional consensus statement that starts to set out what is needed according to immediately available research.

Part two

A second paper, to be published next month will concentrate on anticipated outcomes and policy expectations from the service, along with some implementation issues. Together, the papers provide a robust interim statement about how services should be organised and funded, to achieve best practice in meeting health needs and reducing health inequalities for the youngest and most vulnerable members of the population.

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