Does universal access to assessment of need have an impact on child health and development inequalities: A brief scope of the literature

Compiled by Hannah Shaw, Principal Evidence and Knowledge Analyst and Dr Kirsty Little, Consultant in Public Health, Public Health Wales. June 2022

This document outlines a brief overview of the findings of a scoping search conducted by the Evidence Service within Public Health Wales to identify sources relevant to identifying if universal access to assessment of need has an impact on child health and development inequalities, with a focus on more formal social needs assessments conducted by health visitors if possible.

Initial scoping explored universal access to assessment of need (or a referral mechanism) and its impact on child health and development. Initial scoping was supplemented by a more specific search looking at literature exploring universal access to assessment of need to a speech, language and communication services as this is one aspect of enhanced health visitor services.

Review question	
Does universal access to assessment of need impact child health and development inequalities? *Or* *Does universal access to assessment of need to speech, language and communications services impact child health and development inequalities?*	
Participants	Pre-school aged children (aged 0 to 5 years old)
Intervention / exposure	Universal assessment of need (in relation to child health and development)
Comparison	Usual care
Outcomes	Impact on child health and development Reduction/impact on child health inequalities

Other Study Considerations
Publication date: no limit Systematic reviews/literature reviews/reports

- **Where did you search?**

Resource	Success or relevancy of th retrieval
Cochrane Library (basic search) https://www.cochranelibrary.com/cdsr/reviews	Searched, nothing found
NICE (basic search) https://www.nice.org.uk/guidance	Searched, results found
Medline (basic search) https://dialog.proquest.com/professional/medlineprof?accountid=16678	Searched, results found
Google Scholar (basic search) https://scholar.google.com/	Searched, results found
Early Intervention Foundation (basic search) https://www.eif.org.uk	Searched, results found

Snowballing of identified secondary sources was also undertaken.

- **What terms did you use?**
  - An initial search was conducted using a combination of the following terms:
    - universal access
    - assessment of need
    - child health OR child development
    - health inequalities
  - A second search was also conducted in Medline and Google Scholar using a combination of the following terms:
    - assessment of need
    - systematic review
    - health inequalities

In addition to the broad search terms searches, a more specific search was conducted in Medline on 07/06/22 using the following search strategy:

Set	Terms
1	((Exp Child/) OR (Exp Infant) OR ((neonat* or infan* or pre-schooler* or pre-schooler* or under-five* or p?ediatric*)))
2	(Exp child health services/ or program* or intervention*)
3	(health inequities) OR (reduce inequalities) OR (inequalities)
4	1 AND 2 AND 3

- **Summary of articles relevant to your topic?**

There appears to be very limited evidence relevant to this question. The searches conducted in Medline and Google Scholar outlined a very limited number of potentially relevant systematic reviews. Using the term 'needs assessment' in the search strategy appeared to create a lot of 'noise', so was removed from this more in-depth search. The more in-depth Medline search returned 1,901 hits, 56 of which were systematic reviews. However, articles that initially appeared potentially relevant were generally focussed on low- and middle-income countries, often looked specifically at maternal or new mother interventions or looking at inequalities in terms of the coverage of a programme (for example a vaccination programme). Those that may be relevant to the Welsh context (high-income countries) were mostly looking at parental outcomes rather than child outcomes or not directly relevant to inequalities or assessment of need.

During preliminary discussions with stakeholders, one reference was identified as relevant (Wood, 2012). An overview of this primary study is available in table 1. Citation tracking of this study was performed using the Google Scholar function in an attempt to identify further relevant work. Wood (2012) had been cited by 22 papers, but unfortunately, none were relevant to this scoping question.

Five systematic reviews were included in the data extraction table (table 1) and five primary studies included as potentially relevant to the question. Usually scoping would focus on secondary evidence around a topic, but an additional search that included primary research was undertaken in order to ensure any relevant evidence was identified.

Of the five systematic reviews, one doctoral research project looking at the design and implantation of a multisectoral home visiting intervention in Sweden (Barnoza, 2022) was included. Although, not a systematic review, this was linked to several published articles (highlighted in table 1) which may be of interest. Two of the systematic reviews focussed on universal interventions, two targeted disadvantaged families and one looked at a universal, targeted and proportionate universalism interventions (Morrison, 2014). Very few appeared to include elements of referral or assessment of need.

The five primary studies were conducted in Australia, Canada, USA and two from UK. Outcomes included probabilities of being taken into care and receiving immunisations, reading, maternal smoking, child abuse and neglect, births to single women, and low-income women and increasing access to or coverage of services.

- **List any reviews you found with a link to the full text if available**

Potentially relevant or interesting sources identified in the search have been outlined in table 1 and a link to the source is provided. These have been categorised into secondary evidence and primary studies.

Please note, no quality appraisal has been undertaken so the Evidence Service cannot comment on the methodological quality of sources outlined in table 1. If any paper is to be utilised, please conduct a quality assessment and consider the generalisability of findings to your context.

Table 1: Secondary sources of interest identified

Systematic reviews

Reference	Aim/Question	Abstract or summary	Comments
Barnoza (2022) Home visiting for a better start in life: Studies of an intervention to promote health equity in a socioeconomically disadvantaged area of Sweden. Openarchive.Ki.se https://openarchive.ki.se/xmlui/bitstream/handle/10616/47891/Thesis_Madelene_Barboza.pdf?sequence=1&isAllowed=y	The aim of this doctoral research project was to increase knowledge on the design and implementation of a multisectoral, early childhood home visiting intervention, developed to promote health equity in a socioeconomically disadvantaged setting in Sweden.	Qualitative research methods were applied to produce an initial mapping of the intervention, along with semi-structured interviews with managers and other key actors to create a final version of core components and programme theory of the intervention. The study findings included the identification of five pathways from different situations of low control in the families' lives, that could negatively affect the health and wellbeing of parents and children, and cause health inequities. They regarded instability and insecurity, such as financial and housing; crowded and poor housing conditions; social isolation; restricted access to services; and experiences of segregation. The event of the Covid-19 pandemic was observed to have added negative influence over the families in multiple ways. Persons interviewed considered that the intervention had capacity to create better conditions towards health equity, but also recognised the influence of structural determinants. The intervention was understood to be one part of a larger systemic effort needed to reduce the health gap.	There appears to be a number of published articles linked to this work: Barboza et al. (2022) Towards health equity: Core components of an extended home visiting intervention in disadvantaged areas of Sweden. BMC Public Health. 22 (1091) https://bmcpublichealth.biomedcentral.com/articles/10.1186/s12889-022-13492-3 Barboza et al (2021) Contributions of Preventive Social Services in Early Childhood Home Visiting in a Disadvantaged Area of Sweden: The Practice of the Parental Advisor. Qual Health Res. 1049732321994538-.https://journals.sagepub.com/doi/10.1177/1049732321994538 Barboza et al. (2018) A better start for health equity? Qualitative content analysis of

			implementation of extended postnatal home visiting in a disadvantaged area in Sweden. Int J Equity Health. Apr 10;17(1):42. https://pubmed.ncbi.nlm.nih.gov/29636071/
Meyrick (2016) A systematic review of the effectiveness of universal health visitor-led child health clinics. Journal of Health visiting. 4 (9). pp. 462-471. ISSN 2050-8719 Available from: http://eprints.uwe.ac.uk/29031	This systematic review was undertaken to assess how effectively health visitor led child health clinics ('baby clinics') contribute to the promotion of pre-school child health and the reduction of health inequalities.	Despite the widespread presence of baby clinics across the UK, there is little published research about the service model, its purpose or effectiveness. Thematic analysis was used to organise and interpret the data of 24 included studies. Although the review presents a synthesis of research over the last 30 years, there is a lack of evaluative research about the structure, process and outcomes of baby clinics, which makes it impossible to draw any conclusions about the effectiveness of the service offer. Findings suggest research on the value and purpose of baby clinics is now needed and whilst good evaluation studies with clear outcome measures are sought, it is clear that the theoretical processes through which positive outcomes are promoted need to be established first.	Included studies may be of interest
Molloy et al. (2021) Systematic Review: Effects of sustained nurse home visiting programs for disadvantaged mothers and children. JAN. 77:147-161. https://onlinelibrary.wiley.com/doi/epdf/10.1111/jan.14576	To systematically evaluate published experimental studies of sustained nurse home visiting (SNHV) programs. This review summarizes the evidence and identifies gaps in the literature to inform practice, policy, and future research.	**Results:** From the 30 include studies, seven specific SNHV programs were identified. Each demonstrated evidence of a positive statistical effect on at least one child or maternal outcome. **Conclusion:** Sustained nurse home visiting programs benefit disadvantaged families, though effects vary across outcomes and subgroups. Further research is needed to discern the critical components of effective programs.	This may not be looking at Health Visitors as such and very few of the included programmes included referral
Morrison et al (2014) Systematic review of parenting interventions in European countries	The objective of this systematic review was to identify interventions during early childhood in countries from the World Health	**Methods:** A systematic review was carried out adhering to the PRISMA guidelines using an electronic search strategy in PubMed and the International Bibliography of the Social Sciences [IBSS] databases. A further search was performed in the grey literature. Interventions were included only if they	

aiming to reduce social inequalities in children's health and development. BMC Public Health. 14 (1040). https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4203958/pdf/12889_2014_Article_7165.pdf	Organisation European Region in 1999–2013 which reduced inequalities in children's health and development	were aimed at children or their parents and had been evaluated. **Results:** The review identified 23 universal, targeted and proportionate universalism interventions, programs and services in total. All but 1 intervention-delivered in Sweden-were carried out in the United Kingdom and the Republic of Ireland. These aimed to improve parenting abilities, but also had additional components such as: day-care provision, improving housing conditions and speech or psychological therapies. Programmes offering intensive support, information and home visits using a psycho-educational approach and aimed at developing parent's and children's skills showed more favourable outcomes. These were parenting behaviours, overall children's health and higher level of fine motor skills and cognitive functioning. Child injuries and abuse were also reduced. Two interventions were universally proportionate and all others were aimed at a specific target population. **Conclusions:** Interventions with better outcomes and a higher level of evidence combined workshops and educational programmes for both parents and children beginning during early pregnancy and included home visits by specialised staff. Further evaluation and publication of early years interventions should be carried out also within a wider range of countries than just the UK and Ireland	
Peacock et al. (2013) Effectiveness of home visiting programs on child outcomes: a systematic review. BMC Public Health. 13 (17). http://www.biomedcentral.com/1471-2458/13/17	The purpose of this paper is to systematically review the effectiveness of paraprofessional home-visiting programs on developmental and health outcomes of young children from disadvantaged families.	**Results**: Twenty-one studies that scored 13 or greater out of a total of 15 on the validity tool are the focus of this review. All studies were randomized controlled trials and most were conducted in the United States. Significant improvements to the development and health of young children as a result of a home-visiting program were noted for particular groups. These included: (a) prevention of child abuse in some cases, particularly when the intervention is initiated prenatally; (b) developmental benefits in relation to cognition and problem behaviours, and less consistently with language skills; and (c) reduced incidence of low birth weights and health problems in older children, and increased incidence of appropriate weight gain in early childhood. However, overall home-	

		visiting programs are limited in improving the lives of socially high-risk children who live in disadvantaged families. **Conclusions:** Home visitation by paraprofessionals is an intervention that holds promise for socially high-risk families with young children. Initiating the intervention prenatally and increasing the number of visits improves development and health outcomes for particular groups of children. Future studies should consider what dose of the intervention is most beneficial and address retention issues.	
Primary Studies/ Evaluations			
Reference	**Aim/Question**	**Abstract**	**Comments**
Chartier et al. (2017) Families First Home Visiting programme reduces population-level child health and social inequities. Journal of Epidemiology and Community Health. 72: 1 https://jech.bmj.com/content/72/1/47	To establish whether Families First, a home visiting programme in Manitoba, Canada, decreased population-level inequities in children being taken into care of child welfare and receiving complete childhood immunisations.	**Methods** De-identified administrative health and social services data for children born 2003–2009 in Manitoba were linked to home visiting programme data. Programme eligibility was determined by screening for family risk factors. We compared probabilities of being taken into care and receiving immunisations among programme children (n=4575), eligible children who did not receive the programme (n=5186) and the general child population (n=87 897) and tested inequities using differences of risk differences (DRDs) and ratios of risk ratios (RRRs). **Results** Programme children were less likely to be taken into care (probability (95% CI) at age 1, programme 7.5 (7.0 to 8.0) vs non-programme 10.0 (10.0 to 10.1)) and more likely to receive complete immunisations (probability at age 1, programme 77.3 (76.5 to 78.0) vs non-programme 73.2 (72.1 to 74.3)). Inequities between programme children and the general population were reduced for both outcomes (being taken into care at age 1, DRD −2.5 (−3.7 to 1.2) and RRR 0.8 (0.7 to 0.9); complete immunisation at age 1, DRD 4.1 (2.2 to 6.0) and RRR 1.1 (1.0 to 1.1)); these inequities were also significantly reduced at age 2.	Outcomes may not be directly relevant

		Conclusion Home visiting programmes should be recognised as effective strategies for improving child outcomes and reducing population-level health and social inequities	
Maharaj et al. (2012) Tackling child health inequalities due to deprivation: using health equity audit to improve and monitor access to a community paediatric service. Child: care, health and development. doi:10.1111/cch.12011 https://onlinelibrary.wiley.com/doi/epdf/10.1111/cch.12011	• To demonstrate that community paediatrics can contribute to reduction of health inequalities by providing services that are accessible to and preferentially used by children whose health is likely to be affected by deprivation. • To provide a template for others to improve and monitor equity in their services.	**Methods:** Long-term service reconfiguration and health equity audit. We used routinely collected activity data and the Indices of Multiple Deprivation to construct equity profiles of the children using our service and compared these with the profile of the population aged 0–16 years in the geographical area covered by the service. **Results:** The new patient contact rate for the most deprived children in the population was more than three times that of the least deprived [odds ratio (OR) 3.29, 95% confidence interval (CI) 2.76–3.93]. Deprived children were more than twice as likely to require multi-agency meetings as part of their medical care (OR 2.28, 95% CI 1.94–2.69). Seventy per cent (3693/5312) of our total contacts were with children in the two most deprived quintiles. There was a marked socio-economic gradient in all types of contact. **Conclusions:** The model of care used by our community paediatric service successfully engages deprived families, thereby reducing health inequalities due to poor access. Key features are multi-agency working, removing barriers to access, raising staff awareness and use of health equity audit. Our findings provide support for tackling health inequalities via health services that are available to all, but capable of responding proportionately according to level of need, a model recently described as proportionate universalism.	Potentially reducing health inequalities by increasing access to the most deprived using a community paediatric service
Molloy et al. (2019) Potential of 'stacking' early childhood interventions to reduce inequities in learning outcomes. J Epidemiol Community Health;73:1078-1086.	This study examined the association between exposure to a combination of five evidence-based services from 0 to 5 years on children's reading at 8–9 years.	Data from the nationally representative birth cohort (n=5107) of the Longitudinal Study of Australian Children were utilised. Risk and exposure measures across five services from 0 to 5 years were assessed: antenatal care, nurse home-visiting, early childhood education and care, parenting programme and the early years of school. Children's reading at 8–9 years was measured using a standardised direct assessment. Linear regression analyses examined the cumulative effect of five services on reading. Interaction terms were examined to determine if the relationship differed as a function of level of	Australian intervention, so may not be generalisable

		disadvantage. A cumulative benefit effect of participation in more services and a cumulative risk effect when exposed to more risks was found. Each additional service that the child attended was associated with an increase in reading scores (b=9.16, 95% CI=5.58 to 12.75). Conversely, each additional risk that the child was exposed to was associated with a decrease in reading skills (b=−14.03, 95% CI=−16.61 to −11.44). Effects were similar for disadvantaged and non-disadvantaged children. This study supports the potential value of 'stacking' early interventions across the early years of a child's life to maximise impacts on child outcomes.	
Storey-Kuyl et al. (2015) Focusing "upstream" to Address Maternal and Child Health Inequities: Two Local Health Departments in Washington State Make the Transition. Maternal & Child Health Journal. 19:2329–2335 DOI 10.1007/s10995-015-1756-4 https://web.p.ebscohost.com/ehost/pdfviewer/pdfviewer?vid=0&sid=505e6b59-cf5e-4b7f-b6dd-a9c70e7d5efb%40redis	This paper describes the innovative process and strategies these Local Health Departments used in applying existing Maternal and Child Health funding in new ways	This paper describes the innovative process and strategies these LHDs used in applying existing MCH funding in new ways. The pilot communities selected in both jurisdictions for the initial transition were communities experiencing disproportionately high rates of maternal smoking, child abuse and neglect, births to single women, and low-income women on Medicaid. Available evidence suggested that the reach and effectiveness of existing, individual-level MCH approaches were not adequately improving these indicators in these communities. Using a population-based approach that addressed policy factors as well as social, organizational, and behavioural change; both counties developed neighbourhood level initiatives directed at the root causes of health inequities. The approach included developing meaningful community partnerships, capacity building, and creation of a shared vision for community change. Both LHDs and their partners engaged county-wide groups in neighbourhood selection, jointly established priority intervention areas, and actively engaged communities focused on reducing specific health inequities. With existing funding resources, the two county LHDs dramatically changed their practice to better address underlying conditions that threaten MCH. Early successes from these pilots have contributed to important local and state system-level changes in MCH programming as well as effective community-level efforts to reduce health inequities.	US intervention, so may not be generalisable

Wood et al. (2012) Trends in the coverage of 'universal' child health reviews: observational study using routinely available data. BMJ Open. 2:e000759. doi:10.1136/ bmjopen-2011-000759 https://bmjopen.bmj.com/content/bmjopen/2/2/e000759.full.pdf	This study assessed the coverage of universal child health reviews, with an emphasis on trends over time and inequalities in coverage by deprivation. • What proportion of children actually receives the universal child health reviews? • How does review coverage vary by deprivation? • How has (inequality in) review coverage changed over time, in particular before and after the reduction in number of reviews offered?	**Design:** Assessment of the coverage of child health reviews by area-based deprivation using routinely available data. **Setting:** Scotland. Participants: Two cohorts of around 40 000 children each. The cohorts were born in 1998/1999 and 2007/ 2008 and eligible for the previous programme of five and the current programme of two preschool reviews, respectively. **Outcome measures:** Coverage of the specified child health reviews for the whole cohorts and by deprivation. **Results:** Coverage of the 10-day review is high (99%), but it progressively declines for reviews at older ages (86% for the 39-42 month review). Coverage is lower in children living in the most deprived areas for all reviews, and the discrepancy progressively increases for reviews at older ages (78% and 92% coverage for the 39-42 month review in most and least deprived groups). Coverage has been stable over time: it has not increased for the remaining reviews after reduction in the number of reviews provided. **Conclusions:** The inverse care law continues to operate in relation to 'universal' child health reviews. Equitable uptake of reviews is important to ensure maximum likely impact on inequalities in children's outcomes	Looks at equitable uptake

ISBN: 978-1-83766-121-3