An overview of oral health needs assessments

– to support NICE public health guidance,

“Oral health: local authority strategies to improve oral health, particularly among vulnerable groups”

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Executive Summary

- This report, produced by the Dental Public Health Unit Cardiff University, describes work commissioned by NICE to determine what methods and sources of information would help local authorities identify the oral health needs in their local community, to inform the development of guidance for Local Authorities on strategies to improve the oral health of vulnerable groups.
- In order to do this, three pieces of work were undertaken:
    - identification and analysis of OHNAs produced by Consultants in Dental Public Heath (CDPHs) across the United Kingdom
    - a primary qualitative research study involving a series of semi-structured interviews with CDPHs to seek their views on the OHNA process
    - two structured reviews of the literature:
        - one examining the evidence base on oral health needs assessment and vulnerable groups
        - the other a review of the literature around methods used to produce general health needs assessments.
- From these three components, a set of general principles and good practice points were identified and were used to devise a template for a model oral health needs assessment.
- Key findings from the work are highlighted in text boxes throughout the report and a number of important issues for further consideration are described.
- In total, 72% of CDPHs in the UK responded to the request for examples of OHNAs which they and their employing organisations had produced that were of relevance to assessing oral health needs of vulnerable groups. In combination with an Internet search we identified 105 unique OHNAs. These were subjected to analysis and a 59 item framework was used to conduct a framework analysis of the OHNAs.
- From this activity, it became clear that a wide variety of approaches were taken to OHNAs. Indeed what the submitting CDPHs considered to be OHNAs differed greatly. Virtually no two documents were the same, either in content or format. This made gathering robust evidence from these data sources problematic. A diverse range of topics were covered ranging from overarching oral health needs for a defined geography to assessments focussing on specific groups or services. A good number of OHNAs did make reference to vulnerable groups. However, the aims of the OHNAs were not always made explicit nor indeed how the OHNA linked to the sponsoring organisations priority setting or commissioning plans. The degree of patient and public involvement was variable and in many cases corporate partners or health alliances were not mentioned. Finally, from the OHNAs submitted by the CDPHs for analysis, it often wasn't clear how these fitted into an on-going overview or monitoring of need. Two sample OHNAs are provided as an Annex to this report to demonstrate the type of documentation currently being produced.

- In parallel with the OHNA analysis, qualitative work comprising five in-depth semi-structured interviews were undertaken with senior and experienced CDPHs. Those interviewed were purposively selected on the basis of their past involvement with the OHNA process, such as authors of previous guidance on OHNAs and those who had held senior posts in Dental Public Health. A range of geographic bases were also represented by the interviewees. The intention of this element of the work was to seek individual opinions from experts rather than come to a nationally representative or consensus view.

- The points made by the CDPHs interviewed did however contain many points in common. All viewed OHNA as a key element of the oral and dental health service commissioning process. The view was expressed that OHNA should be on-going process, rather than a one off and OHNA could take a variety of formats dependant on local circumstances. The CDPHs concurred that when it comes to assessing the need of vulnerable groups, lack of robust epidemiological data was often an issue – and indeed while the national surveys gave a good overall picture of oral health, it would be necessary to explore the needs of vulnerable groups separately. The use of proxy measures of need was not ruled-out. Patient and public involvement was identified as an area that had posed difficulties for some in conducting OHNAs in the past, though this is recognised as good practice.

- Having oral health identified as a priority by Local Authorities was seen as an issue and the importance of achieving this objective from the outset and in linking with the Strategic Joint Needs Assessment process in Local Authorities was crucial post April 2013. The consultants were of the view that on occasion it was helpful to have the outcomes in mind when embarking on an OHNA. They also said that it was important to involve the key decision makers in the OHNA process from the outset. Finally, the close relationship between oral health improvement and dental service commissioning was thought important and difficult to separate in conducting an OHNA.

- Two distinct literature reviews were conducted, examining OHNAs and vulnerable groups and separately on the methodology of health needs assessment in the general health literature. In the first search of 1426 articles identified, 59 were selected as relevant to the question asked while in relation to health needs assessments in general, 90 of 1014 articles were relevant.

- In neither search were we able to find any publications which as a single piece of research, described an OHNA that had been taken forward as a strategy, been implemented and then evaluated in terms of clinical and cost-effectiveness. We regard this as a key finding from the literature review. Although we did not conduct a formal systematic review, we are of the view that our search strategy was sufficiently rigorous to conclude that we are unlikely to have missed such research, should it exist.

- There were however, many studies which described parts of what should be incorporated into an OHNA. It is likely that incorporating some or all of these characteristics would result in an OHNA of reasonable quality and comprehensiveness The literature on:

  - patient and public involvement
  - socio-dental indicators
  - data collection
  - the merits of more detailed measures of health inequalities
  - geographic mapping as they relate to OHNA

  are described.

- From the wider literature we identified documents that define approaches to the conduct of HNAs – but much of this is in the form of policy documents and the approaches have not been formally tested in before/after or intervention studies.

- From all of the forgoing evidence – we have suggested principles and practice for the conduct of oral health needs assessments. Conducting OHNAs is a circular process, with optional elements for a slimmed down approach to OHNAs and which we envisage could link to the Joint Strategic Needs Assessment Process in Local Authorities.

- In light of the limited evidence available, we propose a 10-step approach to the conduct of OHNAs and a template document for reporting OHNAs is provided.

- Finally we have highlighted a number of issues for consideration.

SUMMARY OF KEY FINDINGS

In the conduct of this work a number of key findings and consistent themes have emerged. These are summarised here for ease of reference. KF refers to Key Findings. For a full explanation and the background to the findings please see the main body of the report.

Summary Key Findings 1 OHNAs – Their importance and purpose

It was agreed by the CDPHs interviewed that OHNAs are important in the commissioning and organisation of dental services (KF 12). However, from analysis of existing OHNAs, it often wasn't clear where and how the OHNAs fitted into the sponsoring organisation's commissioning plan (KF 5). CDPHs were of the view that Dental Service Commissioning was closely related to oral health improvement and needs to be borne in mind in the OHNA process (KF 22). Getting and keeping oral health on the agenda of Local Authority health improvement programmes was a concern (KF 20).

Summary Key Findings 2 The evidence base

The literature reviews undertaken suggest that evidence on a definitive approach to OHNA is lacking (KF 24). No publications were identified that described an Oral Health Needs Assessment which was taken forward via a strategy, implemented and evaluated (KF 23).

Summary Key Findings 3 The conduct of OHNAs

From the analysis of OHNAs, It is clear that approaches to undertaking OHNAs vary considerably (KF1). The aims of the examined OHNAs were not always made explicit (KF 2). It was suggested that in conducting an OHNA it is important to begin with the end in mind, i.e. to have in mind what the document will be used for and how it fits into the commissioning process (KF 14). It was also suggested that the conduct of an OHNA is a process, on-going and circular in nature (KF13). This was supported by evidence from the wider healthcare literature which suggests that HNA is a circular process – but much of this evidence is in the form of policy documents and has not been tested in before/after or intervention studies to determine the clinical and cost-effectives of the OHNA approach (KF 28). From the documents submitted it was not clear how existing OHNAs fit into an on-going overview or monitoring of need (KF 11).

Summary Key Findings 4 OHNAs - format and content

The OHNAs examined took a very wide variety of formats. Virtually no two documents submitted followed a similar layout or format – save perhaps where one CDPH had produced OHNAs for two PCTs within their area of responsibility (KF 3). The CDPHs were clear that the concept of a 'one-size fits all' OHNA is flawed and that there is a need to recognise that in everyday practice, OHNAs may

vary in complexity in relation to local circumstances (KF15). A wide variety of approaches to oral health improvement were adopted in OHNAs (KF 8).

The OHNAs analysed covered a wide variety of topics – some overarching, some focusing on a specific area of dental practice, some focusing on specific groups within the population (KF 4). There were a good number of the OHNAs which focussed on vulnerable and priority groups (KF 9). Corporate economic / option analyses seldom featured in the OHNAs analysed (KF 10).

Summary Key Findings 5 Stakeholder involvement in the OHNA process

Professional stakeholders In conducting an OHNA it is important to involve key people from the outset, i.e. to ensure "sponsorship" of the process by those with the power to make the necessary decisions on change if required (KF 16). The CDPHs said that personal relationships are important in links between Local Authorities, Public Health England and NHS England (KF 17). However, in many cases, corporate partners / health alliances were not mentioned (KF 7).

Patient and public involvement There is a large literature on involving people and vulnerable groups, but studies of this in the context of oral health needs assessment are very limited (KF 29). Our analysis of the submitted OHNAs showed that involvement of patients and the public has in the past been variable (KF6). This was exemplified by the fact that patient and public involvement wasn't raised as a significant issue by the CDPHs interviewed to any great extent (KF 21).

Summary Key Finding 6 Epidemiological aspects and evidence to inform OHNAs for vulnerable groups

The literature review demonstrated that there are many studies on oral health needs assessment in vulnerable groups but these are largely simple epidemiological surveys of dental caries prevalence (KF 26). It was generally agreed that data to support OHNAs for vulnerable groups are lacking (KF 18). Views were mixed on whether proxy data could be used, some seeing this as acceptable while others were concerned that this may mask disparities within apparently homogeneous groups (KF 19). The literature review suggested that alternative measures may act as a proxy for dental need e.g. school league Tables (KF 27). While socio-dental indicators have been extensively described, this has largely been in one-off studies and not as part of an on-going, evaluated OHNA process (KF 25).

ISSUES FOR CONSIDERATION

Following review of the available evidence there are number of issues that require further consideration. For ease of reference these are summarised here.

Issue 1

Evidence on how to conduct the 'ideal' OHNA - one which results in change that is clinically effective and cost effective - does not exist. There are guidelines in the literature that suggest a circular approach to the OHNA process. The evidence for this approach comes largely from policy documents. On the basis of these guidelines we have developed a Template OHNA. This contains optional elements that can be discarded in the event that a "slimmed-down" OHNA is required. Consideration should be given to whether this approach is sufficient to inform the Local Authority Joint Strategic Needs Assessment Process.

Issue 2

We have undertaken a comprehensive review of OHNAs produced in the United Kingdom. These vary widely in format and content. There is therefore currently no one format for a OHNA document. The concept of "quick and dirty" versus "full-on" as described by one of our CDPH interviewees is likely appropriate. Consideration should be given as to whether and how this approach can be supported in the guidance.

Issue 3

Beyond the National Surveys coordinated by the British Association for the Study of Community Dentistry and the decennial surveys sponsored by the Health Departments, there is little routinely available "off-the-shelf" data to inform the epidemiological dental needs of vulnerable groups. Consideration needs to be given as to what degree guidance on the collection of data relating to vulnerable groups should be issued to Local Authorities as part of the guidance.

Issue 4

The literature suggests that proxies for dental health maybe suitable for some groups e.g. school performance statistics. Consideration should be given as to whether proxies for clinical determination of need are appropriate.

Issue 5

The literature describes more complex approaches to quantifying oral health and in particular oral health inequalities beyond simple caries prevalence data. To what degree should approaches such as Health Equity Audit, Slope Index of Deprivation etc. be used as a measure of inequalities be utilised? Consideration should be given to the value of recommending more complex approached to oral health inequalities, bearing in mind, (a) the limited data available and (b) the lack of evidence of overall usefulness of this approach given the resources required, such health analyst expertise.

Issue 6

Interviews with CDPHs suggest we should on occasion know the answer to an OHNA before we begin and the process is all about getting Oral Health on the priority list of the commissioning authority. To have key people involved from the outside is seen as important, although there is no suggested

evidence as to who the “key people” are. Consideration should be given as to whether there is a need for guidance on these matters.

Issue 7

It is suggested that involvement of the public in the needs assessment process is important as needs judged by professionals often differ from those judged by patients or their representatives. The evidence suggests that currently there is limited patient and public engagement in the OHNA process. Consideration needs to be given to what guidance should be issued to Local Authorities about public involvement in OHNAs relating to improving the health of vulnerable groups.

Issue 8

This review has documented the lack of good quality evidence to inform the oral health needs assessment process. Consideration should be given as to whether recommendations are required on evaluating the implementation of OHNAs or on future research needs in this area.

ABBREVIATIONS

ADH survey	Adult Dental Health Survey
BASCD	British Association for the Study of Community Dentistry
BDA	British Dental Association
CDH survey	Child Dental Health Survey
CDPH	Consultant in Dental Public Health
CU	Cardiff University
DPH	Dental Public Health
HNA	Health Needs Assessment
GDS	General Dental Service
LA	Local Authority
NDNS	National Diet and Nutrition Survey
NICE	National Institute for Health and Care Excellence
OHNA	Oral Health Needs Assessment
UDA	Unit of Dental Activity
UOA	Unit of Orthodontic Activity

GLOSSARY

Arnstein's ladder of public involvement	A model which describes different degrees to which lay members may be involved in a process
Common Risk Factor Approach	An approach to health improvement which recognises that diseases can have risk factors in common e.g. smoking tobacco not only causes lung cancer but increases the risk of periodontal disease.
Delphi technique	A research technique which is designed to obtain a consensus view, usually from those with expert knowledge on a particular topic.
Dental Caries	Commonly known as tooth decay, arises from the breakdown of dietary sugars by oral bacteria to acids which destroy the tooth structure resulting in cavities and breakdown of the tooth.
Dental sepsis	Localised accumulation of inflammation and pus associated with necrotic dental tissue
Dental service commissioning	The process whereby NHS England contracts with dentists and healthcare providers to deliver an agreed volume and quality of dental care
ECOHIS	Early Childhood Oral Health Impact Scale
Edentulous	Term used to describe the condition of having no teeth, these having been extracted due to dental disease.
Health Concentration Index	The concentration index provides a summary measure of the magnitude of socioeconomic-related inequality in a health variable of interest.
"Lax " year in BASCD cycle	Refers to a year in which the age group/population examined in the cycle of epidemiological surveys organised by the British Association for the Study of Community Dentistry is left to the discretion of local commissioners
OHIP 14	Oral Health Impact Profile 14 – a series of 14 questions used to quantify the psychological and social impact of oral and dental disease
Oral Cancer	Caner which affects the soft tissue in the mouth, most commonly arises from the squamous epithelium. There are about 6,200 new cases per year in the UK.
Ottawa Charter for Health Promotion	An international agreement which sets out five key principles for promoting health
Periodontal disease	An inflammatory condition which affects the supporting structures of the teeth. Initially a painless condition, presents as swollen gums which bleed on brushing or probing. Can lead to tooth loss if untreated.
Relative Index of Inequality	The relative index of inequality (RII) can be estimated in two ways: one way is to divide the SII by the mean level of population health or by the

	frequency of the health problem in the population; the other way is to divide the predicted value of the regression at the highest point (range = 1) by the predicted value of the regression at the lowest point (range = 0).
Slope Index of Inequality	The slope index of inequality (SII) represents the linear regression coefficient that shows the relation between the level of health or the frequency of a health problem in each socioeconomic category and the hierarchical ranking of each socioeconomic category on the social scale
Socio-dental indicator	Measures the psychological and social impact of oral and dental disease

SECTION 1 – INTRODUCTION, AIMS, AND OVERVIEW OF THE WORK.

1.1 INTRODUCTION

This report details work undertaken by the Dental Public Health Unit, Cardiff University, on Oral Health Needs Assessment. This work was commissioned by the National Institute for Health and Care Excellence (NICE) in relation to the development of public health guidance on, "Oral health: local authority strategies to improve oral health, particularly among vulnerable groups." The work is designed to inform and support the work of the Public Health Advisory Committee (PHAC), in the production of this guidance. The work was undertaken between April and July 2013.

1.1.2 Oral Health

Good oral health is key to health in general. In common with most common chronic diseases, oral disease is heavily influenced by peoples' lifestyles and life circumstances. The most common oral diseases, dental caries, periodontal disease and oral cancer are largely influenced by diet, the adoption of healthy preventive behaviours and wider health improvement policies. Broader determinants of health are equally important in determining oral disease risk and across populations oral health is closely correlated with social and economic circumstances.

In the population, vulnerable groups may experience worse oral health than that of the population in general and may have difficulty accessing dental care, or require specialised dental care. Assessing the oral health needs of such population groups is a key function of dental public health practitioners and others involved in the commissioning and delivery of oral health improvement and preventive services.

1.1.3 Oral health needs assessment (OHNA)

Oral health needs assessment (OHNA) aims to describe the oral health of the whole population and target resources towards improving the oral health of those at specific risk or in underserved population subgroups. The process involves establishing and describing the oral health of a population, ascertaining their needs, measuring the capacity of existing services to meet these needs and where gaps exist, identify new or alternative ways in which such gaps can be prioritised and filled.

Needs can be defined from the perspective of

- the *service provider* or
- the *service recipient*

and these factors must be accounted for in the process.

Assessment can be considered from:

An epidemiological perspective – comparing disease incidence/prevalence in localities; specific diseases.
A comparative perspective - comparing services/providers in different areas.
A corporate perspective - drawing on views of different groups e.g. providers of healthcare, local people.

Oral health care resources have in the past been provided largely on the basis of historical service-provision and what people ask for. However, what is demanded may not lead to maximum health gain.

Oral health needs assessment (OHNA) is a fundamental component of Dental Public Health practice. Establishing which aspects of oral health have the greatest potential for improvement, OHNA aims to direct health improvement activities and services towards problems and conditions which are both important in terms of numbers of people affected or severity of the condition. The concept of OHNA being "conducted on" a population is evolving into a process whereby there is much greater emphasis on community and stakeholder engagement on information regarding both problems and possible solutions.

1.1.4 Changes to the organisation and commissioning of oral health improvement programmes

OHNA has been the responsibility of Primary Care Trusts in England and Health Boards in Scotland, Wales and Northern Ireland. The NHS Primary Care Contracting Centre has produced an OHNA toolkit (NHS Primary Care Contracting 2006). Examples of OHNAs are publically available on the Internet. There is currently no evidence to inform oral needs assessment by Local Authorities.

The reorganisation of the NHS in England, as legislated in the Health and Social Care Act 2012, has fundamental implications for how oral health improvement programmes are commissioned and how dental public health is organised. The abolition of Primary Care Trusts will see the responsibility for commissioning oral health improvement move to Local Authorities. Consultants in Dental Public Health will be employed either by Public Health England or by the NHS Commissioning Board. Oral Health in young children has been set as one of the health performance indicators for Local Authorities in England (Department of Health 2012).

In this new environment, the guidance to be produced by NICE, will play a key role in informing Local Authorities how to organise and incorporate oral health improvement programmes for vulnerable groups such as: children resident in deprived areas, older people in nursing and care homes and other locations such as day centres, people with mental, learning and physical disabilities, prisoners, homeless people, travellers, substance abusers and other groups excluded from mainstream dental prevention.

The guidance will be crucial in: identifying sources of oral health information to users and planners who are possibly not familiar with these sources; the expertise available from Consultants and Specialists in Dental Public Health and other dental specialties; and, engaging the public and representatives of vulnerable groups.

1.2 AIMS

The aims of this work are to consider the methods and sources of information that could help Local Authorities conduct robust oral health needs assessments for their local community. The focus of the work is oral health needs assessments to inform community oral health improvement programmes, in particular for vulnerable groups at risk of poor oral health.

The specific aims of the work were to:

- Produce a model oral health needs assessment
- Undertake a structured literature review on oral health needs assessment

1.3 OUTPUTS

The proposed outcomes of the work were to:

1. Produce a report which defines what an OHNA should contain, describe possible approaches to construction of an OHNA and the links and data sources that Local Authorities would need, to enable construction of appropriate strategies to improve oral health, especially among vulnerable groups.

2. To produce a review of the existing academic literature on Oral Health Needs Assessment. This will include a commentary on the degree to which current OHNAs meet with suggested National and International Guidance (if such exists) and the challenges that Local Authorities may meet in addressing an ideal OHNA. This work will also highlight opportunities presented by available national resources such as the dental observatory, to provide information support to local needs assessments.

1.4 OVERVIEW OF THE WORK UNDERTAKEN

The work was conducted in three stages:

1. A Review of Oral Health Needs Assessments in the United Kingdom (Section 2)
2. A study to determine the opinion of Senior Consultants in Dental Public Health on the Oral Health Needs Assessment process (Section 3)
3. A structured literature review on Oral Health Needs Assessments (Section 4)

Thereafter we constructed:

4. A ten step approach to the conduct of Oral Health Needs, based on the available evidence (Section 5).

5. A template for the conduct of Oral Health Needs Assessments (Section 6)

6. A list of key issues for consideration (Section 7).

Prior to a detailed description of the project it is necessary to agree definitions central to the work.

1.5 DEFINITIONS

- Oral Health Needs Assessment (OHNA)
- Oral Health Improvement
- Vulnerable Groups

Oral Health Needs Assessment (OHNA)

The following definition of an oral health needs assessment is proposed:

> Oral Health Needs Assessment is a process which aims to describe the oral health of the whole population and target resources towards improving the oral health of those at specific risk or in underserved population subgroups. The process involves establishing and describing the oral health of a population, ascertaining their needs, measuring the capacity of existing services to meet these needs and where gaps exist, identify new or alternative ways in which such gaps can be prioritised and filled.

A key aspect that this work has emphasised and that should be recognised from the outset – OHNA is a process and as we will propose, a cyclical process, that is on-going over time rather than a project or "one-off" procedure.

Oral Health Improvement

Oral Health Improvement previously termed Oral Health Promotion has three dimensions. (Figure 1.1).

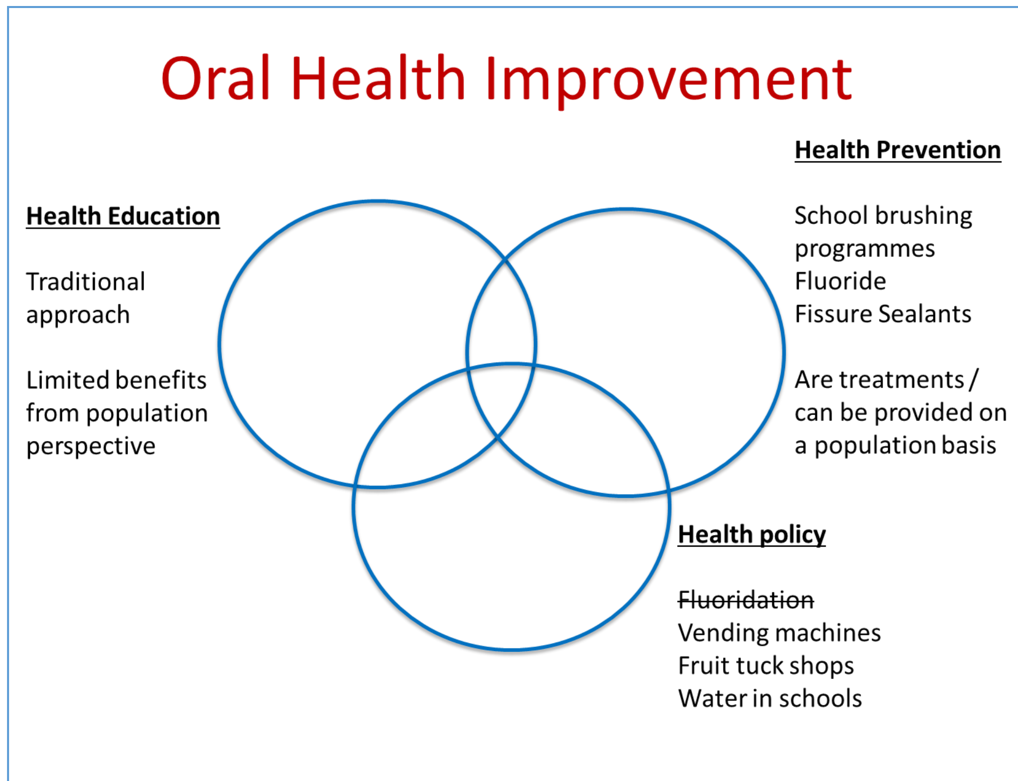


Figure 1 .1 Oral Health Improvement

Health Education involves the provision of information to individuals or groups. The intention is encourage behaviour change and adoption of behaviours conducive to good oral health. This has in the past formed a major element of attempts to improve oral health.

Health Prevention involves actions to prevent oral disease either on an individual or community basis.

Health Policy recognises the wider determinants of health and seeks to modify risk factors via policy and legislation. In the context of oral health improvement an important consideration is fluoridation of the public water supply. However that measure is explicitly excluded from the scope of the public health guidance under consideration.

Vulnerable Groups

Vulnerable groups are defined as those at increased risk of oral disease or who experience increased difficulty accessing or tolerating dental treatment. Examples of such groups include:

- children aged 5 and under
- people on a low income
- older people
- people who are homeless or who frequently change the location where they live (for example, traveller communities)
- people from some black and minority ethnic groups (for example, those of South Asian origin)
- people who chew tobacco

- people with mobility difficulties or a learning disability and who live independently in the community.

A full list of vulnerable groups identified in the literature search strategy is detailed in Appendix 6.

SECTION 2 A REVIEW OF ORAL HEALTH NEEDS ASSESSMENTS CONDUCTED IN THE UNITED KINGDOM.

2.1 Rationale for this study.

Oral health needs assessment (OHNA) is a key competency in the discipline of Dental Public Health. Consultants in the specialty routinely undertake OHNAs and all trainees undertake OHNAs as part of their training. However, the format, content, subject matter and presentation of OHNAs has never been formally investigated. It was thought important to review the current format of OHNAs and to learn how current conduct and presentation of OHNAs may inform future guidance for Local Authorities.

2.2 Aim

The aim of this part of the work was to collect examples of OHNAs from Consultants in Dental Public Health (CDPHs) across the United Kingdom and produce an overview of current OHNA activity.

OHNAs were specifically analysed to:

- Identify oral health needs of local communities and particular groups at greatest risk of poor oral health
- Determine current oral health improvement interventions, activities and services, pathways into care, costs and outcomes
- Describe key stakeholders and how authors identify and consult with them
- Characterise oral diseases and disorders within the local populations

2.3 Methods

2.3.1 Data collection – from UK CDPHs

A list of all Consultants in Dental Public Health in the United Kingdom was obtained from the British Association for the Study of Community Dentistry (BASCD), the professional organisation with which Dental Public Health Professionals in the UK are affiliated.

A personal e-mail was sent to all Consultants named on the list in early April 2013. The text of the e-mail is contained in Appendix 1. This requested copies of OHNAs that Consultants were willing to share. Assurances were given that only summary data would be presented and that deductive disclosure from the data provided would not be possible. Non-respondents were sent a further e-mail after three weeks.

2.3.2 Data collection – Internet

In addition to the collection of data from CDPHs, an Internet search for OHNAs was conducted. The search engine Google.co.uk was used to search on the term “oral health needs assessment”. A

convenience sample of 50 documents was reviewed. Those which were which were deemed to be ONHAs originating in the UK were downloaded and subjected to analysis as described below.

2.3.3 Data extraction

On receipt OHNAs were given a unique identifier and a lead and second reviewer assigned. The lead reviewer took responsibility for extraction of the data to an Excel spreadsheet. The second reviewer scrutinised the output of the first reviewer. Time constraints and the volume of material to be reviewed precluded double-blind extraction. However, the reviewers were topic experts with experience of conducting OHNAs over many years.

An initial sample of six OHNAs were scrutinised and used to produce a framework for data extraction. This contained 59 items as detailed in Appendix 2. Three OHNAs were initially reviewed by all three reviewers and discussions held to ensure understanding and interpretation of the framework and the data constructs.

2.3.4 Data analysis

Duplicate submissions (i.e. those identified both by the Internet search and submitted by a CDPH) were identified and the duplicate removed. The data extracts were then subjected to simple count / frequency analysis.

2.4 Results

2.4.1 Response rate

In total 64 consultants from across the UK were identified and asked to provide an OHNA in electronic or hard copy (Appendix 1). Of these 46 (72%) responded. No response was obtained from 11 (17%) and 7 (1%) were not-contactable.

2.4.2 Number of OHNAs received

A total of 105 unique OHNAs were available for analysis. Of these, 35 were excluded from the analysis. Fifteen of those excluded focussed on service needs assessments (e.g. an OHNA focusing solely on Orthodontics) and the remaining 20 were excluded for a variety of reasons, including the documents which were “tool-kits” i.e. documents detailing how to conduct an OHNA, generic as opposed to specifically oral health needs assessments or research and academic reports (Table A3.1).

The following describes an analysis of the content of the 70 OHNAs deemed suitable for inclusion. The results are presented in Tabular format in Appendix 3.

2.4.3 Characteristics of the OHNAs

Thirty-six of the OHNAs were considered to be generic in nature, with 27 focussing on vulnerable groups (e.g. older people, homeless, prisoners, black and minority ethnic groups BMEs etc.), 3 focussed on adults, 2 on children and 1 each on rural areas and a specific disease (Table A3.2).

In terms of population over half (36) covered the whole population for a defined geographical area, with the rest focussing on specific age and vulnerable groups (Table A3.3).

There were a wide range of author organisations including central governments departments, health boards/PCTs, and local government offices. 17% (12) OHNAs did not state the employing organisation of the author (Table A3.4).

72.9% (51) of the OHNAs covered areas in England, 22.9% (16) covered areas in Scotland, with 2.9% (2) and 1.4% (1) covered areas in Wales and Northern Ireland respectively (Table A3.5). Documents were received from across England and included those from urban, and rural locations as well as from northern, south, east and west geographies.

The year of publication ranged from 1996 through to 2013, with the majority (42) being written between 2008 and 2012 (Table A3.6). In 20% (14) of cases there was no year of publication included.

Reports ranged from 1 to 206 pages in length. The average page length was 48 pages (Table A3.7). UK constituent country breakdowns for this characteristic are presented in Table A3.7.

With regard to prospective audience, 74% (52) of OHNAs did not specifically mention this characteristic. Although on reading the documents it was in many cases possible to make assumptions about this, e.g. “not stated but presumably oral health care planners”, “not explicitly stated but presumed to be PCT board”. 10% (7) of the OHNAs specified that the PCTs were the target audience, 2.9% (2) specified Health Boards and 13% (9) specified other stakeholders, such as “Health Scrutiny Committee” (Table A3.8).

Key Finding 1

OHNAs take a wide variety of approaches.

2.4.4 OHNA Content design

67% (47) of the OHNAs specified their aims and objectives, with the remainder either not stating them (20%, 14) or not being explicit (13%, 9). 45.7% (32) OHNAs did not have an executive summary (Table A3.10).

The documents came in a range of formats, with 40% (28) being considered as OHNA documents, the rest included “Joint Strategic Needs Assessments”, “Research/academic reports”, “Epidemiological survey reports”, “National evidence documents”, “National Needs Assessment Programme documents”, “NHS Regional documents”, “Reads as a handover document”, “Technical

reports" etc. (Table A3.11). The limited internet search that we conducted did not include such terms.

Key Finding 2

The aims of the OHNA were not always made explicit.

Key Finding 3

OHNAs have a very wide variety of formats. Virtually no two documents submitted followed a similar layout or format – save perhaps where one CDPH had produced OHNAs for two PCTs within their area of responsibility.

2.4.5 OHNA factual content

Only 17 (24%) of the OHNAs provided a definition of oral health (Table A3.12).

One third of the documents either did not state (11) or were unclear (13) as to the decision process to be influenced by the OHNA. For the remaining 66% (46) of OHNAs there were a wide range of decisions to be influenced but many related to commissioning, e.g. "To inform commissioning decisions", "Recommendations to develop an oral health strategy - PCTs to note when commissioning dental services", "Mainly relates to allocation of additional resources allocated by the SHA" (Table A3.13).

The OHNAs were assessed as to whether they were linked to Joint Strategic Needs Assessments, it appears that in 18.6% (13) of cases there was some linkage – only in a minority of cases were these embedded within the JSNA (Table A3.14).

93% (65) of the OHNAs had an epidemiological focus; the nature of the epidemiology (in terms of target groups and specific diseases – mainly caries) is described in Table A3.15. 69% (48) of the OHNAs undertook some form of comparative approach to the presentation of epidemiological data. For example: "Compares with other PCTs in Region and England", "Compares with England", "Compares with SHA and with England", "Compares with ADH Survey" (Table A3.16).

44.3% (31) of the OHNAs considered felt or expressed needs in some way; 18.6% (13) sought views via focus groups and/or surveys, 7.1% (5) considered accessing dentistry issues, 2.9% (2) referred to PALs data and 15.7% (11) gave other responses indicating they had considered this aspect (Table A3.17).

41.4% (29) included some form of comparison with guidelines evidence or care provided; the details are outlined Table 18, examples include: "BDA Policy Document on Dental Care for Homeless people", "BASCD Toolkit and recommends school based brushing", "Yes in terms of UDAs delivered / not delivered".

68.6% (48) of the OHNAs incorporated some comparative advocacy or referred to inequalities. There was a wide range of information covered but priority and vulnerable groups predominated (Table A3.19).

Notably just under two thirds (45) of the OHNAs made no reference to corporate health alliances or partners. Where there appeared to be some stake holder involvement this generally was not embedded (Table A3.20).

Similarly there was little evidence of corporate community development or local participation. Only 17% (12) OHNAs provided any evidence of this, by primarily seeking views of local people via surveys or focus groups (Table A3.21).

Only 10% (7) of OHNAs made reference to economic analyses, e.g. “Costs in terms of UDAs and UOAs”, “Costs of services”, “Focused on access rather than costs”, “nearest it gets is to note cost of dental treatments for those with LD once they reach 18” (Table A3.22).

Key Finding 4

OHNAs cover a wide variety of topics – some overarching, some focusing on a specific area of dental practice, some focusing on specific groups within the population.

Key Finding 5

It often wasn’t clear where and how the submitted OHNAs fitted into the sponsoring organisation’s commissioning plan.

Key Finding 6

The degree of patient and public involvement was variable.

Key Finding 7

In many cases, corporate partners / health alliances were not mentioned.

2.4.6 Oral Health Promotion

Over a third (25) of the OHNAs did not refer to the Ottawa Charter principles for health promotion at all. 28.6% (20) referred to *Health Public Policy* in some way, 22.9% (16) referred to *Supportive Environments* with 2.9% (2) referring to *Community Action*, 15.7% (11) to *Developing personal skills* and 40% (28) to *Re-orienting services to prevention/health promotion* (Table A3.23). The approaches used are outlined in Table A3.24, and include: “Some recommendations do seek to help create more supportive environments (e.g. Vending machines in schools)”, “Partial in relation to toothbrushing”, “Mentions partnership activity to prevent dental decay”, “Seeking to reorient current preventive service to be more effective”.

43% (30) of the OHNAs made at least some mention of a common risk factor approach. References were diverse ranging from a strong emphasis of the common risk factor approach which permeated the needs assessments to a fleeting mention (Table A3.25).

44% (31) of the OHNAs referred to past and or current preventive action; examples include "Mentions partnership activity to prevent dental decay", "Only very general recommendations mentioning BASCD \Toolkit", "Yes for each vulnerable group", "Yes measured by a survey of practices", "Yes talks about toothpaste distribution schemes", "Yes training programme to improve mouth cleaning" (Table A3.26).

60% (42) of the OHNAs covered prevention gaps and/or future preventive action. The types of activity referred to were diverse, examples include: "Estimates numbers of people who might benefit from OHP", "Expansion of school based tooth brushing programme", "Focus of prevention is on fluoride varnish and barriers to that being used", "Includes future prevention strategy", "Mentions limited GDS prevention activity for deprived children", "Sought views on what could be done to improve maternal/under 5 health", "Staff training in OH", "Suggests a screening service", "Talks about lack of evidence for dietary intervention", "Yes - highlights cultural barriers", "Yes need for training and assessment on admission to care home" (Table A3.27).

Key Finding 8

A wide variety of approaches to oral health improvement were adopted in OHNAs.

2.4.7 Epidemiology data used

Dental Caries

18.6% (13) of the OHNAs did not incorporate any epidemiological data. The caries data sources for the remaining 81.4% (57) were the BASCD, Adult Dental Health (ADH) and Child Dental Health (CDH) surveys; the National Diet and Nutrition Survey (NDNS) was also mentioned and the remaining data was generated via ad hoc surveys for specific OHNAs (Table A3.28). In the majority of instances (60%, 42) caries data was available at the D3 level or greater (Table A3.29). The geographical boundaries used to describe the caries epidemiology are presented in Table A3.30, 7% (1) of OHNAs used PCT level information whilst 8.6% (6) had data presented at Ward level.

Other data

43% (30) of the OHNAs referred to periodontal disease (Table A3.31). The ADHS was the main data source cited (15.7%, 11) but there were 10 (14.3%) instances where the periodontal data source was not referenced (Table A3.32).

47.1% (33) of the OHNAs made reference to oral cancer (Table A3.33). Regional and National cancer registries were cited as the sources of the oral cancer data, but again in 10 (14.3%) instances the data source was not referenced (Table A3.34).

32.9% (23) of the OHNAs included information on orthodontics (Table A3.35). The CDHS was cited as a source of this data as well as local estimates of need; in 6 (8.6%) instances the data source was not referenced (Table A3.36).

47.1% (33) of the OHNAs made reference to conditions other than the ones previously specified above (Table A3.37). Conditions included cleft lip and palate, trauma, tooth wear, dry mouth, edentulousness.

Pain and dental sepsis were mentioned in 28.6% (20) of the OHNAs (Table A3.38). Hospital / general anaesthesia for caries in children was referred to by 24.3% (17) of the OHNAs (Table A3.39).

2.4.8 Oral Health Impact

Just under a third (22) of the OHNAs made some reference to oral health impact; some incorporated the use of OHIP14 and ECOHIS, whilst others referred to aspects such as embarrassment, self-reported limited function and limited illness (Table A3.40).

2.4.9 Demography

Two thirds (44) of the OHNAs incorporated sections on demography (Table A3.41) and 13 (29.5% of the 44) included some information on demographic trends (Table A3.42). Details of the types of analysis presented are documented in Tables A3.41 and A3.42.

2.4.10 Inequalities

Two thirds (44) focussed at least some aspects of the OHNA on inequalities, e.g. “Yes - used free school meals as a proxy by area”, “Yes a major focus of the report”, “YES - map of service provision related to ward deprivation level”, “Yes, large emphasis on social segmentation” (Table A3.43). There were some very good maps highlighting deprivation, service provision and service access.

2.4.11 Vulnerable groups

81.4% (57) of the OHNAs included at least some information on vulnerable groups. The types of vulnerable groups were diverse, and included socially excluded groups (prisoners on parole, alcohol dependent people, substance mis-users, female victims of domestic violence, homeless in hostels), care home residents, gypsy and traveller population, people with learning disabilities, adults with mental illness, looked after children, people from BME groups (Table A3.44).

Key Finding 9

There were a good number of the OHNAs which focussed on vulnerable and priority groups.

2.4.12 Accessing dental care

87.1% (61) of the OHNAs mentioned accessing primary dental care (Table A3.45). 11.4% (8) made reference to NICE recall guidance; this is notable as many of the OHNAs were drafted after the guidance was issued.

48.6% (34) of the OHNAs made some reference to accessing secondary dental care and emergency dental care (Tables A3.47 & A3.48).

2.4.13 Patient satisfaction

Approximately one third (22) of the OHNAs included some information relating to patient satisfaction, including data derived from patient surveys or focus groups (Table A3.49).

2.4.14 Other key findings

Key Finding 10

Corporate economic / option analyses seldom featured in the OHNAs analysed

Key Finding 11

From the documents submitted it was not clear how these fitted into an on-going overview or monitoring of need.

2.5 SAMPLE ORAL HEALTH NEEDS ASSESSMENTS

It was thought useful to provide two sample OHNAs. To that end we have provided an Annex to this report that contains two OHNAs. One is a comprehensive OHNA carried out in Cambridgeshire PCT and the other a contribution on Oral Health to the Manchester Joint Strategic Needs Assessment.

These are not included as representative of the OHNAs submitted, indeed such was the variety of material received that would not be possible. They are however presented to give a feel for what is currently produced in the National Health Service in England.

The authors of these documents have given their permission for the documents to be made public.

SECTION 3

INTERVIEWS WITH CONSULTANTS IN DENTAL PUBLIC HEALTH PUBLIC HEALTH

3.1 Rationale for this study

In parallel to the analysis of the OHNAs submitted by the CDPHs (Section 2), a piece of primary, qualitative research was conducted. Six CDPHs were asked to participate in a semi-structured telephone interview. The objectives of these in-depth interviews were to add to the analysis of the OHNAs and to discuss the purpose and conduct of OHNAs more generally. Those interviewed were purposively selected on the basis of the personal knowledge of the Cardiff team and were not intended to provide a representative sample. Rather, those invited to participate were selected on the basis of:

- obtaining views from a range of geographical areas (South, London, Manchester and Sheffield)
- their previous experience in producing OHNA guidance
- having held senior positions with the Consultants Group of the British Association for the Study of Community Dentistry .

3.2 Methods

An invitation (Appendix 4) was sent to six CDPHs working within the NHS in England. These individuals were selected on the basis of geography, seniority and experience of NHS commissioning and contracting. At a mutually agreed time the interview was conducted by telephone. An interview guide was developed to direct the conversation (Appendix 5). There was opportunity for participants to discuss any issues they believed relevant to the topic under discussion. With the consent of the interviewee the conversation was digitally recorded and subsequently transcribed. Anonymity for both the employee and their employer was assured. The transcripts were then read by the interviewer and the main points made by the interviewees highlighted. Using the interview guide, a thematic approach was taken to the analyses of the data. As is common in qualitative research, the data resulting are held to be a range of individual opinions. They are not claimed to be representative of the CDPH population in general nor nationally representative.

3.3 Results

All six CDPHs contacted expressed their willingness to participate in the interviews. However, time constraints on the part of one interviewee precluded their participation. It was the view of the team at CU that there was little to be gained by the substitution of an alternate and so the results presented below are those expressed by the five CDPHs who participated in the study. Data in brackets refer to the interview number and transcript line e.g. (I3, L35) refers to interview three, line 35. Direct quotations from the transcripts are italicised.

3.3.1 The overall purpose and value of OHNAs

It was generally agreed that the conduct and orchestration of OHNAs were an essential part of the job of a CDPH (I1, L29; I2, L39) and that OHNAs have been useful in the commissioning and

organisation of dental care services (I3, L32). Interviewees said that OHNAs should be seen as a dynamic circle of assessing need (I3, L27) and not a standalone piece of work (I3, L43; I3 L213).

It was suggested that an OHNA that was primarily about improving services would have a different feel to one on improving oral health. (I2, L214). *"Obviously you've got to know what you are going to do with it at the end. To know you've got a way of responding to the answer that you are anticipating"* was deemed important (I4, L118). The implication was that before beginning it was wise to *"think that there is a reasonable chance you can fund a solution or part of a solution or redirect resources … that's the starting point, …. that's the part that is proving difficult …that's the part we are having most to talk about to colleagues in local authorities."* (I4, L123).

It was agreed that with OHNAs you may well know the answer before you begin, the purpose of the OHNA is to quantify the need from anecdotal reports. OHNAs are *"not done starting against a blank history or going to another country where you know nothing about local needs"* (I4, L128).

It was reported that it takes considerable resources to undertake an OHNA and in the view of the interviewee, those undertaking OHNAs sometimes don't put the time and resources, in terms of people and partners, into the development of an OHNA and don't see it as a dynamic process, rather than a document (I3, L79).

A lifecourse approach to the OHNA process was thought appropriate by one interviewee (I3, L87). The need to use epidemiology to look to the future and forecast future needs in an ageing population was also mentioned (I3, L102).

"Reinventing the wheel" was seen as a potential issue in conducting OHNAs – and the lack of learning across different localities, or even countries within the UK was reported (I3, L225). It was hoped that NICE guidance on the topic might address this issue.

Key Finding 12

OHNAs are viewed as important in the commissioning and organisation of dental services.

Key Finding 13

OHNA is a process, on-going and circular in nature.

Key Finding 14

In conducting an OHNA it is important to begin with the end in mind, i.e. to have in mind what the document will be used for and how it fits into the commissioning process.

3.3.2 The format of OHNAs

It was suggested that the concept of an OHNA or ideal OHNA was flawed, in that OHNAs should take different forms – sometimes detailed, sometimes "*back of an envelope three page document*" (I2, L29). "*I don't think that you should think of one oral health needs assessment – they should be seen as several different outputs depending on the end product you need*" (I5, L21). This interviewee endorsed the concept of an overall OHNA for a locality but then separate assessments for specific groups - military families and people with special care requirements were cited as examples of recent work that the interviewee had been involved in.

One interviewee commented, "*my general thoughts about them* [OHNAs] *are people want them to be all things to all men and there's often a disconnect between what the person who actually needs the assessment wants and what the person carrying out the needs assessment puts in it."* (I2, L32). As to who should be involved in undertaking a needs assessment people from wider public health and local authorities were suggested as well as those who were currently providing services and programmes – *"partly as a means of informing and educating people that you may want to work with in taking forward your plans"* (I3, L53).

It was suggested that in times of constrained resources a needs assessment needs to be fit for what it is required for and therefore not all needs assessments look the same and not all needs assessments need to have the same content (I2 L38). A range of formats for OHNAs, short "*quick and dirty*", "*middle ground*" and "*full on version*" was thought a good approach (I2, L45).

It was suggested that it wasn't useful to have an overly prescriptive format for an OHNA (I2, L215). "*It isn't useful to have something which we* [CDPHS] *use to beat the local authority with"* (I2, L216). The format of any guidance must have a degree of flexibility to fit local circumstances (I2, L219).

It was also suggested that OHNAs should begin with the end in mind and that they were sometimes undertaken not to identify a need, but rather to quantify and confirm a need (I2, 257; I4, L227). It was reported that guidance that was evidenced based / informed would be very helpful to CDPHs in helping re-orientate oral health promotion teams – in particular those wedded to out of date one to one contact type of thinking (I4, L214). It was however recognised that lack of "gold standard" evidence might be an issue for the NICE guidance I4, L220). One respondent thought that the guidance to be produced by NICE should be in the form of a template that would provide detail on how a needs assessment should be conducted for particular groups. Rural communities were cited as an example (I5, L164).

Key Finding 15

The concept of a one-size fits all OHNA is flawed and there is a need to recognise that in everyday practice OHNAs may vary in complexity in relation to local circumstances.

3.3.3 Guidance on the conduct of OHNAs

It was suggested that a key issue is who is involved in the OHNA process from the outset. "*I think you need a very high level of sponsorship and ownership of it by partners"* (I3, L40). Just one or two people writing a document on need and calling it a needs assessment is unlikely to have impact (I3, L37). It was thought important when conducting an OHNA to define the purpose of that OHNA and to agree objectives at the outset (I2, L206).

Interviewees were generally aware of the guidance that has been issued by NHS Primary Care Contracting (NHS Primary Care Contracting 2006) and thought this a useful starter in conducting an OHNA (I1, L30) although it was agreed that this guidance was very service orientated. It was agreed that existing guidance on the conduct of OHNAs produced by NHS Primary Care Commissioning, written just after the introduction of the new dental contract in 2006, had a very narrow focus and was a document of its time – designed to help PCTs deal with the introduction of the new General Dental Service Contract (I3, L187).

It was suggested that it would be useful if the guidance produced by NICE contained a clear description of who were regarded as vulnerable groups (I1, L130). It was also suggested that the guidance should set out how such groups should be tackled (I1, L142).

It was suggested that it would be very helpful if the guidance under production by NICE would identify who should be involved or represented in setting up and conducting an OHNA (I3, L164). Suggested individuals included people from generic public health, CDPHs and those currently providing services. Interestingly, this interviewee did not automatically offer lay representatives amongst their nominees.

It was suggested that a two tier approach where overall needs were identified at a high level was seen as an important function of Public Health England, with more local OHNAs to identify local priorities (I2, L245). Another interviewee said that it should be recognised that health needs assessment is only part of the commissioning process (I3, L253). The need for access to clinical expertise and interpretation in the conduct of OHNAs was emphasised (I3, L182).

Key Finding 16

In conducting an OHNA it is important to involve key people from the outset, i.e. to ensure "sponsorship" of the process by those with the power to make the necessary decisions on change if required.

3.3.4 The interface between Local Authorities, Public Health England and NHS England

It was recognised that following the reorganisation in April 2013, work was needed by CDPHs to build relationships with Local Authorities. The Joint Strategic Needs Assessment (JSNA) was seen as a key vehicle for highlighting health needs and was the conduit to the Health and Well Being Boards (I1, L113). Relationships with the local Director of Public Health in facilitating access to the JSNA was seen as key (I1, L123; I5, L85). It was suggested that many JSNAs already contained a dental element (I1, L119). However the view was also expressed that "*there is a risk that we invest too much hope in JSNAs*" (I2, L94). Competing health improvement needs was seen as a threat to OHNAs in the context of a JSNA (I2, L102; I4, L140; I5 L91). The need to be cognisant of the political influences on determination of priorities was acknowledged (I2, L104).

The lack of understanding of dental issues by Clinical Commissioning Groups (CCG's) was posed as a potential barrier to incorporation of dental factors into the wider health improvement agenda, especially since dental services are now commissioned by NHS England, divorced from the CCGs (I1,L202; I2, L175).

Involving local professional networks for dentistry would also be an important part of ensuring that OHNAs got off the ground and acted upon, but this also needs LA input to engender a sense of ownership (I2, L244). The value of personal relationships and "knowing people" and these relationships not having been disrupted by the April 2013 changes was thought important (I4, L146).

The more complex arrangements for commissioning dental epidemiology services were discussed (I1, L233). It was explained that the responsibility for commissioning epidemiology surveys now lay with the Local Authorities, although the clinical staff who conducted the surveys were employed by NHS England – thus contacts would have to be arranged. However it was suggested that the responsibility for epidemiology hadn't as yet been transferred to LAs in all areas (I1, L239), and that there is a mixed model across the country as to whether resources have moved to the LAs from the

Primary Care Trusts (PCTs) or not (I2, L156). It was suggested that monies transferred to Local Authorities whilst within "the Public Health pot", was not specifically ring fenced for dental epidemiology (I2, L161).

Key Finding 17

Personal relationships are important in links between Local Authorities, Public Health England and NHS England.

3.3.5 Dental Surveys and data to inform OHNAs

The surveys coordinated by the British Association for the Study of Community Dentistry (BASCD) were seen as an invaluable tool for conducting an overall needs assessment for children (I2, L85; I4,l22) and have traditionally formed the starting point for OHNAs (I4, L24). However, lack of data to inform OHNAs for specific groups was seen as a problem (I1, L33; I2, L66). *"There are a lot of vulnerable people out there whose oral health needs we don't know a lot about"* (I4, L56). Data for specific groups within the population generally do not exist. Use of the "lax" year in the BASCD cycle, to target vulnerable groups was suggested as a means of improving information on vulnerable groups (I1, L209). However costs of collecting specific data on vulnerable groups was raised as an issue (I2, L70), meaning that such an approach was not always practical. Collecting data at a local level following the April 2013 reorganisation was thought likely to be more complex than previously (I2, L87).

In localities where a census sample of 5-year-olds have been undertaken (i.e. a survey of all 5-year olds in an area), the level of detail resulting and the ability to use small area statistics was seen as particularly valuable (I4, L26). It was one interviewee's experience however that the degree of rigour with which the surveys have been approached in the past varied by locality, with some areas undertaking a minimal sample approach and being on the bounds of acceptability (I4, L34). Accurate data on oral health needs on children attending special needs schools was seen as in short supply (I4, L64).

One interviewee had undertaken an oral health equity audit (HEA) and was questioned about the value of that more in depth approach to epidemiological assessment. Census data allowed mapping to small area level as well as service use data acting as a proxy for demand. The conclusion was that no clear inverse care law was demonstrable using this data approach (I4, L89). [CU note: this was mirrored when an extensive health equity audit was carried out in Wales]. This was felt to reflect the stability that the market gave to an NHS practice in a deprived area (I4, L97).

The interviewee who had extensive experience of the HEA approach was asked if they felt this was a valuable exercise. Their answer suggested that it was intensive in time and access to health analysis expertise was required (I4, L104). No clear answer was forthcoming as to whether this was overall a useful approach to informing an OHNA or not.

Other data related to the impact of the changes in the consent process for 5 year-olds to participate in oral health surveys. This was seen as a hindrance to accurate data collection (I4, L25; I5 L44; I5 L125). [CU note: in 2007 the Department of Health issued guidance that positive parental consent was required for participation dental epidemiological surveys in England. Prior to that time a negative consent process was use. This has impacted on the proportion of children from different social strata that are examined].

Delays in timely feedback on dental epidemiological data were cited as an issue by one respondent (I5, L146).

Work that has been conducted as alternatives to surveys in relation to vulnerable groups was referred to (I1, L38), and guidance on assessing oral health in vulnerable groups was needed (I1, L39). However, issues around obtaining a representative sample for such groups were a concern (I1, L40). On the other hand, it was accepted that it might not be absolutely necessary to define precisely the clinical dental needs of vulnerable groups. It is generally known that they have poorer oral health than the general public so some form of proxy or extrapolation of work from elsewhere might suffice (I1, L82; I2, L67).

The term vulnerable groups was felt to be difficult to define and an overarching OHNA with defined detailed pieces of work for particular groups would be important in setting priorities (I3, L62). *"I think sometimes we rely too heavily on what a couple of people perceive to be the need of these populations and you may actually miss what the needs really are unless you get accurate and detailed data" (I3, L62).* Language and other cultural issues were proposed as a barrier to accurate identification of needs in BME communities (I5, L 42). It was also suggested that there are "hidden populations" who require dental care but are not receiving it (I1, L50).

One interviewee had surveyed homeless people in a "drop-in" centre but that exercise took the form of a discussion only, no clinical examinations were involved (I1, L61). It was suggested that there are many sub-groups within the term vulnerable people, each with their own needs and peculiarities (I1, L88). Different categories of homeless people were cited as an example (I1, L153). It was again suggested that vulnerable groups, although grouped under one heading could represent a wide range of needs and abilities.

An interviewee described attempting to undertake a specific piece of clinical needs gathering in a group of people with special care requirements, but the volunteer group representing their interests refused access, as it was felt this would put the subjects under too much stress. The interviewee expressed their exasperation when, one year later, the same people came back asking for information on the needs of the special needs group as they were having difficulty accessing dental services (I5, 32).

It was noted that health analysts often had pieces of data that could be used to contribute to OHNAs (I4, L134). However, generic public health and local authority analysts were thought to be generally lacking in knowledge of things dental and needed guidance from CDPHs (I4, L135).

Addressing inequalities in oral health was seen as a key function of OHNAs. To that end, the limitations of population mean data were discussed. It was suggested that more sophisticated measures of the gradation of needs and access should be made explicit in forthcoming guidance (I5, L207).

Key Finding 18

Data to support OHNAs for vulnerable groups are lacking.

Key Finding 19

Views were mixed on whether proxy data could be used, some seeing this as acceptable while others were concerned that this may mask disparities within apparently homogeneous groups.

3.3.6 Oral health as a priority

The view was expressed that the financial cut-backs facing Local Authorities was an issue and the pressures going forward were likely to be such that “*to be honest it’s going to be quite difficult to get an oral health issue far up their agenda, unless it is a major health issue in that locality*.” (I2, L130).

The need to view oral health in the context of a general approach to health was viewed as important. It was thought a danger if dental needs assessments are done on their own, there is the danger that it will just be seen as dental and it won’t be prioritised (I2, L146).

Key Finding 20

Getting and keeping oral health on the agenda of Local Authority health improvement programmes was a concern.

3.3.7 Patient and public involvement (PPI)

It was agreed that past OHNAs had not always been good at involving patients and the public (I4, L168). Professional engagement in the past had been good but seeking the views of lay stakeholders, patients and the public, had been poor (I2, L117). Involving elected members in the future was seen as a possible way of addressing this issue (I2, L117). The view was expressed that Local Authorities are far more sophisticated in how they try to reach out to their communities than the NHS has been in the past. Building on local plans and strategies from the bottom up where possible, was the way forward and an important element of keeping elected members happy and more engaged with the population (I2, L122; I3, L159).

The GP survey was noted to contain some useful dental related questions and was a good way of ascertaining lay perspectives on oral health issues (I4, L169). The patient surveys conducted by the NHS Business Services Authority were also mentioned as a possible source of lay views on dental services (I4, L174). Local lifestyle surveys were also reported as a source of patient data if dental question(s) can be incorporated (I4, L183). Softer opportunities were mentioned such as the involvement of Community Health Council and their successor bodies on oral health advisory groups (I4, L198). Workshops with members of the Local Dental Committee and members of the public had on one occasion proved “*quite illuminating”* (I4, L205).

Key Finding 21

In line with our findings in relation to the analysis of submitted OHNAs (Section 2.4), involvement of patients and the public has in the past been limited. This was exemplified by the fact that patient and public involvement wasn’t raised as a significant issue by the CDPHs interviewed to any great extent.

3.3.8 Health improvement versus service commissioning in OHNAs

There was a view that it was not sensible to divorce health improvement from service commissioning in oral health needs assessments (I1, L97; I2, L191). The term Oral Health and Service

Needs Assessment was thought more appropriate than OHNA, given the inter-relatedness of health improvement and service delivery (I5, L71).

One interviewee raised the issue of the use of HNAs to inform the decommissioning of services that were shown to be inefficient or not working. It was thought that this potential benefit of HNAs was not seen sufficiently often (I3, L141). In such circumstances a good HNA should also identify alternatives when decommissioning was suggested (I3, L148).

Key Finding 22

Dental Service Commissioning was viewed as closely related to oral health improvement and needs to be borne in mind in the OHNA process.

3.3.9 Access to dental care for vulnerable groups

Difficulty in securing access to care for vulnerable groups was a concern and the view expressed that leaflets and other such materials did not work (I1, L71). Dental input to day centres and dining clubs were suggested as a means of accessing some vulnerable groups, but that approach wouldn't reach those "hidden in society" who did not attend such places (I1, L74). Social exclusion was an issue in terms of hard to reach vulnerable people (I1, L86).

Whilst recognising the Common Risk Factor approach in addressing oral health improvement, access to dental care was seen as an important element of the oral health improvement process (I2, L199). It was also suggested that in the past, sometimes resources were provided without sufficient work or thought as to how an identified need could be converted to demand (I3, L246). For example, citing a new dental service in an area of deprivation, but there being insufficient demand to justify the resource.

Difficulty in accessing dental services was thought to be also linked to difficulty in accessing other services. Data on such issues might be of help in the OHNA process (I5, L58).

3.3.10 Thoughts on NICE Guidance

The guidance currently being produced by the National Institute for Health and Care Excellence for Local Authorities was universally welcomed and thought important at this time.

SECTION 4

STRUCTURED LITERATURE REVIEWS ON ORAL HEALTH NEEDS ASSESSMENT

4.1 Rational for this study

In parallel with the work on identification of the contents of OHNAs produced by the CDPHs (Section 2) and CDPH interviews (Section 3), two structured literature reviews were undertaken with two objectives in mind. The first search (Section 4.2) was designed to identify studies of the oral health needs assessment process in vulnerable groups. The second search (Section 4.3) sought to identify literature on the methodology of health needs assessment in general, not specifically limited to OHNA. Given the differing aims, each of searches are described separately and the outcomes of the search are presented separately (Appendix 7 and 8). However, the implications of the research findings are discussed in combination in Section 4.5.

It should be noted that both searches carried out here were in the form of a structured review and were not a formal systematic review of the literature in this area. As a result no attempts were made to contact authors, no supplementary search methods were used beyond searching the databases listed with the exception of the Journal of Disability and Oral Health, the journal of the British Society for Disability and Oral Health in which the Tables of Contents were hand-searched. We also included a key historical paper known to the CU team which was available only in hard copy and not identified in the formal electronic search.

4.2 Search 1 - Oral Health Needs Assessment and Vulnerable Groups

4.2.1 Aim

The aim of this search was to retrieve literature on oral/dental health needs assessment (and variations thereof) and vulnerable groups.

4.2.3 Methodology

Full details of the search strategy and terms used are described in Appendix 6. In summary, the following databases were interrogated, Medline, Embase and CINAHL and the Cochrane Library, the date range being from 1946 (or from commencement of database if later) to Week 1 June 2013. The results from these databases were merged and duplicated articles removed. This search was conducted on 14th June 2013.

The identified papers were screened by Title and Abstract to identify papers relevant to the process of conducting oral health needs assessment in vulnerable groups. At this stage a number of exclusion criteria were applied. The papers were screened by a single reviewer. This was felt sufficient to identify relevant papers.

4.2.3.1 Inclusion Criteria

Papers which describe the conduct of oral health needs assessment in vulnerable groups and which report on the conduct of this process from a population perspective and which did not include one or more of the exclusion criteria below were included in the review.

4.2.3.2 Exclusion Criteria

The following exclusion criteria were applied:

- Assessment / Description of specific clinical procedure
- Descriptions of epidemiological methods or simple description of disease epidemiology
- Assessment of care utilisation or papers about access to dental care
- Assessment of care provision
- Work which describes in isolation oral health related quality of life or sociodental indicators
- Assessment of need in a clinic or on entry to a nursing home
- Description of single clinic or access to a single clinical service
- Description of an educational intervention or interventions
- Studies on demand for services
- Attitudes to specific treatments
- Future need for a single service or topic
- Self-reported unmet health needs
- Study solely about workforce
- Commentary / thought piece
- Description of non-community intervention study
- Economics
- Miscellaneous i.e. papers not relevant to the search topic and not in one of the above categories
- Duplicate studies remaining after de-duplication

4.2.4 Assessment of relevant papers

Studies identified as potentially of relevance were then accessed, either on-line or via hard copy. These were then reviewed in detail and a decision made as to whether the study / information described was of value in informing the conduct of OHNA in vulnerable groups.

The studies were then identified as providing information of value to the ONHA process (included) or not providing information of value (excluded). A commentary on the main findings for both included and excluded studies is provided (Appendix 7). The nature of the studies retrieved indicated that a narrative report was most appropriate. This is provided in Section 4.5.

4.3 Search 2 - The methodology of health needs assessment

4.3.1 Aim

The aim of this search was to retrieve literature on the methodology of needs assessment in general (not just oral health needs assessments).

4.3.2 Methodology

Full details of the search strategy and terms used are described in Appendix 6. In summary, the following databases were interrogated, Medline, Medline in Process, Embase, HMIC, CINAHL and the Cochrane Library. In addition TRIP, NICE Evidence Search and the British Society for Disability and Oral Health websites were searched for any guidance on health needs assessment methodologies outside of the journal literature. A known resource from the Scottish Needs Assessment Programme that was not indexed in any of the search engines was added to the outputs, The date range for the search was 1947 (or commencement of database if later) to 1st week June 2013. The results from these databases were merged and duplicated articles removed. The search was conducted on 20th June 2013.

The identified papers were screened by Title and Abstract to identify papers relevant to the process of conducting health needs assessment that were of relevance to the process of OHNA in vulnerable groups. At this stage a number of exclusion criteria were applied. These are described in Table 4.2. The papers were screened by a single reviewer. This was believed to be sufficient to ensure that relevant papers were identified.

4.3.2.1 Inclusion Criteria

Papers which described the conduct of health needs assessment which would potentially inform the conduct of oral health needs assessments in vulnerable groups were included.

4.3.2.2 Exclusion Criteria

Papers that were not of relevance to the conduct of oral health needs assessments in vulnerable groups were excluded.

4.3.2.3 Assessment of relevant papers

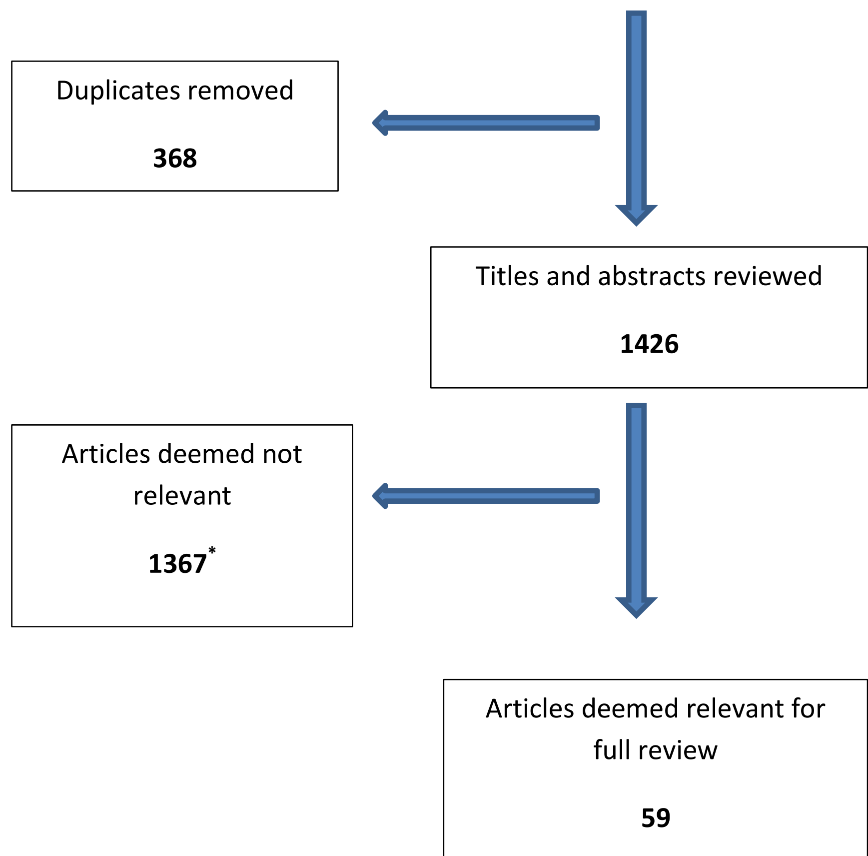
Studies identified as potentially of relevance were then accessed, either on-line or via hard copy. These were then reviewed in detail and a decision made as to whether the study / information described was of value in informing the conduct of OHNA in vulnerable groups. The studies were then identified as providing information of value to the ONHA process (included) or not providing

information of value (excluded). The vast range of topics identified in the search precluded classifying the studies excluded on initial screen.

4.4 Results of Literature Reviews

Figure 4.1 – Flow diagram illustrating the outcomes of Search 1 - Oral Health Needs Assessment and Vulnerable Groups.

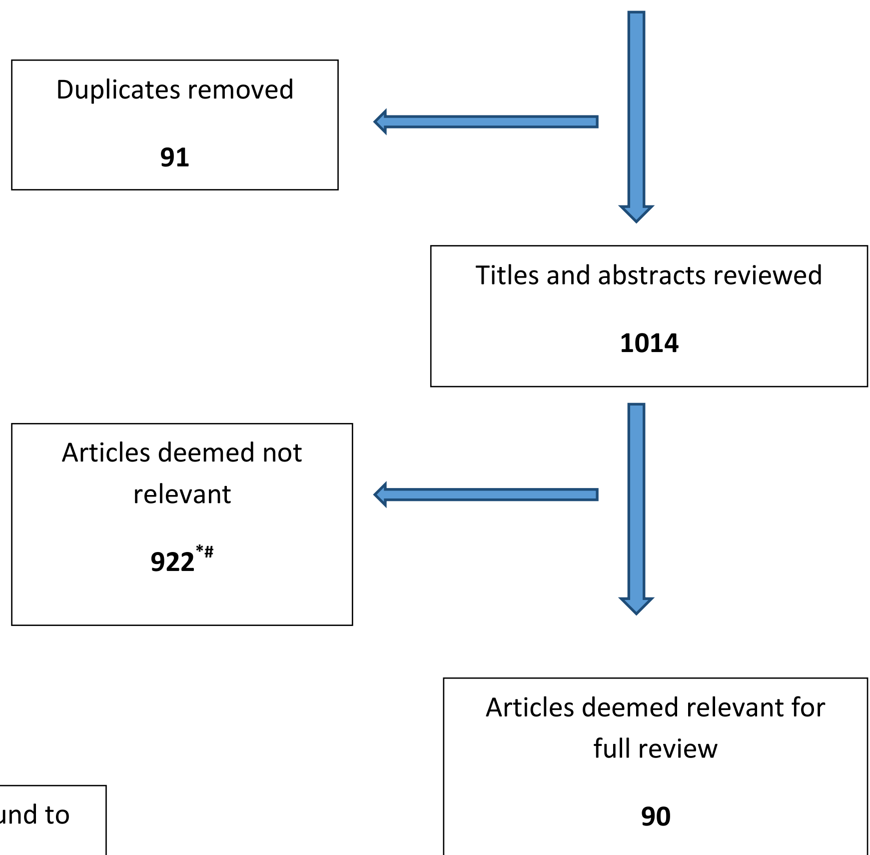
Database	Hits	Limited to English
Medline via Ovid	937	863
Embase	630	604
CINHAL	300	296
Cochrane	31	31
Total	1898	**1794**



*Reasons for exclusion are reported in Appendix 6 as Table A6.1

Figure 4.2 – Flow diagram illustrating the outcomes of Search 2 - The methodology of health needs assessment.

Database		Hits Limited to English
Medline via OvidSP		99
Medline in Process via OvidSP		15
Embase via Ovid SP		118
HMIC (Health Information Management Consortium) via Ovid SP		71
CINHAL		220
Cochrane		73
TRIP Database		9
NHS Evidence		500
Total		**1105**



*A further 2 articles were found to be duplicates

#The range of topics covered in these papers preclude grouping in any meaningful way

From Figures 4.1 and 4.2, it can be seen that both searches resulted in a large number of “hits”. Although Search 1 identified 1426 papers, just 59 of these were deemed to be of direct relevance to the ONHA process in vulnerable groups. A great number (757) of the identified articles were focused solely on a description of epidemiological methods and surveys and were considered not of relevance to the focus of the review (Table A6.1). Studies on access to care (173) and provision of care (107) were also excluded on the grounds that they comprised only one element of the OHNA process and were often specific to countries outside the United Kingdom and were therefore of limited relevance to the main focus of the work (Table A6.1).

Search 2 on needs assessment methodology (Figure 4.2) produced 1014 papers on a wide variety of topics. The topics were too diverse to justify classifying their specific reason for exclusion. A total of 90 papers were deemed worthy of further scrutiny as being of possible value in developing guidance on OHNAs for vulnerable groups.

The papers that were identified as worthy of more detailed scrutiny (Search 1 and Search 2) are detailed in Appendices 7 and 8, together with a brief commentary on the reason for their inclusion or exclusion.

4.5 Key findings and discussion of included research studies.

Search 1 Oral Health Needs Assessments and Vulnerable Groups

Key Finding 23

No publications were identified by the search strategies (Appendix 6) that described an Oral Health Needs Assessment which was taken forward via a strategy, implemented and evaluated.

Key Finding 24

Evidence on a definitive approach to OHNA is lacking.

General comments on literature search

This search generated a large number of “hits”. These described many aspects of oral health needs assessment in part, or related to assessing need, but as stated, no papers described the process of devising, implementing and evaluating an OHNA. In many cases the reports were in the form of primary “academic” studies from which it was not possible to make any inferences of relevance to the NHS. In addition, many of the studies were carried out overseas, largely in North America where the different funding mechanisms for dental care limit transferability of findings to the situation in the United Kingdom. Other than a count of papers identified, the lack of any form of common outcome measures precluded any numerical or statistical approach to the review.

Common themes from the included studies are now discussed.

Perceptions of need

In conducting OHNAs it is important to consider from whose perspective need is assessed. Traditionally in dentistry this has been from the view of dental professionals – so called "Normative need". That this approach predominates is exemplified by the large number of papers on epidemiological tools and dental indices, which are all developed from a professional perspective. However, the value of including self-perceived oral health was noted in a number of studies, (Andersen, Davidson et al. 1997, Akaji, Jeboda et al. 2010). It was suggested that self-perceived need was often at variance with normative need and that this may change over time (Locker and Jokovic 1996, Dolan, Peek et al. 1998).

The use of socio-dental indicators, which take into account the impact of oral disease on daily life was also described in detail in the literature (Sheiham, Maizels et al. 1982, Maizels, Maizels et al. 1993, Srisilapanan and Sheiham 2001, Srisilapanan, Korwanich et al. 2003, Gherunpong, Sheiham et al. 2006, Gherunpong, Tsakos et al. 2006). However, these were mainly one-off surveys demonstrating the use of socio-dental indicators rather than demonstrating their use as part of an overall oral health needs assessment process.

Some interesting alternative approaches to gauging patients' perceptions of need were identified. An American study described use of a Global Oral Health Assessment Index in frail elderly people (Calabrese, Friedman et al. 1999). Other screening instruments for use with older people were described by Lane and Gallagher (Lane and Gallagher 2005, Lane and Gallagher 2006).

Key Finding 25

While socio-dental indicators have been extensively described, this has largely been in one-off studies and not as part of an on-going evaluated OHNA process.

Vulnerable groups

Examples of oral health needs assessment of need in the form of an epidemiological survey were identified for many vulnerable groups e.g. children aged 5 and under; people on a low income; older people; people who are homeless or who frequently change the location where they live (for example, traveler communities); people from some black and minority ethnic groups (for example, those of South Asian origin); people who chew tobacco; people with mobility difficulties or a learning disability and who live independently in the community. These were however excluded as they were purely descriptions of the conduct of a clinical survey or an investigation of access to or attitudes to a dental service.

There were numerous studies on prisoners e.g.(Kipping, Scott et al. 2011). Immigrant populations were identified as a vulnerable group (Duncan and Simmons 1996). Generic HNAs involving drug users were also identified (Gustafson 2008).

Key Finding 26

There are many studies on oral health needs assessment in vulnerable groups but these are largely simple epidemiological surveys of dental caries prevalence.

Data collection
There were papers which described the difficulties and limitations of assessing oral health needs in vulnerable groups (Steele, Walls et al. 1995, Tickle, Craven et al. 1996, Hennequin, Faulks et al. 2000, Milsom, Buchanan et al. 2009, Shah and Tabair 2013). Possible alternative means of collecting data from vulnerable groups included qualitative approaches (Daly, Clarke et al. 2010) and the use of a Delphi study (Kuthy, Siegal et al. 1997).

Novel proxy measures of need included the use of school league tables (Crowley, O'Brien et al. 2003, Muirhead, Locker et al. 2006). This is an interesting possibility in the context of the current work in which the focus of the provider is Local Authorities. They of course have immediate access to school performance statistics.

Key Finding 27

Alternative measures may act as a proxy for dental need e.g. school league Tables.

More detailed data analysis
Health Equity Audit
The concept of Health Equity Audit was raised in both this and the subsequent search on needs assessment methodology. Dyer and colleagues described a Heath Equity Audit approach to describing oral health needs in Sheffield (Dyer 2010). The principles of this approach have subsequently been applied in great detail in Wales (Blewitt, Trubey et al. 2011). In this approach data on need (as judged by clinical survey), is combined with demand (as evidenced by dental attendance) and supply (as measured by the volume of dental care commissioned). This is an intensive approach which requires significant input from a health information analyst. A more simplistic approach, using direct line measures of access to dental care has been described (Landes and Jardine 2010)

Measures of relative inequalities in oral health.
The use of more advanced quantitative methods, specifically, absolute and relative measures, the Slope Index of Inequality, the relative Index of Inequality (mean and ration) and the Health Concentration Index have been examined by Cheng and colleagues, in an attempt to quantify gradations in oral health related to social and economic deprivation (Cheng, Han et al. 2008). However, the CU team are of the view that the ready availability of the data necessary for this type of analysis when dealing with vulnerable groups is in doubt.

Area based-measures and geographic mapping
In the assessment of OHNAs submitted by CDPHs (analysis described in Section 2), in was noted that increasing use was being made of Geographic Information Systems, for example to map the provision of dental services to areas of social and economic deprivation. The literature search demonstrated this as a well-documented and researched area starting with descriptions of an area-based measure as an indicator of inequalities in oral health (Elley and Langford 1993, Locker and Ford 1994). In the interim, more sophisticated software has enabled the use of GIS systems to become routine in assessing the supply side of dental care (Antunes, Frazao et al. 2002, Kruger, Tennant et al. 2011, Kruger, Whyman et al. 2012).

Search 2 The methodology of health needs assessment

General comments on the search related to needs assessment

Construction of the search strategy for this element of the literature search proved challenging. The Information Specialists at both CU and NICE devoted considerable effort into ensuring that this was as focussed as possible (Appendix 6). Several iterations of the search strategy were tested to ensure that it focussed on the relevant literature without retrieving unmanageable volumes of hits. Designing a search which resulted in papers on needs assessment review methodology and not the methods description of a needs assessment was the issue at hand. The inclusion of NICE Evidence Search proved a useful source of papers on the former. However it should be noted that the evidence derived from these were largely “How to” papers, rather than papers which rigorously proved HNA methodology.

The purpose of this review was to examine the approach taken to HNA methodology in the health services research literature, given the lack of robust evidence in the field of oral health needs assessments.

Suggested methodologies for health needs assessment

This literature search and personal knowledge of one resource which exists only in hard copy have identified documents that suggest a possible framework for the conduct of health needs assessments. The first of these documents, produced by the Scottish Needs Assessment Programme (SNAP) provides a very clear description of approaches to assessing need with a focus on primary care services (Scottish Needs Assessment Programme 1998).

The Health Development Agency, produced extensive guidance on the conduct of Health Needs Assessment in 2005 (Health Development Agency 2005). However given the changed structure of the NHS post April 2013, two particularly helpful publications revealed by the literature search were a briefing paper on Joint Strategic Needs Assessment produced by the NHS Confederation (NHS Confederation 2011). The same organisation has subsequently published operating principles for Joint Strategic Needs Assessments and Joint Health and Wellbeing Strategies (NHS Confederation 2012).

A unifying feature of these guidance documents is the depiction of Health Needs Assessment as an on-going and circular process. It should be noted however, that none of these documents are backed up by what would be regarded as a formal academic evidence base, tested in formal before/after or intervention studies. The fairly scant reference lists provided in these documents tend to refer to other policy documents. Rather than robust scientific evidence, the methodology proposed has not been tried and tested and found to be either clinically or cost effective. It can at best be considered as suggested best practice.

A toolkit, specific to oral health needs was produced by NHS Primary Care Commissioning in 2006 (NHS Primary Care Contracting 2006). This document was produced at the time of the introduction of the new General Dental Services Contract. It focuses heavily on issues related to contracting for primary care dental services by Primary Care Trusts, a novel feature of the 2006 contract. It contains little on assessing oral health improvement needs and nothing on vulnerable groups. As such it is considered obsolete by the Cardiff Team.

A somewhat dated, but potentially helpful oral health needs assessment resource is that produced by the Association of Territorial and State Dental Directors in the USA. It was first produced in 1991 and subsequently revised in 2003 (Association of Territorial and State Dental Directors 2003). This describes a seven-step process, which also introduces the concept of a process of assessment – prioritisation – implementation – evaluation – reassessment. This model relates to the collection of data rather a wider concept of need. It has been used to establish maternal and child health data collection priorities for state and local oral health programmes (Kuthy, Siegal et al. 1997). Its value in assessing needs for oral health improvement programmes is not clear and would appear not to have been tested for such.

The British Society for Disability and Oral Health have produced guidelines and integrated care pathways (British Society for Disability and Oral Health 2000, British Society for Disability and Oral Health 2012). Whilst useful for the clinical management of people with mental health problems or learning disabilities, and usefully setting out the issues relating to this group of vulnerable patients, they have a limited perspective on OHNAs from a population perspective.

Given these findings from the literature on general health and health promotion literature, the Cardiff Team are of the view that these give some guidance on what an ideal OHNA template should contain. However, it is our view that there does not exist in the literature, a fit for purpose OHNA template that would suit the current needs of Local Authorities.

We have used the information gained from these literature reviews together with our past experience to formulate a possible approach to the conduct of OHNAs. From the literature just described and knowledge of the public health surveillance approach a proposed template is described in Sections 5 and 6.

Before describing the proposed OHNA template, the remainder of this section describes other issues highlighted by included papers from Search 2.

Key Finding 28

Evidence from the wider healthcare literature suggests that HNA is a circular process – but much of this is in the form of policy documents and has not been tested in before/after or intervention studies to determine the clinical and cost-effectives of the HNA approach.

Measuring inequity in health care

Asada and colleagues described three approaches to measuring inequity in health: (1) collective expert judgments (clinical standard approach), (2) average health care use based on need (population standard approach), and (3) assessment of health care users or providers (direct approach)(Asada 2011). This study may be of use in identifying approaches to measuring oral health inequity.

Rapid approaches to health needs assessment

A rapid assessment method used for health-equity audit was described in relation to diabetes in frail elderly (Aspray 2006). This gives some weight to the concept that health needs assessments need not always be extensive and supports the views of the Consultants that we interviewed (Section 3).

Engaging communities for health improvement

Coulter produced a useful resource about engaging communities in decisions about healthcare (Coulter 2010). The report stresses that, in order for a community engagement project to be effective, it is important to consider the community it is aimed at by: finding out exactly how people want to get involved; providing as much support as possible for people to get involved in the project; and, easily making sure community members know that their views will be taken into account when any decisions are made. It provides case-studies but none of these relate to oral health.

Previous studies have used the Delphi technique (in the case of breast cancer survivors) as a means of gauging public opinion (Shaw 2008). A technique using photographs to engage the public discussing health planning was described by a number of studies (Wang and Burris 1997, Downey 2009, Decker 2011). The degree to which this might be useful in OHNA is unknown.

Arnstein's ladder of public involvement has not previously featured in OHNAs. The complexities of user involvement were described by Tritter and McCallum who were critical of Arnstein's ladder (Tritter and McCallum 2006). This aspect of OHNA development is important given that our analysis (Section 2) suggests that public involvement in the OHNA process hasn't received much attention in the past.

While papers identified by the search describe techniques for involving BME communities (National Health Service Year not Clear), (Aspinal 2006) and older people (Anon 2003), none of these related to oral health.

Key Finding 29

There is a large literature on involving people and vulnerable groups, but studies of this in the context of oral health needs assessment are very limited.

The CU team have drawn on this limited literature to propose a 10-step OHNA process as described in the next Section.

SECTION 5

SUGGESTED PRINCIPLES AND PRACTICE FOR THE CONDUCT OF ORAL HEALTH NEEDS ASSESSMENTS WITH REFERENCE TO VULNERABLE TO GROUPS

5.1 Introduction

From the research evidence identified it is clear that a robust, definitive approach to oral health needs assessment has yet to be established. As a result we have, using the above evidence, proposed an approach to undertaking OHNAs, which draws on the evidence reported in the foregoing Sections, but also on a wider public health theory derived from our knowledge of public health surveillance as described below.

The current section (Section 5) describes the "how to" of conducting an oral health needs assessment. Section 6 describes how this might be reported.

5.2 The Cyclical Process of Assessing Need

Health needs assessment can be defined as a "systematic method for reviewing the health issues facing a population, leading to agreed priorities and resource allocation that will improve health and reduce inequalities." (Health Development Agency 2005).

The only problem with this definition is the focus is wholly on broad brush descriptions of the process of a needs assessment and not the context in which needs assessment is undertaken. A needs assessment is a formal systematic process occasionally undertaken or repeated as part of a bigger on-going public health surveillance process.

"Public health surveillance is the continuous, systematic collection, analysis and interpretation of health-related data needed for the planning, implementation, and evaluation of public health practice. Such surveillance can:

- serve as an early warning system for impending public health emergencies;
- document the impact of an intervention, or track progress towards specified goals; and
- monitor and clarify the epidemiology of health problems, to allow priorities to be set and to inform public health policy and strategies." (World Health Organisation 2013)

Thus surveillance is the continuous process of which an individual needs assessment is a single component. If the process is to remain continuous then the needs assessment will need to be refreshed from time to time.

In day to day health protection practice the process of surveillance can be summarised as a cyclical series of questions and actions:

1. What do I know?

2. What more do I need to know (and who do I need to ask for that information)?
3. Who is at risk (both upstream and downstream)?
4. What action needs to be taken and by whom?
5. Provide advice to take the action (go back to 1)

On a slower scale health needs assessment including oral health needs assessment should be a similar cyclical process covering:

1. What do we know currently?
2. What do we need to know (and how can we secure that information)?
3. Who is at risk?
4. What action should be taken and who is empowered to take that action?
5. Advise on action to be taken (after time for change to occur go back to 1)

5.3 The Context - Oral Health and Joint Strategic Needs Assessment

Oral Health Needs Assessments undertaken in England will be in the context of broader Joint Strategic Needs Assessments, the resulting health and well-being strategies and the accompanying local decision processes.

Understanding of how local priorities are agreed from the Joint Strategic Needs Assessment process and fed into the health and well-being process is required if priorities which emerge from an oral health needs assessment are to feature through this process.

The other processes which need to be understood if they are to be influenced by findings from a needs assessment are those used to secure and manage services which have potential either to prevent oral health problems or to treat them. Services may be commissioned from a range of bodies including the Third Sector or provided directly by local statutory bodies.

In preventing oral health problems the range of areas for potential action include as adapted from Ottawa Charter Principles (World Health Organisation 1986).

- Healthy policy
- Creation of supportive environments
- Supporting community action
- Developing personal skills
- Reorientation of services to be health improving/promoting

The potential areas of interest for both a Local Authority and partners are numerous. Hence the advantage of a cyclical approach where priorities are established and addressed in turn. Thus in turn has implications for how needs assessments can be conducted.

5.4 Principles of Needs Assessment

The following list draws upon principles outlined by the Scottish Needs Assessment Programme (Scottish Needs Assessment Programme 1998) and the NHS Confederation (NHS Confederation 2011).

- Clarity of aim helps to ensure an appropriate approach is chosen.
- There are many concepts of need and no single right definition. You need to be aware of the needs you are recognising and addressing and those you are not.
- Demand is not the same as need.
- Health and well-being is shaped by a range of issues and persistent health inequalities cannot therefore be addressed by a single agency alone.
- Shared pictures of need support shared strategic planning.
- Different information sources and methods inform about different aspects of need, when you integrate enough information you can start to see and understand the big picture.
- How you undertake needs assessment shapes your response to problems. Some approaches simply describe problems allowing decision to be made on whether they are big enough problems to justify action. Others start to explore responses. Ultimately all needs assessment is part of a process of making decisions on areas for potential action and commencement of taking action.
- When people are engaged in needs assessment they are more likely to agree the need for change. This is as much about increasing the probability of success of the needs assessment process as it is about respect for autonomy of individuals and populations.
- Needs assessment should be appropriate to the local circumstances and should fit within the local planning and decision making process.
- Negotiation both beforehand to establish a needs assessment and afterwards to enable decisions and actions will increase the likelihood of achieving change.
- A systematic approach which defines need and chooses solutions explicitly and lists an action plan brings openness and therefore accountability to decision making.
- Needs change over time therefore needs assessments should be part of an interactive cyclical process.

The process outlined in the following section is consistent with the cycle of engagement ownership and leadership for Joint Strategic Needs Assessments promoted by the NHS Confederation and partners (NHS Confederation 2012).

5.4 Undertaking An Oral Health Needs Assessment – a 10 step approach

The problem for undertaking local oral health needs assessments is matching the process to the local circumstances (NHS Confederation 2011). Comprehensive, holistic and fully informed needs assessments take considerable time and resource to produce and may require customised collection of data. On occasions a more focused or edited approach may be appropriate to the context and resource availability. These findings concur with what we were told by the CDPHs (Section 3) and our findings of the lack of detailed epidemiological evidence to inform the needs of specific vulnerable groups.

As reiterated by the CDPH interviews (Section 3), the cyclical process of oral health needs assessment commences with consideration of what is already known. To consider what is known requires people who can bring their knowledge, their thinking skills and their influence to the table.

Drawing on the evidence available, we propose a 10 step approach to the conduct of an oral health needs assessment. This is illustrated in Figure 5.1 and described in detail below.

Step 1

Reconvening an established partnership or establishing a new partnership to undertake the needs assessment is therefore the first step (Scottish Needs Assessment Programme 1998, Association of Territorial and State Dental Directors 2003)

The partnership is a recognition that the needs assessment is a community approach (Mid Hampshire NHS Primary Care Trust 2002).

Step 2

The second step is agreeing the scope, goals and timescale of the work commencing with the population of interest (Association of Territorial and State Dental Directors 2003, Health Development Agency 2005, NHS Scotland 2012).

Not all administrative boundaries match so the population of interest needs to be agreed. Aims, objectives, scope, mandate, timescale and target audience can all be established (Health Development Agency 2005, NHS Confederation 2011)

The scope may be shaped by existing knowledge or by concerns requiring further investigation. Clarifying what the goal of a needs assessment is adds focus to the task.

If there is no previous oral health needs assessment work to draw upon then the purpose of the initial needs assessment can be to describe a comprehensive picture of what is known from readily available data to describe what are believed to be common causes of oral morbidity locally which are priorities for more detailed work (Scottish Needs Assessment Programme 1998, Association of Territorial and State Dental Directors 2003).

The annual requirement for a Joint Strategic Needs Assessment (Conferderation 2011) provides an opportunity for a focused oral health needs assessment to be undertaken each year where there are a range of topics worthy of a focused needs assessment, for example focused upon:

- needs of a vulnerable population,
- on a focused area of oral disease,
- based upon the needs of a specific community or setting (e.g. workplace)
- a review of local practice against the evidence base

Reference: (Wilkinson and Murray 1998)

Step 3

The third step is having partners pull together any previous oral health needs assessment plus any additional information they already have to hand or are aware of (Scottish Needs Assessment Programme 1998).

Techniques which assess the assets (resources, networks, strengths and skills) in communities such as asset mapping, asset-based community development, appreciative enquiry, participatory appraisal and open space technology are increasingly recommended to complement the problem identification aspects of needs assessment and are appropriate for use at this stage (NHS Confederation 2012)

Step 4

The fourth step is about closing information gaps, and is to ask:

1. What do we know currently?
2. What do we need to know (and how can we secure that information)?

Information may be extrapolated from recent studies elsewhere or from trends from historical data. If time and resources allow, it may be possible to collect new data not already available. This is likely to be a necessary step in the context of OHNAs for vulnerable groups. At some point a decision needs to be made that the data available, including any remaining gaps are adequate given the circumstances of the local work.

Different types of information have their own strengths. Blended approaches to needs assessment can draw upon the range of strengths and ensure a more complete picture than a single approach would provide (Murray and Graham 1995).

There are a range of approaches which can be undertaken to engage the local population, either by data collection during the needs assessment process or at various stages of consultation on the problems in the community and possible responses (Jordan, Dowswell et al. 1998).

Optional Step Embedded within Step 5 – Engagement and Consultation on the List of Issues

In the interests of openness, transparency, inclusion, and listening it is good practice to formally engage the local population, including any stakeholders not actively involved in the partnership at this point. They may bring new knowledge or perspectives on the problem not covered by routinely collected data before actions to address the problems are considered.

Step 5

The fifth step is about analysis, synthesis and consideration of information secured to the point of developing a shared agreement on both the assets, strengths and capacities of local communities and on the problems or issues which are a local priority for potential action (Association of Territorial and State Dental Directors 2003, NHS Confederation 2011)

An underpinning concept of need is the ability to benefit from intervention (Culyer 1976).

If there is no action which can be taken then something cannot be a priority for action. Thus it is possible that step 5 will be development of a long list of priority problems and that in step 6 this will be revised to a short list for action. Prioritisation should be based upon issues requiring the greatest attention and where greatest impact can be made from available resources (NHS Confederation 2012).

Step 6

Step 6 is consideration of the various actions which could be taken to address the problems identified in Step 5 (Health Development Agency 2005). An evidence review should be undertaken and may show that some actions will be more predictably effective than others (NHS Confederation 2011), some may not be suited to local context. Others may require resources not available locally. Development of a prioritised list of actions which are recommended as locally appropriate completes this step.

Step 7

Step 7 is identification of how, within the local context of partnership working, organisational responsibilities and decision making, the actions will be implemented by those with power to take action. Ideally a summary for each recommendation should link to the appropriate body, partnership or decision making process for potential implementation.

Step 8

A final consultation phase with key stakeholders on the proposed recommendations can be undertaken.

Step 9

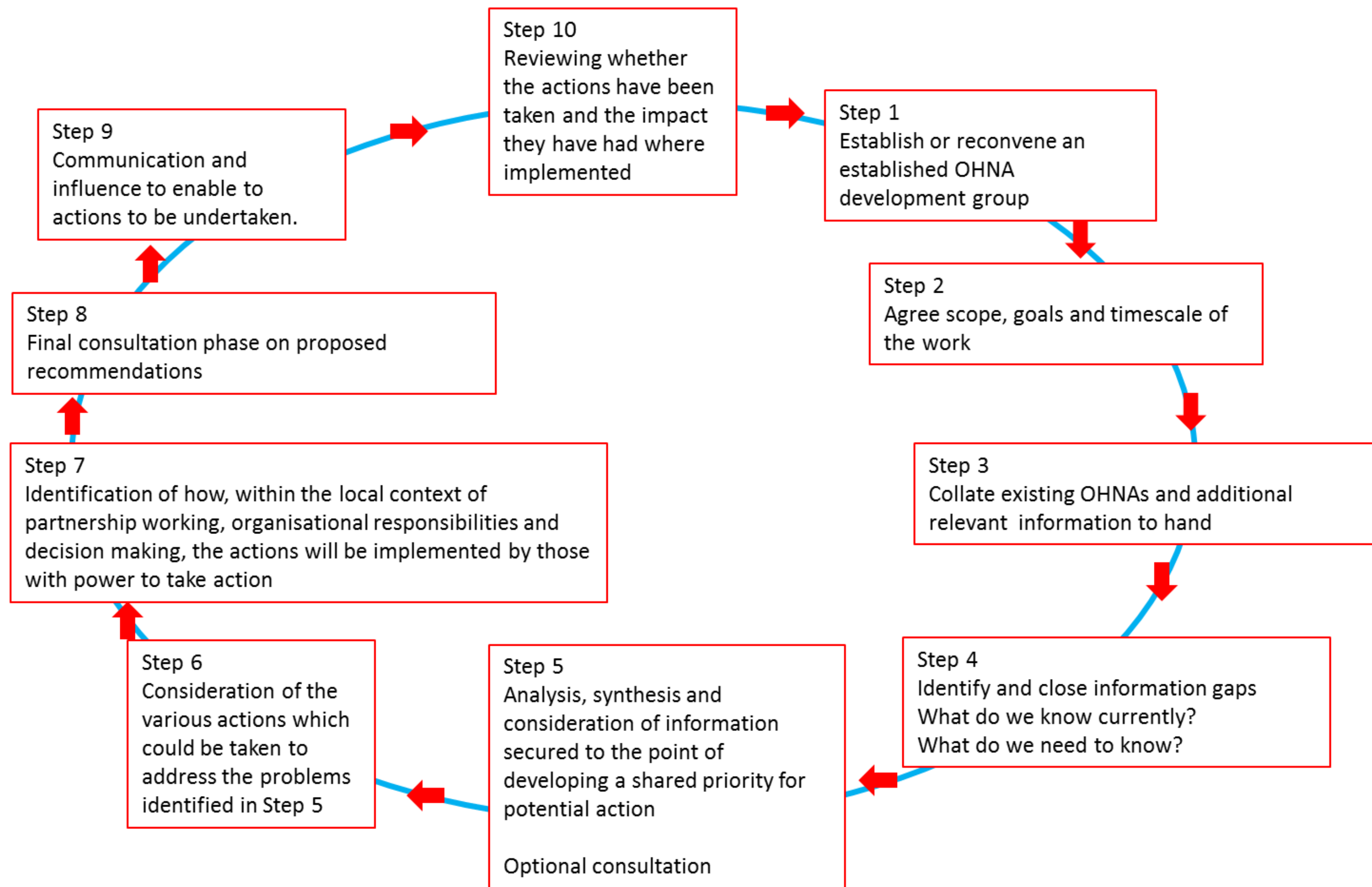
Step 9 is using communication and influence to enable to actions to be undertaken. The influence of the needs assessment can reach beyond the immediate action plan when the information from the needs assessment is presented and updated as an on-going shared planning resource (NHS Confederation 2011).

Step 10

Step 10 is reviewing whether the actions have been taken and the impact they have had where implemented (audit of impact) (Association of Territorial and State Dental Directors 2003).

This is also the starting point for the next cycle of reviewing information with a view to further action, the end of one cycle informing the next.

Figure 5.1 Undertaking an Oral Health Needs Assessment – a 10 step approach.



SECTION 6 TEMPLATE FOR A MODEL ORAL HEALTH NEEDS ASSESSMENT

This “template” suggests a checklist of key elements for use in planning and writing up an oral health needs assessment.

For each element there is an explanation of the rationale for the heading in brackets. Many examples of the rationale are traditional good practice rather than based upon evidence. Where formal evidence does exist supporting the rationale this is noted.

Those marked with an asterix are recommended as essential elements.

In all cases where data is provided in a needs assessment the source of the data should be identified.

Title Page Content

*Title**
(Explaining focus of needs assessment.)

*Author(s)/Organisation(s)**
(Metadata to enable follow up contact by others.)

Contact details
(Metadata to enable follow up contact by others.)

*Date of Publication **
(Metadata to inform readers of time since needs assessment.)

Context

*Aim and Objectives of the Needs Assessment**
(Provides focus for the work – some needs assessments will be more focused than others.)

List of Vulnerable Groups Considered Within or Not Considered Within This Needs Assessment and Rationale for Exclusions
(By definition vulnerable groups are those considered to be: at greater risk of oral disease and/or; face disproportionate burden from the impact of oral disease and/or; experience inequality in accessing preventive or treatment of oral disease. Some may be excluded because they are the subject of another recent or planned focused needs assessment, or for other reasons.)

*Steering Group Who Took Responsibility for the Needs Assessment**
(A range of stakeholders can ensure that the full range of relevant issues are explored within the needs assessment and act as champions for the recommendations in the subsequent decision making processes.)

*Audience for Needs Assessment**
(Identification of the intended audience including those who can influence the implementation of recommendations.)

*Decision Process(es) to be Influenced by Recommendations**
(Understanding decision making processes are a key part of undertaking needs assessment and thought should be given to how recommendations will carry through decision making into implementation.)

Executive Summary

Executive Summary

(Recommended where the needs assessment results in a large technical document partially intended for a professional audience. In this case the executive summary can be a public facing document written for such an audience.)

The Needs Assessment Process – Burden of Dental Disease

*Definition of Needs Assessment**
(Inform audience that needs assessment is a process of reviewing, and possibly collecting to then review, information to identify priority actions and then influence the decision process to bring about the actions.)

*Definitions of Oral Health and of Specific Groups/Conditions of Interest**
(Ensures that there is shared understanding of the scope of the needs assessment. Also assists in providing adequate breadth of scope within the focused area of interest.)

Explanation of Data Sources and Techniques Used to Undertake Needs Assessment
(A brief summary of the range of data sources and techniques will assist the reader to understand what is coming e.g. "this needs assessment uses quantitative information derived from the published literature and qualitative information from local focus groups".)

Explanation of Local Engagement of Stakeholders and Population
(Engagement of stakeholders enables them to raise issues of concern as part of the process and should increase the likelihood of them taking actions within their control.)
(Engagement of the local population provides an opportunity for issues to be raised and explored which are not previously known to those involved in organising the needs assessment.)

*Population Including Geographic Distribution and Demographic Projections Plus Groups of Interest**
(The size and distribution of the population of interest assists in defining and understanding the burden of disease. Maps can be helpful. Population trends provide some information on the direction of travel.)

Determinants of Health/Oral Health Information
(Identification of issues for the population/groups of interest which may contribute to worse/better oral health.)
(Identification of common risk factors will assist in identification of opportunities for consistent and complementary cross sector working.)
NB Information on community assets fits well here.

*Dental Disease Trends**
(Trends in dental disease experience are likely to run through all groups to some degree and provide additional feel for direction of travel regarding burden of disease.)

Dental Workforce Demographics
(Changes in the skill mix of dental teams and the shift from restoration to prevention may impact on the volume of the workforce regularly providing some dental procedures.)

Oral Pain and Sepsis in the Population/Groups

(Information, local or extrapolated from elsewhere, on the oral pain and sepsis experiences of the population/groups will describe the burden of disease which may require urgent intervention.)
(Comparative data will assist in highlighting inequality in burden of pain/sepsis.)

Oral Disease Burden in the Population/Groups
(Quantitative and qualitative information, local or extrapolated from elsewhere, on the oral health/experiences of the population/groups will describe the likely burden of disease.)
(Comparative data will assist in highlighting inequality in burden of disease/experience.)
NB Expressed need (e.g. patient assessed) usually underestimates population burden of disease compared with normative need (i.e. professional assessed).

Oral Health Impact in the Population/Groups
(Quantitative and qualitative information, local or extrapolated from elsewhere, on the oral health/experiences of the population/groups will describe the likely oral health impact of disease.)
(Comparative data will assist in highlighting inequality in burden of impact.)

Inequality of Oral Health Impact in the Population/Groups
(A summary of inequalities identified will assist in establishing local priorities.)

Priority Oral Health Problems
N.B. An oral health inequality audit may assist here
(Identification of priority problems will enable a focus on them for continued and new action.)
(Establishing the key problems to be addressed may also assist in deciding what not a priority is and might be stopped.)

The Needs Assessment Process – Past and Current Preventive Action

Availability and Effectiveness of Past and Current Preventive Action
(Assessing impact of preventive action will assist in identifying what should be continued, what gaps need to be filled and what could be discontinued. Looking forward this also encompasses the following section - Potential Responses to Reduce the Future Local Burden of Poor Oral Health.)

Assessing Local Prevention Against Guidelines/Evidence Base
(Assessment of compliance with guidelines/evidence base may identify opportunities to improve current practice on areas likely to have impact.)

Inequality of Access to Prevention
(A summary of inequalities identified will assist in establishing local priorities.)

Potential Responses to Reduce the Future Local Burden of Poor Oral Health

Assessment of Assets, Strengths and Capacities of Local People/Communities
(Understanding strengths and weaknesses and playing to the strengths while addressing weaknesses increase the likelihood of good outcomes.)

Assessment of Impact of Policy
(Highlighting adverse policy impacts or opportunities for healthier public policy locally and nationally is the first step in achieving policy change.)

Action to Create More Supportive Environments, Empower Community Action and Develop Personal Skills
(Provides opportunities to change environments, and to empower communities and individuals.)

Re-orienting Services, Settings and Environments to Prevention
(Focus is wider than dental services and a range of partners have the potential to play a key role - e.g. vending machines in schools.)

Priority Preventive Actions
(Identification of priority preventive actions will enable a focus on them for both continued and new action.)
(Consideration can be given at this stage to the costs of new action versus savings made from any action to be discontinued.)

The Needs Assessment Process – Dental Service Provision and Access

Dental Service Provision and Access
(A needs assessment may wish to consider access to care for those with disease today alongside prevention of future disease.)

Emergency Dental Care
(Relief of pain and management of dental sepsis are immediate problems of high impact for patients.)

Primary Dental Care
(Primary dental care is the main source of professional dental advice and treatment for the public and for many the basis on an on-going professional relationship which seeks to manage chronic dental disease risk. Access to such care is variable.)

NICE Recall Interval
(Reviewing compliance with NICE recall guidance in primary care may assist in shifting patterns of practice to a more appropriate balance for a publicly funded service.)

Specialist Dental Care
(Access to specialist care is variable and a needs assessment may assist in improving access.)

Patient/User Satisfaction
(Incorporation of service users views from available sources, e.g. patient satisfaction surveys or complaints, may highlight issues not previously noted within the needs assessment process.)

Inequality of Access to Dental Care
(A summary of inequalities identified in access to dental care will assist in establishing local priorities for action.)

Quality and Safety
(A statement on measures to address service quality and safeguard patients).

Potential Responses to Address the Current Local Burden of Poor Oral Health

Priority Dental Service Actions
(Identification of dental service actions will enable a focus on them for both continued and new action.)
(Consideration can be given at this stage to the costs of new action versus savings made from any action to be discontinued.)

Taking Action – Implementation of Priorities/Recommendations

(Needs assessment is part of surveillance – information for action. Thus the rationale of a needs assessment is to review information, and identify priorities for action and be the first step in enabling that action to occur. The key is feeding the priorities into local and national decision making processes.)

(While an action plan will have SMART objectives – specific, measurable, appropriate, realistic and time-related, a needs assessment is not an action plan. It should inform a decision process and therefore include an explanation of who - with power to take action, – will consider recommendations and when.)

(A format outlining the action/decision to be taken, by whom (specifically to person(s) or decision making body(ies) with the power to implement the recommendation) and when they will make a decision or take action makes it more likely that recommendations will be acted upon and provides an outcome framework to assess the impact of the needs assessment.)

SECTION 7 SUMMARY OF ISSUES FOR CONSIDERATION

To conclude this report, there are a number of issues from our review of the evidence that we believe require further consideration.

Issue 1

Evidence on how to conduct the 'ideal' OHNA - one which results in change that is clinically effective and cost effective - does not exist. There are guidelines in the literature that suggest a circular approach to the OHNA process. The evidence for this approach comes largely from policy documents. On the basis of these guidelines we have developed a Template OHNA. This contains optional elements that can be discarded in the event that a "slimmed-down" OHNA is required. Consideration should be given to whether this approach is sufficient to inform the Local Authority Joint Strategic Needs Assessment Process.

Issue 2

We have undertaken a comprehensive review of OHNAs produced in the United Kingdom. These vary widely in format and content. There is therefore currently no one format for a OHNA document. The concept of "quick and dirty" versus "full-on" as described by one of our CDPH interviewees is likely appropriate. Consideration should be given as to whether and how this approach can be supported in the guidance.

Issue 3

Beyond the National Surveys coordinated by the British Association for the Study of Community Dentistry and the decennial surveys sponsored by the Health Departments, there is little routinely available "off-the-shelf" data to inform the epidemiological dental needs of vulnerable groups. Consideration needs to be given as to what degree guidance on the collection of data relating to vulnerable groups should be issued to Local Authorities as part of the guidance.

Issue 4

The literature suggests that proxies for dental health maybe suitable for some groups e.g. school performance statistics. Consideration should be given as to whether proxies for clinical determination of need are appropriate.

Issue 5

The literature describes more complex approaches to quantifying oral health and in particular oral health inequalities beyond simple caries prevalence data. To what degree should approaches such as Health Equity Audit, Slope Index of Deprivation etc. be used as a measure of inequalities be utilised? Consideration should be given to the value of recommending more complex approached to oral health inequalities, bearing in mind, (a) the limited data available and (b) the lack of evidence of overall usefulness of this approach given the resources required, such health analyst expertise.

Issue 6

Interviews with CDPHs suggest we should on occasion know the answer to an OHNA before we begin and the process is all about getting Oral Health on the priority list of the commissioning authority. To have key people involved from the outside is seen as important, although there is no suggested evidence as to who the “key people” are. Consideration should be given as to whether there is a need for guidance on these matters.

Issue 7

It is suggested that involvement of the public in the needs assessment process is important as needs judges by professionals often differ from those judged by patients or their representatives. The evidence suggests that currently there is limited patient and public engagement in the OHNA process. Consideration needs to be given to what guidance should be issued to Local Authorities about public involvement in OHNAs relating to improving the health of vulnerable groups.

Issue 8

This review has documented the lack of good quality evidence to inform the oral health needs assessment process. Consideration should be given as to whether recommendations are required on evaluating the implementation of OHNAs or on future research needs in this area.

Declaration of Interests

The staff in the Dental Public Health Unit, Cardiff University have no material financial interests in the subject matter of this review.

Acknowledgements

The authors acknowledge gratefully, the assistance given by the Consultants in Dental Public Health who so freely shared examples of Oral Health Needs Assessments and those who also gave their time to participant in the telephone interviews.

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APPENDIX 1

Text of e-mail sent to Consultants seeking submission of Oral Health Needs Assessments.

Dear [Insert name of Consultant],

I trust this finds you well. I am writing to ask your help with a project that we are undertaking. Do you have available any Oral Health Needs Assessments that you could let me have a copy of?

Background to this request

The background to this request is as follows. The National Institute for Health and Care Excellence (NICE) is developing guidance to be used by Local Authorities in developing Oral Health Improvement Programmes, with a particular emphasis on Vulnerable Groups.

We have been commissioned by NICE to undertake a piece of work to establish what an ideal Oral Health Needs (OHNA) to inform this process would look like.

What we need

As part of this work, we are writing to all Consultants in Dental Public Health in the UK, to ask if you have an OHNA that you are willing and able to share with us? We will then undertake an analysis of all OHNAs received – the idea being to inform the development of the guidance for the Local Authorities.

It doesn't matter how old the OHNA is or the population / area covered. The work will focus particularly on vulnerable groups so work on any such groups (e.g. children resident in deprived areas, older people in nursing and care homes and other locations such as day centres, people with mental, learning and physical disabilities, prisoners, homeless people, travellers, substance abusers and other groups excluded from mainstream dental prevention) would be particularly welcome.

How to send it

If you have a document(s) that you can let us have then if you can send to me at chestnuttig@cardiff.ac.uk that would be great. If you have older papers that are not available electronically, then a paper copy by post to the address below would be fine.

The small print!

Confidentiality

Any information that you send to me will be seen only by the project team (i.e. the names at the end of this mail). We will use your material only to extract data on the elements that the OHNA contains

e.g. population groups covered, data sources used, methods used to consult patients and service users, etc.

No data which could identify you, or your PCT, Health Board, Health Authority or geographic location either directly or by deduction will be presented.

Project outputs

We will share only aggregated data with NICE. In addition to the work to inform the NICE guidance we make available to all contributors, a paper which sets out the results of our findings.

Why Northern Ireland, Scotland and Wales?

We are contacting all Consultants in Dental Public Health in the UK. Although the guidance from NICE will focus specifically on Local Authorities in England, we are interested in OHNAs from across the UK as there is likely to be value to be had from cross-border sharing of information.

IF YOU DO NOT HAVE ANY OHNAS THAT YOU CAN SHARE.

In the event that you do not have any material that you can send to us, we'd be really grateful if you could simply reply to that effect. This will have two benefits. It means that we won't contact you again on this topic. It also will help our response rate in that we will know you don't have any ONHAs that you can share, rather than that you haven't responded.

And finally,

Apologies for the lengthy e-mail, but obviously the guidance to be issued by NICE will be very important to oral health improvement in the new commissioning arrangements in England. Any material that you can provide to help inform this process will be very helpful.

Thanking you in anticipation of your help,

Yours sincerely,

Ivor G. Chestnutt
Maria Morgan
Nigel Monaghan
Shelagh Thompson

CARDIFF

Appendix 2

Items extracted from Oral Health Needs Assessments

VARIABLES FOR EXTRACTION	**GUIDANCE FOR EXTRACTORS**
Unique ID No.	
Title	
Year of publication	
Publication type	
Lead author	
Author organisation	
Aims/Objectives	
Page count	
Audience	e.g. Technical/Public facing/Decision maker
Abstract/executive summary?	
Decision process to be influenced	Description of who will be making decisions for action and when
Geography	
Definition of oral health	
Population Type	Whole population or specific groups in which case list them
Epidemiological Global/Joint Strategic Needs Assessment linkage and fit	These are normative need
Epidemiological Focused	These are normative need
Epidemiological Comparative	These are normative need
Felt or expressed need	Public demand, complaints, messages from public engagement
Comparative Guideline/ Evidence/ Care Provided	
Comparative Advocacy/Inequalities	
Corporate Healthy Alliances/Partners	Process of engagement of partners, including

VARIABLES FOR EXTRACTION	GUIDANCE FOR EXTRACTORS
	documents and stages of engagement
Corporate Community Development/Local Participation	
Corporate Economic - Option analysis including costs	
Health Public Policy (Ottawa Charter)	
Supportive Environments (Ottawa Charter)	
Community Action (Ottawa Charter)	
Develop personal skills (Ottawa Charter)	
Re-orient services to prevention/health promotion (Ottawa Charter)	Also service redesign
Assessment of the assets, strengths and capacities of local people and communities	
WEB -URL for document IF AVAILABLE	
AUTHOR CONTACT IF AVAILABLE	
LINKS TO OTHER INFORMATION SOURCES	List of examples is included at pages 13-15 and 30-31 of oral health needs assessment toolkit for PCTs March 2006
Common Risk Factor Approach	

VARIABLES FOR EXTRACTION	GUIDANCE FOR EXTRACTORS
Past/Current Preventive action	
Prevention Gaps/ Future Preventive action	
More than simple report of caries rate	
Caries data source	
Caries data level (severity i.e. D3 or greater)	
Caries data minimal geographical area covered	
Periodontal disease	
Perio data Source	
Oral Cancer	
Oral Cancer data source	
Orthodontics	
Ortho data source	
Other conditions	
Pain and sepsis	
Hospital/GA for caries in children	
Oral Health Impact	
Demography	
Demographic trend	
Inequalities	
Vulnerable Groups	
Access primary dental care	

VARIABLES FOR EXTRACTION	GUIDANCE FOR EXTRACTORS
NICE recall interval	
Access secondary dental care	
Emergency Dental	
Patient satisfaction	
Comments	

Table A2.1 Variables extracted from OHNAs

APPENDIX 3

Frequency analysis of components of UK derived Oral Health Needs Assessments

The Tables presented in this Appendix detail the analysis of the OHNAs submitted by the CDPHs or downloaded from the Internet (All UK NHS related).

Reason for exclusion	n
Service	**15**
Ortho	7
Domiciliary care	2
Endodontics	2
Dental practice	1
Implants	1
Primary dental care	1
Sedation & oral surgery	1
Other	**20**
Generic as opposed to OHNA	4
Research work as opposed to OHNA	3
Children's epidemiology report	2
Toolkit	2
Review of oral health improvement	1
Access questionnaire	1
Analysis of a reconfigured system	1
Evidence based position statement	1
Handover service document	1
Process of engagement of dentists in local partnerships	1
Service provision	1
Summary of data findings with little explanation of relationship to dental need	1
Survey not NA	1
TOTAL	**35**

Table A3.1 Reasons for exclusion

OHNA category	n
Adults	**3**
Adults	3
Children	**2**
5 year old children	1
Children	1
Disease	**1**
Disease	1
Generic	**36**
OHNA	36
Rural areas	**1**
Rural areas	1
Vulnerable/Priority groups	**27**
Older people	6
Homeless	4
Prisoners	4
BME	2
Gypsy/Traveller	2
Pre-school children	2
SCD	2
Adults with LD	1
Children with LD	1
People with Special needs	1
Stroke patients	1
Vulnerable/Priority groups	1
Grand Total	**70**

Table A3.2 Type of Oral Health Needs Assessment

Population type	n
Whole population	36
Children	4
Homeless	4
Prisoners	4
Adults	3
Adults with Special Needs	3
Care Homes (residents &/or staff)	3
BME	2
Gypsy and Traveller population	2
Older people	2
Vulnerable/Priority groups	2
Children with learning disabilities	1
People with Special Dental Care Needs	1
Rural	1
Sheltered Accommodation Residents	1
Stroke patients	1
Total	**70**

Table A3.3 Population type covered by the OHNA

AUTHOR ORGANISATION	n
Not stated	12
NHS Lanarkshire	4
UCL/NHS Islington	4
Kings College London	3
NHS Ayrshire and Arran	3
Scottish Needs Assessment Programme	3
Manchester City Council	2
NHS Hillingdon	2
NHS Oxfordshire	2
NHS Plymouth	2
Public Health Wales	2
University of Sheffield/NHS Sheffield	2
A consortium of seven NHS Boards, co-ordinated by NHS Highland	1
Cambridgeshire PCT	1
Department of Health, Social Services and Public Safety, Northern Ireland	1
Department of DPH	1
East Sussex Downs & Weald PCT	1
Isle of Wight PCT	1
Lanarkshire Health Board	1
Leicestershire County and Rutland Primary Care Trust	1
Medway Primary Care Trust	1
NHS Birmingham	1
NHS BRADFORD & AIREDALE	1
NHS BURY	1
NHS Commissioning Board	1
NHS County Durham	1
NHS EAST Lancashire	1
NHS Eastern & Coastal Kent PCT	1
NHS Hartlepool, Middlesbrough, Redcar & Cleveland, Stockton-on-tees	1
NHS Highland	1
NHS Lambeth	1
NHS NORFOLK	1
Portsmouth CCG & City Council	1
Portsmouth City Teaching PCT	1
Public Health Manchester	1
Scottish Forum for public health medicine	1
Scottish Government	1
Southampton City PCT	1
Suffolk County Council/NHS Suffolk	1
Tees public health	1
West Kent PCT	1
Total	**70**

Table A3.4 Author organisation

Geography	n
England	**51**
Islington	4
Lambeth Southwark and Lewisham	3
Manchester	3
Hillingdon	2
Kent and Medway	2
Oxfordshire	2
Plymouth	2
Portsmouth City	2
Sheffield	2
Tees region	2
Birmingham and Solihull	1
Bolton	1
Bradford and Airedale	1
Brighton and Hove	1
Bury	1
Cambridgeshire	1
County Durham	1
Dartmoor Prison	1
East Lancashire	1
East Sussex, Downs & Weald	1
Eastern & Coastal Kent	1
Hastings & Rother	1
Herefordshire	1
HMP Exeter	1
Isle of Wight	1
Knowsley	1
Lambeth	1
Lancashire	1
Leicestershire and Rutland	1
Medway - covering 1 prison and 1 young offenders institute	1
Medway PCT	1
Norfolk	1
Rochdale	1
Sittingbourne	1
Southampton City	1
Suffolk/NHS Suffolk	1
West Kent PCT area	1
Northern Ireland	**1**
Northern Ireland	1
Scotland	**16**
Scotland	5
Ayrshire and Arran	3
Lanarkshire	3
Scottish Health Boards	2
HMP Kilmarnock	1
Most of Scotland	1
Motherwell	1
Wales	**2**
Wales	1
West Wales Health Boards	1
Total	**70**

Table A3.5 Geography covered by the OHNA

Year of publication	n
1996	1
1997	2
2000	1
2001	1
2003	2
2007	5
2008	8
2009	8
2010	8
2011	9
2012	9
2013	1
2008/09	1
Not stated	14
Total	**70**

Table A3.6 Year of publication

	Page count			
	Average	**Min**	**Max**	**n documents**
England	48.4	2	206	51
Northern Ireland	76.0	76	76	1
Scotland	45.0	1	120	16
Wales	38.5	21	56	2
Grand Total	**47.7**	**1**	**206**	**70**

Table A3.7 Average, minimum and maximum page length of OHNA documents

Audience	n
PCT	**7**
PCT	3
PCT Board	1
PCT Dental Commissioning Leads	1
PCT successors	1
PCTs	1
Other	**9**
CDO & Welsh Government's Special Care Dentistry Implementation Group	1
Dental health care planners & the Motherwell African refugee association	1
everyone involved in working with homeless people	1
Scottish Executive and Health Boards identified by some recommendations	1
Health Scrutiny Committee	1
Local Authorities and CCGs	1
Local stakeholders/population	1
Manchester health & Well Being Board	1
NHS Norfolk	1
Health Boards	**2**
Health Boards in Scotland	1
Local Health Boards in Wales	1
Not stated	**52**
Not stated	27
Not explictitly stated but assumed to be PCT Board	2
Not stated but presumably oral health care planners &/or commisioners	2
Not stated but sections drafted for PCT action	2
Not stated presumably oral health care planners	2
Not clearly stated but presumably oral health care planners and or commissioners & those delivering services to client group	1
Not clearly stated but presumably oral health care planners; those delivering services to client group	1
Not explict sets out govt strategy and aspirations	1
Not stated - recommendations mainly at Scotland level	1
Not stated - some recommendations are targeted to different bodies	1
Not stated although recommendations identify some bodies	1
Not stated but a number of the recommendations target specific bodies	1
Not stated but appears to be SHA and PCTs	1
Not stated but presumably County Durham Health Authority	1
Not stated but presumably service planners	1
Not stated, however the OHNA was undertaken as part of the JSNA	1
Not stated, presumably the range of stakeholders based upon the oral health implementation plan - page 28+	1
Not stated, presumably the range of stakeholders based upon the oral health implementation plan - page 32+	1
Presumably the range of stakeholders based upon the oral health implementation plan - page 20+	1
Presumably the range of stakeholders based upon the oral health implementation plan - page 23+	1
Some recommendations are targeted and they cover service providers or those making funding decisions	1
Some recommendations for Oral Health Strategy Steering Group	1
Total	**70**

Table A3.8 OHNA Audience

	Aims/Objectives
Yes	47
Not stated	14
Not explicitly stated	9
Total	**70**

Table A3.9 Did the OHNA have stated aims and objectives?

Executive summary	n
Yes	35
No	29
Not formally although first page highlights key issues and gaps plus recommendations for commissioners	2
Brief summary	1
No - document is described as a summary document	1
Yes but is more of a rationale than a summary	1
Yes of profile - not of recommendations	1

Table A3.10 Did the OHNA have an Executive Summary?

PUBLICATION TYPE	n
Oral Health Needs Assessment	28
Joint Strategic Needs Assessment	4
Research/academic report	4
Epidemiological survey report	2
National evidence document	2
National Needs Assessment Programme	2
NHS Regional document	2
Reads as a handover document	2
Technical report	2
Chapter in DPH annual report	1
Director of Public Health Annual Report	1
Health Equity Audit	1
Generic Health Needs Assessment	1
Health & Well Being Board Paper	1
Meeting notes	1
National Needs assessment / academic report	1
National Oral Health Improvement Strategy	1
Needs Assessment Special Care	1
NHS Scotland National document	1
OHNA update	1
Oral Health & Commissioning Strategy	1
Oral Health Strategy post consultation	1
Oral Health Strategy/ Commissioning Plan	1
Poster presentation	1
Prison Oral Health Survey	1
Repeat of Camden series of surveys	1
Report on local focus groups in Mosques	1
Report on local qualitative survey	1
Report to Health Scrutiny Committee by DPH & CDPH	1
Strategic Commissioning Plan	1
Web pages, comprehensive summary	1
Total	**70**

Table A3.11 Publication type

	Definition of oral health
NO	**53**
NO	48
Not clearly stated	2
No - but defines specific oral diseases e.g. caries / periodontal disease	1
No - but definition of homelessness and a great deal of context for oral health and homeless	1
No definition of oral health, but vision of dental services instead (pp. 9)	1
YES	**17**
YES	11
Yes - enabling function and being free of disease and pain	2
“standard of health of the oral and related tissues which enables an individual to eat, speak and socialise without active disease, discomfort or	1
More detailed - Definitions of Common Dental Diseases	1
Yes in Glossary	1
Yes WHO definition	1
Total	**70**

Table A3.12 Did the OHNA include a definition of oral health?

Decision process to be influenced	n
Not clear	13
Not stated	11
To inform commissioning decisions	6
Not stated but recommendations are well targeted	4
Not explicitly stated but is dental commissioning	3
Not explicitly stated, presumably the provision of dental care in	3
A number of the recommendations target specific bodies	1
Findings will be disseminated to commissioners, service providers and the Sp. Schools involved.	1
Findings will be used to provide recommendations to promote oral health and to increase access to oral health care in homeless populations across Scotland.	1
Future commissioners of dental services	1
It aims to inform the delivery of oral health promotion and dental treatment services in Oxfordshire from 2010	1
Mainly relates to allocation of additional resources allocated by the SHA	1
Not explicitly stated, presumably Provision of oral care for stroke patients	1
Not stated - uncertainty about the future may have limited ability to target recommendations	1
OHNA was undertaken as a part of a strategic commissioning plan	1
Oral health Strategy Steering Group and then NHSAA Public health Department Management Team for dissemination	1
Presumably commissioners - "As contracting evolves into commissioning"	1
Provision of dental care for homeless	1
Provision of oral care and prevention of oral disease in vulnerable groups	1
Recommendations to develop an oral health strategy - PCTs to note when commissioning dental services	1
Requests that the board note the report & comment on how it can help to address some of the challenges	1
Response to a national strategic document rather than part of a decision process	1
Response to a national strategic document, unclear whether it is part of a decision process	1
Some recommendations for Sheffield dental school and for PCT Dental Public Health Unit	1
TEES DENTAL COMMISSIONING GROUP: This is a strategy document for improving oral health and commissioning - part of it sets out why change is required - i.e. the needs bit - this is much more than a OHNA	1
The commissioning of dental services for people with Special Care Needs in South West Wales	1
The health scrutiny committee is asked to note the report & comment on the specific challenges & the plans to sustain & build on recent improvements	1
The provision of dental care for adults	1
The results of this OHNA will inform the planning and implementing of appropriate services and population oral health improvement strategies. Support oral health improvement & dental commissioning functions through transition to LA & NHSCB.	1
The Way Ahead section suggests actions for PCTs - not clear what the actual decision process is	1
There are recommendations on how the actions might be addressed, e.g. via Childsmile, attendance at marca events etc p11.	1
These pages are buried within JSNA website for each of the 4 locations within Tees	1
To inform a proposed oral health strategy group and strategy (?chicken/egg?)	1
To make supported, evidence based and costed recommendations to NHS. Norfolk on priorities for investment and for saving.	1
To provide information to inform the SCD implementation group for Wales	1
Used to inform designing interventions jointly between the PCT & the public	1
Total	**70**

Table A3.13 What was the decision process to be influenced

Epidemiological Global/Joint Strategic Needs Assessment linkage and fit	n
No	**42**
No	39
No but recommendations make links to strategic partnerships etc.	1
No clearly linked to other processes	1
No, although some recommendations seek to link into general health promotion	1
Yes - some link with JSNA	**13**
Yes links to JSNA	2
Yes, marked as JSNA document	2
Mention is made of completion of first JSNA	1
one of the priority themes of the JSNA	1
Yes, embedded	1
Yes, fleeting mention of JSNA	1
Yes, JSNA chapter	1
Yes, looks and health and social needs but doesn't include dental health even though many other aspects of health are covered	1
Yes, stated to be part of JSNA	1
Yes, this is part of the JSNA	1
Yes, used local info from the JSNA to inform the OHNA	1
Other	**15**
Stand alone dental	2
Stand alone OHNA	2
"Smile for life" - Embedded in Childrens and Young People plan	1
Fits into wider local oral Health Strategy	1
General population data used as a proxy	1
Makes good use of data on numbers of vulnerable groups	1
Part of a series of National Needs Assessment	1
Single Integrated Plan 2012 to 2015 highlights oral health as one of 5 partnership priorities. Also priority area for the Health and Well Being Board and Children's Trust.	1
Sits within Director of Public Health Annual Report	1
Some reference to wider priority/vulnerable groups agenda	1
This is a report of a large Scotland wide survey of homeless peole in which 853 people were interviewed and underwent a dental examination	1
This is integrated into a larger piece of work looking at the wider health needs and access to care of homesless people	1
very limited data included	1
Total	**70**

Table A3.14 Epidemiological Global/Joint Strategic Needs Assessment linkage and fit

Epidemiological Focused?	n
No	**5**
No	3
No - Accessing Primary dental care	1
Not really just looking at travel distance to dentist of registered patients	1
Yes	**65**
Yes	22
Partially	4
More emphasis of content on profiling services than dental need	3
Yes on child and adult dental health and access to dental services	3
Caries; Service access data	2
YES, but other characteristics are considered	2
5 year olds for caries	1
Adult oral health	1
Care homes	1
Caries	1
Caries and risk factors in preschool children	1
Child oral health	1
Comprehensively covers range of dental issues and services	1
Covers At risk groups, caries in children, adult dental health and oral cancer	1
Covers range of dental conditions and some at-risk groups	1
Dental attendance and need	1
Focus on access to dental care and dental problems	1
Focused on dental (service) needs of vulnerable/priority groups	1
Focused on needs of care home residents	1
Focused on needs of sheltered accomodation residents	1
Focused on older people	1
Focused on people with special needs	1
Inequalities in 5yo caries plus treatment provision all ages	1
On dental/oral health	1
On Homeless, included some UK and local data	1
Oral health of over 65s	1
Pakistani men and women who attend Mosques	1
Prisoner self reported dental health and dental service experience	1
Rural disease	1
YES - although more of a screening exercise	1
Yes - Gypsy/Travellers needs Maternal and children under 5	1
Yes - major focus on ethnicity	1
Yes for orofacial cancer	1
Yes on Adults with learning disabilities using postal questionnaire and focus groups	1
Yes on caries in 5yo, some mention of ADHS themes and proposes extrapolation from 5yo data to adult need	1
Total	**70**

Table A3.15 Epidemiological Focus?

Epidemiological Comparative	n
No	**22**
No	16
Manchester only	1
No - extrapolates from literature to estimate prevalence of conditions locally	1
No - little data available	1
No but detailed dental examination as part of this needs assessment process	1
No specific data for this group of patients available - uses general population data for older people	1
Not directly - draws on 2002 Scottish survey plus other studies to make case of relative poor oral health of prisoners	1
Yes	**48**
YES	11
Compares with other PCTs in Region and England	7
Compares with England	4
Compares with SHA and with England	2
Compares with ADH Survey	1
Comparison between HBs and Wales	1
Comparison of edentulousness with ADHS	1
Comparison with findings for Sheffield from postal survey or from ADHS	1
Comparisons with Camden in 1980s/1990s	1
dentate/edentate within survey and comparisons with care home residents needs in CDPH079	1
Dentate/edentate within survey only	1
England - no charts or graphs - mainly narrative	1
For dmft, dental registrations	1
Inequalities in 5yo caries plus treatment provision all ages	1
Limited to 5 year old caries vs. South West and England	1
Mainly within Scotland - small reference to UK	1
Mentions both poor oral health in comparison with wider UK and inequality associated with deprivation within NI	1
Other PCTs	1
Other similar PCTs, London, England	1
Prevalence of problems in Argyll and Clyde plus literature on problems accessing dentistry	1
Provides detailed information on numbers in each category of vulnerable group looked at	1
Rural disease similar to whole population	1
Some comparative information on child caries	1
Some comparative information from literature as background	1
Some reference to North-west and England in background information on deprivation	1
Statements of prevalence of various diseases	1
Within Tees/North East and England	1
Yes general health needs are compared with the population norm (but not dental)	1
Total	**70**

Table A3.16 Epidemiological comparative?

Felt or expressed need	n
Accessing dentistry	**5**
Uses demand for services as basis plus local surveys	2
Cites surveys of dental attendance and other dental health related behaviour, inc. DHSRU and ADHS	1
Do you need an appointment to see the dentist now?	1
Only draws on GP survey data re difficulty finding dentist	1
PALS data	**2**
PALS data	1
YES (PALS & DENTAL BUREAU DATA)	1
Sought views via focus groups &/or surveys	**13**
Yes accounts for what prisoners said they needed	2
Focus group information included	1
Limited to report of small survey of cancer patients	1
Sought views of Adults with LD via focus groups	1
Sought views of local people through survey/focus groups etc	1
Sought views via postal questionnaire and focus groups work	1
Yes - drawing on surveys of GP patients and other sources	1
Yes - focus groups with children	1
Yes - focus groups with Pakistani men and women who attend Mosques	1
Yes - telephone and public opinion surveys	1
YES - via focus group	1
Yes, detailed qualitative interviews undertaken	1
Other "Yes to considering felt or expressed need"	11
Felt treatment need	2
Yes	2
Complaints; Dental access assessed through the GP Patient Experience Survey - sought views of patients	1
Consultation with stakeholders through the Oral Health Advisory Group	1
Focus on difference between normative and felt need	1
Participatory, 'bottom-up' and sustainable approach - with home less people at the core - survey and qualitative interviews	1
Very little (only some pt level info from ADHS)	1
Views of some vulnerable groups incorporated based on previous work	1
Yes very good section on "public voice" -mainly national reports but data from Citizens Advice Bureau Reports, Dentistry Watch, Citizen's advice Bureau	1
Not considered	**39**
NO	34
NO - but recommendations to include patient information - interesting one pt rep on the very long list of contributors	1
No - other than attendance at emergency service	1
Not much	1
said they couldn't measure this, would need future surveys but do extrapolated from National Survey on attendance at private dentistry to what that would	1
There is a section entitled expressed needs, but doesn't really cover this	1
Total	**70**

Table A3.17 Were felt or expressed need considered?

Comparative Guideline/ Evidence/ Care Provided	n
NO	41
YES	4
For extraction of wisdom teeth	2
Lists key guidance but does not compare practice with the guidance	2
Analysis of dental practice data and also questionnaire survey of dental practices Documents number of children with special educational need by area as a proxy for dental need. Presented data on numbers of elderly and	1
Appendix lists evidence, but no assessment of local delivery against evidence made	1
BDA Policy Document on Dental Care for Homeless people	1
British Society for Dentistry for the Handicapped frequently referenced - used to benchmark	1
Comparison with ADH survey	1
Evidence for fluoride varnish	1
Highlights conflicts between current guidelines and cultural practice	1
Makes references to some documents on what should be provided in terms of health care in prisons	1
Mentions SIGN prevention guidance	1
No other than using pharmacy as the distance for what is considered a catchment area	1
Oral healthcare For Older People (BDA 2003) and Meeting the challenges of oral health for older people (Gerodontology Association 2005) quoted	1
Referred to national trends/benchmarks/targets - comparing locality to achieve a broad indication of need	1
Reviewed evidence on rural disease and access to services	1
Some evidence referenced but content extrapolates e.g. Opportunistic screening	1
Uses Healthy Child Programme	1
Yes - BASCD Toolkit and recommends school based brushing	1
Yes in a lot of detail both from CDS and GDS	1
Yes in terms of UDAs delivered / not delivered	1
Yes references Childsmile evidence and other evidence base for preventive care	1
Yes with National Scottish document on oral care in nursing homes	1
Yes, in children comparison with local PCTs and with national figure. No local data on Adults - talks about likely issues based on 1998 ADH survey	1
Total	**70**

Table A3.18 Comparative Guideline/Evidence/Care Provided

Comparative Advocacy/Inequalities	n
No mention	22
Yes, maps of disease and/or services linked to inequalities	5
Yes refers to inequalities	5
Deprivation covered comprehensively in demography section	2
Does not cover inequalities in any detail	2
Starts to explore relationship of provision and need	2
A vulnerable group - so trying to address inequalities	1
By implication in that the report focuses on Vulnerable groups	1
dentate/edentate within survey and comparisons with care home residents needs in CDPH079	1
Did seek to listen to views of Adults with LD directly, however low postal survey response rate and low	1
Document uses national reference documents such as Valuing peoples oral health	1
Extracts key points from literature on problems accessing dentistry	1
IMD is used to describe the demography of inequalities in the city. Also epidemiology & delivery of services by IMD	1
Inequalities highlighted in Introduction	1
Inequalities in 5yo caries plus treatment provision all ages	1
Inequalities highlighted in epidemiology section - Figure 2 - good visualisation	1
Mention of geographical inequality in caries experience etc	1
Mentions both poor oral health in comparison with wider UK and inequality associated with	1
Mentions deprivation and dmft by location/school	1
Mentions nursing homes, learning disabilities, drug misusers and young offenders	1
Not beyond mention of parts of Hereford with high decay at age 5	1
Not in any detail - does quote from scientific literature on relative caries experience of minority groups	1
Notes levels and locations of deprivation	1
Notes links to deprivation for evidence, local data has wide confidence intervals however.	1
Notes links with deprivation - draws on literature although not all references listed e.g. Daly 2007	1
Only by extrapolation from ADH	1
Only in the content of saying more deprived are more likely to go to a dentist locally	1
Only rural vs. non-rural	1
Oral cancer by deprivation score	1
Plots obesity against caries levels across LA areas - claims relationship but not convincing - heavily	1
Report does advocate more action on basis or poor prisoner health	1
Says not much variation across city	1
Social inequalities - related to dental behaviour & attitudes	1
To a degree, recognises prisoners from very disadvantaged backgrounds	1
Yes compares groups surveyed with general population	1
Yes though acknowledges that Oxfordshire is overall above the English average, big issue in increasing	1
Yes with general population	1
Yes, noted newly commissioned UDAs not delivered in most deprived areas	1
Total	**70**

Table A3.19 Comparative Advocacy/inequalities

Corporate Healthy Alliances/Partners	n
No partners identified/mentioned	45
Not formally however implementation plan highlights action plus partners	2
Tries to link with Sure Start, notes community Regeneration projects but without clarity on how to	2
Yes	2
Commissioning team, public health team, oral advisory GP & LA partners	1
Directorates of Public Health, Service Redesign , Health Informatics & Intelligence and Communications and Engagement at Oxfordshire Primary Care Trust	1
Does highlight some opportunities for other sectors (e.g. Schools) to contribute	1
Health Promotion, Motherwell African Refugee Association, ChildSmile	1
HWB Board	1
Identifies stakeholders but not as partnership	1
Mentions partnership activity to prevent dental decay	1
Mentions Sure Start only	1
Next stage to link in with those who can address felt need	1
No although some recommendations seek to link oral to general health promotion	1
No but recommendations make links to strategies partnerships etc.	1
Not at core of the approach used but some reference to other not joined up services	1
Not stated but undertaken as part of JSNA	1
Noted little join up even with Public Health	1
Recommendation reference Learning Disability Partnership Board	1
Report acknowledges the range of parties involved but it is not clear that there was a partnership formally behind this work	1
Yes - reference to stakeholder information - consultation, although little evidence in main report	1
Yes - schools, safeguarding children teams	1
Yes - talks about single shared assessment designed to link care needs between local authorities and NHS	1
Total	**70**

Table A3.20 Corporate Healthy Alliances/Partners

Corporate Community Development/Local Participation	n
No evidence of this	58
Focus group information included	2
Used local surveys on dental services/access	2
Consultation with stakeholders through the Oral Health Advisory Group	1
Difficult within a prison environment, probably went as far as it could in this direction	1
None other than looking at nation reports on patients views	1
Other than patient surveys relating to dental health there was little	1
Sought views of local people through survey/focus groups etc	1
This is a note of a meeting with community representatives	1
Views of some vulnerable groups incorporated based on previous work	1
Yes - Platt norms are used to highlight consultant:pop ratios	1
Total	**70**

Table A3.21 Corporate community development/local participation

Corporate Economic - Option analysis including costs	n
No mention of this	63
Costs in terms of UDAs and UOAs	1
Costs of services from p.82 onwards	1
Focused on access rather than costs	1
No - nearest it gets is to note cost of dental treatments for those with LD once they reach 18	1
No - nearest it gets is to note need for prior approval for some treatments	1
Very limited	1
Yes	1
Total	**70**

Table A3.22 Corporate Economic - Option analysis including costs

	Health Public Policy	Supportive Environments	Community Action	Develop personal skills	Re-orient services to prevention/health promotion
Yes	20	16	2	11	28
No	25	29	43	34	17
Total	45	45	45	45	45

Table A3.23 Number of times any reference was made to the Ottawa Charter Principles
(n.b. 25 documents made no reference to any aspect)

Health Public Policy (OC)
Detail does argue for tax on sugar
Implement (Action Plan for improving oral health...) rather than influencing policy
Is response to a national policy document
Payment for rurality raised
Some recommendations do seek to establish/implement policy (e.g. 4.12 Care Standards for care homes to incorporate indicators of quality of oral healthcare)
Suggests changes to some policies
Very little - mention of smoking cessation
Within care homes
Within sheltered accommodation
Yes, detailed description of Common risk factor approach
Supportive Environments (OC)
Mentions role of topical fluoride/chlorhexidine etc for active older people and those in long stay care
Notes frequency of smoking and methadone use, sugary drinks etc
Partial
Seeks to improve training of carers/staff in recommendations
Some recommendations do seek to help create more supportive environments (e.g. Vending machines in schools)
Looks at fruit consumption by ward
Community Action
Refers to this in recommendations

Table A3.24 (i) Types of references to the Ottawa Charter Principles

Develop personal skills (OC)
Building Brighter Smiles
Minimal
Partial in developing skills of care staff
Partial in relation to toothbrushing
Recognises that clinical settings can do little to improve oral health overall
Re-orient services to prevention/health promotion
A little/minimal
Emphasises need for more preventive action and mentions Steele Review and pilots
Highlights need for 2x day oral hygiene
Limited to recommendations about oral health improvement - links to/integration with wider health improvement programmes
Mentioned in relation to new dental contact and role of dental professionals plus nursing staff and other carers
Mentions limited GDS prevention activity for deprived children
mentions need for dental assessment to be introduced into oral care pathways
Mentions partnership activity to prevent dental decay
Mentions role of topical fluoride/chlorhexidine etc on page 48 for active older people and those in long stay care
minimal - talks about delayed transfers of care and the impact on provision of dental services
None other than general mention of NHS desired direction of travel
Notes current/new preventive programmes
partially in relation to the future prevention of dental services
possibly
Prevention in primary dental care
Quote "Dental performers do not play an active role in the small public health promotion or prevention initiatives that are currently undertaken, citing a perceived lack of guidance and
References to new dental contract proposals plus some suggestions intended to help refocs dentists to more prevention
Seeking to reorient current preventive service to be more effective
Some references to need to strengthen prevention
Some staff training
Talks about health promotion services delivered but no major focus on reorientation to prevention
Yes for care staff

Table A3.24 (ii) Types of references to the Ottawa Charter Principles

Common Risk Factor Approach	
No mention	40
Yes	6
Mentions it	5
Small mention in relation to oral cancer	2
An academic description of the wider determinants of health; detail on diet, tobacco, alcohol, fluoride, OHI	1
Asks about sugar intake and smoking status of the mother too	1
In relation to oral cancer	1
Limited - acknowledges risk factors for cancer	1
Mentions in literature search, emphasis on tobacco use in Muslim men	1
not really, pretty dental focussed	1
Not very, evidence - mentioned in passing	1
Only in that 2 Oral Health Educators are colocated in the General Health Promotion Dept	1
Referenced however focus of prevention is on fluoride varnish	1
Smoking and substance misuse mentioned	1
Smoking and to lesser extent alcohol	1
Yes - good emphasis including provision of diagrams	1
YES - SEE SECTION3	1
Yes diagram of CRF included	1
Yes to a good degree includes diagrams	1
YES, 5.3, 5.4	1
Yes, quite a lot about oral health risks linked to general medical conditions	1
Total	**70**

Table A3.25 Common Risk Factor Approach

Past/Current Preventive action	n
No mention	39
Yes lists OHP delivered	13
Counts of CDS contact only	2
Focus of prevention is on fluoride varnish	1
List of recommendations but no timescales etc	1
Lot of profile mentions current services/activity including some on	1
main emphasis is on Smile4life toothbrushing in school which it is	1
Mentions limited GDS prevention activity for deprived children	1
Mentions partnership activity to prevent dental decay	1
Notes current/new preventive programmes	1
Notes local staff training package for oral health promotion	1
Only very general recommendations mentioning BASCD \Toolkit	1
Some example of OHP activities included	1
Toothbrush distribution scheme	1
Very short section on CDS Oral Health Promotion contacts	1
Yes for each vulnerable group	1
Yes measured by a survey of practices	1
Yes talks about toothpaste distribution schemes	1
Yes training programme to improve mouth cleaning	1
Total	**70**

Table A3.26 Past/current preventive action

Prevention Gaps/ Future Preventive action	n
No mention	28
Yes, talks about the need for prevention & oral health promotion	16
Advises new activity	1
Emergency care needs service gap, oral health status of residents unknown	1
Estimates numbers of people who might benefit from OHP	1
Existing needs to be assessed in terms of evidence base	1
Expansion of school based tooth brushing programme	1
Focus of prevention is on fluoride varnish and barriers to that being used	1
From literature extrapolation makes recommendations for staff training	1
Highlights new actions to be taken or commenced after consultation on the strategy	1
Highlights problems but mainly suggests continued involvement rather than new actions	1
Includes future prevention strategy	1
Mentions limited GDS prevention activity for deprived children	1
Mentions possibility of subsidised toothbrushes/paste	1
Mentions role of topical fluoride/chlorhexidine etc on page 48 for active older people and those in long stay care	1
Only need to link more to generic Public Health, talks about provision of leaflets to practices	1
Review health promotion services, cover looked after children, older people and carers and Learning disability	1
Says access no longer an issue, talks about financial risks and moving services from 2ary care to 1ary care - all very general	1
Some recommendations, not clear who will action some	1
Sought views on what could be done to improve maternal/under 5 health	1
Staff training	1
Staff training in OH	1
Suggests a screening service	1
Talks about lack of evidence for dietary intervention	1
Talks about need for increased focus on prevention but future need not really measured	1
Yes - highlights cultural barriers	1
Yes need for training and assessment on admission to care home	1
Yes, large number of recommendations covering: barriers to attendance, quality of care, record keeping	1
Total	**70**

Table A3.27 Prevention Gaps/ Future Preventive action

Caries data source	n
No mention	13
BASCD data	10
BASCD, ADHS	9
BASCD, ADHS, CDHS	9
Ad hoc surveys for the specific report	7
ADHS	5
N/A - as caries wasn't focussed on	4
BASCD, NDNS, ADHS	2
BASCD, ADHS, CDHS, surveys of care homes from the literature	1
BASCD, CDHS, ADHS, NDNS	1
BASCD, COCHRANE	1
Clinical survey as part of the work	1
Dental Observatory	1
Draws on Scottish Prison Dental Survey 2002	1
Examination of 75 prisoners	1
General health survey	1
Literature	1
Overall % affected mentioned, data source not given - assume BASCD	1
Presumably BASCD and ADH	1
Total	**70**

Table A3.28 Caries source for epidemiological data referred to

Caries data level (severity i.e. D3 or greater)	n
>D3	42
No mention	15
N/A	8
CARIES INTO DENTINE	3
Unclear	2
Total	**70**

Table A3.9 Caries data level – severity i.e. D3 or greater

Caries data minimal geographical area covered	n
No mention	14
By PCT area	10
N/A	7
Ward	6
Islington	3
Local Authority Level	3
Localities	2
missing	2
School level data	2
Scottish health board	2
Scottish National	2
Uses ADHS data	2
7 nursing homes	1
City	1
Comparison of Bolton with England	1
HMP Exeter	1
Lambeth	1
Localities/some discussion re Wards	1
Mention made of most deprived localities	1
National	1
Neighbourhoods	1
Northern Ireland/Quintiles	1
One prison	1
Rochdale	1
Scottish prisons	1
UK countries	1
YES - specific group	1
Total	**70**

Table A3.30 Caries data minimal geographical area covered

Periodontal disease	n
N/A	1
No mention	39
Yes	**30**
Yes	16
Mentioned	8
Bleeding gums	2
Y - adults	1
Clinical survey as part of the work	1
Just description of condition, no epidemiology	1
Oral Health, calculus, needs periodontal	1
Total	**70**

Table A3.31 Was periodontal disease referred to in the document?

Perio data Source	n
N/A	40
ADHS	11
Not referenced	10
ADH, Academic references	1
Adult Dental Health Survey - but SHA level only England Data for tooth loss by age group	1
Clinical Examination	1
draws on CDHS/ADHS/NDNS	1
Number needing assessed by Specialist services	1
Only in description of referrals to specialist service	1
Periodontal Health Assessment : Simplified Oral Hygiene Index	1
Reported bleeding gums in general survey	1
This survey	1
Total	**70**

Table A3.32 Periodontal disease data source

Oral Cancer	**n**
N/A	1
No mention	36
Yes	**33**
Yes	22
Mentioned	6
? Quotes national data	1
data at county level	1
Oral mucosal examination as part of the work	1
Suspicious oral mucosal lesions	1
Yes high level data and explanation	1
Total	**70**

Table A3.33 Was oral cancer referred to in the document?

Count of Oral Cancer data source	n
N/A	37
Not referenced	10
Thames Cancer Registry	5
Cancer Information Services	2
Cancer Research UK	2
NYCRIS	2
Anglia Cancer Network	1
Cited another SNAP report	1
Clinical Examination	1
Head and neck cancer network	1
International Association of Cancer Registries	1
Local data	1
National Cancer Intelligence Service	1
Scottish Cancer Registration Scheme	1
Textbook reference	1
This survey	1
UDS_SUS	1
West Midland Cancer Intelligence Unit	1
Total	**70**

Table A3.34 Oral Cancer data source

Orthodontics	n
N/A	1
No mention	46
Yes	**23**
Yes	15
Mentioned	2
Brief mention of orthodontic UDAs and practices	1
Estimate of need	1
Notes estimated need and UDAs for orthodontics	1
Overview	1
Yes - estimate of local need but basis of this not shown	1
Yes including Cleft lip and palate	1
Total	**70**

Table A3.35 Was orthodontics referred to in the document?

Orthodontics data source	n
N/A	47
CDHS	6
Not referenced	6
Based on 30-40% those aged 12-15	1
By UOAs contracted and by Stephen's formulae	1
CDHS, local data on treatment need	1
DPB data	1
Estimates of need extrapolated	1
From BASCD 12 year old survey	1
GDS data	1
general references only	1
HiC	1
LOCAL SURVEYS	1
UOAs PLANNED VERSUS ACTUAL	1
Grand Total	**70**

Table A3.36 Orthodontics data source

Other conditions	n
No mention	37
Cleft lip and palate	3
Dentate/edentate - ADHS plus local ADHS	2
Dry mouth, dry lips	2
Trauma	2
Calculus, gingivitis, plaque	1
Dental trauma mentioned, no data	1
Dentate/natural teeth	1
Denture presence	1
Edentulousness	1
Edentulousness Infections	1
Edentulousness, patient management complexity, dental anxiety	1
Erosion/attrition, Cleft lip and palate, impacted wisdom teeth, orofacial trauma, TMJ	1
Focus on the care index, trauma, l=cleft lip and palate	1
Heavy focus on prevention	1
Impact of general health e.g. cardiovascular disease. Immunocompromised	1
Increasingly dentate population and heavy metal generation - reference ADHS	1
N/A	1
Oral health knowledge and behaviour at its most basic - accessing dentistry, toothbrushing	1
Oral hygiene, diet	1
Restorative Dentistry Special Care dentistry	1
Self reported oral health in adults. Cleft lip and palate. Eating habits - Children’s & young	1
Soft tissue lesions	1
Tooth wear, dental alveolar injuries	1
Tooth wear, denture related candidiasis, dry mouth	1
Tooth/gum problems	1
Trauma, erosion, number of teeth	1
Trauma, tooth loss,	1
Trauma, Tooth surface loss both mentioned but no data provided	1
Total	**70**

Table A3.37 Other conditions

Pain and sepsis	n
No mention	50
Yes	5
Pain included in questions on problems	3
Mentioned	2
Pain	2
ADHS	1
ADHS and local surveys	1
Asks within oral health impact questions	1
Emphasis on sepsis	1
N/A	1
Reported as part of oral health impact	1
Survey asked about pain alongside service use and other problems	1
Yes - ADHS 2009	1
Total	**70**

Table A3.38 Pain and sepsis

Hospital/GA for caries in children	n
No mention	51
N/A	2
Yes	**17**
Current GA/Sedation data	2
GA data included for CDS	1
Mentioned	2
Not specifically - but secondary care referrals - extractions..	1
SECTION ON GA FOR SCD	1
Sedation in primary care	1
Sedation noted	1
YES	5
Yes broken down by postcode	1
Yes local data provided	2
Grand Total	**70**

Table A3.39 Hospital/GA for caries in children

Oral Health Impact	n
N/A	1
N/A	1
No mention	47
No mention	47
Yes	**22**
Yes	6
Mentioned	4
Descriptive	1
Draws on literature for this	1
Quality of life covered	1
Referenced in 2009 local consultation	1
Talks in general terms about inceased impact of oral disease in vulnerable groups	1
Yes - ADHS and local data	1
Yes - ADHS/NDNS/CDHS	1
Yes - embarrassment	1
YES - OHIP14	1
Yes - Section 8	1
Yes - self reported limited function & limited illness	1
Yes - used ECOHIS rather than OHIP	1
Total	**70**

Table A3.40 Reference to Oral Health Impact

Demography	n
Not mentioned	26
Yes	**44**
YES	19
Yes - minimal	3
Yes, in a lot of detail	3
Age profile of Boroughs plus prevalence of ethnic minorities	1
Description of 400 care home residents	1
Description of prisoners ages	1
Discusses changes in numbers of older people	1
Extrapolates from literature in the main	1
Highlights information on numbers from wider needs assessment	1
In the sense of looking at travel distances and deprivation	1
Limited to dentist/population ratios	1
Mentions but does not included numbers!	1
Number of stroke victims and survivors with limited function is presented	1
Static presentation of population data	1
Talks about changes in prison numbers in coming years	1
YES - linked this to 5 potentially who should access dentistry	1
Yes demographics of survey sample presented	1
Yes of various vulnerable groups	1
Yes population tree and talks about inc older population	1
Yes presented in detail by area within the PCT	1
Yes with emphasis on ethnicity, deprivation and population mobility	1
Yes, data of local area presented	1
Total	**70**

Table A3.41 Demography

Demographic trend	n
N/A	26
No	17
Yes	27
Yes	**13**
Yes and argues for more epidemiology for older adults	2
Yes including dental disease changes	2
Concern about net inward migration of people with LD	1
Discusses changes in population, especially increase in older people	1
Includes demographic trends among dental workforce	1
Limited to "designated growth area" net inflow of 70,000	1
Mentions but does not include numbers	1
Notes increase in elderly population and dental trends for that age group	1
Trends for trends in edentate	1
Yes discussed in some detail	1
Yes in detail	1
Yes, presented in detail	1
Total	**70**

Table A3.42 Demographic trend

Inequalities	n
No mention	26
Yes	**44**
Yes	11
Mentioned	6
By implication yes	2
Some content on deprivation scores	2
Caries and fluoridation	1
Deprivation score information only	1
Extrapolates from literature in the main	1
In relation to material deprivation	1
in terms of access to GDS services	1
Lists deprivation and advocated dmft within Plymouth	1
Lots of references to wider deprivation in Borough	1
More a focus on deprivation than inequalities	1
no except rural access to dentistry	1
Only in relation to prisoners generally poor backgrounds	1
Oral cancer data by quintile of deprivation	1
Yes - good section on deprivation in demography section	1
Yes - access to services in different geographical areas	1
Yes - in terms of oral health	1
YES - see p10 onwards, IMD by LSOA, maps highlighting deprivation	1
Yes - used free school meals as a proxy by area	1
Yes a major focus of the report	1
YES e.g. map of service provision related to ward deprivation level	1
Yes in relation to service provision	1
Yes in some detail	1
Yes map of deprivation	1
Yes, large emphasis on social segmentation	1
Yes. Good on this and talks about using a Health Inequalities Impact Assessment to measure this (Page 8)	1
Total	**70**

Table A3.43 Inequalities

Vulnerable Groups	n
Not mentioned	13
Prisoners	4
Care home residents	3
Homeless	3
Yes	3
Gypsy and traveller population	2
Mentioned	2
Older adults? Although there is some mention of some groups in demography (e.g. People with HIV) and claims of dental implications these implications are not explained	2
Oral health promotion for looked after children, older people and carers and Learning disability	1
Adults with learning disability	1
Adults with Learning disabilities, Children with LD, Frail older people, Adults with mental illness, looked after children, socially excluded groups (prisoners on parole, alcohol dependent people, substance misusers, female	1
Adults with special needs (LD, Downs, autistic spectrum disorder, mental health problems, physical disabilities)	1
BME (demography, p19); care home residents	1
BME ethnicity, disability, gypsy and traveller, deprivation	1
BME, Adults with learning disability, older people, care home residents, homeless,	1
BME, Older people, Drug users, Looked after children. Travellers, Learning Disabled	1
Care home residents - GA & complex needs	1
Children attending special schools; Adults with learning disabilities; Adults in nursing homes; Homeless people	1
Children with disabilities, Adults with disabilities, adults with mental health problems	1
children with learning disabilities	1
Currently we don’t have data on people with a learning disability - p13	1
frail elderly, people with special care needs, homeless people	1
Highlights frail older people	1
Immigrant Congolese population	1
Learning disabilities, Drug misuse, oral cancer risk, diabetes,	1
Learning disability for tooth loss and attendance, Asian population for oral cancer	1
Looked after children mentioned. Suggests further work for families with young children and children with a disability	1
Looked after children, people who have a learning disability, those with mental illness, frail elderly, care homes, psychiatric care, prisons, homeless….	1
Lots mentioned: people living in material and social deprivation, people with learning difficulties, people with mental illness, people in institutional care, homeless, ethnic minorities, travelling community, elderly in	1
Mentioned but didn't undertake specially commissioned surveys of prisons, older people, Learning disabled but didn't undertake these p10 Noted as groups seen by Salaried services but no data on service usage	1
Old people	1
People living in sheltered accommodation	1
People with LD, Elderly, Alcohol Misusers, Homeless people, mentally ill people, people with physical	1
People with physical Disability; People living in care homes or who are receiving assistance to live at home; People with Learning Disabilities; Homeless people; Gypsy and Traveller populations	1
People with special needs	1
Reference to anxious dental patients, people with special needs	1
Referred to BMEs, those with special needs	1
Those who never attend, children living in poverty, bme, obesity	1
Yes - children not attending primary care dentistry	1
Yes - SCD patients	1
Yes mentions BME (and their lack of participation in epidemiological studies as masking risk)	1
Yes talks about residents of old peoples homes and prisoners	1
Yes, BME, children in care, homeless, drug users, children in care	1
Yes, in a lot of detail - the most detailed of any report I have reviewed	1
Yes. This assessment is about stroke victims	1
Yes: looked after children, homelessness, ethnicity, hiv/aids, substance misuse	1
Total	**70**

Table A3.44 Vulnerable groups

Access primary dental care	n
Not mentioned	9
Yes	**61**
Yes	36
Yes, in detail	2
Asked about previous attendance and opinions on experience	1
Covered access to range of early years services etc.	1
Discusses aspirations for drop-in centres for access by homeless. Data on Domiciliary care by both GDS and CDS	1
Extremely detailed presentation of information from NHS Health Information Centre (DPB).	1
In the context of emergency care	1
Limited data from Health Survey	1
List of actions in past and current provision	1
Percentage of population seen by a dentist	1
Prison dental services mentioned in passing	1
Registration, list size, treatment patterns	1
Yes - large emphasis here	1
Yes - major focus of report	1
Yes among patients and dentists	1
Yes for care homes	1
Yes for over 65s	1
Yes including access for those with special needs	1
yes including specialist	1
Yes, a major focus of this OHNA	1
Yes, asked about as part of interview process	1
Yes, difficulty climbing stairs after stroke etc is discussed	1
Yes, general description of different dental services, GDS, CDS and Hospital	1
Yes, talks about care on release and care provided whilst in prison	1
Yes, this is a major focus of this document but about the population in general not Vulnerable Groups	1
Grand Total	**70**

Table A3.45 Access primary dental care

NICE recall interval	n
Not mentioned	59
Yes	8
Predates	2
One of the issues mentioned	1
Total	**70**

Table A3.46 NICE recall interval

Access secondary dental care	n
Not mentioned	36
Yes	19
Yes including surgical dentistry in community	2
Nothing in main text, recommendations notes longstanding vacant OMFS post	1
Orthodontic/oral surgery/Maxillofacial activity, spend and waiting times	1
Sections on MaxFax and Orthodontics	1
Talks about need to move to 1ary care	1
Talks about what services are provided there - mainly oral surgery	1
Yes - briefest possible mention	1
Yes - but more about what could be done - not how much	1
Yes - notes presence of a number of local dental hospitals	1
Yes - with list of specialities	1
Yes detailed analysis by provider and specialty	1
Yes for care homes	1
Yes, there is a dental referral bureau which acts as a triage centre for referrals to secondary dental care	1
Yes. Data on referral to Hospital Dental Services	1
Total	**70**

Table A3.47 Access secondary dental care

Emergency Dental	n
Not mentioned	36
Yes	23
Issue identified as issue to be addressed	1
limited mention and no data	1
Mention of dental access centres	1
Out of hours	1
Partial	1
Profiles existing service	1
Provided by local salaried service	1
Section on access to emergency care but no data to back up just very general recommendations	1
Yes covers difficulty in accessing care in an emergency	1
Yes describes how this is provided	1
Yes, detailed breakdown of calls to Helpline	1
Total	**70**

Table A3.48 Access emergency dental care

Patient satisfaction	n
Not mentioned	48
Yes	**22**
Yes	13
Yes local surveys cover patients perspective	3
Limited to accessing dentist via GP survey data	1
One small paragraph on patient focus groups	1
Small audit report	1
Talks about need to measure better	1
Yes - telephone and postal surveys	1
Yes survey conducted	1
Total	**70**

Table A3.49 Patient satisfaction

APPENDIX 4

Invitation to Consultants in Dental Public Health to participate in semi-structured interviews

Dear [Insert name of Consultant],

As you know we are doing work for NICE in relation to the production of guidance on health improvement in vulnerable groups and you very kindly sent us material for this work.

As part of this work we are also interviewing six CDPHs to gather their views on the topic. The Interview would discuss the topic generally rather than be a discussion of your documents. What we are particularly interested in is how you would envisage using NICE guidance on this topic / the format of the guidance that would be helpful to you as a CDPH, in the post April 2013 NHS England, barriers / facilitators to the production of such an Needs Assessment locally etc.

The Interview / Discussion would last no longer than one hour and would be conducted by me. We would do this by telephone. I would ask your permission to record the call in order that we could subsequently transcribe it and analyse our discussion. All information disclosed would remain anonymous and we will not disclose Interviewees in any subsequent reports or publication of the work, nor disclose any information that lead to deductive disclosure of Interviewees.

I would hope to conduct the interview on Thursday 4th July or Monday 8th or Tuesday 9th or if these dates don't suit at some other mutually convenient time.

I do appreciate how busy folks are so if you don't have the time or would prefer not to take part in an interview then that is fine. Of course if you are able to help us, that would be great and we can arrange a time and number on which I can call you.

Kind regards

Prof. Ivor G. Chestnutt
Professor and Hon Consultant in Dental Public Health
School of Dentistry
College of Biomedical and Life Sciences
Cardiff University
Heath Park
CARDIFF CF14 4XY

APPENDIX 5

Semi-structured questionnaire used in interview with consultants in dental public health

Guide for Interview of CDPHs

Preamble

Thank you for agreeing to be interviewed. As you know we are undertaking a piece of work on behalf of NICE that is examining OHNAs as they relate to improving oral health in vulnerable groups. We have received over 80 OHNAs from colleagues around the UK and are in the process of extracting information from these to get a picture of the range of OHNAs that CDPHS have produced.

We are also looking at the academic literature to see what we can glean from that in relation to undertaking OHNAs for vulnerable groups, to identify what evidence there is for effective conduct and delivery of HNAs.

As part of this exercise we are also interviewing a purposive sample of CDPHs to benefit from their experience in conducting OHNA and also to get your views on how evidence based guidance on conducting OHNAs could be implemented in the new NHS / LA structure.

I do not want to ask you specifically about any HNAs that you have sent to us already, but rather want to discuss the topic in general terms.

Before we start, are you happy that I record this conversation to make subsequent analysis of what we discuss easier?[1]

Obviously we won't identify you or your organisation personally in any use we make of the information and we will not include any information that could result in deductive disclosure. The transcript of our conversation will be seen only by the research team here in Cardiff. We may want to include cited examples of good practice in our report but if that is the case then we'll contact you separately.

I have a list of about a dozen questions here, so we'll go through these in turn and as agreed we'll take no longer than an hour of your time.

Are you OK to continue?

[1] Interviewees have already been informed of and agreed to recording of the conversation. This is a reminder / confirmatory.

Questions (as a general guide – not didactic – use only to direct discussion – follow up points made by Interviewees at all times)

1. What are your thoughts on the Oral Health Needs Assessment process in general?

2. Have they in the past been useful?

   If yes, in what way?

   How do you prevent them being pieces of work that just gather dust on the shelf?

3. The guidance that NICE have been tasked to produce relates specifically to "oral health in vulnerable groups". What are your thoughts on that?

   Follow-up issues raised

4. Many of the OHNAs that we have been sent focus heavily on service delivery issues, what are your thoughts about an OHNA this is specifically focussed on oral health improvement?

5. What about information to inform such an OHNA?

   a. Follow up on adequacy of information sources / data at local level

6. What about focusing on specific groups? – What is your experience of that?

7. Are there any features or specific evidence (if available) that you think should be in the guidance that would be particularly helpful to you?

8. How do you think that such guidance would be used in the new NHS England set-up?

9. Who do you think should be on the group that develops an OHNA for improving oral health in vulnerable groups?

10. Who are the key people / groups that you think will the OHNAs be targeted at?

11. What do you think the role of the Health and Well Being Boards will be in this?

12. How do you think we can make sure that oral health in vulnerable groups gets on the Agenda?

13. That completes what I wanted to ask you, are there any other areas that you think that I should have asked about but didn't, or just any other thoughts in general that you think relevant to this piece of work?

Conclude interview and thank Interviewee and confirm arrangements for consultation on the draft guidance via NICE when it is issued, should they be interested.

APPENDIX 6 SEARCH STRATEGIES FOR REVIEW OF THE LITERATURE

OHNA Final Search Strategy

Search 1: - Oral Health Needs Assessments and Vulnerable Groups

The aim of this search is to retrieve literature on oral/dental health needs assessment (and variations thereof) and vulnerable groups.

Databases searched: Medline, Embase and CINAHL and the Cochrane Library.

Medline via Ovid 1946 to June week 1 2013

Search performed by Lucy Collins 14 June 2013.

1. needs adj1 assess*.ti,ab.
2. Needs Assessment/og,sn
3. Health Services Needs and Demand/og,sn
4. 1 or 2 or 3
5. Oral Health/
6. oral adj1 health.ti,ab.
7. dent*.ti,ab,sh.
8. 5 or 6 or 7
9. (ethnic* adj2 minor*).ti,ab.
10. Vulnerable Populations/
11. Minority Groups/
12. Social Isolation/
13. Social Alienation/
14. Social Marginalization/
15. Social Problems/
16. Social Welfare/
17. Socioeconomic Factors/
18. Poverty/
19. Poverty Areas/
20. (poverty or deprivation or financial hardship*).ti,ab.
21. ((vulnerable or disadvantaged or at risk or high risk or low socioeconomic status or neglect* or affected or marginal* or forgotten or non-associative or nonassociative or unengaged or hidden or excluded or transient or inaccessible or underserved or stigma* or inequitable) and (people or population* or communit* or neighbourhood*1 or neighborhood*1 or group* or area*1 or demograph* or patient* or social*)).ti,ab.
22. ((social or welfare or benefits) and claimant*).ti,ab.
23. ((low-income* or low income* or low pay or low* paid or poor or deprived or debt* or arrear*) and (people or person*1 or population*1 or communit* or group* or neighbourhood*1 or neighborhood*1 or famil*)).ti,ab.

24. Prison/
25. Prisoner/
26. prison*.ti,ab.
27. (recent* adj2 release*) adj2 (inmate* or prison* or detainee* or felon* or offender* or convict* or custod* or detention or incarcerat* or correctional or jail* or penitentiar*).ti,ab.
28. ((prison* or penal or penitentiar* or correctional facilit* or jail* or detention centre* or detention center*) and (population or inmate* or system* or remand or detainee* or felon* or offender*1 or convict* or abscond*)).ti,ab.
29. (parole or probation).ti,ab.
30. ((custodial adj2 (care or sentence)) or (incarceration or incarcerated or imprisonment)).ti,ab.
31. Homebound Persons/
32. (immobile or (disabled and (house bound or home bound)) or ((house or home) adj3 bound)).ti,ab.
33. Homeless Youth/
34. Homeless Persons/
35. (rough sleep* or runaway*1 or ((homeless* or street or destitut*) and (population or person*1 or people or group* or individual*1 or shelter* or hostel* or accommodation*1)).ti,ab.
36. Substance-Related Disorders/
37. Substance Abuse, Intravenous/
38. Drug Users/
39. ((drug* or substance) and (illegal or misus* or abuse or intravenous or IV or problem use* or illicit use* or addict* or dependen* or dependant or delinquency)).ti,ab.
40. Alcohol-Related Disorders/
41. Alcoholics/
42. ((alcohol* and (misus* or abuse or problem* use* or problem drink* or illicit use* or addict* or dependen* or dependant or delinquency)) or (alcoholic*1 or alcoholism)).ti,ab.
43. Gypsies/
44. (traveller*1 or Gypsies or Gypsy or Gipsy or Gipsies or Romany or Romanies or Romani or Romanis or Rromani or Rromanis or Roma).ti,ab.
45. ((disab* or handicap*) adj2 (physical* or learning or mental*)).ti,ab.
46. Intellectual Disability/
47. Communication Barriers/
48. (illiteracy or illiterate*).ti,ab.
49. "Transients and Migrants"/
50. "Emigrants and Immigrants"/
51. Refugees/
52. (immigrant* or migrant* or asylum or refugee* or undocumented).ti,ab.
53. Aged/
54. elderly.ti,ab.
55. (old* adj1 (person* or people)).ti,ab.
56. Adolescent/
57. Child/
58. Infant/
59. Child, Preschool/
60. (child* or kid*1 or infant*1 or toddler* or neonate* or baby or babies).ti,ab

61. (adolesc* or youth*1 or young* or teen*).ti,ab
62. (girl* or boy*).ti,ab
63. (preschool* or school age* or schoolage* or preteen* or preadoles*).ti,ab
64. (under 18 or under 18s or under 16 or under 16s).ti,ab
65. Paediatrics/
66. (pediatric* or paediatric*).ti,ab
67. or/9-66
68. 4 and 8 and 67

No limits N= 937

Limited to English language N= 863

ti = Title
ab = Abstract
sh = Subject Heading
/ = MESH Subject Heading
og = Organization & Administration subheading
sn = Statistics & Numerical Data subheading
*= truncation of term with all possible endings
*1 = truncation of term with one character
adj1 = two terms next to each other in any order
adj2 = two terms in any order and with one word (or none) between them
adj3 = two terms in any order and with one word, two words (or none) between them

Embase via Ovid 1947- present

Search performed by Lucy Collins 14 June 2013.

1. needs adj1 assess*.ti,ab.
2. Needs Assessment/
3. 1 or 2
4. oral adj1 health.ti,ab.
5. dent*.ti,ab,sh.
6. 4 or 5
7. (ethnic* adj2 minor*).ti,ab.
8. Vulnerable Population/
9. Minority Group/
10. Social Isolation/
11. Social Exclusion/
12. Social Welfare/
13. Social Problem/
14. Socioeconomics/
15. Poverty/
16. (poverty or deprivation or financial hardship*).ti,ab.

17. (vulnerable or disadvantaged or at risk or high risk or low socioeconomic status or neglect* or affected or marginal* or forgotten or non-associative or nonassociative or unengaged or hidden or excluded or transient or inaccessible or underserved or stigma* or inequitable) and (people or population* or communit* or neighbourhood*1 or neighborhood*1 or group* or area*1 or demograph* or patient* or social*)).ti,ab.
18. ((social or welfare or benefits) and claimant*).ti,ab.
19. ((low-income* or low income* or low pay or low* paid or poor or deprived or debt* or arrear*) and (people or person*1 or population*1 or communit* or group* or neighbourhood*1 or neighborhood*1 or famil*)).ti,ab.
20. Prison/
21. Prisoner/
22. prison*.ti,ab.
23. (recent* adj2 release* adj2 (inmate* or prison* or detainee* or felon* or offender* or convict* or custod* or detention or incarcerat* or correctional or jail* or penitentiar*)).ti,ab.
24. ((prison* or penal or penitentiar* or correctional facilit* or jail* or detention centre* or detention center*) and (population or inmate* or system* or remand or detainee* or felon* or offender*1 or convict* or abscond*)).ti,ab.
25. (parole or probation).ti,ab.
26. ((custodial adj2 (care or sentence)) or (incarceration or incarcerated or imprisonment)).ti,ab.
27. Homebound Patient/
28. disabled and (house bound or home bound).ti,ab
29. immobile.ti,ab
30. (house or home) adj3 bound.ti,ab.
31. Homelessness/
32. (rough sleep* or runaway*1) .ti,ab
33. (homeless* or street or destitut*) and (population or person*1 or people or group* or individual*1 or shelter* or hostel* or accommodation*1).ti,ab.
34. Substance Abuse/
35. Drug Dependence/
36. ((drug* or substance) and (illegal or misus* or abuse or intravenous or IV or problem use* or illicit use* or addict* or dependen* or dependant or delinquency)).ti,ab.
37. Alcoholism/
38. (alcohol* and (misus* or abuse or problem* use* or problem drink* or illicit use* or addict* or dependen* or dependant or delinquency)).ti,ab.
39. Gipsy/
40. (traveller*1 or Gypsies or Gypsy or Gipsy or Gipsies or Romany or Romanies or Romani or Romanis or Rromani or Rromanis or Roma).ti,ab.
41. ((disab* or handicap*) adj2 (physical* or learning or mental*)).ti,ab.
42. Intellectual Impairment/
43. Communication Disorder/
44. (illiteracy or illiterate*).ti,ab.
45. Immigrant/
46. Illegal Immigrant/
47. Refugee/
48. (immigrant* or migrant* or asylum or refugee* or undocumented).ti,ab.
49. Aged/
50. elderly.ti,ab.
51. (old* adj1 (person* or people)).ti,ab.

52. Adolescent/
53. Child/
54. Infant/
55. (child* or kid*1 or infant*1 or toddler* or neonate* or baby or babies).ti,ab.
56. (adolesc* or youth*1 or young* or teen*).ti,ab
57. (girl* or boy*).ti,ab
58. (preschool* or school age* or schoolage* or preteen* or preadoles*).ti,ab
59. (under 18 or under 18s or under 16 or under 16s).ti,ab
60. Paediatrics/
61. (pediatric* or paediatric*).ti,ab
62. or /7-61
63. 3 and 6 and 62

No limits N= 630

Limited to English language N= 604

ti = Title
ab = Abstract
sh = Subject Heading
/ = MESH Subject Heading
*= truncation of term with all possible endings
*1 = truncation of term with one character
adj1 = two terms next to each other in any order
adj2 = two terms in any order and with one word (or none) between them
adj3 = two terms in any order and with one word, two words (or none) between them

CINAHL (Cumulative Index of Nursing and Allied Health Literature) 1937 **–** present

Search performed by Lucy Collins 14 June 2013.

1. needs N1 assess*.ti,ab.
2. Health Services Needs and Demand/MM
3. Needs Assessment/MM
4. 1 or 2 or 3
5. Oral Health/MH
6. oral N1 health.ti,ab.
7. dent*.ti,ab,mw.
8. 5 or 6 or 7
9. (ethnic* N2 minor*).ti,ab.
10. Minority Groups/MH
11. Blacks/MH
12. Asians/MH
13. Hispanics/MH
14. Special Populations/MH
15. Social Welfare/ MH

16. Social Problems/MH
17. Socioeconomic Factors/MH
18. Social Isolation/MH
19. Social Alienation/MH
20. Poverty/MH
21. Poverty Areas/MH
22. (poverty or deprivation or financial hardship*).ti,ab.
23. ((vulnerable or disadvantaged or at risk or high risk or low socioeconomic status or neglect* or affected or marginal* or forgotten or non-associative or nonassociative or unengaged or hidden or excluded or transient or inaccessible or underserved or stigma* or inequitable) and (people or population* or communit* or neighbourhood* or neighborhood* or group* or area* or demograph* or patient* or social*)).ti,ab.
24. ((social or welfare or benefits) and claimant*).ti,ab.
25. ((low-income* or low income* or low pay or low* paid or poor or deprived or debt* or arrear*) and (people or person* or population* or communit* or group* or neighbourhood* or neighborhood* or famil*)).ti,ab.
26. Correctional Facilities/MH
27. Prisoner/MH
28. prison*.ti,ab.
29. (recent* N2 release* N2 (inmate* or prison* or detainee* or felon* or offender* or convict* or custod* or detention or incarcerat* or correctional or jail* or penitentiar*)).ti,ab.
30. ((prison* or penal or penitentiar* or correctional facilit* or jail* or detention centre* or detention center*) and (population or inmate* or system* or remand or detainee* or felon* or offender* or convict* or abscond*)).ti,ab.
31. (parole or probation).ti,ab.
32. ((custodial N2 (care or sentence)) or (incarceration or incarcerated or imprisonment)).ti,ab.
33. Homebound Patients/MH
34. Homebound Patient/MH
35. disabled and (house bound or home bound).ti,ab
36. immobile.ti,ab
37. ((house or home) N3 bound).ti,ab.
38. Homeless Persons/MH
39. (rough sleep* or runaway*).ti,ab
40. (homeless* or street or destitut*) and (population or person* or people or group* or individual* or shelter* or hostel* or accommodation*).ti,ab.
41. "Substance Abuse/MH
42. Substance Abuse, Intravenous/MH
43. Inhalant Abuse/MH
44. Intravenous Drug Users/MH
45. Substance Abusers/MH
46. ((drug* or substance) and (illegal or misus* or abuse or intravenous or IV or problem use* or illicit use* or addict* or dependen* or dependant or delinquency)).ti,ab.
47. Alcohol-Related Disorders/MH
48. Alcoholics/MH
49. Alcohol Abuse/MH

50. Alcoholism/MH
51. ((alcohol* and (misus* or abuse or problem* use* or problem drink* or illicit use* or addict* or dependen* or dependant or delinquency)) or (alcoholic* or alcoholism)).ti,ab.
52. Gypsies/MH
53. (traveller* or Gypsies or Gypsy or Gipsy or Gipsies or Romany or Romanies or Romani or Romanis or Rromani or Rromanis or Roma).ti,ab.
54. ((disab* or handicap*) N2 (physical* or learning or mental*)).ti,ab.
55. Learning Disorders/MH
56. Mental Retardation/MH
57. Communicative Disorders/MH
58. Illiteracy/MH
59. (illiteracy or illiterate*).ti,ab.
60. Immigrant/MH
61. Illegal Immigrant/MH
62. Refugee/MH
63. "Transients and Migrants"/MH
64. (immigrant* or migrant* or asylum or refugee* or undocumented).ti,ab.
65. Aged/MH
66. elderly.ti,ab.
67. (old* N1 (person* or people)).ti,ab.
68. Adolescent/MH
69. Child/MH
70. Infant/MH
71. Child, Preschool/MH
72. (child* or kid* or infant* or toddler* or neonate* or baby or babies).ti,ab
73. (adolesc* or youth* or young* or teen*).ti,ab
74. (girl* or boy*).ti,ab
75. (preschool* or school age* or schoolage* or preteen* or preadoles*).ti,ab
76. (under 18 or under 18s or under 16 or under 16s).ti,ab
77. Paediatrics/MH
78. (pediatric* or paediatric*).ti,ab
79. or/9-78
80. 4 and 8 and 79

N= 300

Limited to English language N= 296

ti = Title
ab = Abstract
mw = Subject Heading
/MH = CINAHL Subject Heading
/MM = CINAHL Subject Heading as major concept
*= truncation of term with all possible endings
N1 = two terms next to each other in any order

N2 = two terms in any order and with one word (or none) between them
N3 = two terms in any order and with one word, two words (or none) between them

Cochrane Library via Wiley

All databases;
Cochrane database of Systematic Reviews 2005 – present
Database of Abstracts of Reviews of Effects 1994 - present
Cochrane Central Register of Controlled Trials
Cochrane Methodology Register 1951- present
Health Technology Assessment Database 1989 - present
NHS Economic Evaluation Database 1968 – present

Search performed by Lucy Collins 14 June 2013.

1. needs NEXT assess*.ti,ab,kw
2. Needs Assessment/
3. Health Services Needs and Demand/
4. 1 or 2 or 3
5. Oral Health/
6. oral NEXT health.ti,ab,kw
7. dent*.ti,ab,kw
8. 5 or 6 or 7
9. 4 and 8

N=31

ti= Title
ab= Abstract
kw= Keyword
sh= Subject Heading
/= MESH Subject Heading
*= truncation of term with all possible endings
NEXT = two terms next to each other in any order

Table A6.1 Reasons for exclusion of papers in Search 1 - Oral Health Needs Assessment and Vulnerable Groups

Reasons for exclusion	Number of papers excluded
Assessment / Description of specific clinical procedure	7
Description of Epidemiological method / simple description of disease epidemiology	757
Assessment of care utilisation / Access	173
Assessment of care provision	107
Oral health related quality of life / sociodental indicators	37
Assessment of need in clinic / on entry to nursing home etc.	7
Description of single clinic or access to a single clinical service	8
Description of educational intervention	4
Studies on demand for services	1
Attitudes on treatments	3
Future need for single service / topic	2
Self-reported unmet health needs	62
Study solely about workforce	52
Commentary / thought piece	74
Description non community intervention study	5
Economics	17
Miscellaneous	22
Duplicate	29

Search 2 The methodology of health needs assessment

The aim of this search is to retrieve literature on the methodology of needs assessment in general (not just oral health needs assessments).

Databases searched: Medline, Medline in Process, Embase, HMIC, CINAHL and the Cochrane Library.

TRIP, NICE Evidence Search and the British Society for Disability and Oral Health were searched for any guidance on health needs assessment methodologies outside of the journal literature. A known resource on the conduct of Health Needs Assessment produced by the Scottish Needs Assessment Programme was added to the search output.

Ovid Medline via OvidSP 1946 to – June week 2 2013

Search performed by Lucy Collins 20 June 2013.

This search is limited to Oral Health needs assessment as a search of just needs assessment and methodologies obtains 1848 records.

1. needs adj1 assess*.ti,ab.
2. Needs Assessment/
3. Health Services Needs and Demand/
4. 1 or 2 or 3
5. Oral Health/
6. oral adj1 health.ti,ab.
7. dent*.ti,ab,sh
8. 5 or 6 or 7
9. Epidemiologic Methods/
10. Epidemiologic Research Design/
11. Research Design/
12. (method* or technique*).ti
13. 9 or 10 or 11 or 12
14. 4 and 8 and 13
15. (needs adj1 assess* adj1 method*).ti,ab.
16. 14 or 15

Limited to English language N=99

ti = Title
ab = Abstract
sh = Subject Heading
/ = MESH Subject Heading
*= truncation of term with all possible endings
adj1 = two terms next to each other in any order

Medline in Process via OvidSP

Search performed by Lucy Collins 20 June 2013

1. needs adj1 assess*.ti,ab.
2. (method* or technique*).ti
3. 1 and 2
4. (needs adj1 assess* adj1 method*).ti,ab.
5. 3 or 4

N=15

ti = Title
ab = Abstract
*= truncation of term with all possible endings
adj1 = two terms next to each other in any order

Embase via OvidSP 1947- present

Search performed by Lucy Collins 20 June 2013

There aren't equivalent "methodology" subject headings in Embase as those used in the Medline search. The search was not limited to Oral Health but the term "health" was added as a keyword to focus the search on "health needs assessments".

1. needs adj1 assess*.ti,ab.
2. Needs Assessment/
3. 1 or 2
4. (method* or technique*).ti
5. 3 and 4
6. (needs adj1 assess* adj1 method*).ti,ab.
7. 5 or 6
8. health.ti,ab
9. 7 and 8

Limited to English language N=118

ti = Title
ab = Abstract
/ = MESH Subject Heading
*= truncation of term with all possible endings
adj1 = two terms next to each other in any order

HMIC (Health Information Management Consortium) via Ovid SP 1979- present

Search performed by Lucy Collins 20 June 2013

1. needs adj1 assess*.ti,ab.
2. health needs assessment/
3. needs assessment/
4. community health needs assessment/
5. epidemiological assessment/
6. health profiling/
7. rapid health assessment/
8. comparative assessment/
9. or/1-8
10. (method* or technique*).ti.
11. research design/
12. research strategies/
13. questionnaire design/
14. statistical design/
15. survey design/
16. research methodology/
17. research methods/
18. research projects/
19. epidemiologic methods/
20. methods/
21. or/10-20
22. 9 and 21
23. (needs adj1 assess* adj1 method*).ti,ab.
24. 22 or 23

N=71

ti = Title

ab = Abstract

sh = Subject Heading

/ = MESH Subject Heading

*= truncation of term with all possible endings

adj1 = two terms next to each other in any order

CINAHL (Cumulative Index of Nursing and Allied Health Literature) 1937 **–** present

Search performed by Lucy Collins 20 June 2013

1. needs N1 assess*.ti,ab.
2. Health Services Needs and Demand/MM
3. Needs Assessment/MM
4. 1 or 2 or 3
5. Health Services Research/MT
6. (method* or technique*).ti.
7. 5 or 6
8. 4 and 7

9. (needs N1 assess* N1 method*).ti,ab.
10. 8 or 9

N= 220

ti = Title
ab = Abstract
/MM = CINAHL Subject Heading as major concept
/MT = Methods subheading
*= truncation of term with all possible endings
N1 = two terms next to each other in any order

Cochrane via Wiley

All databases;
Cochrane database of Systematic Reviews 2005 – present
Database of Abstracts of Reviews of Effects 1994 - present
Cochrane Central Register of Controlled Trials
Cochrane Methodology Register 1951- present
Health Technology Assessment Database 1989 - present
NHS Economic Evaluation Database 1968 – present

Search performed by Lucy Collins 20 June 2013

1. needs NEXT assess*.ti,ab,kw
2. Needs Assessment/
3. Health Services Needs and Demand/
4. 1 or 2 or 3
5. Epidemiologic Methods/
6. Epidemiologic Research Design/
7. Research Design/
8. (method* or technique*).ti.
9. 5 or 6 or 7 or 8
10. 4 and 9

N=73

ti = Title
ab = Abstract
kw = keyword
/ = MESH Subject Heading
/MT = Methods subheading
*= truncation of term with all possible endings
NEXT = two terms next to each other in any order

TRIP Database (www.tripdatabase.com)

Search performed by Lucy Collins 20 June 2013

1. needs assess*.ti
2. (method* or technique*).ti.
3. 1 and 2

N=9

ti = Title
*= truncation of term with all possible endings

NHS Evidence

Search performed by Lucy Collins 20 June 2013

1. “health needs assessment”
2. health needs assess* AND (method* or technique*)
3. Results of search 2 limited to first 100 relevant results after selecting the following “types of publication” filters:
   - Grey Literature
   - Policy and Service Development
   - Population Needs Assessment
4. 1 or 2

N = 500

*= truncation of term with all possible endings

APPENDIX 7 SUMMARY OF INCLUDED AND EXCLUDED PAPERS FROM SEARCH ON ORAL HEALTH NEEDS ASSESSMENT AND VULNERABLE GROUPS (SECTION 4.2)

Authors	Date	Title	Comments
Included studies			
Akaji, E. A., Jeboda, S. O. and Oredugba, F. A.	2010	Comparison of normative and self-perceived dental needs among adolescents in Lagos, Nigeria	In this study, which involved adolescents in Nigeria, self-perceived oral health needs was found to be at variance with normative needs as judged by a clinical oral examination. How this translates to the UK situation isn't clear but in conducting OHNAs need to bear in mind that Normative and Self-Perceived needs may well differ.
Andersen, R. M., Davidson, P. L. and Nakazono, T. T.	1997	Oral health policy and programmatic implications: lessons from ICS-II	This paper looks at self-perceived oral health and that determined normatively - unsurprisingly those who have regular access to care are more likely to look at their oral health positively - no data on how to perform a OHNACU
Antunes, J. L. F., Frazao, P., Narvai, P. C., Bispo, C. M. and Pegoretti, T.	2002	Spatial analysis to identify differentials in dental needs by area-based measures	This paper describes the use of mapping data to display caries data at local levels - it supports its use and suggested it will be valuable to Public Health planners
Calabrese, J. M., Friedman, P. K., Rose, L. M. and Jones, J. A.	1999	Using the GOHAI to assess oral health status of frail homebound elders: reliability, sensitivity, and specificity	This study, which involves old people, again pointed out the lack of correlation between self-assessment need and need determined by clinical examination. It is critical of the Global Oral Health Assessment Index (an index used to determine

Authors	Date	Title	Comments
			need in older people. It also suggested that agreement on need when judged by a dentist and a physician correlated well. Even though the work was conducted in the USA, the relevance to our work is that it again shown a disparity between clinical and self-perceived assessment of need.
Cheng, N. F., Han, P. Z. and Gansky, S. A.	2008	Methods and software for estimating health disparities: the case of children's oral health	This is a useful paper as it describes more advanced methods of quantifying inequalities in oral health, specifically - Absolute and relative measures, the Slope Index of Inequality, the Relative Index of Inequality (mean and ratio), and the Health Concentration Index were estimated. The authors concluded that oral health differed significantly between White children and all non-White children and was significantly related to SEP. - this paper shows how LAs could take a more sophisticated approach to presenting oral health inequalities and the approaches to measuring and demonstrating these. Study was conducted in America.
Collins, J. and Freeman, R.	2007	Homeless in North and West Belfast: an oral health needs assessment	Although primarily an epidemiological study of the oral health of homeless people in Belfast, the study not only shows that it is possible to do an oral health study of the homeless, it is important to consider wider issues in determining oral health needs. Dental anxiety status was related to dental

Authors	Date	Title	Comments
			disease experience which impacted negatively on quality of life. Forty-seven percept of the participants felt at least occasionally self-conscious and/or felt ashamed by the appearance of their teeth. Health and psychosocial factors associated with being homeless must be incorporated into the delivery of context-sensitive oral healthcare for this socially excluded population.
Crowley, E., O'Brien, G. and Marcenes, W.	2003	School league tables: a new population based predictor of dental restorative treatment need	This study was primarily an epidemiological study conducted in Cork Ireland - the relevance to our work is the finding that aggregate measures of academic achievement may be a potential indicator of dental restorative treatment need. The possible relevance to the OHNA work is that school performance (which LAs have access too) may provide a proxy indicator of need, in the absence of dental clinical examinations.
Daly, B., Clarke, W., McEvoy, W., Periam, K. and Zoitopoulos, L.	2010	Child oral health concerns amongst parents and primary care givers in a Sure Start local programme	This qualitative study reports positively on the incorporation of oral health into generic health promotion programmes - e.g. sure start. The relevance to our work is that strategies arising from OHNAs should link with other generic programmes and take a CRF approach.

Authors	Date	Title	Comments
Daly, B., Tim; Newton, J. and Batchelor, P.	2010	Patterns of dental service use among homeless people using a targeted service	This is a further study of dental care provision for homeless people. While the small sample limits the findings in this study, it is hypothesized that the presence of the dental service promoted uptake of dental care. Flexible attendance tended to result in multiple visits and delayed outcomes, which themselves could have acted as barriers to care
Dolan, T. A., Peek, C. W., Stuck, A. E. and Beck, J. C.	1998	Three-year changes in global oral health rating by elderly dentate adults	This paper looks at self-perceived oral health in older people and how these vary over time - though the clinical implications of this are not clear from this study. May link with lack of correlation with normative conventionally determined need.
Duncan, L. and Simmons, M.	1996	Health practices among Russian and Ukrainian immigrants	This study is a survey and clinical examination of the health needs of immigrants to the United States. The major health problems identified included various dental conditions requiring treatment, obesity, and the absence of basic health screening measures such as cholesterol testing, high blood pressure screening, Pap smears, and mammograms. The authors also identified a need for translators and for education regarding preventative self-care, such as breast self-examinations. The relevance to our work is that immigrants may form a vulnerable group with high dental need.

Authors	Date	Title	Comments
Elley, K. M. and Langford, J. W.	1993	The use of a classification of residential neighbourhoods (ACORN) to demonstrate differences in dental health of children resident within the south Birmingham health district and of different socio-economic backgrounds	this paper is interesting in that it was one of the first to use ACORN (a classification of residential neighbourhoods) to demonstrate inequalities in oral health.
Gherunpong, S., Sheiham, A. and Tsakos, G.	2006	A sociodental approach to assessing children's oral health needs: integrating an oral health-related quality of life (OHRQoL) measure into oral health service planning	This study looks at the use of sociodental indicators in assessment oral health need in Thai Primary School Children, The authors concluded that was a marked difference between the standard normative and the sociodental needs assessment approach, with the latter approach showing a 60% lower assessment of dental health care needs in Thai 11-12-year-old children. Different levels of "impacts" on daily life can be used to prioritize children with needs.
Gherunpong, S., Tsakos, G. and Sheiham, A.	2006	A sociodental approach to assessing dental needs of children: concept and models	Related to the above paper this works suggests that traditional normative methods of assessing dental needs do not correspond to current concepts of 'health' and 'need'. Although there is dental research on quality of life, evidence-based practice, and oral behaviours, those concepts are rarely applied to dental needs estimation. Dental needs are usually calculated mainly from clinical data and are likely to be inaccurate. A structured comprehensive method for assessing dental needs

Authors	Date	Title	Comments
			is required. The objectives of this study are to develop and test a new sociodental system of needs assessment for overall dental needs of primary schoolchildren. Furthermore, normative and sociodental estimates of need are compared.
Hennequin, M., Faulks, D. and Roux, D.	2000	Accuracy of estimation of dental treatment need in special care patients	Patients with special care requirements - this study shows that access of patients with special care requirements to dental care may be limited by the ability of their carers to evaluate their oral condition and/or by the persons inability to express their pain or discomfort.
Kipping, R. R., Scott, P. and Gray, C.	2011	Health needs assessment in a male prison in England	This study reports on a survey of oral health in prisoners in an English Category B prison. The mixed methodology which involved analysis of health data and talking to a wide group of stakeholders, including prisoners, helped triangulate the data. The process of undertaking the health needs assessment shifted the focus from 'health care' to 'health'. This has facilitated a significant reframing of the concepts of 'health' and 'health need' with on-going work now focused on the prison as a whole system, not merely on the provision of health care within the prison. Many improvements have already been made in response

Authors	Date	Title	Comments
			to the assessment. It is of relevance, not so much from the point of view of overall OHNAs, but because (a) it provides an example of an OHNA for a vulnerable group and (b) uses mixed methodologies beyond a simple clinical dental examination.
Kruger, E., Tennant, M. and George, R.	2011	Application of geographic information systems to the analysis of private dental practices distribution in Western Australia	This is a paper about geocoding and mapping dental practices - it doesn't add a great deal to what we know about this process, which appears to be in routing use in many OHNAs in England
Kruger, E., Whyman, R. and Tennant, M.	2012	High-acuity GIS mapping of private practice dental services in New Zealand: does service match need?	This paper - linked to the one above concluded that Oral health has a substantial impact on health-related quality of life and the utilisation of dental care services can contribute to its improvement. As such, it is expected that access to care should be focused on the population groups with the highest degree of need. However, in a market-driven, mostly private practice model, such as that in New Zealand, available care is concentrated largely in areas of high socio-economic status and in populations with lower levels of oral disease.

Authors	Date	Title	Comments
Kuthy, R. A., Siegal, M. D. and Wulf, C. A.	1997	Establishing maternal and child health data collection priorities for state and local oral health programs	This paper sought to identify specific data items for use by state and local agencies in a maternal and child oral health needs assessment model. They used a Delphi technique to seek agreement amongst State Dental Directors and other officials. A modified Delphi approach facilitated the development of core and optional data items for a model oral health needs assessment. This model has potential for a common reporting mechanism so that states and local dental programs can share data. The paper also sets out a nice diagram of a model Oral Health Needs Assessment - which has a circular format
Landes, D. P. and Jardine, C.	2010	Targeting dental resources to reduce inequalities in oral health in the North East of England - a health equity audit methodology to evaluate the effects of practice location, practice population and deprivation	This study describes health equity audit and takes needs assessment beyond simple epidemiological classification of need, in that it also takes into account deprivation and practice list size. The methodology used in this study can be used to identify inequalities and inequities in oral health in different areas. In the audit area improving access to dental services for those in most need, was best tackled by targeted investment into dental practices located in deprived communities. Audits are recommended to insure a fare distribution of resources to meet local population needs

Authors	Date	Title	Comments
Lane, E. A. and Gallagher, J. E.	2006	Role of the single assessment process in the care of older people. How will primary dental care practitioners be involved?	This work looks at screening instruments for use in older people as part of a needs assessment. The authors concluded that there has been proliferation of oral health screening instruments for older people in support of health and social care policy, with limited evidence of research into their effectiveness. D-E-N-T-A-L is the only instrument with published evidence of its effectiveness its inclusion in national and local instruments is recommended. Further research on effectiveness of screening instruments with a dental component is required, including their acceptability to older people and personnel. However as looks at care on an individual basis rather than population basis probably of limited relevance to current work
Lane, E. A. and Gallagher, J. E.	2005	A review of screening instruments for oral health in older people -- multi-agency working across health and social care	Describes the single assessment process as above
Locker, D. and Ford, J.	1994	Evaluation of an area-based measure as an indicator of inequalities in oral health	Sets out the benefits of area based measures over single domain measures e.g. occupation as a basis for identifying oral health need

Authors	Date	Title	Comments
Locker, D. and Jokovic, A.	1996	Using subjective oral health status indicators to screen for dental care needs in older adults	Authors concluded that although subjective measures of oral health need didn't correlate well with clinically assessed needs nonetheless they did identify a sub-group of individuals whose clinical conditions impacted significantly on daily life and who would probably benefit the most from dental treatment. In this respect, the subjective measures assessed could themselves be interpreted as indicators of need which complement conventional clinical measures of needs for dental care.
Maizels, J., Maizels, A. and Sheiham, A.	1993	Sociodental approach to the identification of dental treatment-need groups	This study proposed a method that could be used to distinguish significantly different dental treatment-need groups, to assist in planning more appropriate preventive dental health programmes. The authors suggested that Significant differences among groups emerged in relation to various social indicators like age group, gender, region and dental history, and in relation to preventive dental health measures such as dental attendance and efficacy of teeth cleaning. However, given that this paper was published in 1993, it is interesting that greater use of a sociodental approach to oral health needs assessment hasn't emerged in the meantime.

Authors	Date	Title	Comments
Milsom, K. M., Buchanan, K., Neville, J. and Tickle, M.	2009	Recruitment difficulties associated with epidemiological surveys of the dental health of children with a Statement of Educational Special Needs in four PCTs in the Northwest of England in 2006/7	This study describes a cross sectional epidemiological survey of children with a statement of special educational needs - The results suggest that participation in dental epidemiological studies amongst children with a Statement of Special Educational Needs is a problem and that the difficulty of recruitment is particularly acute amongst children from disadvantaged backgrounds and amongst older cohorts.
Muirhead, V., Locker, D. and Quinonez, C.	2006	School performance indicators as proxy measures of school dental needs	This study established the feasibility of using school-level school performance indicators as proxy measures of school-level dental treatment needs. School performance results were good predictors of urgent dental treatment in York Region elementary school children.
Owens, J., Dyer, T. A. and Mistry, K.	2010	People with learning disabilities and specialist services	This is an opinion piece that deals with access to care for people with learning difficulties – none specifically about OHNA, therefore exclude. The authors concluded There is a risk that specialist services led by newly created consultants in special care dentistry may have the unintended effect of reducing choice if general dental practitioners are encouraged to refer all those with learning disabilities. A modified model of access is proposed that primary care organisations could use as a

Authors	Date	Title	Comments
			commissioning tool for dental contracts to facilitate choice and maximise involvement in oral health care for those with learning disabilities.
Pieh-Holder, K. L., Callahan, C. and Young, P.	2012	Qualitative needs assessment: healthcare experiences of underserved populations in Montgomery County, Virginia, USA	This paper is useful in that it describes the use of qualitative research (focus groups) to investigate attitudes to healthcare (general) in underserved groups. It is set in North America and so the context of care is different from England, but in conducting OHNAs, the value of qualitative research as an adjunct / provider of an alternative perspective of traditional epidemiological approach should be borne in mind.
Shah, K. K. and Tabair, E. D.	2013	Challenges encountered when conducting a dental health needs assessment of older people resident in care homes: experience from England	This paper describes the process of undertaking a dental health needs assessment of older people resident in care homes in the North East of England and the challenges involved. It illustrates many competency areas of interest to dental public health practitioners: oral health surveillance, dental public health intelligence and collaborative working. Although care in nursing homes in technically excluded from the scope of current work, there are issues described in this paper that would apply to conducting surveys of need in other

Authors	Date	Title	Comments
			vulnerable groups.
Sheiham, A., Maizels, J. E. and Cushing, A. M.	1982	The concept of need in dental care	An early paper on need in relation to dentistry that sets out the concept that measures of need should include the impact of ill health upon individuals, the degrees of dysfunction and the perceptions and attitudes of patients.
Srisilapanan, P. and Sheiham, A.	2001	Assessing the difference between sociodental and normative approaches to assessing prosthetic dental treatment needs in dentate older people	This paper emphasises the differences in self-perceived and normative need, this time when it comes to needs for dentures
Srisilapanan, P., Korwanich, N. and Sheiham, A.	2003	Assessing prosthodontic dental treatment needs in older adults in Thailand: normative vs. sociodental approaches	This papers is very similar to Srisilapanan, P. and Sheiham, A. 2001
Steele, J. G., Walls, A. W. and Murray, J. J.	1995	Methodological issues involved in sampling a population of the elderly for a dental survey	This paper describes issues in sampling free-living older people and discusses the degree to which they may be representative of this population group as a whole
Tickle, M., Craven, R. and Blinkhorn, A. S.	1996	Use of self-report postal questionnaires for district-based adult oral health needs assessment	Describes the use of self-completed postal questionnaires - noted response bias related to deprivation but suggested that this could be

Authors	Date	Title	Comments
			compensated for.
Wulfman, C., Jonas, P., Fattouh, J. and Rignon-Bret, C.	2010	Aesthetic demand of French seniors: a large-scale study	This study of free living French seniors concluded, the high number of collected questionnaires confirms the strong interest shown by seniors for dental aesthetics, particularly from women. Baby-boomers seem more attentive to the appearance of their smile than their elders. However, the importance of appearance decreases with age, as it becomes less of a priority, with attention more focused on general health.
EXCLUDED STUDIES			
Albino, J. E., Inglehart, M. R. and Tedesco, L. A.	2012	Dental education and changing oral health care needs: disparities and demands	This article deals with the change population demographic in the USA and how the dental education curriculum needs to change to keep up with the changing population who may not have access to care in the same way as the traditional American-European population do. Not specifically about OHNA - Exclude
Bachman, S. S., Vedrani, M., Drainoni, M. L., Tobias, C. and Andrew, J.	2007	Variations in provider capacity to offer accessible health care for people with disabilities	This is an American paper and so there are questions as to whether the issues arising apply directly to England. The paper is from the social-work domain and reports that dental services are amongst those that people with disabilities have

Authors	Date	Title	Comments
			most difficulty in accessing. It suggests that social workers may have a role in supporting people access dental care. Differences in how care is organised and delivered in the UK mean that the findings are likely to be of limited significance in the UK.
Bateman, P., Arnold, C., Brown, R., Foster, L. V., Greening, S., Monaghan, N. and Zoitopoulos, L.	2010	BDA special care case mix model	This toolkit is designed to account for the increased complexity in terms of time and cost that is required to provide dental care for patients with special care requirements. For each episode of care the case mix tool assesses the following on a four point scale: 'ability to communicate', 'ability to cooperate', 'medical status', 'oral risk factors', 'access to oral care' and 'legal and ethical barriers to care'. This toolkit is more likely to be of value in commissioning care than in undertaking an Oral Health Needs Assessment.
Billings, P. and McKee, D.	1998	Addressing the needs of underserved populations: one organization's experience	This paper describes the experience of the San Diego Children's Dental Health Association - of limited relevance to the UK situation - exclude
Biron, R. and So, S.	1995	Addressing the dental needs of the emerging geriatric population	American paper on needs of elderly - given paper is 1995 probably not of great relevance to OHNA process in the UK

Authors	Date	Title	Comments
Bjorn, A. M.	1989	Community health assessment and nursing care needs of the elderly	PhD Thesis not readily available
Bourgeois, D., Leclercq, M. H., Barmes, D. E. and Dieudonne, B.	1993	The application of the theoretical model WHO/FDI planning system to an industrialised country: France	This paper describes the FDI/WHO workforce planning model and as such is not relevant to the scope of our work on OHNA
Bronkhorst, E. M., Truin, G. J., Batchelor, P. and Sheiham, A.	1991	Health through oral health guidelines for planning and monitoring for oral health care: a critical comment on the WHO model	This is a critique of the FDI/WHO model which looks only at workforce planning. The criticism is that the model relies on past care delivery, rather than what might happen in the future. The focus is workforce and not relevant to our work on OHNA
Brumley, D. E., Hawks, R. W., Gillcrist, J. A., Blackford, J. U. and Wells, W. W.	2001	Successful implementation of community water fluoridation via the community diagnosis process	This paper describes how dental epidemiological data can be used to persuade policy makers to implement fluoridation - as such it is out of scope in relation to OHNA.
Hancock, P. A. and Blinkhorn, A. S.	1996	A comparison of the perceived and normative needs for dental care in 12-year-old children in the northwest of England	This study is primarily about training and calibration of clinical examiners and so is not of direct relevance to our work.
Hunter, P.	2006	DAI index	DAI = Dental Aesthetic Index - relates to orthodontics and is therefore not in the scope of this study
Kossioni, A. E.	2012	Is Europe prepared to meet the oral health needs of older people?	This is a commentary / opinion piece that focuses on access to care for older people across Europe. IT doesn't have anything novel to say about needs

Authors	Date	Title	Comments
			assessment.
Lutenbacher, M., Karp, S. M., Dietrich, M. S. and Sullivan, J. N.	2013	Are Services to Tennessee Children with Special Health Care Needs Comparable with National Achievement of MCHB Objectives?	American focused paper on satisfaction with services for children with special needs - not of great relevance to the UK situation
Macinko, J. and Lima-Costa, M. F.	2012	Horizontal equity in health care utilization in Brazil, 1998-2008	This study is about horizontal equity - but deals mainly with access to Primary Care services in Brazil. As such it isn't of great relevance to current work
Marshman, Z., Porritt, J., Dyer, T., Wyborn, C., Godson, J. and Baker, S.	2012	What influences the use of dental services by adults in the UK?	This paper deals with determinants and predictors of dental attendance rather than oral health needs assessment and so is not of direct relevance to the OHNA process
Muirhead, V. E. and Locker, D.	2006	School performance indicators as proxy measures of school dental treatment needs: a feasibility study	This paper replicates the information in Muirhead, V., Locker, D. and Quinonez, C. 2006
Nielsen, S. S., Hempler, N. F., Waldorff, F. B., Kreiner, S. and Krasnik, A.	2012	Is there equity in use of healthcare services among immigrants, their descendants, and ethnic Danes?	This paper is about access to care in Denmark - where it was concluded that immigrants had the same access to care as ethnic Danes. As it is not directly about OHNA exclude
Palmer, C.	2004	African-American males' oral health needs get special focus: NBA player's personal experience prompts him to action	News article from American Dental Association - not of relevance to population OHNA

Authors	Date	Title	Comments
Petersen, B. and Dahlstrom, L.	1998	Perception of treatment need among orthodontic patients compared with professionals	This paper is about using photographs to compare concepts of orthodontic treatment need between, patients and professionals - not relevant and should have been excluded on first sift
Somkotra, T. and Detsomboonrat, P.	2009	Is there equity in oral healthcare utilization: experience after achieving Universal Coverage	This study is about access to Health care in Thailand and not of relevance
Waldman, H. B. and Perlman, S. P.	2007	Using large numbers can overwhelm efforts to secure care for children with special health care needs. A case study in the USA	This study describes the demographics of children with special health care needs in California - not of relevance to current work, therefore exclude.
Waldman, H. B. and Perlman, S. P.	2004	Almost 300,000 children (ages 5 to 15) with disabilities in California	This study describes the demographics of children with special health care needs in California - not of relevance to current work, therefore exclude.
Worden, A., Challis, D. J. and Pedersen, I.	2006	The assessment of older people's needs in care homes	Reports on the admission assessment forms in care homes in the North West of England. As care homes are excluded from this work - exclude

Table A7.1 Detailed review of papers identified of as potential relevance to OHNAs – Included and excluded studies with commentary.

APPENDIX 8 SUMMARY OF INCLUDED AND EXCLUDED PAPERS FROM SEARCH ON THE METHODOLOGY OF NEEDS ASSESSMENT (SECTION 4.3)

Author	Year	Title	Comments
INCLUDE			
Asada, Y. K., G.	2011	Understanding different methodological approaches to measuring inequity in health care	The objectives of this study were to classify different methodological approaches to measuring inequity in health care, identify the strengths and weaknesses of each approach, and suggest directions for future improvement of each approach. The authors classified three approaches to measuring inequity in health care according to: (1) collective expert judgments (clinical standard approach), (2) average health care use based on need (population standard approach), and (3) assessment of health care users or providers (direct approach). This study may be of use in identifying approaches to measuring oral health inequity.
Aspray, T. J. N., Karen; Cassidy, Timothy P.; Hawthorne, Gillian	2006	Rapid assessment methods used for health-equity audit: diabetes mellitus among frail British care-home residents	Describes how a rapid assessment approach can inform the health equity cycle - relates to diabetes but may have implications for OHNA

Author	Year	Title	Comments
British Dental Association	2011	Dental public health futures	This BDA policy document states that Whilst it is essential that there is Dental Public Health input into Local Authority Joint Strategic Needs Assessments, the majority of dental commissioning will be with the NHS Commissioning Board, where it is even more important to give professional leadership and advice. We feel that this can only be carried out from within the NHS and so support the model of a public health agency.
British Society for Disability and Oral Health	2000	Oral health care for people with mental health problems: guidelines and recommendations	This is an important guideline of relevance for anyone undertaking an OHNA for disabled patients. Although published in 2000, authors confirmed of continued validity in Dec 2010.
British Society for Disability and Oral Health	2012	Clinical guidelines and integrated care pathways for the oral health care of people with learning disabilities 2012	These are clinical guidelines produced by the British Society for Disability and Oral Health. They usefully set out the issues relating to this group of vulnerable patients, but they have a limited perspective on OHNA from a population perspective

Author	Year	Title	Comments
Coulter A.	2010	Engaging communities for health improvement	This is a useful resource about engaging communities in decisions about healthcare. The report stresses that, in order for a community engagement project to be effective, it is important to consider the community it is aimed at by: finding out exactly how people want to get involved providing as much support as possible for people to get involved in the project easily making sure community members know that their views will be taken into account when any decisions are made. IT provides case-studies but not of these relate to oral health
Decker, J. W.	2011	Photovoice: An untapped method for community needs assessment in obesity research	Photovoice (PV) is a community-based participatory research technique in which community members use photography (along with individual and group discussions) to describe the facilitators or barriers in their community for engaging in certain behaviours or to describe the lived experience of residing in their community - not clear whether this would have any relevance in oral heal needs assessment
Downey, L. H. I., C. L.; Scutchfield, F. D.	2009	The use of photovoice as a method of facilitating deliberation	Another study on use of photographs in the community engagement process. Concludes: Community members are more easily able to identify solutions to local health issues when forum discussions are informed by local images and narratives.

Author	Year	Title	Comments
Dyer, T. A. S., J.; Canning, D.; Green, J. R.	2010	A health equity methodology for auditing oral health and NHS General Dental Services in Sheffield, England	This is an important paper which describes a health equity model for determining adequacy of dental service provision at a local level - takes OHNA to a level beyond the usual simply epidemiological description and simple mapping beyond sits of service provision against area measures of deprivation
Finifter, D. H. J., C. J.; Wilson, C. E.; Koenig, B. L.	2005	A comprehensive, multitiered, targeted community needs assessment model: Methodology, dissemination, and implementation	This article describes methodological best practices for a comprehensive, multitiered, targeted community needs assessment and strategies used to disseminate and implement findings. Could be applied to OHNA
Fryer, G. E., Jr.; Call, R. L.; Heine, C.; Casamassimo, P.	1983	The validity of indices for rural health manpower needs assessment	Relates to dentist /population / area measures of workforce provision - may provide an alternative approach to describing the supply side.
Gustafson, D. L. G., Lesley; Keough, Fran	2008	When the dragon's awake: a needs assessment of people injecting drugs in a small urban centre	Study which uses a mixed methods needs assessment which began with a survey and key informant and focus group interviews to determine attitudes, knowledge, and practices of people with current or previous experience injecting drugs. Only of relevance to OHNA in that is demonstrated how the needs of this client group have been assessed in the past

Author	Year	Title	Comments
Health Development Agency	2005	Clarifying approaches to: health needs assessment, health impact assessment, integrated impact assessment, health equity audit, and race equality impact assessment	This is a useful document by HAD which describes where HNA fits into the overall commissioning process
Landes, D. P. J., C.	2010	Targeting dental resources to reduce inequalities in oral health in the North East of England - a health equity audit methodology to evaluate the effects of practice location, practice population and deprivation	One of the few studies looking at equity on dental service provisions. The authors suggest that the methodology used in this study can be used to identify inequalities and inequities in oral health in different areas. In the audit area improving access to dental services for those in most need, was best tackled by targeted investment into dental practices located in deprived communities. Audits are recommended to insure a fare distribution of resources to meet local population needs.
NHS Confederation	2012	Operating principles for Joint Strategic Needs Assessments and Joint Health and Wellbeing Strategies	Useful document which describes the JSHA process - useful diagram which could be used to illustrate where OHNA fits in.
NHS Scotland	2012	Review of equality health data needs in Scotland	This is an NHS Scotland document that describes data types and sources of use for measuring Health Inequalities - of partial relevance to OHNAs
NICE	2006	Health equity audit: learning from practice briefing	This document describes the Health Equity Audit Process - case studies but none from dentistry / oral

Author	Year	Title	Comments
			health
Scottish Government	2012	National oral health improvement strategy for priority groups : frail older people, people with special care needs and those who are homeless	This Scottish Government document sets out the strategy for oral health improvement in the named vulnerable groups in Scotland. It describes assessment of need on an individual basis but there is nothing on conducting OHNAs from a population perspective other than description of the groups at risk, demography and dental epidemiology.
Shaw, M. D. C., C.	2008	Using a Delphi technique to determine the needs of African American breast cancer survivors	Useful only in that this study suggests the use of a Delphi technique for determining user views
Smith, S. M. L., J.; Deady, J.; O'Keeffe, F.; Handy, D.; O'Dowd, T.	2005	Adapting developing country epidemiological assessment techniques to improve the quality of health needs assessments in developed countries	This paper describes methods to produce HNA data when robust epidemiological data is missing . Although set in Dublin and dealing with generic HNA there may be lessons for conduct of OHNAs
Steele, J. G. W., A. W.; Murray, J. J.	1995	Methodological issues involved in sampling a population of the elderly for a dental survey	This paper describes sampling methods and operational problems in trying to measure oral health in adults aged >60 years and as such is of relevance to those conducting OHNAs in the free living older people
Taylor, P. J. C., C. L.	1980	Dental health and the application of	Old paper - largely superseded by modern mapping

Author	Year	Title	Comments
		geographical methodology	techniques
Tritter and McCallum	2006	The snakes and ladders of user involvement: moving beyond Arnstein	This discussion article reviews Arnstein's ladder of public involvement. It argues that the hierarchical nature of this model of involvement with its emphasis on power assumes that it has a common basis for all users providers and policymakers and ignores the existence of different relevant forms of knowledge and expertise. It also fails to recognise that for some users, participation itself may be a goal. The authors argue that for user involvement to improve health services, it must acknowledge the value of the process and the diversity of knowledge and experience of both health professionals and lay people.
Wang, C. B., M. A.	1997	Photovoice: concept, methodology, and use for participatory needs assessment	Concept paper on the use of photographs in helping patients describe their needs
Not clear	Not clear	Asking the experts: a guide to involving people in shaping health and social care services	This publication on the University of Essex web site for whom neither an author or publication date is available -describes the involvement of people. It includes concepts like Arnstein's ladder of participation and discusses come concepts that are useful in dealing with people fro0m particular demographic groups, e.gt. BME.

Author	Year	Title	Comments
Not clear	Not clear	BMJ Collected Resources- Other management	This resource spans the period 1995-1999 and contains a series of publications in the BMJ which relate to Health Needs Assessment in general they describe the process and some useful diagrams
Not clear	Not clear	Towards race equality in health: a guide to policy and good practice for commissioning services	This guide deals with commissioning health services for BME groups. It contains a good section of involvement BME communities on decisions about the commissioning of health services
Not clear	2003	Health needs assessment: involving older people in health research	Reports on an action research study whose aim was to elicit the health needs of older people as part of a wider health needs assessment exercise.
Not clear	2006	How to analyse ethnic differences in health, health care and the workforce : a toolkit for the NHS	This review is designed to help the NHS analyse ethnic differentials in health, healthcare and the workforce. May be helpful to persons undertaking an OHNA of BME groups
Not clear	2011	The joint strategic needs assessment	This briefing paper produced by the NHS Confederation describes how to conduct a JSNA two very useful items - a step by step guide to their conduct and also five key principles
EXCLUDE			

Author	Year	Title	Comments
Abdul-Hamid, W.	1997	The elderly homeless men in Bloomsbury hostels: their needs for services	Looks at mental health needs of 37 homeless men - nothing of relevance to OHNA other than it is possible to interview men in hostels
Ahari, S. S. H., Shahram; Yousefi, Moharram; Amani, Firouz; Abdi, Reza	2012	Community based needs assessment in an urban area: a participatory action research project	Describes research in Iran - nothing of relevance to the conduct of OHNAs
Aleksejuniene, J. B., Vilma	2009	An assessment of dental treatment need: an overview of available methods and suggestions for a new, comparative summative index	This paper describes a literature based study of dental indices
Allen, V. R. M., M. D.	1986	A model for assessing health needs of the rural elderly: methodology and results	The purpose of this health needs assessment of the rural elderly was to determine the actual conditions, opportunities, activities, and attitudes of older citizens living in a rural area and to assess their specific psychological, social, and medical needs. This was accomplished through a survey developed by an interdisciplinary team and distributed to individuals aged 55 years or older in a rural community of Georgia. Survey responses were used to plan and implement a series of four workshops to improve health education in the rural community surveyed. Other than suggesting a method of accessing the views of older people not of relevance to the conduct of an OHNA

Author	Year	Title	Comments
Barton, J. A. S., M. C.; Brown, N. J.; Supples, J. M.	1993	Methodological issues in a team approach to community health needs assessment	Not of relevance to oral health needs assessment
Boland, M. D., L.; Staines, A.	2008	Methodological issues in inclusive intellectual disability research: a health promotion needs assessment of people attending Irish disability services	Not of relevance to OHNA
Capilouto, E. C., M. L.; Ohsfeldt, R.	1995	A review of methods used to project the future supply of dental personnel and the future demand and need for dental services	About workforce mainly not of relevant to the conduct of OHNAs
Carr-Hill, R. A. S., T. A.; Smith, P.; Martin, S.; Peacock, S.; Hardman, G.	1994	Allocating resources to health authorities: development of method for small area analysis of use of inpatient services	This paper takes a very statistical approach to modelling hospital services – not of relevance to OHNA methodology
Carter, M. F. C., C.; Geerthuis, S.; Startup, M.	1995	A client-centred assessment of need needs assessment	An overview of HNA as it relates to mental health - not of direct relevance to the OHNA process
Clegg, A. D., B.	2001	Health needs assessment in intermediate care of elderly people	This article critiques health needs assessment methodology, investigates the origins of health needs assessment and discusses the application of health needs assessment theory in a community hospital setting. Simple descriptive article that

Author	Year	Title	Comments
			doesn't relate information that would be of value in OHNA
Côté, M. J. T., S. L.	2001	Four methodologies to improve healthcare demand forecasting	This study describes four common methods of forecasting demand for health care: -percent adjustment, 12-month moving average, trendline, and seasonalized forecast. These four methods are all based upon the organization's recent historical demand. Likely not of much value to the OHNA process
de Viggiani, N.	2012	Adapting needs assessment methodologies to build integrated health pathways for people in the criminal justice system	Discussed HNA in prisons - not relevant to OHNA methodology
Fryer, G. E., Jr.; Drisko, J.; Krugman, R. D.; Vojir, C. P.; Prochazka, A.; Miyoshi, T. J.; Miller, M. E.	1999	Multi-method assessment of access to primary medical care in rural Colorado	Relates to access to medical care in rural Colorado - not of relevance to OHNA
Gherunpong, S. T., G.; Sheiham, A.	2006	A sociodental approach to assessing dental needs of children: concept and models	included in Search 1 relation to value of sociodental indicators

Author	Year	Title	Comments
Gibson, A.		Geographies of need and the new NHS : methodological issues in the definition and measurement of the health needs of local populations	Very academic paper on modelling CHD at small area level - using proxies of need - not of relevance to OHNA process
Griffiths, P. U., R.; Harris, R.	2005	Self-assessment of health and social care needs by older people: a multi-method systematic review of practices, accuracy, effectiveness and experience (Structured abstract)	This Cochrane review looked as self-assessment tools in older people. It concluded that low sensitivity and specificity meant that it was these are of limited value in identifying older people with problems. Not of great relevance to the OHNA process
Hann, M. B., D.; Hayes, J.; Wagner, A.; Barr, R.	2001	Methodological issues in the development of a national database for primary care groups and trusts	Paper describes how a database that was of use to PCTs was established - of limited value in relation to the OHNA process
Harty, M. A. T., Stuart; Parrott, Janet		HM Prison healthcare needs assessment	Insufficient data in reference precluded access
Hawe, P.	1996	Needs assessment must become more change-focused	This is a thought piece on HNAs - arguing the case for greater focus on patients wishes that the traditional broad epidemiological approach of the past - limited relevance to OHNA process
Haydon-Clarke, J. M., Eileen; Moriarty, Helen	2011	HEALTH NEEDS ASSESSMENT AND NURSE-LED HEALTH CARE SERVICES OF A SMALL ISLAND COMMUNITY: METHODOLOGY AND RESULTS OF A PILOT STUDY OF THE HEALTH STATUS	This paper highlights the issues associates with conducting NHA is a small community - issues of confidentiality that may arise etc. limited relevance to OHNA process

Author	Year	Title	Comments
		OF RESIDENTS OF STEWART ISLAND, NEW ZEALAND	
Li, Y. C., J.; Lin, H.; Li, D.; Wang, Y.; He, J.	2009	Community health needs assessment with precede-proceed model: a mixed methods study	This study relates to CVD in China - not of relevance to OHNA process
Matthews, D. C. B., M. G.; Clovis, J. B.; McNally, M. E.; Foliage, M. J.; Katter, R. D.; Lawrence, H. P.	2012	Assessing the oral health of an ageing population: methods, challenges and predictors of survey participation	Describes a telephone survey and follow-up clinical examination in the USA. The survey response rate was 21% for the interview and 13.5% for the examination. Not much of relevance to PHNA process
NHS Confederation	2012	Defining mental health services: promoting effective commissioning and supporting QIPP	NHS Confederation document about the provision of mental health services - nothing of relevance to OPHNA process
NHS Confederation	2013	Stronger together: how health and wellbeing boards can work effectively with local providers	No mention of oral health or dentistry - not of relevance to OHNA

Author	Year	Title	Comments
Raine, R. H., A.; Black, N.	2004	Is publicly funded health care really distributed according to need? The example of cardiac rehabilitation in the UK	Study deals with CHD - suggests importance of measuring both the horizontal and vertical components of equity in order to examine whether patients are receiving the health care that they need. Horizontal inequity was demonstrated because male and female hypertensive patients with equal needs were not treated equally. There was also vertical inequity because although patients with hypertension were treated differently to normotensive patients, this treatment difference was not the same for men and women. Not clear if these concepts would apply in considering the equity of oral health care
Reading, R. O., S.; Jarvis, S.	1994	Are multidimensional social classifications of areas useful in UK health service research?	this paper describes the advantages and disadvantages of a multi-dimensional small area classification in the analysis of child health data - not clear what the implications are of OHNAs
Satin, M. S. M., C. H.	1985	Census tract predictors of physical, psychological, and social functioning for needs assessment	Paper describes use of US census data. Not of relevance to current work
Shriven, M.	1982	Research methodology. Needs assessment	Dated review of the basic concepts in needs assessment and of the various ways in which needs assessment is performed with applications to clinical and health care programs is discussed in this article.

Author	Year	Title	Comments
Steyn, P. S. L., G.; Noach, D. A.	2000	Schering Prize for the best poster. Mind mapping can be an affordable method as a tool to do a needs assessment in a developing country with scarce resources	Suggests mind mapping may be a useful tool in the HNA process but query relevance to the NHS setting
Viswanathan, M. A., A.; Eng, E.; Gartlehner, G.; Lohr, K. N.; Griffith, D.; Rhodes, S.; Samuel-Hodge, C.; Maty, S.; Lux, L.; Webb, L.; Sutton, S. F.; Swinson, T.; Jackman, A.; Whitener, L.	2004	Community-based participatory research: assessing the evidence (Provisional abstract)	Abstract on DARE database but no longer available URL not working
Warheit, G. J. B., J. M.; Bell, R. A.	1978	A critique of social indicators analysis and key informants surveys as needs assessment methods	Dated paper which describes social indicators and key informant surveys.
Williams, S. E. B., C. M.; Menzies, C.	2000	A pharmaceutical needs assessment in a primary care setting	Describes a needs assessment specific to an individual practice - not relevant to OHNA
Not clear	Not clear	Commissioning for Change: Commissioning Service Changes for People with Learning disabilities	This is a toolkit produced by Health Scotland and relates to the commissioning of services for people with learning disabilities. Of limited relevance to the conduct of OHNAs
Not clear	Not clear	Meeting the health care needs of people in care homes	This is a report by the Care Quality commission on mental health services it has little of relevance to inform the OHNA process

Author	Year	Title	Comments
Not clear	Not clear	Identifying assets and gaps in local mental health services to develop the Joint Strategic Needs Assessment (JSNA)	This is a report from NICE on a consultation exercise carried out in relation to mental health services - not of direct relevance to current work on OHNA
Not clear	2002	Health needs assessment toolkit	This publication relates to needs assessment for General Medical Practices - of limited relevance to OHNAs
Not clear	2003	Equity in health : tackling health inequalities - understanding the links	Not of relevance - a descriptive document of health inequalities in the city of Belfast
Not clear	2004	From the cradle to the grave : a literature review of access to health care for people with learning disabilities across the lifespan	This is an extensive literature review using a life course approach into access to care for disabled people. Little of relevance to the OHNA process
Not clear	2004	Improving patient access to health services: a national review and case studies of current approaches	This is a NICE (HAD) document on access which deals mainly with transport issues. Little of relevance to the OHNA process
Not clear	2005	Identification and evaluation of standardised datasets for measuring and monitoring access to health care	This document describes data set that can be used to measure access to dental care - now somewhat out of date and little of relevance to inform the OHNA process
Not clear	2006	Vulnerable groups and access to health care : a critical interpretive	This is an extensive critical review on access to care for vulnerable groups - not of relevance to OHNA

Author	Year	Title	Comments
		view	process
Not clear	2007	South West Public Health Observatory - Joint Strategic Needs Assessment (JSNA) Quality standards - November 2007	Local document about standards in production of JSNAs
Not clear	2008	Are we choosing health? The impact of policy on the delivery of health improvement programmes and services	An Audit Commission review of health improvement policies - no mention of dental / oral health. Not of relevance to the OHNA process
Not clear	2008	Closing the gap in a generation: health equity through action on the social determinants of health	This is a WHO report on the determinants of health - nothing in the report is of direct relevance to the OHNA process
Not clear	2009	The health needs of the Somali community in Bristol	Study that looks at the needs of a Somali community in Bristol. Not of relevance to the OHNA process though is a reminder that asylum seekers may constitute a distance vulnerable group with particular needs. This could apply to dental services.

Author	Year	Title	Comments
Not clear	2009	Applied public health research – falling through the cracks?	Not of relevance to OHNA - though the discussion and theme of applied public health research and the differing needs of organisations providing or commissioning health care, those recommended by organisations developing evidence-based guidance, and those which research funding bodies are prepared to support are of general relevance to work of the kind which we are currently involved.
Not clear	2009	Need-based resource allocation: different need indicators, different results?	This work is about differing health care needs across Canadian provinces and models of funding
Not clear	2009	The British Dental Association Oral Health Inequalities Policy	This is a policy document form the BDA. It describes inequalities in oral health, identifies some vulnerable groups, and discusses risk factors and the role dentists can play in the clinical situation in addressing oral health inequalities. However, little to help inform the OHNA process i
Not clear	2011	Health needs assessment toolkit	This is a web site provided by Public Health England - which provides a data resources - may be of value to local CDPHs for local area demographics etc.
Not clear	2011	Operating principles for health and wellbeing boards	Produced by the NHS confederation this document sets out the operating principles for Health and Wellbeing Boards - not of direct relevance to the conduct of OHNAs - though obviously the OHNA via

Author	Year	Title	Comments
			the JSHA will hope to influence the decisions of the HWBs
Not clear	2011	A study of English PCTs Setting Priorities in Health	This is a study commissioned by the Nuffield Foundation and carried out by Birmingham which looks at the how priorities are set in PCTs. No mention of oral health or dentistry
Not clear	2011	A shared agenda in the new world: the role of GP consortia and public health in improving health and wellbeing and delivering effective health care	This is a report of a Colloquium which took place in January 2011, sponsored by the NHS Alliance and QIPP RightCare Team and organised by Solutions for Public Health (NHS). No mention of oral health and nothing of relevance to OHNA
Not clear	2012	NICE issues public health guidance on identifying and managing tuberculosis among hard-to-reach groups	NICE report on tackling Tuberculosis - not relevant
Not clear	2012	Nutritional Care of Adults with a Learning Disability in Care Settings	Report from the British Dietetic Association about nutrition on adults with a learning disability in care settings. No mention of teeth or dentistry
Not clear	2012	Supporting JSNA in Yorkshire and the Not clear Humber leaflet	Resource from local PH observatory.

Author	Year	Title	Comments
Not clear	2012	Joint strategic needs assessment: member briefing	Document form the Chartered Institute of Environmental Health which sets out Environmental Health Service may contribute to the local health mapping either to contribute to the JSNA process directly and/or to use health mapping to aid the environmental health service response.
Not clear	2012	Resources and the joint health and wellbeing strategy	Document local to London on resources for conduction a JSNA
Not clear	2012	Joint strategic needs assessment & the joint health and wellbeing strategy	Document local to London on developing a JSNA
Not clear	2013	Joint Strategic Needs Assessments : how well do they address the needs of people with learning disabilities	This report describes an audit of all JSNAs to establish to degree to which they accounted for Oral Health Needs Assessment.
Not clear	2013	PH37 Tuberculosis - hard-to-reach groups: guidance	NICE publication - not of relevance to OHNA

Table A8.1 Detailed review of papers identified of as potential relevance to OHNAs – Included and excluded studies with commentary.

Annex (presented as a separate document).

Examples of Oral Health Needs Assessments submitted to the review team.

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