



Using evidence from diverse research designs



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Introduction

This report presents a preliminary review of methodological work that aims to develop methods for synthesising evidence from research using diverse study designs. In this introduction we briefly describe how the review has been undertaken and we seek to contextualise the material that follows.

The review has not been systematic in the sense of involving an extensive and exhaustive search for literature or other information on relevant methodological work. Rather, it is based on the authors' existing knowledge of the field, contact with experts in the field, and a survey distributed through the Cochrane Qualitative Methods Group mailing list and related networks. In this context three contextual points need to be emphasised:

- *The comprehensiveness of the review:* experience in the Cochrane Collaboration has demonstrated that a systematic approach to searching for literature and/or ongoing work usually reveals that a particular body of work is more extensive than originally thought. In our enquiry it soon became evident that, while it would be relatively easy to identify larger externally funded programmes and/or projects, we would only be able to scratch the surface of a more extensive body of relevant literature and ongoing work.
- *The biases involved:* given the limited nature of the formal searches conducted for this review, it is inevitable that the information reported will be biased. The most obvious biases relate to:
 - *the UK focus of the work reported:* not surprisingly, given where we started from, most of the work reported here is based in the UK;
 - *the type of methodological work identified:* we have focused the review on three broad areas of methodological work: search strategies, study quality appraisal and approaches to synthesis. This classification reflects key stages in a Cochrane-type systematic review. Framing the review in this way may mean that we have missed work that does not sit readily within a systematic review framework. Additionally, although we focused on three aspects of evidence synthesis – searching, quality appraisal and synthesis – our own interests lie particularly in quality appraisal and synthesis. We therefore have more knowledge of work underway in these two areas than in relation to search strategies, thus biasing the review in this direction;
 - *the topic areas covered:* inevitably, given our search approach, the work identified in this review is primarily

drawn from the fields of healthcare, public health and, to a lesser extent, other areas of social policy.

- *The depth of the review:* the review has been conducted over a relatively short timeframe and as a result it provides a 'thin' description of the methodological work identified. It does not provide a detailed description of the specific methodological work underway in particular projects and/or programmes.

This review provides a partial picture of methodological work now underway on the synthesis of evidence from research using qualitative and/or mixed methods. Although personal experience and anecdotal evidence would suggest that the picture presented may be a reasonable reflection of current activity in this field, more work is required to ensure that relevant methodological research in other countries, on other topics and from other substantive fields of enquiry is not overlooked.

In the following sections we describe the research identified under the headings:

- reviews of methodological and other literature; and
- examples of methodological research currently underway.

Reviews of methodological literature

Three reviews of methodological literature relevant to this report have been identified. Please note again that we have not searched electronic databases. If we had, we might have found more reviews of relevant methodological literature.

- Dixon-Woods et al (2003: forthcoming):* Dixon-Woods and colleagues are currently undertaking an informal review of approaches to synthesising qualitative and quantitative evidence for the Health Development Agency. This will identify a range of issues, including problems in appraising qualitative research that arise from the diverse disciplinary traditions and allegiances currently evident in qualitative inquiry. The report will also consider in some detail how the findings of qualitative and quantitative evidence may be synthesised. It will offer an overview and critique of the following strategies: informal narrative review; thematic analysis; grounded theory; meta-ethnography; aggregation of findings; qualitative meta-synthesis; meta-study; Miles and Huberman's data analysis techniques; content analysis; case survey methods; qualitative comparative analysis; and Bayesian meta-analysis. It will identify some of the similarities and commonalities between these approaches, and comment on the theoretical and procedural problems to be resolved in moving forward.
- Banning et al (2001)¹:* This paper, by James Banning and colleagues at the School of Education, Colorado State University, is intended as a project resource. The project involves a series of three systematic reviews focusing on interventions aimed at: assisting secondary aged students with disabilities (i) to make a successful transition from high school to work; (ii) to stay at school; and (iii) to succeed in academic performance. It provides brief abstracts of papers focusing on different approaches to the synthesis of findings from qualitative studies. The abstracts are organised into four sections: eleven texts that the authors argue "contribute to the understanding, issues, and strategies associated with qualitative meta-analysis"; seven texts that focus on the possible relationships between qualitative and quantitative meta-analysis; fourteen examples of studies that have attempted a synthesis of findings from qualitative and quantitative studies; and twenty-nine examples of studies that have attempted a synthesis of findings from multiple qualitative studies. There is no attempt to classify the different approaches to synthesis identified here.

- *Spencer and colleagues (2003)²*: This is work being carried out for the Cabinet Office. It involves developing a framework for quality-appraising evaluative studies that use qualitative methods. The authors provide a useful review of a diverse range of quality appraisal frameworks purporting to be appropriate for use with qualitative research.

Methodological research

For the purpose of structuring this review, we have drawn a somewhat artificial distinction between research aiming specifically to develop methods for evidence synthesis and research that involves undertaking a specific evidence synthesis/systematic review. (This distinction is artificial in the sense that the latter will also contribute to the development of the methods used.) This section describes the research focused on methodological development. This research will be identified under two headings:

- methodological work on the synthesis of qualitative evidence; and
- methodological work on the synthesis of qualitative and quantitative evidence.

3.1. Methodological work on the synthesis of qualitative evidence

- *Meta-ethnography*: a significant development in this country is the methodological research funded by the NHS Health Technology Programme on the development of meta-ethnography as a method for synthesising findings from qualitative research by Campbell and colleagues. This team is undertaking two syntheses of qualitative research on lay experience

of medicine taking, and lay experience of rheumatoid arthritis. Pilot work for this research focusing on lay experience of diabetes and diabetes care has already been published³. Although not its primary focus, this work will also contribute to developments in methods for searching for qualitative evidence and in study quality appraisal. In the latter case they are using an amended version of the Critical Appraisal Skills (CASP) framework.

- *Metasummary and meta-synthesis*: Sandelowski and colleagues at the University of North Carolina at Chapel Hill have a National Institutes of Health (NIH) grant to undertake a programme of methodological work on the synthesis of evidence from qualitative studies, using studies of HIV-positive women as the method case and studies of women/couples receiving positive diagnoses of foetal impairment as the test case. They have distinguished between producing meta-summaries of findings that are themselves surveys of data, and meta-syntheses of findings that are themselves syntheses of data. These approaches involve appraisal of studies for form and relevance of findings rather than methodological quality. Several papers are available from this work⁴.

- *The Qualitative Assessment and Review Instrument (QARI)*: Pearson and colleagues, at the Joanna Briggs Institute, Latrobe University in Australia, are producing this software package, QARI, to manage, appraise, analyse and synthesise textual data as part of a systematic review of evidence. The QAR Instrument has been designed as a web-based database and incorporates a critical appraisal scale, data extraction forms, a data synthesis function and a reporting function. A hierarchy of evidence involving three levels has also been incorporated into the software. (While QARI does not consider non-research-based evidence, another module in SUMARI – the NOTARI* module – does.) The software was developed over a period of two years through participatory processes at three consensus workshops, and aims to support the systematic review of qualitative evidence to address questions of appropriateness, meaningfulness and feasibility in order to augment evidence of effectiveness in evidence-based healthcare. An in-depth discussion of the premises on which QARI is based and a detailed users' manual have been produced⁵.
- *Appraising the quality of qualitative evaluation research*: This work (also noted above) has been funded by the Cabinet Office and has involved a review of current approaches to the appraisal of quality in qualitative research as the basis for the development of a new framework. The work involves a literature review and in-depth interviews, and a workshop with policy makers, researcher

managers and funders, academics and other researchers.

3.2. Methodological work on the synthesis of qualitative and quantitative evidence

- *The EPPI Centre*: The Evidence for Policy and Practice Information (EPPI) and Coordinating Centre at the Social Science Research Unit, Institute of Education, University of London, undertakes methodological development as well as both undertaking and supporting the undertaking of systematic reviews. The EPPI Centre methods are developed with the aim of answering all research questions and thus including both quantitative and qualitative research data. There are currently three strands to the EPPI Centre's work:

1. *Health promotion*: the Centre is funded by the Department of Health (England) to undertake a programme of work concerned with advancing evidence-based health promotion. This involves carrying out systematic reviews in relevant topic areas and methodological work on reviewing 'non-trial' research, including 'qualitative' studies. Recent reviews (not all reviews) have integrated the findings of qualitative and quantitative studies of people's views and experiences of particular health issues with the findings of experimental evaluations of interventions to tackle those health issues. This work has led to the development of appraisal and synthesis methods for diverse study types. These continue to be refined and tested by other reviews within and beyond the health promotion stream at the EPPI Centre.

*NOTARI is a Narrative, Opinion and Text Assessment and Review Instrument. This instrument was in development at the time that the report was being written, and was to be available in August 2003. It is designed to facilitate critical appraisal, data extraction and synthesis of expert opinion texts and of reports.

2. *Education*: the Centre is funded by the Department for Education and Skills (England) to support the development of review groups in education undertaking reviews with EPPI Centre training and support and methods and tools. In addition, the Teacher Training Agency and other funders support further review teams and in-house reviews so that there are currently approximately 25 EPPI collaborative groups.

3. *Perspectives and participation*: the Centre is developing methods and providing support to enhance roles for lay people in: (i) the commissioning and conduct of health research; (ii) the use of research findings to inform decisions; and (iii) experimental evaluations of interventions to tackle those health issues. In addition, several members of the EPPI Centre are involved in other research synthesis work (for example, the work of Jo Garcia, described in this report's final section on 'Specific projects involving methodological developments').

In the past few years, the Centre has developed an innovative approach to the conduct of reviews of studies involving a mixture of descriptive and experimental/evaluative methods generating both qualitative and quantitative data. This work is making methodological contributions to all elements of the systematic review process, including study search/selection strategies, study quality appraisal and synthesis. The EPPI approach involves a number of stages including: a user-led* review question, systematic mapping of the research field, using the map to refine the question for the in-depth

review and synthesis, and a Weight of Evidence (WoE) system. The WoE system involves judgements of:

- i) quality of execution of study;
- ii) relevance of study design to addressing the systematic review question;
- iii) appropriateness of focus of the study to addressing the systematic review question; leading to (iv) overall judgement about how the findings of study contribute to answering the review question.

Systematic mapping and the WoE system allow broad review questions including varying study designs and types of data to be addressed. These methods are supported by specialist web-based software for coding and managing the various types of quantitative and qualitative data that may be included in a review. Papers describing these methods in more detail have been presented at conferences and will be published shortly⁶.

- *Mary Dixon-Woods (Leicester University) and colleagues*: The review of current work on the synthesis of qualitative evidence by Dixon-Woods and colleagues has been described earlier. Dixon-Woods and colleagues are also undertaking methodological research funded from several sources, including the Economic and Social Research Council (ESRC), the NHS Health Technology Programme and the Health Development Agency. Specific topics on which evidence is being reviewed include: support for breast feeding; access to healthcare by vulnerable groups; and patient satisfaction with general practice. The methodological work includes the identification and evaluation of a range of study quality appraisal

*In this context, 'user-led' refers to the users of research.

frameworks/tools and of different strategies for the synthesis of qualitative and quantitative evidence including, but not restricted to, the application of Bayesian techniques to evidence synthesis⁷.

- *Banning et al, Colorado State University*: This programme of work, funded by the US Department of Education, involves a series of systematic reviews of 'what works for young people with disabilities' around transition from school to work and/or higher education. The reviews include any studies that seek to evaluate a relevant intervention regardless of methods/design. The team have developed an approach (and related software) to the appraisal of study quality – the Design and Implementation Appraisal Device – which is embedded in the data extraction process. They would seem to have strong links with the EPPI Centre and they are using some of the Centre's software to support their review process. A software package – NVivo – is used to build a descriptive map of studies included in the reviews; to aid the analysis of qualitative evidence; and to integrate syntheses of qualitative and quantitative findings. The approach to the synthesis of qualitative data is described as 'ecological triangulation'. This focuses on "the mutual interdependence among theory, method, and findings to provide insights into what interventions work to produce what outcomes with what persons in what settings or environments. For example, the trustworthiness or validity of a positive outcome for an intervention is enhanced if it is shown to occur under diverse conditions with diverse groups using diverse methodological and theoretical approaches"⁸. Papers describing this approach are available but they do not explain how the synthesis of qualitative and quantitative evidence are 'integrated'.
- *The UK Centre for Evidence-based Policy*: Work on the development of realistic synthesis has been undertaken by Ray Pawson from Leeds University, while based at the ESRC-funded Centre, at Queen Mary University of London. This involves a theory-led approach to evidence synthesis. It may incorporate non-research based evidence alongside research findings, is concerned with the relevance of evidence to the synthesis topic rather than study quality appraisal, and therefore adopts a purposive approach to study identification rather than attempting to identify all possible relevant studies. A new grant from the ESRC Research Methods Programme to Ray Pawson and Annette Boaz will allow further methodological development of this approach. Researchers at the UK Centre have also been involved, with others, in exploratory work funded by the Social Care Institute of Excellence (SCIE) on a classification of different types of evidence – research and non-research-based – that could inform policy and practice and on how the quality of this evidence might be assessed. Additionally, there is work underway within the Centre on searching strategies for diverse evidence sources.
- *The UK Evidence-based Policy Network*: Alongside the national Centre, the ESRC has also funded a network of evidence-based 'nodes', each with a different substantive focus. A number of these nodes are making important contributions to the development of systematic review methods. For example, the public health node, involving the Universities of Glasgow, Liverpool and Lancaster, has a series of non-traditional systematic reviews underway which are seeking to

incorporate qualitative and quantitative evidence. This includes, for example, a systematic review of epidemiological evidence on the relationships between child health, income and parental employment and reviews on aspects of child health that are seeking to be more sensitive to the needs of users in local health systems⁹.

- *Incorporating evidence on implementation into effectiveness reviews:* This work, undertaken by Popay, Roberts and colleagues, involved exploratory work extending two existing systematic reviews of the effectiveness of interventions aiming to reduce child accidents to include evidence on factors impacting on the implementation of these interventions. The work, funded by the Health Development Agency, explored issues involved in searching for relevant studies of implementation, study quality appraisal and approaches to synthesis. It used the notions of 'thin' and 'thick' description from qualitative research to describe the differing quality of the evidence on implementation identified. A report is available¹⁰.
- *The development of narrative synthesis of qualitative and quantitative findings in the context of systematic reviews:* Popay and colleagues have recently been awarded a grant with the ESRC Research Methods Programme to undertake research on the development of methods for narrative synthesis of qualitative and quantitative findings in systematic reviews. This work began in May 2003 and will result in the publication of good practice guidance on narrative synthesis.

Specific projects involving methodological developments

In addition to the methodological research described in the previous section, our review has also identified examples of evidence synthesis/systematic review projects, which are also making important contributions to methodological developments in evidence synthesis. The work by Dixon-Wood and colleagues described earlier will also be including a large number of similar examples. This highlights how, in a situation when methodological standards are underdeveloped, anybody seeking to undertake research in an area will necessarily become involved in developing methods. It also highlights how dispersed the existing methodological work on evidence synthesis is and how difficult it is, therefore, to review this field. The projects we have identified also illustrate how important their contribution can be. Among the rapidly increasing number of projects focusing on the synthesis of evidence from diverse sources, many of them not directly funded, some are certainly highly innovative.

The research projects identified through our survey are detailed further in the appendices. Here we briefly comment on some of these projects. We know that they represent only the tip of an iceberg of relevant work but they at least serve to illustrate the nature, if not the scale, of the innovation involved. The Cochrane Qualitative Methods Group and the

Campbell Implementation Process Methods Group are developing a database of protocols and reports/publications from relevant projects. This will be available on the group's website¹¹ and will serve to disseminate information about the nature and scope of the methodological work underway on the synthesis of evidence from diverse sources.

- *Philip Satherley* at University of Wales College of Medicine, has been developing methods for locating studies for review, and a framework for appraising the quality of qualitative and quantitative studies, in the context of systematic reviews of effectiveness. The appraisal, the only one we have identified which claims to be relevant to both qualitative and quantitative studies, is to be tested in another review in the near future.
- *David Evans* (currently at the University of Adelaide, Australia) has conducted a series of systematic reviews of qualitative and quantitative evidence on the use of physical restraints in acute and residential settings. This work, carried out at the Joanna Briggs Institute, has involved evidence from descriptive studies and has made a number of useful methodological contributions in relation to searching,

quality appraisal and synthesis that have been published (see Appendix C).

- *Carl Thompson*, at the University of York, is seeking to include qualitative and quantitative findings in the update of his systematic review of interventions to support carers of people with dementia. This work includes some testing of alternative approaches to searching (comparing the results of the Rochester filter* with hand searching) and to quality appraisal (comparing the CASP tools with the *JAMA [Journal of the American Medical Association]* appraisal guides). Similarly, they are using a meta-ethnographic approach to synthesis but comparing the results of this with other methods.
- *Andrew Herxheimer*, at the UK Cochrane Centre, has published a systematic review of adverse effects of melatonin for jetlag, and adverse experiences reported by people treated with paroxetine (an SSRI antidepressant). Both studies have involved the interpretation of single case reports. The melatonin review, published in the Cochrane Library, is now being updated and the work on paroxetine has been published¹³. Herxheimer has also done work in relation to DIPEX, the Database of Individual Patients' Experience of illness, which involves drawing together qualitative accounts that are understood to be common experiences of patients who have undergone a particular course of treatment. These accounts describe important effects that the intervention and the disease have on people's lives. The qualitative data collected within DIPEX is used alongside Cochrane reviews that are predominantly based on the data from randomised controlled trials (RCTs). The database now includes collections of experience of hypertension, prostate cancer, breast cancer and colorectal cancer¹⁴.
- *Jo Garcia*, at the Institute of Education, has undertaken a series of reviews of evidence from diverse sources in the field of pregnancy and childbirth. These include (i) a review of women's views of pregnancy ultrasound which involved synthesis of various types of research evidence, and (ii) a recently completed review of women's views about childbearing and poverty which has included primarily qualitative research and an attempt to link this review to an existing review of the effectiveness of anti-smoking interventions. A new review of women's views of maternity care is making specific efforts to identify and include research from the poorest countries.
- *Peter Bradley*, of the Agency for Health and Social Welfare, Norway, is undertaking a systematic review of qualitative research on the individual experience of providing and/or receiving educational interventions in Evidence-based Practice. The review aims to provide an insight into the factors that might explain heterogeneity in the results of quantitative research and to identify factors that shape effective learning in groups, sub-groups and individuals, and the outcomes that providers/ participants feel are important. The reviewers are also aiming to contribute to methodological developments in searching, appraising and synthesising findings from diverse study designs.
- *Jane Noyes*, with colleagues at the Universities of York, Lancaster and Liverpool, is undertaking a systematic

*The Rochester search filters are a series of 'evidence-based filters' for OVID which are adaptable to other platforms and created by the University of Rochester, NY, USA.¹²

review of qualitative research in order to extend an existing review of the results of experimental studies of the effectiveness of Directly Observed Treatment interventions to increase uptake of tuberculosis medication. This work is testing various approaches to quality appraisal and synthesis.

The body of this report offers a descriptive overview of work that is recently completed, or currently in progress, in specific areas of methodological development relating to systematic review and evidence synthesis. It highlights specific pieces of research, and particular groups of researchers, concerned to include qualitative research in the processes of systematic review and evidence synthesis. What follows are three appendices describing the survey we undertook to contribute to the above overview. In these appendices are included a summary of survey responses and a list of relevant publications suggested by respondents.

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Appendix A: A brief report on the survey of work on the synthesis of evidence from studies using diverse designs/methods

The response

In February 2003, a brief survey was sent out to key researchers who were known to be, or likely to be, undertaking work that would be of interest in this report. Respondents were asked to identify various details about their work, including the topics covered, the funding sources, the methods being used, and any work that was being done on methodological development.

Relatively few responses were received. At the end of March, a total of 17 questionnaires had been returned. Details of responses are provided in the table in Appendix B. An overview of the responses is provided here.

Topics covered

The focus of the research identified is heavily weighted towards health topics, ranging from being drug-related issues and clinical processes and practices to a wide array of public health concerns. Topics identified are as follows:

- physical restraint in acute and residential care
- melatonin for jetlag
- adverse effects of paroxetine (SSRI antidepressant)
- preventing childhood accidents
- infant growth
- income studies
- HIV-positive women and their experiences of
 - 1) motherhood
 - 2) stigma and disclosure
 - 3) abuse of drugs
- wound care/pathways of care
- the role of arts-based interventions in counselling and psychotherapy work with refugees
- Health Impact Assessment
- nursing innovations for chronic obstructive airway disease
- promoting children's physical activity and healthy eating
- reducing HIV among men who have sex with men
- interventions to support carers of people with dementia
- lay views and experiences of medicine taking
- support for breastfeeding
- access to healthcare by vulnerable groups
- patient satisfaction with general practice
- women's views of pregnancy ultrasound
- communication issues in stillbirth and infant death
- poverty and maternity

- interventions that are designed to assist secondary-aged students with disabilities in:
 - 1) making a successful transition from high school to work or post-secondary education
 - 2) staying in school
 - 3) succeeding in academic performance
- lay experience of medicine taking
- lay experience of rheumatoid arthritis.

Sources of funding

Around one fifth of the projects reported did not yet have funding. In one case, the respondent wrote that the work had been done as doctoral research. In other cases, respondents signalled that the work was at an early stage of writing proposals and seeking funding.

Table A: Studies with and without funding

Number of studies with identified funding source(s)	20
Number of studies for which there is not (yet) any funding	5

Sources of funding that were identified include: BBC, Health Development Agency, Department of Health, Barnardo's, NINR/NIHN 2000-2005, ESRC Research Methods Programme, Cabinet Office, Health Technology Assessment funding, NHS Service Delivery and Organisation Programme, Confidential Enquiry into Stillbirths and Deaths in Infancy, World

Table B: Types of research included

What the study involved	Number of studies
Only evaluative qualitative research	6
Both qualitative and quantitative evaluative research	11
Basic and evaluative research	4
Other	1 (descriptive studies)

Health Organization, US Department of Education.

Types of research included

Given the options that follow, respondents were asked to indicate whether their study involved:

- only evaluative qualitative research
- both qualitative and quantitative evaluative research
- basic and evaluative research
- other.

In cases where the option 'other' was selected, respondents were asked to describe further the nature of their research.

Some people did not respond to this question and one answered that it was not possible to understand their research in terms of the categories we were suggesting.

Methodological work

Respondents were asked what work they were doing towards methodological development in relation to their review and synthesis of qualitative research. We were particularly keen to find out what work was being done on: search strategies; quality appraisal; and synthesis of findings from multiple studies. Of the 16

respondents who answered this question, most ($n=13$) indicated that they were doing some methodological work in all three of these areas. Of the remaining three: one indicated that they were doing work only on quality appraisal and synthesis of findings; one indicated that they were doing work only on the synthesis of findings; and one indicated that they were not doing methodological work on any of the three areas of central interest.

Respondents were invited to elaborate briefly on their methodological work. Respondents who identified existing methods, tools, or software referred, variously, to using: the Rochester search filter, CASP and JAMA appraisal tools; Meta- ethnography, Reference Manager software and NVivo. Some provided details of new software and/or methods they were developing. Researchers in Australia, for example, reported that they were developing a QARI as part of a suite of applications called System for the Unified Management of Information (SUMARI). Researchers in the US described a new approach to synthesis called 'ecological triangulation'. They describe this as being concerned with 'what works with what kind of folks in what kinds of settings'.

Appendix B: Summary of survey responses

Name and institution	Research topics	Stage of progress and indication of external funding source	Given the following selection, respondents indicated what kinds of studies were included in their work:	Respondents were asked to identify any tools or methods they were using and to specify if they were doing methodological work in any of the following areas:
David Gough, Institute of Education, University of London	<ol style="list-style-type: none"> 1. All research questions in education 2. Research on initial teacher education 3. Effectiveness of personal development planning for improving students' learning 	<ol style="list-style-type: none"> 1. Ongoing programme of supporting review groups in education for DFES launch conference 6 June 2003 2. Programme of managing review teams for Teacher Training Agency 3. Single review for Learning and Teaching Support Network 	<ul style="list-style-type: none"> • Only evaluative qualitative research • Both qualitative and quantitative evaluative research • Basic and evaluative research • Other 	<p>a) The mapping stage involves searching (i) b) The synthesis stage involves quality appraisal (ii) and synthesis of findings from multiple studies (iii)</p> <p>a) Through the mapping stage, methodological work is being done on search strategies (i) b) At the synthesis stage, methodological work is being done in all three identified areas (i, ii, and iii above)</p> <p>These methods are supported by EPPI-Reviewer, a web-based software tool for coding and managing the data from reviews</p>

<p>Dr David Evans, Department of Clinical Nursing, University of Adelaide, Australia</p>	<p>Physical restraint in acute and residential care. A series of reviews addressing different aspects of this problem including:</p> <ul style="list-style-type: none"> • patient and relative experience of the use of physical restraint • reasons why restraint is used in healthcare • injuries secondary to restraint use • restraint minimisation • restraint alternatives • how restraints are used 	<p>Completing the write up of the series of restraint reviews. Starting to look for a new topic to further explore the use of qualitative data in systematic reviews</p>	<p>Descriptive studies included</p>	<p>Based on methods used in existing published reviews as much as possible. However, in a number of areas there has been little methodological development and this is acknowledged as a limitation of the reviews</p> <p>Involved a range of methodological development in the areas of:</p> <ol style="list-style-type: none"> i. search strategies ii. quality appraisal iii. approaches to synthesis of findings from multiple studies
<p>Andrew Herxheimer</p>	<ol style="list-style-type: none"> 1. melatonin for jetlag 2. adverse effects of paroxetine (SSRI antidepressant) 	<p>Paroxetine paper in press Melatonin review being revised/ update Some funding from BBC</p>	<p>Both qualitative and quantitative evaluative research included</p>	<p>Study methods include Searching, Study quality appraisal, and Synthesising findings from multiple studies. Methodological work being carried out on:</p> <ol style="list-style-type: none"> i. search strategies ii. quality appraisal iii. approaches to synthesis of findings from multiple studies

<p>Helen Roberts, Lisa Arai, Patricia Lucas, Sandra Dowling, City University, London</p>	<p>a) childhood accidents (Popay, Roen, Arai, Roberts) b) infant growth (with Law and Baird, Southampton; Kleinjen, York; Lucas and Roberts, City) c) income studies (with Logan, PMS; Laing, Hackney, QM; Dowling, Joughin, and Roberts, City)</p>	<p>a) complete – HDA funded b) just starting – DoH funded c) just starting – Barnardo’s funding</p>	<p>Both qualitative and quantitative evaluative research included</p>	<p>Study methods include searching, study quality appraisal, and synthesising findings from multiple studies. Methodological work being carried out on:</p> <ul style="list-style-type: none"> i. search strategies ii. quality appraisal iii. approaches to synthesis of findings from multiple studies
<p>Margarete Sandelowski, University of North Carolina at Chapel Hill</p>	<p>Method case: studies of HIV-positive women Test case: studies of women/couples receiving positive prenatal diagnoses</p>	<p>On-going work to develop metasummary and metasynthesis techniques. Also will produce metasyntheses of findings concerning motherhood, stigma, and drug abuse in HIV-positive women NINR/NIH 2000-2005 funding</p>	<p>Only qualitative studies</p>	<p>Focus on developing appraisal and synthesis tools and guides (relevant papers cited)</p> <ul style="list-style-type: none"> i. search strategies – yes ii. quality appraisal – yes, but we argue against exclusionary quality appraisal and for findings type appraisal iii. approaches to synthesis of findings from multiple studies – yes

<p>Philip Satherley</p>	<p>Will be starting another review in the next six months into ecology/pathways of care. A substantive purpose of which will be to test out the emergent appraisal methods</p>	<p>Appraisal framework is to be tested on a body of literature and compared to other methods. Working on method to incorporate research findings from multiple studies</p>	<p>Focus on qualitative evaluative research at this stage, but quantitative to be included as well</p>	<p>The methods we are using involve:</p> <ol style="list-style-type: none"> i. searching – currently developing ways of locating qualitative studies effectively ii. study quality appraisal (stage 1) – will be using our developed framework iii. integrating findings from multiple studies (stage 2) – building on the idea of a ‘realist evaluation’ by Ray Pawson as a logical development of stage 1 iv. working on incorporating process evaluations to compliment stage 2 of the study <p>Methodological development on:</p> <ol style="list-style-type: none"> i. search strategies – we are looking at working out an efficient method for locating studies, building on the work of our first review (Barriers to Change, 2000) ii. quality appraisal – we are working on further refining our evaluative framework (which can be used for appraising qualitative and quantitative studies) and will be applying it to a body of literature this year. This will be of use to systematic reviewers, researchers and practitioners iii. approaches to synthesis of findings from multiple studies. To answer overall question ‘what works, why and where?’
<p>Alan Pearson, The Joanna Briggs Institute, Adelaide, Australia</p>		<p>QARI at final testing stage – due for release in March 2003</p>		<p>We are working on methodological development in the areas of:</p> <ol style="list-style-type: none"> i. search strategies ii. quality appraisal iii. approaches to synthesis of findings from multiple studies <p>Our group has developed an electronic system for appraising and synthesising qualitative findings. The system is called QARI and is part of a suite of applications called SUMARI</p>

<p>Garth Allen, Professor and Director, Centre for Social and Educational Research, The College of St Mark and St John/ Research Associate, Refugee Studies Centre, University of Oxford</p>	<p>The role of arts- based interventions in counselling and psychotherapy work with refugees: a two-stage study: scoping then systematic review of key interventions The RSC at Oxford will be the lead organisation</p>	<p>Outline research proposal finalised Going out to potential funders</p>	<p>We are working on methodological development in the areas of:</p> <ul style="list-style-type: none"> i. search strategies ii. quality appraisal iii. approaches to synthesis of findings from multiple studies <p>I am new to the work. Have had discussions with Cochrane people at Bristol. The problem is that we will be working inside three broad 'traditions': the arts, counselling and psychotherapy, refugees</p> <p>We have 'experts' from each area lined up to be part of the core team. The idea of scoping then reviewing is an attempt to overcome the difficulties of diverse fields. We will need a defence – a method – for the selection of interventions from the scoping study</p>
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<p>Annette Boaz, Senior Research Fellow, UK Centre for Evidence-based Policy, Queen Mary, University of London</p>	<p>Three review topic areas: ESRC research methods review project with Ray Pawson. Due to begin June 2003– review topic to finalised within the next couple of weeks (<a href="http://www.evidence
network.org/
project3.asp">www.evidence network.org/ project3.asp) Health Impact Assessment project led by Jenny Mindell at the London Health Observatory (<a href="mailto:jenny.mindell
@lho.org.uk">jenny.mindell @lho.org.uk) Probably looking at existing reviews rather than doing new ones NHS SDO programme review on nursing innovations for chronic obstructive airway disease living in the community (I am involved as a member of the scientific advisory committee, rather than as a reviewer) <a href="http://
www.smd.qmul.ac.uk/gp/
copdreview/
copdreview.html">http:// www.smd.qmul.ac.uk/gp/ copdreview/ copdreview.html</p>	<p>The ESRC methods project is about to start The HIA project is awaiting a funding decision from the Department of Health The nursing innovation review began in April 2003</p>	<p>All three projects involve a wide range of different sorts of evidence, both qualitative and quantitative, basic and evaluative</p>	<p>All three projects address issues of searching, quality appraisal and synthesis Methodological work is being done in the areas of: i. search strategies ii. quality appraisal iii. approaches to synthesis of findings from multiple studies In particular the projects are looking at ii and iii, although colleagues (Alan Gomersall and Lesley Grayson are engaged in work on searching). The COPD nursing innovation project involves the application of existing tools for appraisal. The ESRC project will further test Ray Pawson’s ‘realist synthesis’ approach. A project for SCIE has explored the issue of quality appraisal across the social care knowledge base</p>
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<p>Angela Harden, Research Officer, Institute of Education, Social Sciences Research Unit, University of London</p>	<p>The health promotion team at the EPI Centre are currently working on three reviews which are combining trials of intervention effectiveness with 'qualitative' and 'quantitative' studies of views and experiences in the following areas: promoting children's physical activity and healthy eating (reviews 1 and 2) and HIV health promotion among men who have sex with men (review 3)</p>	<p>Review 1 has just been finalised Review 2 is at the data extraction stage Review 3 is at the protocol and searching stage All three reviews are funded by the Department of Health (England) as part of a broader programme of work on advancing evidence based health promotion</p>	<p>1. Both qualitative and quantitative evaluative research 2. Basic and evaluative research</p>	<p>The methodological work for these three reviews involves extending and further testing methods we developed in a previous review series focused on young people in the areas of: a) mental health b) physical activity c) healthy eating d) peer delivered health promotion. We are using a modified version of a tool we developed for assessing the quality of qualitative research in these earlier reviews We are using qualitative synthesis techniques to combine findings across studies of people's views and experiences. The results of this synthesis are then juxtaposed against the findings from our synthesis of trials in a theoretical and methodological matrix</p>
<p>Dr Carl Thompson, Research Fellow and Programme Lead, MSc Evidence Based Practice, Department of Health Sciences, University of York</p>	<p>Interventions to support carers of people with dementia</p>	<p>Early stages We are pursuing the possibility of buying in a researcher assistant to help for three months (there aren't that many studies)</p>	<p>Both qualitative and quantitative evaluative research</p>	<p>We are engaged in searching, study quality appraisal, and synthesising findings from multiple studies We are involved only in the application of existing tools and possible refinement and development for the 'real world' of qualitative research in the clinical area Rochester search filter versus hand searching; CASP versus JAMA qualitative appraisal guides Meta-ethnography where possible and exploration of alternatives</p>

<p>Jane Lewis, National Centre for Social Research, London</p>	<p>Not carrying out any reviews</p>	<p>Draft report delivered to Cabinet Office, to be finalised end March 2003 Funded by the Cabinet Office</p>		<p>The relevant study I've been involved in an attempt to develop a framework by which the quality of evaluations using qualitative research could be assessed. The study isn't itself a review, although systematic reviews are one of the possible areas to which the framework we develop could have an application The study involves a review of existing frameworks for judging the quality of qualitative research studies, and is generating its own framework</p>
<p>Dr Mary Dixon- Woods, Department of Epidemiology and Public Health, University of Leicester</p>	<ol style="list-style-type: none"> 1. Support for breast-feeding 2. Access to healthcare by vulnerable groups 3. Review of approaches to integrating qualitative and quantitative evidence 4. Patient satisfaction with general practice 	<p>Early stages Funding: 1. ESRC 2. NHS SDO Programme 3. Health Development Agency</p>	<p>Both qualitative and quantitative evaluative research</p>	<p>Study methods include searching, study quality appraisal, and synthesising findings from multiple studies. Methodological work being carried out on: i. search strategies ii. quality appraisal iii. approaches to synthesis of findings from multiple studies We are: evaluating a range of search strategies for identifying qualitative research evaluating the impact of a range of quality appraisal methods on the selection of qualitative studies for inclusion in a review identifying and critiquing a range of strategies for synthesising qualitative and quantitative evidence evaluating the impact of a range of strategies for synthesising qualitative research and quantitative and quantitative evidence</p>

<p>Jo Garcia, Institute of Education, Social Sciences Research Unit, London</p>	<ol style="list-style-type: none"> 1. My review of women's views of pregnancy ultrasound 2. Work with Rachel Rowe (also NPEU, the National Perinatal Epidemiology Unit) on communication issues in stillbirth and infant death 3. Current project at NPEU on poverty and maternity. This includes reviews of women's views about childbearing and poverty – mainly qualitative work. We have linked one part of this to a review of effectiveness of anti-smoking interventions 4. This project also includes some reviews of non-RCT studies about access to care. Quantitative mainly (eg studies of access to antenatal screening for women of different ethnic backgrounds) 5. A study for WHO of women's views of maternity care that is trying to access studies from poorest countries 	<ol style="list-style-type: none"> 1. published in an updated form in the December issue of <i>Birth</i> 2. Various reports and publications available on this 3. Just finishing – will be available soon <p>Funded as part of bigger projects by DoH, CESDI, WHO, HTA</p>	<p>Work does not fit clearly within given categories</p>	<p>Study quality appraisal – adapted the EPPI guidelines</p>
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<p>James H. Banning PhD, 1051 Education Building, School of Education, Colorado State University, Fort Collins, CO 80523 USA</p>	<p>We are performing three systematic reviews of interventions that are designed to assist secondary-aged students with disabilities in:</p> <ul style="list-style-type: none"> a) making a successful transition from high school to work or post-secondary education; b) staying in school; and c) succeeding in academic performance 	<p>We are in the key-wording process, using the EPPI Centre's EPPI-Reviewer processes Grant from the US Department of Education</p>	<p>We are including in our three reviews studies that use both quantitative and qualitative (and mixed) methodologies as long as there was an intervention that was assessed by those studies</p>	<p>Methods or tools used:</p> <ul style="list-style-type: none"> i. searching – our primary searching software has been Reference Manager ii. study quality appraisal – we have included a quality appraisal activity within the extraction process iii. synthesising findings from multiple studies – we are using a software package called NVivo to help us build a descriptive map of the studies that are included in our reviews; to help us perform the analyses of the results of qualitative studies; and to help us integrate the analyses of both quantitative and qualitative studies <p>In terms of methodological development, we have developed a concept that we are calling 'ecological triangulation' – what works with what kind of folks in what kinds of settings</p>
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<p>Dr Rona Campbell, Department of Social Medicine, University of Bristol</p>	<p>Pandora Pound is working on lay views and experiences of medicine taking and Gavin Daker-White is working on lay experience of rheumatoid arthritis. We are working as a group, with two teams for each of the substantive areas</p> <p>The group is headed by Rona Campbell and consists of Pandora Pound, Nicky Britten, Myfanwy Morgan, Lucy Yardley (medications team) and Gavin Daker-White, Roisin Pill, Rona Campbell and Jenny Donovan (rheumatoid arthritis team)</p>	<p>We have completed the searching and appraisal of studies and have just embarked on synthesising the figures HTA funding</p>	<p>Only qualitative studies in each of the substantive topics</p>	<p>Study methods include searching, study quality appraisal, and synthesising findings from multiple studies.</p> <p>Methodological work being carried out on:</p> <ul style="list-style-type: none"> i. search strategies ii. quality appraisal iii. approaches to synthesis of findings from multiple studies <p>All of the above, but particularly (iii) developing methods of synthesising findings from multiple qualitative studies. For (ii) we have used an amended version of the CASP quality appraisal tool</p>
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<p>Fiona Stevenson PhD, Lecturer in Medical Sociology, Department of Primary Care and Population Sciences, Royal Free and University College School of Medicine, London</p>	<p>Clinician, client and population interventions to change antibiotic prescribing in primary care</p>	<p>Revising proposal in light of referees' comments In negotiation with Department of Health</p>	<p>i. Both qualitative and quantitative evaluative research ii. Basic and evaluative research</p>	<p>Study methods include: i. searching – grey literature and searches of medline, embase, psychlit. WOS, Cochrane, CINHAL ii. study quality appraisal – unsure at the moment iii. synthesising findings from multiple studies – unsure at the moment Methodological work possibly to be carried out on: ii. quality appraisal iii. approaches to synthesis of findings from multiple studies</p>
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Appendix C: Relevant reports and publications identified by survey respondents

- Arai, K., Popay, J., Roen, K. and Roberts, H. (2003) 'Preventing accidents in children – how can we improve our understanding of what really works?', *Exploring methodological and practical issues in the systematic review of factors affecting the implementation of child injury prevention initiatives*, Health Development Agency.
- Barroso, J. and Sandelowski, M. (2003) 'Challenges of searching for and retrieving qualitative studies', *Western Journal of Nursing Research*, vol 25, pp 153-78.
- Barroso, J. and Sandelowski, M. (2003: forthcoming) 'Sample reporting in qualitative studies of women with HIV infection', *Field Methods*.
- Campbell, R., Pound, P., Pope, C., Britten, N., Pill, R., Morgan, M. and Donovan, J. (2003) 'Evaluating meta-ethnography: a synthesis of qualitative research on lay experiences of diabetes and diabetes care', *Social Science and Medicine*, vol 56, pp 671-84.
- Cooper, N.J., Abrams, K.R., Sutton, A.J., Turner, D. and Lambert, P.C. (2003: forthcoming) 'Use of Bayesian methods for Markov modelling in cost-effectiveness analysis: an application to taxane use in advanced breast cancer', *Journal of the Royal Statistical Society Series A*.
- Dixon-Woods, M. and Fitzpatrick, R. (2001) 'Qualitative research in systematic reviews has established a place for itself' (editorial), *BMJ*, vol 323, pp 765-6.
- Dixon-Woods, M., Fitzpatrick, R. and Roberts, K. (2001) 'Including qualitative research in systematic reviews: problems and opportunities', *Journal of Evaluation in Clinical Practice*, vol 7, pp 125-33.
- Dixon-Woods, M., Seale, C., Young, B., Findlay, M. and Heney, D. (2003) 'Representing childhood cancer: accounts from newspapers and parents', *Sociology of Health and Illness*, vol 15, pp 143-64 (this paper uses reciprocal translational analysis for primary data).
- Evans, D. and FitzGerald, M. (2002) 'The experience of physical restraint: a systematic review of qualitative research', *Contemporary Nurse*, vol 13, pp 126-35.
- Evans, D. and FitzGerald, M. (2002) 'Reasons for physically restraining patients and residents: a systematic review and content analysis', *International Journal of Nursing Studies*, vol 39, pp 735-43.

- Evans, D., Wood, J. and Lambert, L. (2002) 'A review of physical restraint minimisation in the acute and residential care setting', *Journal of Advanced Nursing*, vol 40, no 6, pp 616-25.
- Evans, D., Wood, J. and Lambert L. (2003: forthcoming) 'Patient injury and physical restraint devices: a systematic review', *Journal of Advanced Nursing*.
- Gough, D.A. (in preparation) 'Systematic research synthesis', in R. Pring and G. Thomas (eds) *Evidence-based practice*, Buckingham: Open University Press.
- Harden, A. (2002) 'Choosing appropriate criteria for assessing the quality of "qualitative" research for inclusion in systematic reviews: a review of the published literature', Poster presented at the First Campbell Collaboration Methods Group Conference, Baltimore, 17-19 September.
- Harden, A. (2003) 'Framework for integrating different types of evidence in systematic reviews for public policy', Paper presented at the Third Annual Campbell Collaboration Colloquium, Stockholm, Sweden.
- Harden, A., Oakley, A. and Oliver, S. (2001) 'Peer-delivered health promotion for young people: a systematic review of different study designs', *Health Education Journal*, vol 60, pp 339-53.
- Harden, A., Rees, R., Shepherd, J., Brunton, G., Oliver, S. and Oakley, A. (2001) 'Young people and mental health: a systematic review of barriers and facilitators' London: EPPI Centre, Social Science Research Unit, http://eppi.ioe.ac.uk/EPPIWeb/home.aspx?page=/hp/reports/mental_health/mental_health.htm
- Harden, A., Oliver, S., Rees, R., Shepherd, J., Brunton, G., Garcia, J. and Oakley, A. (2003) 'A new framework for synthesising the findings of different types of research for public policy', Paper presented at the Third Campbell Colloquium, Stockholm, February (see www.campbellcollaboration.org/Fraspecial.html).
- Lambert, P.C., Sutton, A.J., Abrams, K.R. and Jones, D.R. (2002) 'A comparison of summary patient level covariates in meta-regression with individual patient data meta-analyses', *Journal of Clinical Epidemiology*, vol 55, pp 86-94.
- Lyne, P., Satherley, P. and Allen, D. (2000/01) *Systematic review: effectiveness of interventions designed to reduce or remove barriers to change to improve interagency working*, Discussion Paper: Nursing, Health and Social Care Research Centre, University of Wales College of Medicine.
- Lyne, P., Allen, D., Martinsen, C. and Satherley, P. (2002) 'Improving the evidence base for practice: a realistic method for appraising evaluations', *Clinical Effectiveness in Nursing*, vol 6, pp 81-8.
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Using evidence from diverse research designs

Systematic reviews of evidence in social care need to draw on a range of sources of evidence, including qualitative research and research using mixed methods. This report presents an overview of current developments in synthesising evidence from these different sources.

The methods outlined in this report form part of the work by the Social Care Institute for Excellence to develop methods of systematic review appropriate to social care.



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