

Does poor communication contribute to stillbirths and infant deaths? A review

Rachel E. Rowe, Jo Garcia, Alison J. Macfarlane and Leslie L. Davidson

Abstract

Background Assessors from the Confidential Enquiry into Stillbirths and Deaths in Infancy (CESDI) have cited poor communication as a contributory factor in a proportion of such deaths. This review assesses what research evidence exists to support or explain this.

Methods A structured review was carried out, including all studies of sub-optimal care in stillbirth or infant death and studies of litigation in perinatal care. The following databases were searched: MEDLINE, PsycLIT, The Cochrane Library, BIDS Science and Social Science Citation Indexes, Cinahl and Embase. For included studies, information was extracted on the type of study, the selection criteria and number of cases studied, other methods used and results relevant to the question.

Results One hundred and four studies of potential relevance to the review were identified. Of these, 52 did not meet the inclusion criteria and were excluded. Of the remaining 52 studies, 11 considered communication failure explicitly as a factor in sub-optimal care leading to stillbirth or infant death. In three out of the four studies that presented their findings in terms of numbers of cases, communication failure was noted in between 24 and 29 per cent of cases. There was some consistency across different types of study in the types of communication problems noted.

Conclusion Poor communication may contribute to a proportion of stillbirths and infant deaths. However, given the small number of papers that looked explicitly at poor communication as a factor in sub-optimal care and the lack of comparative information on communication in cases that do not end in poor outcome, caution is needed in drawing conclusions based on the findings of these papers.

Keywords: review, communication, fetal death, infant mortality

Introduction

The importance of effective communication in health care has been widely acknowledged in recent years, both at an official, professional level and by patients. In the Audit Commission's report on communication between hospitals and patients it was stated that 'Communication is not an "add on", it is at the heart of patient care'.¹ The Department of Health, the Royal Colleges and other statutory bodies have all been involved in initiatives to promote good communication and to improve record keeping. For example, in 1995 the Royal College of Obstetricians

and Gynaecologists published a report on communication standards in obstetrics² and in 1997 the Royal College of Physicians also published a report on improving communication between doctors and patients.³

Within maternity care, the *Changing childbirth* report highlighted the importance of good communication in woman-centred care and described a number of initiatives in the United Kingdom designed to meet some of the problems of poor communication.⁴ Research on women's views of maternity care has given an indication of the importance of good communication with mothers and between health professionals, and has also illustrated the different aspects of communication. The Audit Commission's national survey of mother's views of maternity care⁵ and the 'Choices' project on women's expectations and experiences of care in Essex⁶ suggested that readily available and clear information is central to women's needs. In both these studies, women also referred to the importance of professionals listening to them and responding to their individual needs. The unique challenge for communication in maternity and perinatal care is that, because care is required for both mother and baby, a much wider group of health professionals may be involved than in many other areas of health care. Given this, it is significant that women also often relate good communication to having a smaller number of caregivers or being able to build relationships over time with their caregivers.^{5,6}

Although good communication may be a necessary goal in itself, evidence from recent reviews suggests that good communication may bring benefits in terms of outcomes for patients.^{7,8} But what happens to patients when communication breaks down? Is poor communication, either between patient and professional or between professionals, associated with adverse outcomes for patients?

The Confidential Enquiry into Stillbirths and Deaths in Infancy (CESDI) was set up by the Department of Health in

National Perinatal Epidemiology Unit, Institute of Health Sciences, Old Road, Headington, Oxford OX3 7LF

Rachel E. Rowe, Researcher

Jo Garcia, Social Scientist

Alison J. Macfarlane, Medical Statistician

Leslie L. Davidson, Director

Address correspondence to Rachel E. Rowe.

E-mail: rachel.rowe@perinat.ox.ac.uk

1992 to review the extent of sub-optimal care in deaths between 20 weeks of pregnancy and 1 year after birth. In 1997, 10418 such deaths were notified to CESDI in England, Wales and Northern Ireland. The CESDI Annual Reports for 1995, 1997 and 1998 suggested that deficiencies in communication might be contributing to sub-optimal care leading to stillbirth or infant death.^{9–11} These deficiencies include both communication problems between professionals and parents, and poor communication among professionals, including inadequate record keeping. As CESDI was not set up to investigate these issues systematically, and hospital records are not organized to record all communications or communication problems, it is difficult to assess the extent of the impact of communication failure on deaths using information from CESDI alone.

This review examines the work carried out by CESDI, along with other similar audits and research in the area of sub-optimal care and stillbirth and infant death, to assess the contribution of poor communication to these deaths. It forms part of a larger report looking at all aspects of communication within the CESDI framework, which was commissioned by CESDI.

Methods

Inclusion criteria

Any audit, survey or study that examined the role of sub-optimal care or avoidable factors in stillbirth or infant death was eligible for inclusion in the review. In addition, studies of the role of poor communication in prompting litigation in perinatal care were also considered for inclusion. Studies carried out in developing countries were excluded.

Search methods

Search strategies were devised and run on the following electronic databases to identify studies relevant to this and two related reviews that made up the main report:¹² MEDLINE (from 1966), PsycLIT (from 1967), The Cochrane Library, BIDS Science Citation Index and Social Science Citation Index, Cinahl (from 1982), Embase (from 1980). Final searches were carried out in May 1999. The MEDLINE MeSH terms relevant to this review were: communication, hospital-patient-relations, interpersonal-relations, medical-staff, -hospital, medical-records, forms-and-records-control, medical-audit, pregnancy, obstetrics, prenatal-care, perinatal-care, neonatal-nursing, labor, fetal-death, infant-mortality. The text terms communicat*, litigat*, still-birth*, still birth*, sids, fetal mortality, fetal death, stillbirth*, perinatal mortality, perinatal death*, neonatal mortality, neonatal death*, infant mortality, infant death* were also used. No language limits were used for any of the searches.

For the MEDLINE searches, titles of all papers identified by the search were reviewed (R.R. or J.G.) and potentially relevant abstracts were selected. These were then checked (R.R. and J.G.) and full copies were obtained for those that appeared to meet the inclusion criteria. For searches on other databases, which gener-

ally identified fewer papers, all abstracts were reviewed either on screen or on printouts. Citations of all papers that appeared to meet the inclusion criteria were compiled into a database.

Reference lists of all studies meeting the inclusion criteria and any relevant reviews identified were searched for further studies. All CESDI regional co-ordinators were contacted for information about any relevant studies carried out in their regions and any regional confidential enquiries carried out before the formation of CESDI. Other studies were located through searches of NPEU databases, citations in books and as a result of consultation with relevant experts.

Results of the literature search

The searches identified 104 papers or reports of potential relevance to the review. These were read by one reviewer and checked against the inclusion criteria. Fifty-two studies did not meet the inclusion criteria and were excluded. The majority (31) of these excluded studies were descriptive or discussion papers, or perinatal mortality surveys that did not consider avoidable factors. A further 16 studies, dealing with the role of poor communication in medical and air traffic accidents, were read and used to inform interpretation of the other studies, but were not included in the review.

All of the 36 included papers were read by one reviewer. The papers were categorized according to whether they were: (1) reports of audits or studies of stillbirth and/or infant death where poor communication was explicitly considered as a factor in sub-optimal care; (2) other audits, surveys or studies of sub-optimal care contributing to stillbirth and/or infant death; (3) studies of the role of poor communication in prompting litigation in perinatal or infant care. A structured format for summarizing these papers was devised based on extracting information on the type of study, the selection and number of cases studied, a description of other methods used and any results relevant to the question. For those papers in which poor communication was not considered explicitly as a factor in sub-optimal care, we attempted to identify 'proxy measures' of communication failure, that is, any avoidable factors that indicated a possible failure of communication contributing to death. Any indication of any possible failure of communication, either between professionals and patients or among professionals, was considered relevant to this review. This included problems relating to oral communication, including language difficulties, and written communication, including record keeping.

Results

Confidential enquiries and studies where communication was considered explicitly

The 10 reports of confidential enquiries and one case-control study in which communication failure was considered explicitly as a factor in sub-optimal care leading to stillbirth or infant death are summarized in Table 1. Six of the confidential enquiries were

Table 1 Studies of sub-optimal care in cases of stillbirth and/or infant death in which communication failure was explicitly considered

Study Country	Study type Case selection Number of included cases	Methods	Results
CESDI 1999 ¹³ UK	Confidential enquiry Random sample of cases of stillbirth and neonatal death during 1996–1997 573 cases	CESDI process	Communication failure cited in 116/756 (15%) Grade 2 or 3 comments Record keeping not adequate in 194/573 (34%) of cases
CESDI 1999 ¹³ UK	Confidential enquiry All cases of death in babies weighing 4 kg and over during 1997 151 cases	CESDI process	Communication failure cited in 43/328 (13%) Grade 2 or 3 comments
CESDI 1998 ¹¹ UK	Confidential enquiry All cases of sudden unexpected death in infants, where cause was apparent from the history or was revealed at autopsy during Feb. 1993–March 1996 67 cases	CESDI process with additional information collected from interview with parents	Not clear how many comments related to poor communication
CESDI 1997 ¹⁰ UK	Confidential enquiry All cases of intrapartum-related death in 1994–1995 873 cases	CESDI process	222/873 (25%) cases were affected by a Grade 2 or 3 comment of poor communication Communication failure cited in 493/3265 comments (15% of all comments) and in 296/2522 (12%) Grade 2 or 3 comments
CESDI 1996 ¹⁴ UK	Confidential enquiry All cases of sudden unexpected death in infants during Feb. 1993–Jan. 1995 228 cases	CESDI process with additional information collected from interview with parents	146/228 (64%) cases involved sub-optimal care of Grade 2 or 3 Poor inter-professional communication noted in 7 cases Poor record keeping noted in 3 cases Poor professional–family relationship noted in 2 cases
CESDI 1995 ⁹ UK	Confidential enquiry All cases of intrapartum-related death during 1993 388 cases	CESDI process	Communication failure cited in 249/1278 (19%) of all comments Poor quality of notes cited in 108/388 (28%) cases Sub-optimal care by parents cited in 70 (18%) cases; 70% of these comments involved mother/family ignoring or failing to follow advice
Tan <i>et al.</i> 1999 ¹⁵ UK	Confidential enquiry All cases of stillbirth and neonatal death in one region during 1991 238 cases	Very similar to CESDI process	10/219 (5%) factors in cases graded 2 or 3 (149) cited poor communication as a problem 43/219 (20%) ‘patient-related’ factors were noted; these included 19 (9% of total) relating to delay in reporting decreased fetal movements, vaginal bleeding or liquor leakage and 6 (3%) of refusal to accept management or non-compliance 39 (18%) factors cited perinatal risk factors, e.g. significant weight loss, decreased fetal movements, hypertension/pre-eclampsia, previous adverse obstetric history, neglected or ignored by staff

Table 1 continued

Study Country	Study type Case selection Number of included cases	Methods	Results
Scottish Office Home and Health Department 1994 ¹⁶ UK	Confidential enquiry All cases of intrapartum stillbirth and neonatal death in five centres in Scotland in 1989–1990 132 cases	Multi-disciplinary review of case notes; consultants and midwives in charge of clinical care for each case invited to comment on individual cases and meet with the visiting team	38/132 (29%) cases were considered to show some deficiency in clinical care relating to 'communication or referral'
West Midlands Perinatal Audit Team 1989 ¹⁷ UK	Case-control study All cases of perinatal death in half of the districts in one region in 1987 and matched controls 255 cases 255 controls	Community midwife interviewed each case and control mother, asking about satisfaction with maternity care	No significant difference in case and control mothers' satisfaction with all aspects of care; no significant difference in areas of concern in mothers who were dissatisfied with some aspect of care Many of the main areas of dissatisfaction related to communication
West Midlands Perinatal Audit Team 1989 ¹⁷ UK	Confidential enquiry All cases of perinatal death in half of the districts in one region in 1987 449 cases	Cases assessed by individual members of multi-disciplinary panel using information on care provided, report of parental interview, information from GP. Each assessor identified and graded 'relevant factors' in management of the case and gave each case an overall grade; these grades were scored and averaged for each case	Disagreement between assessors on the grade of factors for each case means that it is difficult to assess the number of cases in which death might have been avoided by different management; authors estimate between 2 and 13% of deaths Some general comments provided on poor communication but no numbers of cases
Brimblecombe <i>et al.</i> 1983 ¹⁸ UK	Confidential enquiry and case-control study All cases of perinatal and early childhood death in one district in 1980–1981 51 cases 51 matched controls	Cases discussed by professionals directly concerned with care, members of research team and other district medical and nursing staff; discussion based on report of interview with parents and questionnaires completed by professionals concerned. Same information for controls; meetings not attended by all professionals	Perinatal and neonatal deaths: some aspect of poor communication suggested in 11/45 (24%) cases and 4/45 (9%) controls. Postneonatal deaths (1 month–2 years): poor communication suggested in 4/17 (24%) cases and 2/17 (12%) controls

carried out by CESDI. The process followed for these confidential enquiries is described in Table 2. In more recent CESDI enquiries some changes have been made to aspects of this process. The remaining confidential enquiries were carried out in Scotland and regions of England before the establishment of CESDI. Their methods varied and included using different grading systems, using panels of assessors made up partly or entirely of professionals involved in the cases under review, collecting additional information from one or both parents and using controls. The case-control study, which asked specific questions about communication, was based on information collected in an interview with parents, using no information from professionals or from case-notes.

The enquiries also differed in the way in which their results were reported. In the main they did not make the fullest use of the information available to them on communication problems. Only two of the CESDI enquiries^{10,14} and two of the other enquiries^{16,18} provided information on the number of cases in

which communication failure was identified as a factor in sub-optimal care. Of the six remaining enquiries, five provided details of the number of 'comments' or 'notable factors' relating to communication failure^{9,11,13,15} and one gave an overview of the kinds of communication failure identified.¹⁷ As one case could generate a number of 'comments' it was not possible to identify the number of cases involved.

In three of the four enquiries that gave information in terms of cases, communication failure was noted in between 24 and 29 per cent of cases.^{10,16,18} The only available comparison comes from the one confidential enquiry in which information was also collected from controls. In this, communication failure was noted in 24 per cent of the 45 cases of perinatal and neonatal death and in 9 per cent of controls. For postneonatal deaths and deaths of infants up to 2 years of age, poor communication was indicated in 24 per cent of the 17 cases and in 12 per cent of controls.¹⁸

There was some consistency in the types of communication

Table 2 The CESDI process

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- All deaths of babies between 20 weeks gestation and 1 year of life in England, Wales and Northern Ireland are notified to CESDI regional co-ordinators using Rapid Report Form
 - A specific sub-set of deaths is chosen centrally by CESDI as the subject for Confidential Enquiry
 - Cases eligible for inclusion are identified by regional co-ordinators
 - Members of regional confidential enquiry assessment panels are appointed; each panel typically includes an obstetrician, paediatrician, midwife, specialist perinatal/paediatric pathologist, general practitioner and a chairperson, who is usually independent
 - Case-notes, post-mortem report and other notes as appropriate are collated, anonymized and sent to members of confidential enquiry assessment panel
 - Assessment panel meets to produce a summary of the case and a standard form including graded comments on sub-optimal care and an overall grade for the case using the following system:
 - Grade 0: no sub-optimal care
 - Grade 1: sub-optimal care, but different management would have made no difference to outcome
 - Grade 2: sub-optimal care – different management might have made a difference to outcome
 - Grade 3: sub-optimal care – different management would reasonably have been expected to have made a difference to outcome
 - Regional enquiry findings are collated centrally and reported in CESDI Annual Report
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failure identified, but most gave no more than a few examples of the types of poor communication involved. This means that it was rarely possible to separate inter-professional communication problems from poor communication between professionals and patients, or to ascertain whether particular types of communication failure were more common than others. For professional–patient communication, maternal delay in reporting decreased fetal movements or other changes in pregnancy, and professional response to maternal concerns, appeared as a problem area in three enquiries.^{10,15,18} For inter-professional communication, poor record keeping was a recurring theme, noted in six enquiries.^{9,10,13,14,16} There were also suggestions from three enquiries of poor communication in the care of women presenting with obstetric risk factors.^{9,10,15} Two enquiries indicated problems in the upward transfer of responsibility during labour, either from midwife to obstetrician or from junior doctor to senior registrar or consultant.^{9,10}

Confidential enquiries, audits and studies where communication was not considered explicitly

Eighteen studies, reported in 19 papers, were identified which examined the role of sub-optimal care in stillbirth, infant death or other adverse outcomes, but which did not consider communication explicitly as a contributing factor. Ten of these studies gave some indication of sub-optimal care that may have been related to poor communication. These are summarized in Table 3. The remaining eight studies used criteria for sub-optimal care that did not relate to communication or the results were not described in enough detail to judge whether poor communication could have played a part.^{30–37} These studies are not summarized here.

The 10 papers fell into three types. Three were described as confidential enquiries^{25,28,29} and a fourth followed some of the process of confidential enquiry.²⁴ Four papers reported audits of stillbirths or infant deaths, either by an independent expert panel or by professionals directly involved in the cases.^{19–21,26}

The two remaining papers reported retrospective reviews of case notes in cases of stillbirth or infant death carried out by one or two clinicians.^{22,23} All the studies aimed to identify and classify ‘avoidable factors’ in care contributing to stillbirth and/or infant death or to identify potentially avoidable deaths and their causes.

For communication between professionals and patients, evidence from a number of studies suggested that communication relating to reduced fetal movements was a problem. Four out of the 10 studies that provided some information on communication-related sub-optimal care indicated failure to report reduced fetal movements or inadequate response to maternal reports of reduced fetal movements.^{19,22,24,28}

The other recurring theme relating to professional–patient communication in these studies was a variety of problems collectively described as maternal ‘non-compliance’. This term was generally used to describe failure by mothers to attend for care, follow advice or accept intervention. Six studies gave some indication of maternal ‘non-compliance’.^{21,23,25,26,28,29} The relationship between ‘non-compliance’ and poor communication is difficult to assess and it was not usually possible to identify whether ‘non-compliance’ was related to communication failure, a difference of opinion or something else that meant that the mother did not carry out the care programme chosen by her carers. Because ‘non-compliance’ may involve or may result from communication problems, we have noted all cases where it was identified as contributing to sub-optimal care.

Sub-optimal care involving poor communication between professionals was reported less often in these papers than failures of professional–patient communication. Failure to respond or delay in responding to indications of fetal distress were the only indications of failure of inter-professional communication noted and the information provided was very limited. Only one study provided any evidence of this problem, and the contribution of poor communication in these cases was not clear.²² Organizational or resource problems are other possible explanations for the delays noted.

Table 3 Studies of sub-optimal care in cases of stillbirth and/or infant death where communication was not considered explicitly

Study Country	Study type Case selection Number of included cases	Methods	Results
Andersen <i>et al.</i> 1991 ¹⁹ Denmark	Audit All cases of stillbirth in 3 counties during 1985–1986 119 cases	Expert panel Anonymized detailed summary of medical record Evaluated standard of care and its relation to death Each death classified as: (1) unavoidable; (2) potentially avoidable; (a) sub-optimal antenatal care; (b) sub-optimal intrapartum care; (3) no consensus	48/119 (40%) cases potentially avoidable 6 (5%) classified as ‘inadequate response to maternal claims of decreased fetal movements’
Andersen <i>et al.</i> 1991 ²⁰ Denmark	Audit All cases of neonatal death in 3 counties in 1985–1986 109 cases	As for Ref. 19	Types of sub-optimal care noted do not include communication problems
Birdsall and Pattison 1992 ²¹ New Zealand	Audit Cases of perinatal death in one hospital in 1989–1990 293 cases	Authors (two obstetricians) Medical record Identified any ‘avoidable factors’ and categorized as: (1) patient; (2) antenatal; (3) intrapartum; (4) neonatal care	Avoidable factors identified in 73/293 (25%) deaths 6 (2%) cases indicated patient-related avoidable factors involving failure to attend for antenatal care
Cruikshank and Linyear 1987 ²² USA	Retrospective record review All cases of term stillbirth in one state in 1983 108 cases	One obstetrician Anonymized maternal medical records Care provided was compared with ‘recognized standards of obstetric care’ Death classified as: (1) preventable (2) non-preventable	35/87 (40%) of the antepartum deaths and 17/21 (81%) of the intrapartum deaths were judged preventable (48% overall) 3/108 (3%) cases indicated communication relating to decreased fetal movements as a problem 8/108 (7%) cases of delays of 1–3 h in the management of significant fetal distress. Not clear why
Delke <i>et al.</i> 1988 ²³ USA	Retrospective record review All cases of perinatal death in one hospital in 1981–1987 133 cases	Two independent clinicians and perinatal pathologist Medical and autopsy records Deaths assessed according to ‘recognized standards of perinatal care’ and categorized as: (1) avoidable; (a) obstetric; (b) maternal/social; (c) paediatric; (2) unavoidable	21/133 (16%) cases where some aspect of maternal ‘non-compliance’ was a factor. This included refusal or delay in accepting active intervention in response to monitoring indicating fetal distress
Kirkup and Welch 1990 ²⁴ UK	Retrospective record review All cases of perinatal death in one region during 1983 75 cases	Two authors Information abstracted from case notes Joint assessment of events leading directly to death to identify any avoidable factors (no more than one per case). Deaths classified as: Grade 2: absence of avoidable factor may have led to different outcome had all other features remained equal; Grade 1: avoidable factor present, but not direct link to death, or other adverse features present that would have led to death anyway	Avoidable factor present in 38/75 (50%) deaths; 22/75 (29%) were classified as Grade 2 2/75 (3%) Grade 2 cases of delay in acting on evidence of antenatal problems, including ‘persistently reported marked diminution of fetal movements’ (p. 386)

Table 3 continued

Study Country	Study type Case selection Number of included cases	Methods	Results
MacVicar 1980 ²⁵ UK	Confidential enquiry All cases of perinatal death in one Area Health Authority during 1976–1978 Approximately 550 cases	Multi-disciplinary panel Questionnaire containing information abstracted from hospital and GP records, information from medical/nursing personnel involved and interview with parent. Also case-notes and perinatal mortality meeting summary Avoidable factors judged to be present if 'standard of care falls below an acceptable level at any time' Avoidable factors classified as due to: (1) quality of antenatal care; (2) care in labour; (3) poor patient co-operation; (4) bad paediatric management	Avoidable factors present in 110/~550 cases (~20% of cases) 28/~550 (~5%) cases of avoidable factors relating to patient compliance, but no more information given
Moawad <i>et al.</i> 1990 ²⁶ USA	Audit Cases of perinatal death in 13 hospitals between 1983 and 1987 1362 cases	All participants in the case Clinical information abstracted from prenatal records, hospital chart, autopsy report and supporting laboratory records on special form and a narrative case summary prepared 'immediately after' death Deaths classified as: (1) congenital malformation incompatible with life; (2) unavoidable; (3) potentially avoidable: (a) patient factor; (b) provider factor; (c) both; (4) undetermined (lack of consensus or insufficient data)	383/1362 (28%) cases classified as potentially avoidable 108/1362 (8%) cases of 'non-compliance'
Myers <i>et al.</i> 1990 ²⁷ USA	Preliminary report covering first 2 years of study reported in full by Moawad <i>et al.</i> ²⁶ 1990		
Pharoah <i>et al.</i> 1982 ²⁸ UK	Confidential enquiry All cases of perinatal death in part of one Regional Health Authority 309 cases	Two obstetricians and two paediatricians Summary of case-notes and questionnaire, interviews with relevant professionals and interview with mother; full case notes available if necessary Avoidable factor defined as 'some departure from the accepted standards of satisfactory care, in its widest sense, which may have played a part in the death' Categorized as: (1) obstetric; (2) paediatric; (3) maternal/social	182/309 (59%) had avoidable factors Communication possibly a factor in: 2/309 (<1%) cases where reduction of fetal movements reported, but no action taken; 16/309 (<5%) cases where women failed to attend antenatal care
Wood <i>et al.</i> 1984 ²⁹ UK	Confidential enquiry All cases of neonatal death in one region in 1981–1982 386 cases	Consultant paediatrician Standard anonymized questionnaire completed after visit to relevant maternity unit and meeting with staff concerned 'Adverse factors' in medical care identified (no definition given)	36/386 (9%) cases in which adverse factors in medical care were identified 1/386 (9%) case of 'maternal non-co-operation' as a factor in delay in responding to fetal distress

Communication and litigation in perinatal care

Six studies that looked at cases of litigation in perinatal care were identified. These are summarized in Table 4. All of these involved retrospective review of medical records in cases of litigation, with the aim of identifying the causes of obstetric accidents or the factors leading to litigation.

Problems relating to inadequate response to maternal worries or concerns were noted in one paper.⁴² In the same paper it was reported that women complained that staff disregarded their wishes or feelings, or were unsympathetic.

Two papers gave some indication of problems in communication between professionals.^{40,42} Most of these problems appeared to relate to problems in the upward transfer of responsibility in labour. In one other paper the author's comments indicated interprofessional communication problems of a similar nature although no figures were presented.⁴³

Discussion

It is very difficult, based on the studies reviewed here, to estimate the extent of the problem of poor communication in

perinatal and infant care and assess the link between poor communication and stillbirth and infant death. In three confidential enquiries, poor communication was considered a factor by multi-disciplinary assessment panels reviewing case notes in between 24 and 29 per cent of cases of stillbirth and infant death. No comparable information was available from any of the other studies reviewed.

Although many studies did not distinguish between different types of communication problem, it is possible to say a little more about the types of communication problem that were revealed. Between professionals and patients, problems identified as 'maternal non-compliance' and problems relating to perceived failures of professionals to explain, inform or listen to mothers, often in the context of reduced fetal movements, were most notable. Given the information available it was not possible to establish the causes of these problems. For instance, maternal failure to report reduced fetal movements could result from the mother not recognizing a change or not acting. Similarly, inadequate professional response to maternal concerns could be related to not listening or not taking the information seriously. Whatever the root cause of these failures, they suggest communication problems around relationship-building and

Table 4 Communication in cases of litigation in perinatal care

Study Country	Study type Case selection Number of included cases	Methods	Results
B-Lynch <i>et al.</i> 1996 ³⁸ UK	Retrospective record review Medico-legal claims in obstetrics and gynaecology submitted for medical expert opinion during 1984–1994 500 cases	Two independent medical experts Case histories, clinical test results, patient statements and correspondence Classified causes of claims	37/500 (7%) cases involved 'poor counselling' or problems with consent Authors comment on difference between information recorded as given to a patient and what the patient perceived or understood at the time
Donn <i>et al.</i> 1987 ³⁹ USA	Retrospective record review Medico-legal claims referred by lawyers to neonatologists for expert opinion during 1982–1984 115 cases	Neonatologist who had originally given expert opinion 're-reviewed' the case and extracted summary data regarding the nature of the case, problems involved, outcome, etc.	No explicit consideration of communication problems as a factor leading to adverse outcomes or litigation
Ennis and Vincent 1990 ⁴⁰ UK	Retrospective record review Serious obstetric cases reported to Medical Protection Society during 1982–1996 64 cases	'Expert reviewers' Original case notes and medical expert's report reviewed and data collected using specially designed form Standard of care and causes of accidents assessed	No explicit consideration of poor communication as a factor in adverse outcome or litigation In 14/64 cases a CTG abnormality was ignored or not noticed; in 3 of these cases an abnormality was correctly noted by the midwife, but ignored by the doctor
Hickson <i>et al.</i> 1992 ⁴¹ USA	Telephone interview study Families who had filed medical malpractice claims, closing during 1986–1989, following perinatal injuries 127 cases	Two researchers Responses to telephone interviews containing both structured and open-ended questions were recorded verbatim Responses were assigned to one of six categories (not clear if these categories came out of the responses or were pre-defined)	No consideration of poor communication leading to adverse outcome 125 families gave 179 reasons for litigation (2 declined to answer); no explicit reference to communication problems, but 25 (20%) families sued because they wanted more information and 30 (24%) families sued because they felt they had been misled or misinformed (either intentionally or not)

Table 4 continued

Study Country	Study type Case selection Number of included cases	Methods	Results
Vincent <i>et al.</i> 1991 ⁴² UK	Retrospective record review All serious obstetric cases reported to Action for Victims of Medical Accidents during 1982–1988 41 cases	Authors Not explicit what records were available Data recorded under the following headings: (1) nature and cause of death/damage; (2) risk factors and warning signs; (3) expert criticisms of management of delivery; (4) mother's account of care offered; (5) adequacy of medical records	In questions relating to communication 'most respondents' complained about at least one communication problem: 32% believed that their physicians would not talk or answer questions; 13% that their physicians would not listen; 48% that their physicians misled them; 70% that no one involved in providing medical care during the perinatal period ever told them that their babies might have permanent medical problems or die 8/41 (19.5%) died during labour or shortly afterwards; the 33 surviving infants suffered longstanding mental and/or motor impairment 13/41 (31.7%) cases where mother was aware, often before staff, that labour was not progressing satisfactorily (most often complaints of bleeding or excessive pain); in 11 cases these worries were communicated to staff, but in 7 of these staff failed to take them seriously (e.g. dismissed pain or bleeding as unimportant) 6/41 (14.6%) cases where senior doctor was called, but failed to arrive; another 4 cases (9.8%) where senior doctor did arrive, but expert commented on length of delay and implications for outcome 9/41 (22%) cases of missing records; 26/41 (63.4%) cases where adequacy of records was criticized 10/41 (24.4%) cases in which women complained that staff disregarded their wishes/feelings 10/41 (24.4%) cases in which women complained that staff were unsympathetic 4/41 (9.8%) cases in which women complained that staff were unduly critical
Ward 1991 ⁴³ USA	Retrospective record review Consecutive cases of obstetric and gynaecologic malpractice litigation claims supplied by insurance companies and attorneys between 1983 and 1988 500 cases: 294 obstetric and 206 gynaecologic	One doctor Not clear what records were reviewed Standard of care assessed with reference to ACOG Standard, Technical Bulletins and Committee Opinions, and 'articles indexed in NLM Medlars database'; case judged as indefensible if cause-and-effect relationship could be established between substandard care and poor outcome	No consideration of poor communication leading to adverse outcome 79/294 (27%) obstetric cases classified as indefensible; of these, 23 (29%) had inadequate documentation or combination of inadequate documentation and substandard care; 17/45 (38%) of the indefensible gynaecologic claims had inadequate documentation or combination of inadequate documentation and substandard care

information exchange, particularly in the antenatal period.⁸ Although these papers provided no evidence to indicate that language problems contribute to communication failure, it seems likely that the problems already identified could only be exacerbated by language difficulties.

One promising approach to the problem of communication of information was tested in a trial where pregnant women were given extra information on prenatal screening tests in the form of group or individual teaching and leaflets.⁴⁴ Women who received extra teaching, either in groups or individually, felt more satisfied with the information they received and felt they understood it better. Women who received individual teaching were also less anxious. Formal fetal movement counting does not seem effective in reducing the rate of stillbirths,⁴⁵ but communication about decreased fetal movements does appear to be a problem area. A clinical trial could test the effectiveness of providing women with extra information on the significance of decreased fetal movements. There is some suggestion from research outside maternity care that providing health professionals with training in communication skills can improve patient knowledge, understanding and compliance, and even affect patient outcome.⁴⁶ Research into providing maternity caregivers with training in communication skills would also be appropriate.

The most common problems identified for communication between professionals were poor continuity and information exchange in the antenatal period, particularly in the care of women at risk of various obstetric problems, poor communication in the upward transfer of responsibility during labour and poor record keeping. In general, however, less information was available about communication failure between professionals. This may be because poor communication between professionals occurs less frequently. On the other hand, it may be more difficult to identify poor inter-professional communication from available sources of information. Records of care form one way in which professionals communicate with one another, but not all communication between professionals is recorded. Furthermore, although the medical record may well contain information on the results of a breakdown of communication, it may not be clear from the record that poor communication was at the root of the problem. More research, using a range of methods, is required to explore communication between maternity caregivers. In the first instance, this could involve a literature review of the qualitative research on interactions between and among midwives and doctors (e.g. Refs 47, 48). In addition, any new medical records designed to improve communication in maternity care should be evaluated.

There are several reasons for caution in drawing conclusions based on the findings of this review. The first of these is the lack of comparative information about the overall prevalence of communication problems in maternity care. Although the information presented in these papers tells us something about the presence of communication problems in cases of stillbirth and infant death, we know virtually nothing about standards of

communication in cases that do not result in poor outcome. As a result, we are not in a position to draw any firm conclusions about the relationship between poor communication and adverse outcome.

The second problem with relying heavily on evidence from confidential enquiries is that the assessment of whether communication failure contributed to death in each case is performed by assessors who are not blind to the outcome of the case. A well-designed case-control study, in which assessors were blinded to the outcome of each case, would remove this potential source of bias and give more information on communication in cases that do not result in adverse outcome.

Third, the number of papers that explicitly looked at poor communication as a factor in sub-optimal care was small. This means that we have also had to rely on secondary evidence, based on inferring problems of communication in other types of sub-optimal care. Although poor communication is one explanation for some of the problems identified, it is not always the only explanation. We also considered evidence from studies of cases of litigation in perinatal care, which may not be at all representative of perinatal care in general.

Finally, we are aware that given the problems in extracting and interpreting data from these studies, which in many cases did not set out to look at the problem of poor communication, it would have been more reliable to have had two reviewers read and assess all of the papers. Unfortunately, because this review formed part of a much larger project, lack of time and resources prohibited this.

Conclusions

Although poor communication may be a factor in a significant proportion of stillbirths and infant deaths, the information available on the prevalence and impact of poor communication in perinatal and infant care is inadequate to make a complete assessment. The evidence suggests, however, that there are areas where communication could be improved and where further research is required.

Acknowledgements

This review forms part of a larger report commissioned and funded by CESDI.¹² The authors would like to thank the members of the CESDI Communications Working Group for their helpful comments and advice.

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Accepted on 8 August 2000