



Centre for Maternal and Child Enquiries
Improving the health of mothers, babies and children

CENTRE FOR MATERNAL AND CHILD ENQUIRIES

POST PROJECT REVIEW REPORT DIABETES IN PREGNANCY

April 2010

CMACE Mission statement

Our aim is to improve the health of mothers, babies and children by carrying out confidential enquiries and related work on a nationwide basis and by widely disseminating our findings and recommendations.

This work was undertaken by CMACE. The work was funded by the National Patient Safety Agency, the Department of Health, Social Services, Public Safety of Northern Ireland and the Channel Islands. The views expressed in this publication are those of CMACE and not necessarily those of its funding bodies.

Issued April 2010

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1. INTRODUCTION

This report presents findings of a post project review conducted by the Centre for Maternal and Child Enquiries (CMACE) on the national confidential enquiry into diabetes in pregnancy. The Enquiry findings were reported in “*Diabetes in Pregnancy: are we providing the best care? Findings of a national enquiry*” issued in 2007¹. The aim of this report is to provide an assessment of how the diabetes report and recommendations have been received and put into practice and also to explore any potential barriers to implementation. The outcome of this review will assist CMACE in developing future reports and recommendations with the aim of improving maternal and child health in the UK.

This report comprises findings from a post project review survey questionnaire conducted over the summer of 2009 and a summary of dissemination activities undertaken in relation to the diabetes project findings by CMACE between April 2007 and November 2009.

¹ This report was issued by the Confidential Enquiry into Maternal and Child Health (CEMACH). On the 1st July 2009 CEMACH became an independent charity with the new name Centre for Maternal and Child Enquiries (CMACE).

2. POST PROJECT REVIEW SURVEY

2.1 Objectives and Methods

This questionnaire elicited views from policy makers, service providers and commissioners on:

- knowledge and perception of the report and its recommendations
- implementation of the recommendations
- suggestions on developing future CMACE reports and recommendations.

In June 2009 a questionnaire and cover letter were sent in a pre-addressed return envelope to the following groups:

- Clinical Directors and Heads of Midwifery at each NHS acute trust providing maternity services in England, Wales, Northern Ireland and Scotland
- Directors of Public Health and lead commissioners for maternity services at every Primary Care Trust (PCT) in England and Health Boards in Northern Ireland (NI), Wales and Scotland
- Twenty two national organisations including 'Arms Length Bodies', Royal Colleges and government departments.

The questionnaire consisted of four sections covering: 1. knowledge of report/recommendations; 2. perception of the report/recommendations; 3. implementation of recommendations; 4. effect of report/recommendations.

2.2 Respondents

Completed questionnaires were returned between June and September 2009 by 43% (243/559) of recipients. Respondents comprised 50% (91/183) Clinical Directors at trusts and maternity providers, 58% (101/175) Heads of Midwifery, 25% (44/179) of Directors of Public Health at a PCT or health board and 32% (7/22) of representatives from national organisations.

Numbers of individual responses for each question are indicated in the following sections of this report.

2.3 Maternity Care Providers, including Trusts

This section gives further detail regarding the responses provided by the 91 Clinical Directors and 101 Heads of Midwifery who responded to the survey.

Knowledge of the report and recommendations

Have you read part or all of the CEMACH Diabetes in Pregnancy report 2007?

How did you learn about the CEMACH diabetes recommendations?

- Ninety five percent (173/183) of respondents had read the CEMACH report
- The report itself was the main source for learning about the recommendations for 80% (125/157) of respondents.

Dissemination of the report

Have you attended any external events to your trust, where this report has been disseminated?

Were you aware of any internal meetings in your unit to discuss the report and its recommendations?

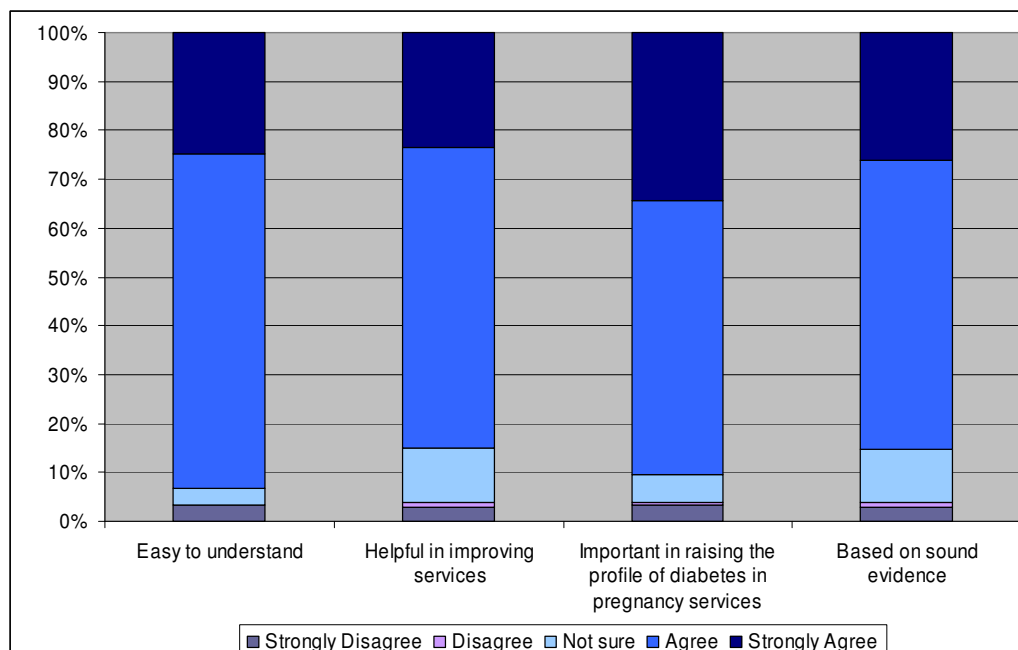
- Thirty-eight percent (70/184) of respondents had attended external events to their trusts where the CEMACH report was discussed.
- Over two thirds (115/166) of respondents knew of specific meetings within their trusts where the report and recommendations were discussed.

Perception of the report and recommendations

In your professional opinion, how would you rate the CEMACH diabetes report and its recommendations?

- Ninety-three percent (165/181) of respondents agreed or strongly agreed that the report was easy to understand.
- Eighty-five percent (152/181) of respondents agreed or strongly agreed that the report was helpful in improving services.
- Ninety-one percent (163/181) of respondents agreed or strongly agreed that the report was important in raising the profile of diabetes in pregnancy.
- Eighty-five percent (150/181) of respondents agreed or strongly agreed that the report was based on sound clinical evidence.

Figure 1: Rating of CEMACH report and its recommendations in trusts, 2009



Implementation of the report and recommendations

Is there someone within your trust specifically designated to ensure compliance with any CEMACH recommendations?

- Eighty-three percent of respondents (148/179) indicated that there was someone specifically designated at their trust to ensure compliance with CEMACH recommendations.

Implementation pre and post CEMACH report

Were these recommendations met by your unit prior to the report publication in 2007?

Does your unit meet some/or all of these recommendations now?

Was this development partly/or fully assisted by the publication of this report?

- 8% (14/180) of Clinical Directors and Heads of Midwifery responded that all of the recommendations were met by their unit prior to the report publication in 2007.
- 88% (153/173) of Clinical Directors and Heads of Midwifery responded that all of the recommendations were met by their unit at the time of the survey in summer 2009.

- Almost 80% (124/158) of all Clinical Directors and Heads of Midwifery respectively believe that the CEMACH diabetes report partly or fully assisted their trust in developing their diabetes maternity services to meet the recommendations outlined in the report.

Challenges in implementation

We are also interested in finding out the challenges or barriers that trusts have experienced in implementing new initiatives in response to the recommendations.

- Fifty-eight percent (112/192) of all Clinical Directors and Heads of Midwifery listed challenges and barriers that trusts experience in implementing the recommendations. These included; resource constraints including clinical space and staff shortage; financial constraints and challenges in implementing a preconception care service. NHS trusts provided some interesting examples of challenges and barriers. The specific comments are provided in Box 1.

Box 1: Challenges and barriers reported by NHS Acute Trusts in response to the CEMACH report

Specific comments

- *"The big difficulty is preconception care. Organising hospital services to comply with standards was straight forward. Involved primary care and getting PCT/GP involvement was and is difficult. Targeting GPs is the necessary next step".*
- *"New business planning model has been a barrier. The fixed tariff for pregnancy (historically) has also been a problem to improve services such as diabetes which is resource hungry".*
- *"Majority of preconception advice relates to work in the community, this is difficult to identify and implement from acute trusts, PCT should be more involved".*
- *"The trust is committed to supporting NICE recommendations and will use this as guideline of management of diabetes in pregnancy. Even so this is difficult to achieve, partly because of multidisciplinary nature of the problems (e.g. dieticians, physicians, ultrasonographers all under different budgets with hospital directorate)".*
- *"Complex funding of maternity services with some areas of service being on tariff whilst others remain part of the block contract make it difficult to identify who is responsible for funding new initiatives across the community/acute service."*

Effect of the report and recommendations

Have there been new initiatives in your unit in diabetes care inspired by the CEMACH report and its recommendations?

We are interested in finding examples of initiatives that may be considered an example of good practice in relation to the report and its recommendations.

- Sixty-seven percent (117/176) of Clinical Directors and Heads of Midwifery stated that the CEMACH report has inspired new initiatives in diabetes care in their units.
- Clinical Directors and Heads of Midwifery gave several examples of how the CEMACH report and recommendations helped improve their diabetes in pregnancy service. These included changes to local guidelines and policies; introduction of standardised notes and individualised care records; improvements in documentation and developments in staffing. Some examples of specific comments are provided in Box 2.

Box 2: Examples of good practice initiatives by NHS Acute Trusts in response to the CEMACH report

Specific comments

- *"Introduction of individualised care record for pregnancy and the postnatal period; Re-writing of all policies and guidelines; Revision of eye screening practice to fully comply with CEMACH recommendations; Revision of neonatal hypoglycaemia policy to fully comply with CEMACH recommendations; Greater emphasis on antenatal education regarding breastfeeding".*

Royal Berkshire Hospital NHS Trust

- *"We provide a fully comprehensive service where women are seen at a joint obstetric and metabolic clinic on a fortnightly basis with back up services provided by the endocrinology department daily if required"*

Belfast Health and Social Care Trust

- *"Flow chart for care of newborn of mothers with diabetes - prevention of hypoglycaemia. All diabetic women encouraged to hand express breast milk in pregnancy and seen by infant feeding team. Robust multidisciplinary care pathway for women with diabetes"*

North Bristol NHS Trust

- *"Antenatal diabetic in pregnancy guidelines renewed and updated. New diabetes specialist midwife post commenced in August 2006 and CEMACH report gave me a guide on what my post should entail".*

Barking, Havering and Redbridge Hospitals NHS Trust

- *"We have secured research funding for antenatal breastfeeding classes for diabetic women".*

Guy's and St Thomas' NHS Foundation Trust

- *"To improve communication between different areas within the hospital we introduced a pro forma for the notes to record any changes in insulin dosage during the pregnancy - including the type of insulin used and the method/device of administration".*

Not stated

- *"We are looking at an electronic pop up system for GPs to highlight women needing pre-conception advice".*

Birmingham Women's NHS Foundation Trust

- *"Multidisciplinary guidelines and pathways of care are being developed. Plans are in progress to move GTT and diabetic workshops into the community setting in a neighbourhood where is closer to home for non English speaking women with interpreters".*

Not stated

In your opinion, since the publication of the CEMACH diabetes report, what is the level of change within your unit?

Clinical Directors and Heads of Midwifery reported a perceived change in diabetes care within their units following the publication of the CEMACH report.

- In preconception care 47% (78/166) of Clinical Directors and Heads of Midwifery believe their unit experienced a moderate or significant change.
- In obstetric care during pregnancy 55% (92/168) of Clinical Directors and Heads of Midwifery believe their unit experienced a moderate or significant change.
- In diabetes care during pregnancy 57% (97/169) of Clinical Directors and Heads of Midwifery believe their unit experienced a moderate or significant change.
- In postnatal care 55% (88/161) of Clinical Directors and Heads of Midwifery believe their unit experienced a moderate or significant change.

Compliance with recommendations

Since the publishing of the CEMACH Diabetes in Pregnancy report in 2007, have you reviewed your trusts' level of compliance with the CEMACH recommendations around diabetes in pregnancy?

- Seventy-seven percent (142/185) of Clinical Directors and Heads of Midwifery state that their trusts have reviewed their level of compliance with the CEMACH diabetes in pregnancy recommendations.
- 80% of all Clinical Directors and Heads of Midwifery point to an internal audit or a departmental internal meeting taking place to review their trusts' level of compliance with the recommendations (see table 1).

Table 1: Review of trusts' compliance with the recommendations

	Percentage	n=142
An internal audit	37%	52
A departmental internal meeting	43%	61
CEMACH interactive workshop	3%	4
Other	18%	25

2.4 Commissioners, including Primary Care Trusts

The questionnaire was sent to named Directors of Public Health or lead commissioners for maternity services at a total of 179 primary care trusts and health boards in NI, Wales and Scotland. 25% (44/179) of recipients responded to the survey. Fifty-three percent (20/44) of respondents had read the report. 83% (15/18) of those who had not read the report were aware of the reports' main recommendations.

Table 2: Description of PCT respondents

Size of PCT population	Percentage	n=42
Level 1: Up to 300,000	60%	25
Level 2: 300,000-600,000	24%	10
Level 3: 600,000 and above	17%	7
Number of Acute Trusts per PCT		
1	67%	29
2	14%	6
3	7%	3
4 or 5 trusts	10%	4

Perception of the report and recommendations

In your professional opinion how would you describe the CEMACH diabetes report and its recommendations?

- 91% (29/32) of PCTs agreed or strongly agreed that the report and its recommendations were easy to understand.
- Eighty-eight percent (28/32) of PCTs agreed or strongly agreed that it was helpful in improving services and important in raising the profile of diabetes in pregnancy services.
- Ninety-four percent (30/32) of PCTs agreed or strongly agreed that the report and its recommendations were based on sound evidence.

Commissioning of the report and recommendations

Have you commissioned any specific services for women with diabetes in pregnancy since the publication of the CEMACH report in March 2007?

Since the publishing of the report in 2007, have you commissioned audits or reviews of diabetes in pregnancy services in your area?

Please list any actions you may have taken in response to the CEMACH diabetes recommendations.

- 38% (14/37) of PCT respondents commissioned specific services related to diabetes in pregnancy care since the publication of the report.
- 28% (11/40) of PCT respondents commissioned audits or reviews of diabetes in pregnancy services in their area.

PCTs provided some interesting examples of good practice. Some of the specific comments are provided in Box 3

Box 3: Examples of good practice initiatives by PCTs in response to the CEMACH report

Specific comments

- *"We have conducted an informal review of related services...we were able to assure ourselves that, on the whole, local services were compliant with the recommendations, though there were some gaps, and a clear need to increase the level of available resource".*
"To ensure full implementation of report, an increase in the provision of specialist midwifery for women with diabetes in pregnancy has been included in our commissioning strategy plan".

Not stated

- *"We have updated our local guidelines accordingly and are including pre-conception counselling as a standard element of the annual review".*

Nottinghamshire County PCT

- *"We have commissioned a pre-conception clinic for both Type 1 & Type 2 diabetic women provided by the acute trust".*

North East Lincolnshire PCT

- *"Developed an agreed pathway for retinal screening for pregnant women with diabetes to ensure that all have the recommended number of screens through a digital camera".*

Derbyshire County PCT

- *"The CEMACH recommendations have impacted on commissioning of maternity services in that the services specifications with providers of services to pregnant women stated that these services must have plans for the care of women with complex pregnancies that require multidisciplinary agency care, including diabetes".*

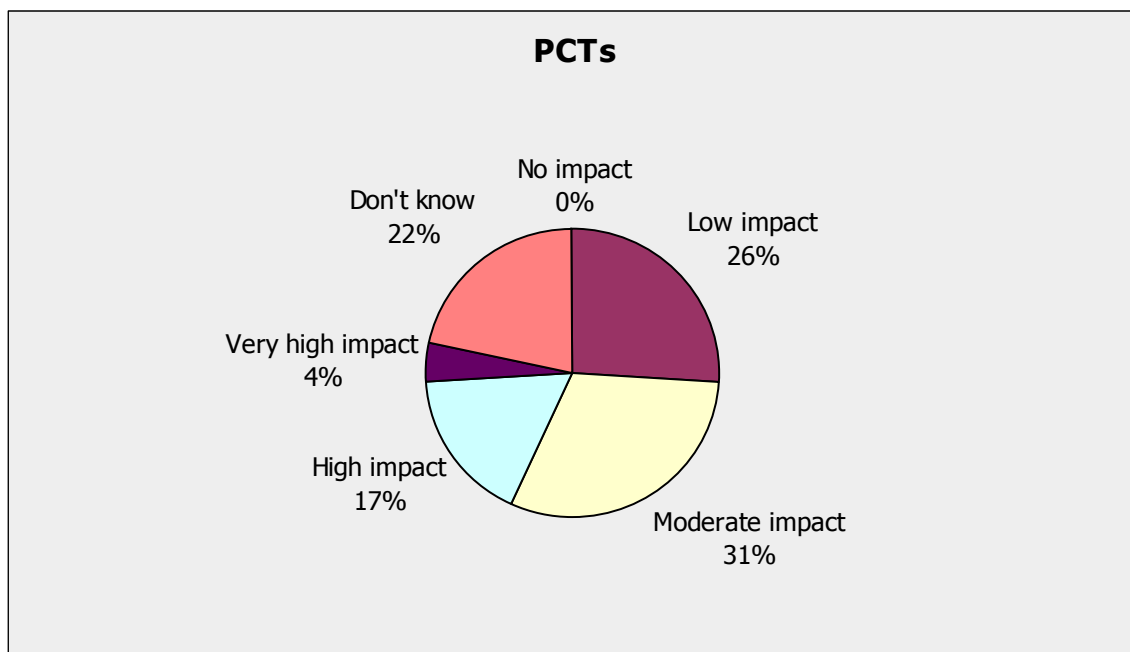
Devon PCT

In your opinion how much of an impact have the CEMACH diabetes recommendations had on the way in which you have commissioned diabetes in pregnancy services?

Please list challenges that PCTs have experienced in implementing recommendations.

48% of respondents believed diabetes recommendations resulted in a high or moderate impact in the way on which they commissioned diabetes in pregnancy services. Figure 4 illustrates the impact of the CEMACH diabetes recommendations on the commissioning of services as perceived by PCT directors.

Figure 4: Impact of CEMACH report and recommendations on the commissioning of diabetes services



Information provided by the PCT and commissioners respondents included how their organisation had responded to the report and how CEMACH could improve future reports. Their specific comments are given in box 4 below and box 5 overleaf.

Box 4: Challenges or barriers experienced by PCTs in implementing the recommendations

Specific comments

- *"Need more detail in maternity contracts. CEMACH could provide model wording".*
- *"Limited financial resources in PCT with many competing priorities - feels like 'yet another issue'".*
- *"Some of the difficulties in getting agreement in implementing recommendations have been as a result of having to work with a number of maternity providers in our case(8). To some extent this has been addressed through having 3 MSLCs linked with our 3 main providers across the county".*

Box 5: PCT suggestions on how to improve future CEMACH reports and recommendations

Specific comments

- *"Tools, models and other products to facilitate action."*
- *"Keep it simple. Start with obstetricians or midwives don't wait for commissioners. Cost your recommendations, lobby TSAR etc for adequate tariffs to make these affordable. Directly approach patients, raise expectations and demand."*
- *"Understanding systems before write recommendations so that these reflect how they can be achieved and 'facilitating' local discussion."*
- *"The recommendations are very clinically (appropriately) focused and as commissioners, we discussed them with providers who said they met most and it would cost us more to meet the remaining. ? Consider a regional event to raise the profile of CEMACH reports and recommendations with commissioners and providers."*
- *"Make it clearer to access from the website - it can be difficult to identify the latest information."*
- *"The implementation of CEMACH recommendations may be strengthened by CEMACH liaising with the Care Quality Commission for Specific reviews to be taken."*
- *"Having reports implemented via the NICE system would be preferable so that there was one route for the evidence base."*

2.5 National Bodies

32% (7/22) national bodies responded to our survey. These comprised the National Institute for Clinical Excellence, National Patient Safety Agency, Diabetes UK, Obstetric Anaesthetists' Association, Royal College of Anaesthetists, Royal College of Midwives, Royal College of Obstetricians and Gynaecologists. 72% (5/7) perceived the report and recommendations produced by confidential enquiries as 'very useful' for their organisations and 57% (4/7) believed the CEMACH Diabetes in Pregnancy report was 'very useful' to their organisation. All of them reported the report and recommendations were easy to understand, 85% (5/7) agreed

or strongly agreed the report was important in raising the profile of diabetes in pregnancy services, and 72% (5/7) agreed or strongly agreed it was helpful in improving services and was based on sound evidence.

Information provided by the national bodies who responded included comments on how their organisation had responded to the CEMACH report and how CEMACH could improve future reports. Their specific comments are given in the box 6 and box 7.

Box 6: Good practice initiatives by national bodies in response to the CEMACH report

- *“There are two points at which these type of reports are useful at [our organisation]. Firstly in terms of informing guidance development and secondly in terms of the implementation programme around assessing uptake of aspects of the guidance and indicating where further implementation support may be needed”.*

National Institute for Clinical Excellence (NICE)

- *“The information and recommendations have been cascaded through RCM networks. We have especially promoted the need for partnership working to improve the quality of care for women with diabetes in pregnancy.”*

Royal College of Midwives

Box 7: National bodies’ feedback on how to improve future CEMACH reports and recommendations

- *“Request evidence all trusts have presented the findings to all staff by email/paper/presentation. This could be a metric by NHS LA/CNST”*
- *“More dissemination of information. Maybe each trust should have a CEMACH day or two each year to discuss the report internally and how they are going to adopt the recommendations.”*
- *“It may become useful to split type 1 and type 2 depending on what information is required from the reports and recommendations.”*

3. DISSEMINATION ACTIVITIES

In addition to the specific post project review survey, CEMACH conducted a wide range of dissemination activities up to November 2009 to promote uptake of the recommendations from the report “Diabetes in Pregnancy: are we providing the best care?” These activities included

- 20 conferences/local events with a combined total of 1337 delegates
- 10 diabetes interactive workshops with 329 participants
- 1 peer review paper and 12 conference abstracts.

3.1 Conferences

The report was launched with three national conferences held in London, the North West and the East Midlands with a combined total of 660 delegates. In addition there were a further 17 local events promoting the recommendations throughout 2007 and 2008 which a further 677 delegates attended in total.

3.2 Interactive Workshops

Ten diabetes interactive workshops have been held since the report was launched, including two pilot events. The aims of the workshops were to disseminate the enquiry findings and to encourage participants to consider ways in which they can implement the recommendations within their practice. The workshops incorporated presentations on the report findings and women’s experiences of pregnancy with diabetes as well as work in breakout groups. In these groups, with the support of an expert clinician as facilitator, participants from a variety of specialties examine case studies adapted from the enquiry. The cases both illustrate the origins of report recommendations and stimulate analysis of both individual and local practice.

Participants are asked to:

- Consider what would happen if the woman or her baby were cared for by their service and if this case could reoccur
- Identify examples of local good practice
- Propose actions required both within their own practice and the wider service, necessary to meet the report recommendations (e.g. policy development, specific training, formulation of business cases and local or regional audit)
- Present good practice and action points to the wider audience within a feedback session.

These points and any ensuing debate form the basis of a workshop report written by CMACE.

This is distributed to all participants to take forward in practice with the aim to improve services and ultimately outcomes. The workshops have been held across England and Wales and

attended by representatives of all professional groups involved in the care of women with diabetes, as illustrated in tables 3 and 4 overleaf.

Table 3: Diabetes interactive workshops held

Date	Region	Location	Participants
16/09/09	London South East	Basingstoke	37
15/09/09	South West	Exeter	33
12/06/09	South West	Bristol	39
05/02/09	East Midlands, Yorkshire & Humberside	Sheffield	23
11/12/08	North West	Manchester	26
08/12/08	London South East	London	38
18/09/08	East of England	Colchester	22
22/01/08	North West	Manchester	35
25/06/07	Wales (pilot)	Cardiff	48
19/06/07	Wales (pilot)	Wrexham	28

Table 4: Delegates attending Diabetes Interactive Workshops, by speciality

Speciality	Number
Diabetes Specialist Midwives	21
Midwives	183
Obstetricians & Gynaecologists	43
Diabetologist	15
Dieticians	12
Diabetes Specialist Nurse	9
Practice Nurse	4
GP	5
Other	18

3.3 Peer Review Papers and Abstracts

CEMACH produced one peer review paper '*Perinatal mortality and congenital anomalies in babies of women with type 1 or type 2 diabetes in England, Wales, and Northern Ireland: population based study*'. Macintosh MC, Fleming KM, Bailey JA, Doyle P, Modder J, Acolet D, Golightly S, Miller A. BMJ. 2006 Jul 22;333(7560):177. In addition twelve abstracts for conferences including the RCPCH annual conference, the 13th annual British Maternal and Fetal Medicine Society conference, The British Association of Perinatal Medicine Scientific meeting and the 8th International meeting of Obstetrics and Gynaecology have been produced.

4. SUMMARY AND LESSONS LEARNT

The post project review set out to assess the effectiveness of CMACE's dissemination activities in relation to the diabetes report and to elicit views from policy makers, service providers and commissioners on their knowledge and perception of the report and the extent of the implementation of the recommendations.

The findings from the survey indicate that CMACE's dissemination strategy was successful, particularly amongst senior clinicians in NHS trusts, with the report being widely read and instrumental in prompting service improvements at a local level. Whilst 8% of Clinical Directors and Heads of Midwifery considered that their units complied with the report's recommendations prior to its publication in 2007, 88% considered that the recommendations were being met by mid 2009.

On the other hand, whilst the survey indicates the report and its recommendations had some impact on the commissioning of diabetes services, the response rate for PCTs was substantially lower than for NHS Trusts. CMACE needs to further consider how to frame and disseminate its recommendations for PCTs and other commissioners in future reports.

The national bodies that responded to the survey believe CMACE reports are useful to their organisations but again the response rate amongst these bodies was limited and CMACE should strive to maintain strong links with these bodies wherever possible. CMACE's continued participation in the Care Quality Commission (CQC) maternity outliers programme and involvement in the guideline implementation process at the National Institute for Clinical Excellence (NICE) is crucially important. CMACE did not include SHA's in the survey and these organisations would be important to target in future post project reviews.

As many of the written comments by respondents indicate, successfully implementing change in diabetes care is a complex process because of the relationships between a wide range of organisations, professionals, patients and carers. The overall impression is that respondents viewed the report as a lever and incentive to overcome some of the barriers that do exist. As one respondent commented "It is always challenging working with other disciplines. This report has enabled links between professionals to be improved which impacts on the services provided".