The future role for a diabetes specialist midwife

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Abstract

In the United Kingdom diabetes is now the most common, pre-existing medical disorder in pregnancy [Jincoe A. Diabetes: monitoring maternal and fetal wellbeing. Br J Midwifery 2006;14 (2):91–4], and still continues to have associated risks for the mother, fetus and neonate [Confidential Enquiry into Maternal and Child Health. Diabetes in pregnancy: are we providing the best care? Findings of a national enquiry: England, Wales and Northern Ireland. London: CEMACH; 2007]. Worldwide diabetes is becoming more prevalent [Macfarlane A. Diabetes and pregnancy. Br Med J 2006;333(7560):157–8] and there is the added new phenomenon of the increase in Type 2 diabetes in the childbearing population. The midwifery role in such pregnancies has come under question as some units have Diabetes Specialist Midwives and some do not and midwifery care is presently varied [Miller A. Diabetes: lessons for midwives. Pract Midwif 2005;8(1):4–5]. This review will specifically seek to address the midwifery role in relation to this client group with complex needs. It will explore how a specialist midwifery post could have an impact on improving care, how the role is developing and future perspectives. Aspects on how midwifery care is delivered to women with diabetes in the United Kingdom will be discussed and a brief international insight relayed.

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Introduction

This is the New Millennium and we are living in a continually changing world where new problems and challenges to healthcare are emerging every day. However, it must be noted that with challenges come the creation of opportunities to provide a better level of care and the chance to embrace a better future. One such challenge throughout the world is that diabetes is increasing in prevalence and there is the added new phenomenon of the increase of Type 2 diabetes in the childbearing age group.\textsuperscript{1, 2} The current obesity epidemic in adults and children suggests that this rise will continue.\textsuperscript{3} The increase in ethnic diversity, obesity and the proportion of older mothers within the UK maternity population suggests that achieving optimal pregnancy outcomes may become more challenging in the future.\textsuperscript{4} It is important for midwives to assess the way that care is delivered at present and to face the future prepared for the challenges that lie ahead.

Diabetes has now become a major public health problem.\textsuperscript{5} It is the most common pre-existing medical disorder complicating pregnancy in the United Kingdom\textsuperscript{6} and affects approximately one pregnant woman in two hundred and fifty.\textsuperscript{7} Recent publications and reports have highlighted that diabetes continues to have an associated increased risk for the mother, fetus and neonate.\textsuperscript{8, 9, 10} It can lead directly to an increased risk of stillbirth during pregnancy, to having a baby with a congenital abnormality, and to the risk of a baby dying in the first year of life.\textsuperscript{5}

The form that midwifery roles should take in a pregnancy complicated by diabetes has come under question.\textsuperscript{11} Throughout time midwifery roles have been constantly evolving, diversifying and responsibilities changing, particularly in recent decades. This review will specifically seek to address the issue of midwifery care to pregnant women with diabetes and how it is organised. It will look at how midwifery care in some areas of the UK has adapted and been refocused. International aspects on to how midwifery care is delivered to women with diabetes in other countries will be briefly mentioned and future perspectives will be explored.

What is a midwife?

The word midwife as defined in Wikipedia means “with woman”.\textsuperscript{12} For years the role of the midwife in providing care for women experiencing normal pregnancy and birth has remained unchanged, but midwives now need to be more adaptable and specialist roles have been coming forth and developing. ‘Aristotle’\textsuperscript{13}, (a pseudonym used by an 18th Century English doctor), had even written about the qualities a midwife should possess long before our present day complexities! “A MIDWIFE ought to be of middle age, neither too old nor too young, not subject to diseases, fears, or sudden frights. A lady’s hand, a hawk’s eye, and a lion’s heart; to which it may be added activity of body and a convenient strength, with caution and diligence; not subject to drowsiness, nor apt to be impatient. She ought to be sober and affable, not subject to passion, but bountiful and compassionate and her temper cheerful and pleasant, that she may the better comfort her patients in their sorrow. Nor must she be very hasty, though her business may perhaps require her in another place, lest she should make more haste than good speed. But above all, she ought to be qualified with the fear of God, which is the principal thing in every state and condition, and will furnish her on all occasions both with knowledge and discretion.”\textsuperscript{13}

Whilst this quotation may bring a smile to many it does reflect that midwives have always needed to have special skills and personal qualities to enable provision of care in all variety of situations. Although the main concern for care providers is with present care and in preparing for the future, a historical perspective on maternity care illuminates women’s history and social history throughout the ages.\textsuperscript{14} No doubt the increase in diabetes in childbearing women is a reflection on our culture to-day. The “with woman” meaning of the word midwife has held true throughout the ages and should still hold true in our changing times. So, while the historical background continuously changes, so does the role of a midwife. Perhaps by extending and diversifying this role midwives can adapt to the needs of women in a positive way and still remain “with women” and actively seek to influence and improve care.

Women’s needs, stress and anxiety

The focus of midwifery care is essentially about healthy women but this care often extends to include women with medical problems such as diabetes and the question arises as to the exact role the
midwife should take. Women who have complications still need information, support and advice from the midwife and that in such pregnancies the need for such care may be increased. In fact, the midwife can have an important role in coordinating care for provision of a “seamless” delivery of service that ensures needs are met and the best possible care provided. Midwives must recognize that it can be easy to forget that at the centre of a pregnancy complicated by diabetes there is a woman who may be missing out on any form of normality during pregnancy. Having the medical condition of diabetes and also being pregnant can be a fearful and worrying time for the mother and also her family. A strong wish for a normal pregnancy and a normal baby will always be her foremost thought.

For women and their families complications during pregnancy can provide a stressful and uncertain experience and stress can be shown to impact on the mother, child and family. Sittner et al. examined the psychosocial impact of a high-risk pregnancy on families through a descriptive study using naturalistic inquiry. Three recurring themes emerged from this qualitative study – firstly, the women expressed that they experienced mixed emotions from feeling scared to excited; secondly, there was the theme of needing to adjust and adapt to what was happening in their life and thirdly, the need of support and access to information and informative care.

The authors noted in conclusion that the high-risk pregnancy not only affects the woman but also has an effect on the functioning of the family. There were limitations to this study in that the sample was purposive and small and therefore the results were not generalisable. The authors recommended verification of the findings in other high-risk populations. Despite this, it provides an understanding for midwives of the issues surrounding a pregnancy associated with risk. It also emphasised that midwives do need a thorough understanding of high-risk pregnancies if they are to help women cope and to effectively implement midwifery care.

Women’s anxiety cannot be underestimated. Interestingly Homer et al compares levels of anxiety with a different model of care involving a team of midwives. A risk associated pregnancy team (RAP) cared for women with risk associated pregnancies. In the study, these women’s anxiety was compared to that of women receiving standard care in a normal pregnancy. The women with normal pregnancy reported more anxiety than those who had been managed by the RAP team. This seemed to compliment the idea that a team approach helped to reduce worry. Lindsay confirms this and describes how anxiety and uncertainties are the key characteristics of a risk associated pregnancy and that these women need support to help them achieve successful outcomes. The midwife can play a crucial role in maintaining a focus on normality in the midst of difficult pregnancies.

The most recent literature review regarding stress in pregnancy was by Alderdice and Lynn in 2009 who reiterated that one of the factors associated with stress in pregnancy can be identified as having a complex pregnancy that involves a medical condition. The authors concluded that women vary substantially in their experiences of pregnancy, and in the available resources for help, and suggested that midwives have a key role in identifying and supporting women who are undergoing stressful experiences.

Another recent study raised awareness of how women cope with diabetes during pregnancy and specifically sought to seek out women’s personal accounts prospectively using a phenomenological approach. The accounts revealed the everyday dilemmas that pregnant women with diabetes face and how they had to “juggle” their lives to try to obtain the best diabetic control. Some of the frequently recurring themes were of concern for their unborn baby, concern for other already existing children and hypoglycaemia. Many of the women harbored resentment and anger towards having diabetes and expressed that they had not been allowed to be “normal” and that life became a constant balancing act. They described how having to monitor their condition left them little time to do anything else and of feeling “robbed” of the experience of having a normal pregnancy. This study no doubt highlighted the difficulties that women with diabetes face and raised the issue that practice does need to change to show better understanding and provide a service which enables improvement of care.

**Women’s choice and continuity of care**

The foundation of midwifery practice has always been to provide safe, woman-centered and holistic maternity care. Women-centered care is based on the philosophy of maternity care that provides priority to the wishes and needs of the woman and places emphasis on the importance of informed choice, continuity of care, client involvement, clinical effectiveness, responsiveness and accessibility.
In a complex pregnancy the woman still has the right to make choices and this is reinforced by
guidelines from the UK Department of Health such as the Changing Childbirth Report and the
Patients Charter. These reports raise awareness of the need for woman-centered care to be provided
for all women and this includes those who have the medical complication of diabetes.

Women and their partners will want to know and be able to trust the midwife who has the
responsibility for providing information, support and ongoing care however complicated the preg-
nancy may prove to be. Their desire for this emphasises the value of continuity of care, meaning that
the woman can have an identified contact and be able to build up a relationship of trust with the
availability of accurate information.

Specialist knowledge is required for the complex care of a woman who has diabetes. With the
addition of a specialist diabetes midwife providing of continuity of expert midwifery care, it has been
shown that there is potential to improve maternal and fetal outcomes and satisfaction. This could be
a good example of practice development and could enhance care in the gaps of current care provision.
These women need specialist support and information and this is best provided by midwives who also
have extensive knowledge of diabetes. The actual challenge is in how services are organised for
women with diabetes and how that service can manage to provide holistic, women-centered care that
encompasses continuity.

Women want to have their questions answered, to be treated with respect and dignity and for their
care to be less fragmented. The inclusion of a diabetes specialist midwife would surely promote
continuity of care, add an extra dimension, and consequently capitalize on influencing positively the
care provided. With this would come added satisfaction for the mother and her family.

Multidisciplinary teams

A diabetes specialist midwife within a multidisciplinary team could have a fundamental role in
maintaining midwifery care in a high-risk pregnancy, and Lindsay writes of care being about part-
nership and empowerment. Already there have been recommendations made in the UK that women
with diabetes, and their partners, should be cared for by a multidisciplinary team that includes
a Diabetes Specialist Midwife. Providing midwifery care still utilises the essential role of a midwife in
care for a woman who has diabetes, and adds a perspective of normality for the woman especially
when these women also require care from a wider team. Dividing maternity care into normality and
high-risk may contribute to a reductionist view of a woman's needs and there needs to be a balance
between medical and natural perspectives.

One-to-one care is not appropriate in a pregnancy complicated by diabetes due to the complexity of
the condition and there is evidence suggesting that regardless of risk all women with diabetes will
benefit from midwifery input; it may be the continuity of a multidisciplinary team that is important.
Within that team the specialist midwife can act as an advocate, supporter, counselor, educator and
facilitator.

Both medical and midwifery staff together should provide maximum possible continuity of care for
women experiencing a high-risk pregnancy. In considering the midwife's position in a multidisci-
plinary team, care must be taken that she acts as an advocate for the woman whilst retaining
professional integrity. In trying to maintain a high standard of care she may find herself in a vulnerable
position, balancing the needs of the mother with that of the medical team, and having to act as a
buffer. It can be a challenge in practice to provide care to women with a complex pregnancy as their
options for care can be more restrictive which can widen an obstetric and midwifery split. However,
midwives have a distinctive role and provide a frontline service for both the mother and the baby, being
key professionals in pregnancy and birth, and this could make all the difference to the experience for
the woman. The midwife's contribution can be powerful in a multidisciplinary team where everyone
pools and draws together their particular skills. A role like this within a team could be a source of
strength insight and experience that would enable co-ordination of planning, communication and
decision making. The important aspect should be to focus on providing the best quality care by good
quality team working and partnership, thus developing care designed to meet the needs of pregnant
women with diabetes.
**Professional issues**

In 1989 the St. Vincent Declaration was produced by the World Health Organization and the International Diabetes Federation. This declaration aimed, among other points, that the outcome of a diabetic pregnancy should approximate that of the non-diabetic pregnancy. A ten year outcome analysis undertaken in Northern Ireland assessed outcomes the years between 1985 and 1995 and concluded that the outcome of a diabetic pregnancy still remained at a much greater risk than that of the rest of the population. Subsequent reports again highlighted these risks, and reinforced the view that further improvements in the management of women with diabetes in pregnancy were required. The aims of the St Vincent declaration were far from being achieved.

Remarkably, in the same year as the St Vincent Declaration in 1989, a midwife was appointed in St Mary’s Hospital Manchester to act as a Diabetes Specialist Midwife. On a recent fact finding mission to St Mary’s Hospital in Manchester, the author found not only one midwife but an entire Specialist Diabetic Midwifery Team. This team provides a variety of care including preconception care, and offers antenatal advice and a telephone advice facility. The midwives provide education about diabetes in pregnancy to all levels of staff and they are an integral part of the multidisciplinary team. This experience was also noted by Buick a student midwife when undertaking her placement at St Mary’s Hospital during her midwifery course. Buick comments that this service demonstrated how the role of the midwife has been successfully extended, and that mothers with diabetes were receiving holistic care.

In her address at the Royal College of Midwives (RCM) annual conference in London in 2005, the then President of the College discussed the metamorphosis of midwifery and the spectrum of midwifery care now provided. She spoke of the necessity for midwives to include those high-risk women who require specialist skills in the care they provide.

There are currently many developments that are creating changing midwifery roles and working practices due to the needs and changing demands of maternity care. This has resulted in the introduction and growth of specialist roles focusing on particular clinical skills. To facilitate this the Royal College of Midwives have produced guidelines on the topic of refocusing on the role of the midwife.

In Northern Ireland, The Northern Ireland Practice and Educational Council for Nursing and Midwifery (NIPEC) commissioned research which explored extending and expanding innovative nursing and midwifery roles in the Northern Ireland Health and Social Services. This research identified good practice with recurring themes of relationship building, holistic care and skilled communication. Some qualities identified were:

- Advocacy
- Autonomy,
- Educator
- Disseminator of information,
- Health promotion
- Leading by example
- Providing clinical leadership,

all reflecting on qualities that may be required of a Diabetes Specialist Midwife. This research was limited in that there was no method for the researchers to identify all the innovative roles that were currently in place. It did however highlight that the growth and evolution of new roles has increased, particularly from the year 2000. Importantly it offered recommendations on how such roles should be considered, indicating the need for a clear rationale, stated objectives and the proposed benefits of an expanding role. Appropriate funding, adequate resources and an infrastructure for support of the practitioner including an appropriate line manager were recommended requirements. Issues of accountability, professional recognition, regulation and clinical governance should be made clear. Being mindful of wider practice consequences, and the possible deskilling of others, evaluation of such roles were advised, but throughout the present literature review no evidence was found regarding the evaluation of the role of a Diabetes Specialist Midwife. More recently in Northern Ireland a study using qualitative interview technique was undertaken to review the perspectives of healthcare
managers on new roles and their impact on patient care and cost effectiveness. This study showed
generalized support from health managers for the development of enhanced roles but also noted that
the success of such roles relied on adequate support, suggesting that appropriate infrastructure should
be in place to support and evaluate such posts.46

There is argument that new roles can devalue traditional skills.47 It is also questioned if specialist
roles offer an increased continuity of care or have they been created just to fill the gap left by a shortage
of another professional.47 Worryingly, it is suggested that as the numbers of extended roles have
increased the number of midwives working in core areas has decreased.47 Interestingly one of the
motions for debate at this year’s RCM Annual Conference was whether specialist knowledge comes at
the expense of key midwifery skills. It was acknowledged in debate that these roles facilitated some
normality to high-risk women but that there was also a risk of dilution of the core aspect of the
midwife’s role.48 Against this lies the argument that there should not be distraction by arbitrary role
boundaries but concentration on the individual woman and her family.49

Midwives are required to be autonomous and up to date with evidence, be responsible for indi-
vidual professional development and to be accountable for their actions.50 This can produce honesty,
respect and mutual collaboration in a multidisciplinary team.51 It must however be remembered that
along with expansion of the role comes increased accountability and responsibility. Midwives in the
UK are governed by the Nursing and Midwifery Code of Professional Conduct and need to practice
competently, possessing the knowledge, skills and abilities required.52 It is obvious from this that on
appointment to a Diabetes Specialist Midwifery post, the midwife should receive any specific
education necessary for the role and adhere to boundaries of practice.53 When in post there should
also be the opportunity to continue in professional development and maintain competence and
confidence.

Regulation in midwifery needs to allow midwives to extend their practice so long as she is
appropriately prepared, which will mean that a midwives’ invaluable knowledge and skills can be
utilised to bring maximum potential for outcome.54

**Present and future perspectives**

Already midwives work in partnership with women and their families to provide care and promote
health. The question is whether or not by creating diversifying roles the care provided is more effective.
The Prime Minister’s Commission55 on the future of nursing and midwifery in England has expressed
a goal for the future. It suggests that by fulfilling the potential of nurses and midwives the best possible
health and wellbeing of families and communities could be achievable. The Summary Vision suggests
that nurses and midwives are ordinary people who do extraordinary things and that their potential can
be untapped and released. Some important points expressed in this vision are that nurses and
midwives:

- Will take centre stage in health leadership, delivering efficient and effective healthcare, policy-
making, service design, service management and education.
- Will be at the heart of a universally accessible, service-user-driven system of integrated health and
social care, most services provided near people’s homes.
- Will draw on extensive knowledge to provide high quality physical and psychological care, using
skills ranging from the everyday to the inspirational, as nursing and midwifery practice is rooted in
compassion.
- Will be valued by society and the health services not only as clinicians, but also as managers,
teachers, researchers, activists, thinkers and policy-makers, and also be valued members of the
local community
- Will be articulate, informed and consulted on all health-related issues, and will have the confi-
dence to take the lead and take ownership.
- Will be a source of, inspiration, support and also leadership
- Will tell a new story of nursing and midwifery, of community and clinical involvement that creates
a public image reflecting their diversity and high value in society
Whilst this commission is looking at nursing and midwifery generally, many of the points raised could be applied within the post of a diabetic specialist midwife. Many of the qualities described are required in such a role, for example, the ability to be informed and able to be articulate and to act as a source of inspiration, support and leadership. The midwife’s role is rooted in compassion and possesses the opportunity to deliver care to pregnant women with diabetes in a sensitive and knowledgeable way. Surely these qualities could only provide strength in delivery of care to women who with the complication of having diabetes are requiring maximum support.

In some areas of the United Kingdom the current practice is to include such a specialist midwife but there is no such post in Northern Ireland. The most recent organizational survey was by CEMACH in 2004 of units in England, Wales and Northern Ireland. It indicated that 77% had a midwife who was a specialist in the care of the diabetic mother but there were still 23% percent of units that did not.56

For the present review, enquiries were made informally inside and outside of the United Kingdom to try to establish how midwifery services for pregnant women with diabetes were presently provided. Some enquiries were made directly to hospitals, to the Royal College of Midwives and also the International Alliance of Midwives. This proved to be challenging and it was difficult to obtain information and perhaps this could be a future topic for research where better resources and more time was available to acquire more accurate information. Nevertheless informal enquiries did reflect that services were fragmented and varied from area to area. One of the main issues uncovered was the existing variety of roles presently in practice in relation to diabetes in pregnancy. Those roles ranged from identified posts with specific job descriptions to those midwives with an interest in diabetes working without a specific remit or recognised post. In some areas midwives took it in turn to provide care at joint antenatal/metabolic clinics so that all would be aware of the needs of this client group.

In Northern Ireland there are presently no identified posts as such for diabetic specialist midwives. Enquiries in Scotland reflected a similar pattern to Northern Ireland. In Wales some hospitals had midwives who had a special interest in diabetes, and further enquiries did reveal that there were some midwives who were employed specifically in a role regarded as a specialist diabetes midwife. The situation in England is completely different, and there are indeed many recognised specific posts for this role, with a variety of expertise and a variety in the extent of care provided. This was reflected in the “Open Space Event” held in 2008 in London by the National Diabetes Support Team.57 This event was organised to facilitate a sharing of ideas and further discussion as to how women could be successfully supported throughout pregnancy right through from preconception to the postnatal period. Over 100 health professionals and service users attended, and midwives with expertise in caring for the pregnant woman with diabetes were invited. Those midwives who attended displayed backgrounds of a variety of responsibilities, training and education. Themes were identified at the event and task and finish groups were formed to look at needs, find solutions and develop and take forward new ideas. One such group was the Diabetes & Pregnancy Supporting Midwives group.58 This group is seeking to find out the existence of such roles and the diversity in midwifery practice of midwifery within each role. The Royal College of Midwives is working in collaboration in this task. The aim will be to develop agreed minimum standards and a competency framework for midwives whose role is in caring for pregnant women with diabetes. Following from this the standards could then be utilised to develop an academic module that would relate particularly to meeting the educational needs of midwives in such roles. Undoubtedly midwives throughout the United Kingdom would welcome this opportunity and it was interesting to read a comment posted recently by a midwife from Scotland on The Royal College of Midwives Discussion Forum stating that she finds diabetes care and management is largely ignored in comparison to England, where there exists diabetes midwife specialists who provide, facilitate and promote a high standard of care and education to both midwives and the women they care for. She also stated that training and study was difficult to access, and that she would like to develop the skills and training necessary to provide the standards of care needed.59

Informal enquiries outside of the United Kingdom showed:-

- Canada (Toronto) – There were no identified specialist midwives but women were cared for by a multidisciplinary team and this included midwifery input but not in a recognised role as a specialist diabetic midwife.
• United States (Chicago) – There was no midwives in Chicago!! There is what is termed obstetric nurses; however some of the “Research Nurses” would help to care for women with diabetes.

• Sweden – For women with Gestational Diabetes most of care is provided in the community where the women live. Women known to have existing diabetes are referred to the specialist antenatal care within the hospital and all the care for that woman is provided within the specialist clinic for the remains of the pregnancy. There is close collaboration between midwives, obstetricians and physicians regarding these women. Usually, there is at least one midwife working there who has specialist diabetes education – if not there is collaboration with the diabetes nurses. In city areas there are usually several midwives with specialist diabetes education, however, in rural regions there is a lack of midwives with specialist diabetes training and care may be provided by diabetes nurses and the community midwife.

• India – there are no professionally trained midwives to look after complicated births. Those who work as midwives often have too little clinical experience and are of low-ranking status among other healthcare staff.60 This was reflected in enquiries in other countries such as Pakistan, China and South America. Importantly diabetes is more prevalent in many of these countries.

Summary

It is obvious that with the passing of time provision of healthcare services constantly changes, including that delivered to pregnant women. Throughout history the role of the midwife has adapted and advanced in response to the ever moving goalposts of women’s needs and our changing society. In this twenty first century, a new climate means a new direction and it is paramount that midwives endeavor to continue in their invaluable role of meeting the needs of women and this should incorporate those with complex needs such as pregnant women with diabetes. There is still much to learn but midwives can no longer disengage from the present diversifying and challenging period. This will mean new roles being introduced in acknowledgement of these needs in advancing times. Perhaps the extending role in relation to diabetes in pregnancy is a just starting point for the future and should not be something to fear but should be viewed as embracing and enhancing the invaluable skills used everywhere by midwives.61 It is interesting that in researching for this article that the present midwifery service provided for women with diabetes was found to be varied and fragmented, surely this is a sign of something that is just beginning to evolve. There appears to be a clear need for the development of the role of the midwife in the care and management of diabetes, but this requires the infrastructure, appropriate guidelines and funding to do so.

As midwives continue to face new challenges it is hoped they will see it as the opportunity to grow and adapt their skills to reach for the best possible solutions and continue doing what midwives do best—putting the wellbeing of mothers and babies first. After all the word midwife means to be “with woman” and this should apply to all women, including those with pregnancies that are complicated by diabetes. These women should not be viewed in context of their medical complication alone but as women who need to experience a positive pregnancy and positive outcome. Specialist midwifery knowledge and skills can be enhanced but should never be at the detriment of core essential midwifery skills.36

The values and philosophy that define a midwife should not change. The point will always be to provide trust, support and faith to women to help and empower them to have the best possible birth experience and assist them in becoming strong, capable mothers for future generations. The role which the midwife has in encouraging future optimal outcomes should not be underestimated or undervalued.

Practice points

• Define specialist diabetes midwifery roles and responsibilities clearly.
• Develop guidelines for practice in this area.
• Develop a specific academic module for training.
• Develop a standards and competency framework for the role.
Audit of the service provided by diabetic specialist midwives.
Appropriate recognition of the role as a specific post and as a member of the multidisciplinary team.
Creation of appropriate documentation for accurate record keeping.
Involvement in risk management.
Support network.
Resource implications

**Research agenda**

We live in an age of evidence-based medicine. Importantly we need to be able to evaluate the likely impact of various interventions such as the midwifery input of a specialist diabetes midwife.

- Audit of patient outcomes and patient satisfaction with care provided.
- Comparison of outcomes to those patients were a specialist diabetes midwife is in post to those were there is no such post.
- Interactions between the diabetes midwife, the patient and the multidisciplinary team can be complex but these interactions could influence and impact the quality of care. Ways in which this could be evaluated would be valuable in interpreting how these relationships have an effect on care, outcomes, and on patient and job satisfaction.
- A more structured and extended approach to ascertaining what midwifery care is being provided at present to pregnant women with diabetes.

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