

The top ten research priorities in diabetes and pregnancy according to women, support networks and healthcare professionals

Supplementary information

Table S3: The full list of 60 indicative questions with the original questions submitted in the initial survey. Presented in groups by phase of pregnancy, with rank. Darker grey indicates higher number of questions, votes or priority rank. Top ten are highlighted. All – aggregated across all groups; W&SN – Women and support networks; HCP – Healthcare professional; Questions code: W – Woman; S – Support network; H – Healthcare professional; U – Other; N – Not answered.

#	Phase of pregnancy	Indicative Question	FINAL RANK	Initial survey submissions count by group				Initial survey questions
				All	W&SN	HCP	Other/unk	
1	Before pregnancy	What effect does diabetes, or previous gestational diabetes, have on a woman's fertility (ability to get pregnant and number of pregnancies)?	40	7	7	0	0	W-How does type 1 diabetes affect fertility? W-Is fertility affected by diabetics? W-Why is it so difficult for women with Type One Diabetes to become pregnant and to maintain a pregnancy? W-Will I have issues becoming pregnant while having Type 1? W-Can diabetes prevent me from having more babies in the future as I would like to [3 or &] healthy babies W-Is there a physical limit to how many babies a t1 woman can have in her fertile lifetime W-Will gestational diabetes in 1st pregnancy, affect my chances of getting pregnant again
2	Before pregnancy	How can a woman with diabetes best prepare for pregnancy? For example blood sugar level targets, nutrition.	14	10	4	6	0	W-How can we improve outcomes for Type 1 diabetic women wanting to get pregnant/have a baby? H-Managing patients in pre-pregnancy clinics so complications do not occur during pregnancy: what are the optimal parameters in such clinics H-What is the best way to plan for pregnancy for a woman who has diabetes? W-What is the most important factor mothers should control pre-conception to improve neo-natal outcomes? H-What preconceptual advice should diabetic women be given regarding preparing to conceive a baby W-Are diabetis more likely to suffer deficiencies and if so what are they? H-Are women with pre exciting dm more nutritionally compromised? Difference between different socio-economic status H-How to improve mother glucose levels before and during pregnancy H-what is optimal blood glucose range before and during pregnancy? what's risk if BG control isn't that good during the different trimesters?

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								W-What is the best A1c to have before and during pregnancy?
3	Before pregnancy	How much and for how long should women with diabetes take folic acid before pregnancy?	57	2	2	0	0	W-How much folic acid should diabetic women take before and after conception? W-What if I haven't been taking folic acid long enough before falling pregnant?
4	Before pregnancy	For women with diabetes, what factors (i.e. their age, the duration they have had diabetes, contraception) may be important to consider when planning to have a family?	55	6	5	1	0	W-Does my age in pregnancy make a difference to risk of short and long-term complications/diabetes developing in me or my baby? W-Does the age you get pregnant at with diabetes impact the baby getting diabetes later in childhood? W-what effect does fertility treatment have on your likelihood of developing gestational diabetes? Likewise maternal age? W-Does it really make a difference to the outcomes/risks if I manage my sugars tightly for 6 months before pregnancy - doesn't the time before with diabetes have an impact on the eggs (or indeed sperm if the father has diabetes)? what is the real cut off if there is one really? H-Why do diabetic women who take up pre-pregnancy counselling get pregnant before their diabetes is optimally controlled? W-What affect does contraception/changing contraception or coming off it have on blood sugar levels?
5	Before pregnancy	How can care and services be improved for women with diabetes who are planning pregnancy? For example, removing barriers to	10	37	4	32	1	H-Do we provide enough pre-conceptual care for women with diabetes who are child bearing age H-How can primary care health professionals improve their dialogue about contraception and pregnancy planning at every contact with women of childbearing age with diabetes? N-How can we improve pre preg counselling for pre existings H-How can we improve pre pregnancy 'counselling' for women with diabetes

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		attending pre-pregnancy clinics.						<p>H-How can we improve pre-conception care in women with diabetes - provision of care pathways, education, targets?</p> <p>H-How do we improve pre-conceptual care, ensuring women tighten their diabetic control and start pregnancy in optimal health?</p> <p>H-How well do we manage our patients in preconception clinic - for diabetes control?</p> <p>H-preconception care and compliance needs to be better, How can we improve this?</p> <p>H-With the increased incidence of women with type 2 diabetes before pregnancy what support is available to primary care to prepare these women for pregnancy?</p> <p>H-How do women access care through the hospital without going through the G.P for pre-conception advice?</p> <p>W-How to better educate women & family about pregnancy & diabetes?</p> <p>H-What should a woman with diabetes should do before she gets pregnant and how can we make sure that all have appropriate pre-conception counselling?</p> <p>H-How can women with type 2 diabetes be supported to meet the care recommendations before pregnancy including BMI</p> <p>W-Why isn't there more support for pre-conception for women with diabetes</p> <p>H-How to make PPC services more accessible to women with T2D in particular those from BME groups and disadvantaged backgrounds</p> <p>H-How can women with pre existing diabetes be engaged pre conception to improve pregnancy outcomes</p> <p>H-How to ensure adequate access to safe effective contraception for all women with diabetes between the ages of 15-50yrs</p> <p>H-How can we promote the importance of pre-conception care?</p> <p>H-What strategies are available to promote the importance of pre-pregnancy care for all women with diabetes.</p> <p>H-How can we get women with t2dm to partake in pre conception care</p>

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								H-How can we improve access to preconception care for women with pre existing diabetes H-How can we improve engagement with diabetes and pregnancy services including prior to pregnancy H-How can we improve the uptake of preconception care for type1/2 women. H-How can we reach more women of child bearing age with diabetes to support earlier preparation for a safe pregnancy H-What’s the best way to support hard to reach and vulnerable women H-How easy is it for women to access prepregnancy care H-How to improve uptake of contraception and prepregnancy care H-How women who are not engaged with the care offered should be managed? H-How would these women like to access preconception care H-What are the barriers for women attending Diabetes clinics, regardless of type of DM? H-What stops some women with diabetes from attending pregnancy planning clinics? H-What stops some women with diabetes from attending pregnancy planning clinics? H-What stops some women with diabetes from attending pregnancy planning clinics? W-What stops some women with diabetes from attending pregnancy planning clinics? H-What stops women attending preconception planning clinics (outside unplanned pregnancies!) W-What stops women with diabetes from attending pregnancy planning clinic H-Why don't more diabetic women take up pre-pregnancy counselling?
6	During pregnancy	What is the best test to diagnose diabetes in pregnant women?	1	14	0	14	0	H-How can we better detect clinically relevant hyperglycaemia in pregnancy? What tests or care pathways can improve on the current OGTT? H-Is biomarker testing better than a gtt? H-Is there a test better than GTT to diagnose gestational diabetes?

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								<p>H-Is there a way to reliably diagnose diabetes in the absence of a glucose tolerance test (i.e national standard on capillary glucose monitoring)?</p> <p>H-Is there anything better than a gtt?</p> <p>H-Try to establish a nationally agreed test and cut offs for diagnosing GDM. Widening screening criteria to all women</p> <p>H-What diagnostic thresholds matter, using which test (e.g., blood sugar series vs OGTT [and which one of those])?</p> <p>H-what is the best test to diagnose gestational diabetes?</p> <p>H-Which is the best screening method for diabetes in pregnancy?</p> <p>H-what tests in early pregnancy/ booking allow prediction of later gestational diabetes?</p> <p>H-when is the best time to diagnose gestational diabetes? if earlier diagnosis is possible, would earlier diagnosis be more likely in high risk groups for example and would that improve outcomes?</p> <p>H-Why is GTT often inaccurate in diagnosing/ruling out GDM?</p> <p>H-Protocol for GTTs + gastric bypass surgery/band, and maternal age and PCOS.</p> <p>H-What is the best way to diagnose diabetes in patients with previous gastric bypass surgery?</p>
7	During pregnancy	What are the different types of diabetes that develop in pregnancy and how can they be promptly and accurately diagnosed?	60	3	1	2	0	<p>W-How do we make health professionals (especially midwives and diabetes in pregnancy teams) aware of how MODY behaves when women are pregnant. Lack of awareness now means that women are being diagnoses as diabetic too late in their pregnancy.</p> <p>H-Trying to better identify MODY or other types of diabetes in pregnancy that may be misdiagnosed as GDM</p> <p>H-Is it effective (cost and clinically) to screen for type 2 diabetes in early pregnancy?</p>
8	During pregnancy	What is the best way to test for and treat	7	29	1	28	0	<p>H-A query that comes up regularly is how to investigate and manage those women with suspected fetal macrosomia close to term, for instance but not exclusively those with</p>

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		diabetes in late pregnancy i.e. after 34 weeks?						additional risk factors for GDM but who have already had standard screening which was normal. In essence the appropriate diagnosis and management of potential late onset GDM. I know some units perform a series of BM readings for instance. H-Appropriate screening test for GDM after 34 weeks? H-At what gestation should gestational diabetes be used? W-Can you develop diabetes late in pregnancy? What are the symptoms? H-Do we need to screen for GDM after 34 weeks and if so how, what screening test should be used? H-How best to screen for GDM in later pregnancy H-How can late presentation of gdm be best diagnosed? H-How do we diagnose and manage GDM in pregnant women who develop risk factors for GDM past 36/40 in their pregnancy. We require research that looks at normal blood sugars of pregnant women with no risk factors for GDM past 36/40 compared to women who develop risk factors for GDM past 36/40. H-How should we diagnose gestational diabetes in late pregnancy. Should we do OGTT or CBG monitoring? What are normal glucose values later on in pregnancy? H-How to diagnose GDM in late pregnancy H-Is there any utility in testing for gestational diabetes in late pregnancy H-late diagnosis of GDM- is it true, what to do H-Screening for gestational diabetes after 28/40-how can we be sure we are doing the right thing? H-Towards the end of the third trimester (beyond 34/40) when large for gestation age is detected? Would screening for gestational diabetes have any beneficial effect on neonatal outcomes? What cut off for blood glucose should be used? H-What cut offs can be used for the GTT when performed after 28 weeks gestation to diagnose GDM.

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								<p>H-What gestational cut off should be used for GTT? Should GTT be repeated in case of polyhydramnios/ glycosuria and if soup to what gestation?</p> <p>H-What is the best way to detect and treat gdm after 34 weeks?</p> <p>H-What is the best way to diagnose gestational diabetes after 34 weeks gestation?</p> <p>H-What is the evidence for diagnosing gestational diabetes in the late third trimester?</p> <p>H-What should clinicians do when a baby is large for gestational age or has polyhydramnios after 32 weeks? Is there a role for testing for diabetes?</p> <p>H-When is the latest time an oral glucose tolerance test should be performed?</p> <p>H-What is normal glucose tolerance in late pregnancy?</p> <p>H-What is a normal level of glucose in pregnant women after 34 weeks gestation?</p> <p>H-What is the best way to manage late onset growth acceleration suspected to be due to late onset gestational diabetes?</p> <p>H-What to do for pregnant women who has big baby or increased amniotic fluid after 34 weeks? 1. If they had normal OGTT at 28 weeks, 2. and also patients who has never had OGTT before in that pregnancy.</p> <p>H-What do I do with a woman who presents late in pregnancy with slightly raised sugars?</p> <p>H-A RCT to assess the benefit or and target for treating gestational diabetes after 34 weeks gestation.</p> <p>H-Is it worth testing for and treating Gestational diabetes after 34 weeks gestation - does it alter outcomes?</p> <p>H-When is the optimal time and risk factors for performing OGTT in the 3rd trimester, and what is the evidence behind management and pregnancy outcomes of GDM diagnosed late in the 3rd trimester?</p>
9	During pregnancy	Does testing all pregnant women for	17	11	3	8	0	W-Is there any value to testing women for gestational diabetes when they are low risk? As in universal testing?

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		gestational diabetes improve pregnancy outcomes?						<p>H-Is Universal screening or risk factor based screening for GDM more effective in reducing adverse pregnancy outcomes</p> <p>H-Should all women be screened or at risk groups?</p> <p>H-Should GDM screening be offered routinely to all pregnant women?</p> <p>H-Try to establish a nationally agreed test and cut offs for diagnosing GDM. Widening screening criteria to all women</p> <p>H-Why do we need to screen all pregnant women for diabetes?</p> <p>W-Why is GD testing not mandatory for all pregnancies</p> <p>W-Why is not everyone screened for GD by the GTT or similar?</p> <p>H-Insulin resistance increases in pregnancy, we are seeing more thin non typical looking GDMs. Are the diagnosis criteria the right ones?</p> <p>H-Is there any utility in testing for gestational diabetes in large for dates women with no other risk factors</p> <p>H-Why BMI 30 for GTT why not 35 as many will not be diagnosed GTT, mostly behave like normal and their HbA1C is usually normal.</p>
10	During pregnancy	Why do some women develop diabetes in pregnancy and others don't? Can this be predicted for individual women?	30	34	24	4	6	<p>W-Gestational diabetes - is this my fault and could I have prevented it?</p> <p>U-How would I know if I am at risk of gestational diabetes before my first pregnancy and what can I do to prevent it?</p> <p>H-Is it my fault I have GDM?I thought i was eating a healthy diet.</p> <p>W-Is it something I have done to create the diabetes?</p> <p>U-Is the risk of gestational diabetes predictable?</p> <p>U-What are the warning signs during pregnancy and how can the risk be detected early?</p> <p>U-What are the effects on my life are of developing gestational diabetes when already being insulin resistant?</p> <p>W-what effect does fertility treatment have on your liekelihood of developing gestational diabetes? Likewise maternal age?</p>

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								W-Why are some women more likely to get gestational diabetes than others? W-Why do I only get diabetes when pregnant? H-Why do we get diabetes when pregnant? W-Why does diabetes develop in pregnancy? W-Why is this happening to me? U-Is there a greater risk for mothers who are overweight? W-I have eat healthier in my pregnancy than I ever have before, why did I still get diabetes? U-Is there a greater risk for mothers who smoke? H-Why many women get gestational diabetes, including many who are not overweight, and is there anything that mothers who have had gestational diabetes in one pregnancy can do to lessen the risk of it happening in the next pregnancy? W-I had gestational diabetes however I did not fit the normal criteria as in I am of a normal weight, I exercise, eat a healthy balanced diet and had no immediate family with diabetes. So what caused me to have gestational diabetes? W-Am I guaranteed to get gestational diabetes in my second pregnancy W-Am I likely to be diabetic in subsequent pregnancies? W-Am I now likely to have diabetes in other pregnancies W-Do I have chances of getting diabetes for my next pregnancy? W-How likely am I to get diabetes again in following pregnancies, and can I do anything to change this? W-How likely am I to suffer again in any other pregnancies I have? W-If again get pregnant will this come back? W-Should I have a GTT during my second pregnancy if I was gestationally diabetic during my first pregnancy?

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								W-Why do I have diabetes in second pregnancy if I haven't in my first one? W-Will gestational diabetes affect every pregnancy? W-Will I definitely have gestational diabetes in my subsequent pregnancies W-Will I have diabetes in future pregnancies? W-Will I have diabetes with my next pregnancy? W-Will it be better, worse or just the same in my next pregnancy S-Will they have diabetes in all future pregnancies H-What is the incidence of gestational diabetes in pregnant women of Chinese ethnicity?
11	During pregnancy	What are the most effective ways (i.e. diet, lifestyle, medication) to prevent a woman developing diabetes in pregnancy?	26	28	13	12	3	W-Can it be prevented before it occurs W-Can you do anything to prevent gestational diabetes? W-Gestational diabetes - is this my fault and could I have prevented it? H-How can GDM be prevented W-How can I prevent it happening W-How can I prevent the GDM in future? W-How can women prevent gestational diabetes during pregnancy? W-How do I avoid diabetes in pregnancy? H-How do we prevent diabetes in our pregnant population? U-How would I know if I am at risk of gestational diabetes before my first pregnancy and what can I do to prevent it? H-Is weight management effective for the prevention and treatment of gestational diabetes? U-What are the (most) effective ways to reduce the risk of developing diabetes during pregnancy? W-What can be done to prevent developing diabetes in pregnancy?

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								<p>W-Can gestational diabetes be prevented in future pregnancies?</p> <p>W-I had gestational diabetes during my first pregnancy. What can I do to reduce the risk of having gestational diabetes if I get pregnant again/</p> <p>H-Why many women get gestational diabetes, including many who are not overweight, and is there anything that mothers who have had gestational diabetes in one pregnancy can do to lessen the risk of it happening in the next pregnancy?</p> <p>U-If I have had gestational diabetes in my first pregnancy what can I do to prevent it in any future pregnancies?</p> <p>H-How can we help to reduce obesity in young girls and therefore reduce risk of GDM later in their lives</p> <p>H-How health care professional and NHS services helps to promote and recruit women into lifestyle interventions (pre conception, during pregnancy, post pregnancy, inter pregnancy period)?</p> <p>H-What are the factors which are helpful for women to engage with nutritional intervention or/and weight management programme at pre conception, during pregnancy and post pregnancy to reduce risk ?</p> <p>H-Which makes a successful lifestyle intervention for inter pregnancies?</p> <p>H-How can low carbohydrate diets be used in the prevention of gdm in high risk women?</p> <p>W-Are there any changes I could have made to my diet in the first half of pregnancy to avoid getting gestational diabetes at this later stage (less fruit?)</p> <p>H-How to reduce maternal obesity and help prevent GDM next pregnancy</p> <p>H-What pre-conception dietary interventions are most effective in reducing risk of GDM?</p> <p>H-What diets are protective against getting gestational diabetes?</p>

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								W-Can you prevent developing GDM by preventative administration of anti-diabetic medications in high risk pregnant women? W-Is there a way such as medication to prevent gestational diabetes for those at risk? Not just lifestyle advice?
12	During pregnancy	What causes women with diabetes in pregnancy to have larger or smaller than average sized babies, and can it be prevented from happening?	38	10	6	4	0	W-Am I going to have a bigger than average baby and if so why? Can this be avoided if I control my blood sugar throughout pregnancy? W-Are all babies bigger when you have the diabetes W-If blood sugars are controlled, is the baby more likely to be around the average weight/size? H-What are the causes for big baby and excess amniotic fluid apart from Diabetes control? H-what are the determinants of macrosomia other than glucose and BMI W-When diabetes is well-managed during pregnancy, with HbA1c targets consistently met, why do some pregnancy complications still occur (e.g. macrosomia)? W-Why is a child born to a woman with GDM a significant weight at birth? W-Will my baby be born big regardless of good control? H-What are the most effective ways of preventing macrosomia? H-What are the consequences of having a small for gestational age baby for women with GDM?
13	During pregnancy	For women with diabetes, what is the best way to monitor the baby's health during pregnancy? For example, timing of scans, in pregnancies where the baby is	23	5	1	3	1	H- What is the ideal method for monitoring fetal wellbeing of diabetic pregnancies complicated by macrosomic babies? H-as clinicians how should we monitor the fetus that is large for dates in a mother with pre existing diabetes in pregnancy W-How accurate are the late scans in terms of predicting pregnancy outcome and determining if inducing labour is actually necessary? Induction of labour is very painful, quite stressful and unpleasant and I wonder if it is always necessary.

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		larger than average size, etc.						U-Scan more often for tracing closely 2-3 weekly H-what is the best timing of scans in the 3rd trimester?
14	During pregnancy	How do we diagnose or predict problems with the baby in the womb caused by diabetes in pregnant women?	42	8	6	2	0	H-Early predictors of adverse neonatal outcomes in women with diabetes . W-How do we know what impact the diabetes in pregnancy will have on the baby? At what point does it become clear if there is an impact or not? How can we communicate this to the mother effectively? S-If the mother has diabetes, will it affect the development of the foetus in the womb? W-Can diabetes be a sole cause of a baby having a congenital heart defect? H-Is cardiogenesis in weeks 5-10 of pregnancy driven by the opposite polarities of oxygenated (diamagnetic) and deoxygenated (paramagnetic) blood? W-Is gestation diabetes linked to jaundice in my newborn? W-Is my baby likely to have deformities? W-My baby only has one kidney, is this linked to gestational diabetes?
15	During pregnancy	Can the risk of pregnancy loss (miscarriage, fetal death or stillbirth) be predicted in women with diabetes?	27	12	4	7	1	H-Are there risks around having frequent episodes of hypoglycaemia - in terms of IUFD or fetal development H-At what Gestation does the risk around IUFD become the greatest H-Can stillbirth be predicted in women with 1 and t2 diabetes? H-During pregnancy how do we improve detection of the highest risk cases, predicting those in particular at risk of stillbirth. H-What are the risks around IUFD specifically from? H-Are there any tests to help predict still birth and therefore reduce unnecessary induction of labour N-What are the risks of stillbirth in gdm H-What is the risk of still birth among women with gdm

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								<p>W-Does type 1 or other types of diabetes have an increased risk of miscarriage for pregnancy?</p> <p>W-I miscarried and was diagnosed 7 months later - Are these two events linked? Did my type one cause the miscarriage? Did the miscarriage trigger my type 1?</p> <p>W-Why is it so difficult for women with Type One Diabetes to become pregnant and to maintain a pregnancy?</p> <p>W-Will I have issues staying pregnant while having Type 1? ie, Am I more susceptible to miscarriage?</p>
16	During pregnancy	Does variation in a woman's blood sugar (level, range and duration) affect their pregnancy and baby, and if so, how?	29	28	23	4	1	<p>W-How can my blood glucose levels affect my unborn baby both during pregnancy and after birth?</p> <p>W-How detrimental are uncontrolled BG to a babies physical and mental health?</p> <p>H-How does blood sugar level affect the differential magnetic susceptibility of redoxing (oxygenated versus deoxygenated) blood?</p> <p>W-How does HbA1C during pregnancy affect baby's long term outcomes?</p> <p>W-How does standard deviations in blood sugar during pregnancy affect outcomes?</p> <p>W-the importance of managing blood sugar levels</p> <p>W-Will my pregnancy sugars affect my baby once born.</p> <p>W-Does the baby feel the same discomfort the mother feels when you are hypo/hyperglycemia?</p> <p>W-1) How will high blood sugars affect my growing baby?</p> <p>W-How bad is it if I go high during my first trimester? Having the max be 13 mmol/L seems so unachievable and I worry that going to 18 by accident would be detrimental to the fetus.</p> <p>W-How dangerous is it to the baby if I gets lot of carbs and my sugars go high (15+) for a couple of hours but do come down with the insulin I took for the carbs? Now I have a</p>

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				All	W&SN	HCP	Other/unk	
								<p>CGM I see this kind of thing happening in between blood tests (but wouldn't catch if doing blood tests alone).</p> <p>W-How harmful can borderline blood sugar levels be? For eg if my post prandial is between 120 and 140 is that ok for the baby?</p> <p>W-How would my diabetes affect my baby (for example occasional high blood sugar?)</p> <p>W-If I'm not pregnant, a high lasting a few hours is apparently not an issue. How does it affect baby?</p> <p>W-What effect do hypes have on the baby?</p> <p>W-What will happen if I have an occasional treat while having GDs?</p> <p>W-Will my baby be safe if I have a spike in sugars during the pregnancy?</p> <p>H-Are there risks around having frequent episodes of hypoglycaemia - in terms of IUFD or fetal development</p> <p>H-can too many hypos during a pregnancy cause harm to the baby?</p> <p>W-Does hypoglycaemia have an impact on baby's outcomes?</p> <p>U-Does hypoglycaemia in pregnant women with type one diabetes pose a risk for the health of their baby?</p> <p>W-How do lows effect fetal development?</p> <p>W-How does hypoglycemia affect the fetus?</p> <p>W-How does low bloodsugar affect the fetus?</p> <p>H-How relevent are new hypos in the third trimester - is there a specific insulin reduction that increases the risk of stillbirth and hence guides us to offer early delivery</p> <p>W-Is there any long term risk to my baby, of persistent hypos during pregnancy?</p> <p>W-So hypos during pregnancy affect my unborn baby or is it more the risk to myself (and therefore indirectly to the baby from falling, etc...) then are the issue with them?</p> <p>W-Will hypos have a bad effect on my baby?</p>

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17	During pregnancy	What factors aside from maternal blood sugar levels have an effect on pregnancy outcomes? Can these be tested for and used to improve the outcomes of the pregnancy?	34	6	4	2	0	<p>H-Are there better biomarkers (compared with glucose) of risk that could be used at booking and again at the end of the second trimester?</p> <p>H-How much does good glucose control affect outcomes in pregnancy</p> <p>W-How will my diabetes control in pregnancy impact on my categorisation of risk!m? E.g if I maintain normal HBA1C levels as a type 2 diabetic can I be categorised as low risk?</p> <p>W-If my blood glucose level is well controlled during the pregnancy, despite my gestational diabetes diagnosis, what are the probabilities that my baby will develop the related complications?</p> <p>W-If a diabetic women is well controlled can her pregnancy be the same risk as someone who isn't diabetic? And if not, why not?</p> <p>W-What are the critical factors - bm, diet, no of hypos, hypers etc that if managed, will minimise any risks to a pregnancy?</p>
18	During pregnancy	For women with diabetes, does pregnancy affect their risks of diabetes-related complications? Does the risk change with further pregnancies?	49	8	6	1	1	<p>W-Am I more prone to infections through pregnancy because I am diabetic?</p> <p>H-Can we provide some reassurance to women with diabetes about the risks of developing sight threatening retinopathy during pregnancy? What are the risks of developing sight threatening retinopathy in pregnancy? If there is no/mild retinopathy pre-pregnancy? If control has been good for some time, is the risk reduced?</p> <p>W-Do diabetes complications get worse or better during pregnancy?</p> <p>S-Does being pregnant affect the seriousness of the mother's diabetes?</p> <p>U-how much does pregnancy accelerate diabetes complications, the long term affects of someone having one or several pregnancies?</p> <p>S-What impact the pregnancy will be on the diabetic mother's health ..how difficult it is going to be to control her blood sugar levels...is it possible it might damage some her organs like kidneys ...</p> <p>W-What other challenges might t1 woman face in addition to her t1 if she becomes pregnant?</p>

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								W-Will having subsequent children mean I'm more likely to have retinopathy again (developed it with my first baby)
19	During pregnancy	What is the best way to medically manage blood sugar levels during pregnancy for women with different types of diabetes? This includes finding new treatments.	37	43	33	9	1	<p>W-How I control my diabetes level? It always up and down</p> <p>W-HOW will I be able to manage to keep my readings in such a tight range for a whole 9 months, when trying to do that when not pregnant is hard enough?</p> <p>W-What is the best way to manage my diabetes while pregnant as I find my blood sugar is fluctuating a lot.</p> <p>W-What's the best way to manage blood glucose levels?</p> <p>H-At what stage of pregnancy does the body start to find more difficult to process blood glucose?</p> <p>W-Does all mother suffering from diabetes needs to take insulin at the later stage of her pregnancy?</p> <p>S-Does every pregnant woman with diabetes have to have insulin</p> <p>W-How can women be helped to understand insulin requires as blood sugars fluctuate due to hormones and stopping of breast feeding in the year after pregnancy?</p> <p>W-How do we better understand the insulin resistance?</p> <p>H-How does pregnancy effect insulin demands</p> <p>W-How shall / best way to modify my insulin requirements when my insulin resistance changes particularly in the early second / third trimesters?</p> <p>H-How to improve monitoring and insulin delivery to prevent extremes of glucose (high and low)?</p> <p>W-How will my type 1 diabetes be affected by pregnancy.</p> <p>W-I find it hard to make insulin adjustments as I rarely have the same glucose patterns for more than 2 days in a row</p> <p>W-Is it really worthwhile being on micro doses of insulin? Ie does 1 unit daily have any therapeutic effect?</p>

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				All	W&SN	HCP	Other/unk	
								<p>U-is there a set exact pattern that blood glucose levels/insulin requirements progress through pregnancy which can be used as a sort of algorithm to make predictive changes to insulin doses before or as the changes happen? Could this be used to more accurately predict when these changes are not happening that there are implications with placental function and intervene? or is everyone completely different?</p> <p>W-More information should be given on the stages of insulin resistance/usage going up towards the end & what to look out for (like placental problems and decreasing insulin needs)</p> <p>W-What are the reasons behind blood sugar fluctuations in pregnancy, especially greater insulin sensitivity in the first part of pregnancy? Is it because beta cells recover? How can we harness this?</p> <p>W-What to expect regarding insulin requirements throughout pregnancy and breastfeeding?</p> <p>W-What's the rate of change for basal rates as pregnancy progresses? How do I know how much to change it by and when?</p> <p>W-Why can blood sugars vary so much in pregnancy for lots of women?</p> <p>H-Is it best to start women with gdm who you know will need insulin on Metformin prior to this ?</p> <p>H-Is there a way to know whether metformin or insulin (or diet) will be the most effective treatment (on presentation)?</p> <p>W-What could have done during my pregnancy with gestational diabetes to reduce the risk to my child? For example, I successfully controlled my sugar levels my managing my diet, but a routine test towards the end indicated that I was going into ketosis, and I'm worried that this may have affected my child too. I'd have appreciated more advice on how to manage gestational diabetes, and when to switch from diet-based management to other strategies.</p>

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				All	W&SN	HCP	Other/unk	
								<p>H-What is the benefit, if any, of starting metformin when recorded CBGs are normal but USS suggests an apparent increase in fetal size?</p> <p>W-A hypo means a period of higher BG following treatment as a matter of course. We're told that a hypo won't harm baby, so are we better undertreating if unaffected by the lower level?</p> <p>W-Does the likelihood of severe hypoglycemia that needs intervention increase during pregnancy? What's the best way to proactively prepare for it?</p> <p>S-How aware are Healthcare professionals (Diabetes Team, GPs, etc) of the risks of hypo attacks during pregnancy?</p> <p>S-How can family and friends help to prevent or manage Hypos during pregnancy?</p> <p>W-How can I prevent or minimize severe lows during the first trimester in my next pregnancy? And how can I better prevent my next baby from experiencing low blood sugar in the 24 hours after birth (other than keeping my levels within target)?</p> <p>W-How to reduce hypos during pregnancy</p> <p>W-Increase hypo awareness</p> <p>S-Is a mother more likely to suffer from hyperglycemia and hypoglycemia during pregnancy and how can she minimise this?</p> <p>S-Is there anything that can be done to prevent or manage Hypos during pregnancy?</p> <p>W-How can post meal blood glucose spikes be reduced to limit the impact on the development of babies in the womb?</p> <p>H-How to manage high bs on morning</p> <p>H-What are the best ways of addressing hyperglycaemia in pregnancy?</p> <p>S-What do I need to do if someone with Type 1 diabetes is pregnant and are experiencing symptoms of high or low blood sugars?</p> <p>W-Advice & why medication doesn't work/help sugar levels</p>

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								<p>W-I am here to discuss medication as currently on Gliclozide and can't tolerate Metformin</p> <p>W-If current method of insulin is not working effectively, how quickly can solutions/alternatives be identified/and offered</p> <p>W-What are the implications if metformin/insulin are not effective in controlling blood sugar?</p> <p>H-What new drugs can be developed for gestational diabetes to improve pregnancy outcome and future health of mother and baby?</p>
20	During pregnancy	For women with diabetes, what is the best way to manage blood sugar levels using diet and lifestyle during pregnancy? Wider factors to consider include maternity leave, dietitian services, safety and effectiveness of specific diets e.g. low carbohydrate, personalised diets.	3	47	23	22	2	<p>H-How can we encourage lifestyle changes to reduce the impact of diabetes in pregnancy?</p> <p>H-How do you motivate/address some women to make a change in dietary/exercise/lifestyle habits in a short space of time? (Especially young women with significant obesity)</p> <p>H-How important is it to manage weight gain during pregnancy in woman with any type of diabetes, with a BMI >25kg/m2 at conception?</p> <p>H-Is weight management effective for the prevention and treatment of gestational diabetes?</p> <p>H-What is the most effective lifestyle intervention for the treatment of gesational diabetes?</p> <p>W-Do you have to diet during pregnancy?</p> <p>W-Food, control diabetes & pregnancy food intake [illegible] & some Asian food.</p> <p>W-How can I manage diabetes to make sure I still eat everything I need (and baby)?</p> <p>W-How do I eat out sensibly?</p> <p>W-How to balance diabetes management with eating enough for pregnancy</p> <p>W-How to obtain enough calories whilst on a diabetes diet when weight loss is not required</p>

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				All	W&SN	HCP	Other/unk	
								<p>W-I'd like more sound advice ie diet/a lot of conflicting advice</p> <p>W-I'm vegetarian & don't eat a lot of dairy/eggs. How do I make sure I eat the correct amount.</p> <p>W-More education given on dietary requirements during oregnancy and what effects that has on size of the baby</p> <p>W-What are the best ways to modify your diet throughout to help with glucose control?</p> <p>W-What foods are good to eat and what are good carb/sugar targets in meals & snacks</p> <p>W-Whats best to eat</p> <p>U-Can you still continue with a low carb diet when pregnant?</p> <p>H-Gestational diabetes and moderate/low carbohydrate diet</p> <p>W-How do I know how many carbs I can eat on average</p> <p>H-How do I manage a nutritionally complete diet whilst restricting carbs</p> <p>H-How low in carbohydrate can woman's diets in pregnancy be? For all types of diabetes? Can it be carb free?</p> <p>S-I eat a lower carbohydrate diet which helps me maintain normal blood glucose levels. How can I incorporate my diet into a healthy pregnancy and make sure I am getting enough nutrients for my baby?</p> <p>W-I'd like to know more about whether eating low carb to help keep steady blood sugars is a complete no-no or may be ok for some of the day (eg morning) or is there too high risk of developing ketones? Was told in last pregnancy that I should have a min of (I think) 115g CHO which is a bit higher than I typically eat.</p> <p>H-In gestational diabetes what is the lowest amount of carbohydrates that can be safely consumed? So can a low carb diet 50-130g carbs a day be safe in pregnancy?</p> <p>H-Is quality or quantity of carbohydrates more important?</p> <p>H-Low carb diets and ketones. Are they harmful?</p>

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								H-Optimum amount of carbs for GDM and should there be any specific guidance for Type 1s W-Too many carbs vs ketosis - how to balance it? W-What impact does ketosis have on a baby? H-What is the evidence for low carbohydrate diets the management of GDM? H-Best dietary recommendation for patients with gestational diabetes H-Could we have national guidelines on the dietary recommendations for gestational diabetes? H-Is there any evidence to support dietary guidelines in gestational diabetes? W-Should I only eat when my blood sugar is within target range? W-What can I eat with gestational diabetes? W-What can I eat/should I avoid eating now I have been diagnosed with gestational diabetes before I see my consultant? H-What is the best diet to follow when you are diagnosed with gestational diabetes. W-what is the best diet to follow while pregnant with GD W-Why does the NHS give type 2 diabetes diet information for women with gestational diabetes as this diet is inadequate and does not mention protein and fat pairing? H-What is the ideal diet to follow during pregnancy for women with GDM? H-Could improving dietetic time with patients improve health outcomes and reduce medication use/dose? U-The impact of having the support of a Diabetes Dietitian H-Would it be beneficial to have dietetic advice when I discover I am pregnant? H-Can we personalise diet recommendations to improve glycemic control? H-What thought and psychological processes are driving food choice especially when less good food choice is made so that better choices can be supported in the future

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				All	W&SN	HCP	Other/unk	
								W-Does starting mat leave earlier in the pregnancy have an effect on diabetes control towards the end of pregnancy?
21	During pregnancy	What is the best way to monitor blood sugar levels of pregnant women with diabetes?	44	8	2	6	0	<p>H-How best to we monitor women’s blood sugars in pregnancy in a way that is easier</p> <p>H-How to improve monitoring and insulin delivery to prevent extremes of glucose (high and low)?</p> <p>H-How useful is hba1c in pregnancy and in which patients can't we use it and why</p> <p>W-Is it necessary to take blood 4 times a day if you have pregnancy diabetes? How are mothers supported with this? It's quite stressful.</p> <p>W-To ensure my levels are kept in a safe range during pregnancy, what help/technology is available to assist me?</p> <p>H-What is the best method to monitor both compliance and CBGs in pregnancy? Should we be checking CBGs twice daily or 4 times a day?</p> <p>H-What is the best way to monitor and treat GDM?</p> <p>H-What s the best method of monitoring blood glucose after diagnosis of GDM?</p>
22	During pregnancy	How can diabetes and pregnancy management be tailored for individual women during their pregnancy? Taking into account, for example, different types of diabetes, the phase or type of pregnancy, risk to pregnancy, or women’s own preferences.	45	34	17	15	2	<p>H-Glycaemia control in labour v glycaemic control in pregnancy The evidence seems to be sparse and without clear differentiation between gestational and pre-existing diabetes. It would be great to have better understanding of the impact of glycaemic control during pregnancy and delivery in relation to neonatal hypoglycaemia which would also be in keeping with ATAIN.</p> <p>U-I understand that much of the guidelines for pregnancy with diabetes are based on evidence from studies/experience in gestational diabetes. Doesn't the type of diabetes make a difference to how the pregnancy should be managed and the glucose targets set? Surely the physiology and duration of exposure to high (and low) blood sugars would have an effect? - evidenced by different treatments for different types. Also what about treatment effects?</p> <p>W-Why is it more difficult to control blood glucose levels in a second GDM pregnancy?</p>

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								<p>W-As a type 2 I been through an early miscarriage and subsequently two successful pregnancies. After weight loss and careful management my diabetes is in remission. How will my care be managed in any future pregnancies?</p> <p>H-Are our target blood sugars accurate or does this need revising in pregnancy?</p> <p>W-How does standard deviation (ie hypers and hypos) affect neonatal and maternal outcomes - over and above HbA1c?</p> <p>W-How tight does my control have to be to ensure my baby won't be impacted? (It is very difficult to balance tight control vs hypos)</p> <p>W-What are the idea blood ranges really?</p> <p>H-What are the targets for blood glucose for optimal outcome</p> <p>W-What is "normal" activity for blood sugars during each trimester</p> <p>H-what is optimal blood glucose range before and during pregnancy? what's risk if BG control isn't that good during the different trimesters?</p> <p>W-What is the best A1c to have before and during pregnancy?</p> <p>U-What is the HBA1C target for pregnant women with diabetes?</p> <p>W-What measures are expected after taking the medication?</p> <p>W-Which weeks of pregnancy are most important for keeping tight control to prevent birth defects or issues for the baby and mother with diabetes?</p> <p>W-Which weeks of pregnancy for women with type I diabetes are the most important for getting blood sugars in range in order to prevent spina bifida or other severe developmental abnormalities?</p> <p>W-Why are blood sugar targets for gestational diabetes so strict during pregnancy? (I lost weight due to strict targets- I didn't need to loose weight, my pre pregnancy weight was 8 stone 8 , my post pregnancy weight was 8 stone , my baby weighed 6' 15, you do the maths)</p> <p>H-Why is the fasting blood sugar target 5.3 for gdm when on gtt it is 5.6mmols</p>

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								<p>H-Are there different types of gestational diabetes, with different treatments and different implications for the baby?</p> <p>H-Are there ways of stratifying women with gestational diabetes so that we can avoid overtreating some women and over medicalising their pregnancy while ensuring women at higher risk get the care they need</p> <p>H-Are we now over-treating GDM by glucose criteria?</p> <p>H-Are women with well controlled, diet controlled GDM more at risk of adverse neonatal outcomes?</p> <p>W-Does the fact that I had to inject insulin put me at an even higher risk than if it were diet controlled?</p> <p>W-How high is the risk to my baby</p> <p>W-If I have gestational diabetes can I have a low risk birth?</p> <p>H-Is Gestational Diabetes one condition or a myriad of different conditions requiring different approaches?</p> <p>W-Can gestational diabetes disappear before the end of your pregnancy??</p> <p>H-Why do some women diagnosed with GDM appear to have no symptoms/completely controlled glucose levels after not changing their diet?</p> <p>W-I'm pregnant with twins, how will this impact my blood sugars?</p> <p>H-Women's preferences for medical treatment of Gestational Diabetes: Metformin or Insulin?</p> <p>H-How could the patient experience be improved when attending diabetes in pregnancy appointments?</p> <p>H-How do pregnant (and affected by diabetes) women's experiences of antenatal clinic attendance impact on willingness to adhere to appointment schedules (and what can be done to enhance their experiences)?</p>

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								H-How do women feel about the current schedule of visits for type 1 and type 2 diabetes W-Is there an optimum frequency of antenatal appointments? (e.g. I found that weekly travel to antenatal clinic and waiting for long periods of time was uncomfortable and exhausting.)
23	During pregnancy	What psychological interventions can help motivate or support pregnant women in their diabetes management?	31	3	0	3	0	H-Even knowing the potential for a poor pregnancy outcome - why do some women with Type 1 & 2 DM struggle to be motivated to make changes or seek advice about their treatment ? H-What thought and psychological processes are driving food choice especially when less good food choice is made so that better choices can be supported in the future H-What psychological interventions can positively affect pregnant women with diabetes' attitudes towards optimising their glycaemic control in pregnancy?
24	During pregnancy	Are diabetes medications (e.g. metformin, insulin) safe in pregnancy and for the baby in the short and long term?	33	24	16	8	0	W-Can being on medication (metformin & insulin) have any affects on baby? H-Can we use all the newer analog Insulins during pregnancy W-does metformin have any lasting effects W-Does taking insulin during pregnancy will lower insulin producing capacity of my body in long term? W-How does insulin and metformin affect my baby? W-How does insulin and metformin affect my baby? W-If I cannot control my blood glucose well enough using diet alone and therefore have to be prescribed metformin or insulin, what are the possible side effects to taking these during pregnancy - is there any possibility of short or long term problems for my baby? H-Is metformin safe in the long-term to offspring? H-Is Metformin safe to take during pregnancy? H-Is metformin safe?

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								<p>W-Is my child more likely to develop diabetes because I had insulin dependant gestational diabetes?</p> <p>H-should we be using metformin in pregnancy</p> <p>W-What are the biggest risks to me and my baby post partum if i have insulin dependant gestational diabetes post ?</p> <p>W-What are the long term affects of Metformin on children whose mothers took it in pregnancy?</p> <p>W-What dosage/how many metformines, will I be prescribed with per day as a maximum before being prescribed with insuline injection if I couldn't control with metformine?</p> <p>H-What effects can Metformin and Gliclazide used in pregnancy have in the longer term (e.g. post GDM pregnancy) on the mother and child, is there any data from T2DM pregnancies? Also does the need for oral hypoglycaemics and/or insulin in pregnancy have long term effects if diagnosed with diabetes?</p> <p>W-What insulin was best when I became pregnant</p> <p>W-What side affects are there with taking metformin in preg?</p> <p>W-Why is metformin used when it is not licensed for use in pregnancy?</p> <p>S-Will injections of insulin affect the development of the foetus.?</p> <p>W-Will my baby have lasting issues due to taking insulin in pregnancy?</p> <p>W-Will taking insulin in pregnancy increase chances of developing diabetes post pregnancy?</p> <p>H-Apart from Metformin, which oral antidiabetic drug is safe in pregnancy ?</p> <p>H-Is metformin safe in growth restricted pregnancies?</p>
25	During pregnancy	What is the best way to manage sickness/vomiting in	51	6	3	3	0	<p>H-How do glucose levels respond to morning sickness especially post meal if vomited to inform best management strategies</p> <p>W-How to manage diabetes with sickness/hyperemesis</p>

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		pregnancy with diabetes? For example, hyperemesis in women with type 1 diabetes.						H-Hyperemesis and type 1 link W-What is the best way manage my diabetes when ill in pregnancy H-What to do with diabetes and ketone management when pregnant woman is unwell? S-Will having morning sickness affect glucose levels.?
26	During pregnancy	How can the diagnosis and management of preeclampsia be improved for pregnant women with diabetes with and without diabetes-related complications e.g. diabetic nephropathy?	56	5	3	2	0	H-can we try and understand more about the overlap between pre-eclampsia and diabetic nephropathy? how do we differentiate one from the other and what is the best way of managing progressive diabetic nephropathy during pregnancy W-Does type 1 diabetes increase the risk of other pregnancy-related complications (eg., pre-eclampsia) W-I had diabetes and pre-eclampsia, meaning my baby was being highly monitored for simultaneous risks of being too big and too small: how do the two conditions interact? W-I have concerns around preeclampsia- are long term effects of TY1-D similar to the warning signs/symptoms of preeclampsia and how do doctor know the difference and prepare patients for the risks early in their pregnancy? H-is pre-eclampsia in a diabetes pregnancy a more severe clinical condition that pre-eclampsia outwith of diabetes?
27	During pregnancy	How can we optimise the benefits and reduce the risks of steroid administration in pregnant women with diabetes?	52	9	2	6	1	N-Are subcutaneous VRll as good or better at managing glycaemic control during steroid administration, compared to VRlll and which is more acceptable to the woman? H-Most effective monitoring during steroid administration and control of glucose levels H-Corticosteroids and diabetes in pregnancy. So many ladies with diabetes deliver pre-term and are given steroids to reduce the incidence of respiratory disease of the newborn but, of course, steroids have a huge impact of women's blood glucose levels. It would be great to understand more about the risks and benefits of giving steroids and risks of raised maternal blood glucose levels. This would be especially useful for those 'borderline' situations when a woman with diabetes may have an elective LSCS slightly earlier than the usually recommended 39 weeks but the benefits of steroids are not so clear cut. It would be useful to understand the optimum time to give steroids. Is it worth

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								<p>giving them to all women with diabetes at 28 weeks, for example, so that blood glucose levels can return to normal in good time prior to the delivery</p> <p>W-Do the benefits of steroids for pre-term delivery outweigh the negatives poorer glycaemic control in mothers?</p> <p>W-Do the current guidelines re: use of steroids prior to c-sections before 39 weeks apply to diabetics? (The evidence feeding into this guideline is from a non-diabetic population)</p> <p>H-Does giving antenatal steroids for elective CS before 38-39 weeks improve pregnancy outcomes for women with diabetes? Are the benefit of steroids for earlier gestations to the same extent in women with diabetes compared to those without diabetes?</p> <p>H-Should steroids be given for caesarean sections after 37 weeks but before 39 weeks in patients with diabetes?</p> <p>H-Should steroids be given up to 39 weeks for elective caesarean in women with diabetes?</p> <p>H-Variations in protocols for the management of steroids in women with diabetes, does it matter?</p>
28	During pregnancy	In women with diabetes, does diabetic neuropathy affect the woman's ability to feel and detect movements of their baby in the womb? What impact does this have on risks and outcomes?	59	1	1	0	0	W-Does neuropathy impact the ability to feel and detect fetal movements
29	Labour and birth	In women with diabetes, what is the best way to manage	15	18	14	4	0	<p>W-How to manage diabetes during labour & breastfeeding the baby</p> <p>W-How will I manage my bloods while giving birth?</p>

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		their blood sugar levels during labour and delivery? For example, blood sugar targets, women managing their diabetes themselves, insulin infusions/sliding scale, use of diabetes management/monitoring technology.						<p>W-How will my blood sugar levels be managed during labour and delivery?</p> <p>W-What is the best way of maintaining optimal glucose control in labour/ around the time of birth?</p> <p>W-How can we improve delivery care for type 1 diabetics? E.g. sliding scale insulin is terrifying! Would prefer to keep diabetes management separate from delivery team.</p> <p>W-How can women with diabetes advocate for controlling their own diabetes in the hospital during delivery?</p> <p>W-How do we ensure guidelines and staff knowledge are up to date with the latest technology such as CGMS.</p> <p>W-Should a diabetic specialist be on call to advise midwives who are unfamiliar with managing type 1 diabetics during labour if necessary?</p> <p>W-Why do midwives/obstetrics not follow diabetes management plans while on the labour ward?</p> <p>H-optimal blood glucose control during labour and delivery</p> <p>H-what is the best management of diabetes during labour and what is the evidence for the BG targets currently used in guidelines</p> <p>H-Do we overuse variable rate insulin infusions in the peri-partum period</p> <p>H-Does having hourly blood sugars after corticosteroid administration, and possibly a sliding insulin scale of insulin make a meaningful difference in outcome for babies of diabetic mothers?</p> <p>W-Should sliding scales continue to be used if they are not providing optimum blood glucose management in labour/steroid treatment?</p> <p>W-Recognising signs of hypo during labour</p> <p>W-Will midwives have an understanding of type 1 and how to recognise hypos? Will they help me treat hypos?</p>

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								W-Am I able to leave my insulin pump and if applicable CGM or freestyle libre on during labour and delivery rather than sliding scale? W-Can I use my pump and cgm instead of a sliding scale during labour?
30	Labour and birth	Why does being on diabetes medications in pregnancy affect the way women can give birth?	47	2	1	1	0	W-Why can I not go to full term if I have gestational diabetes and am on insulin? Is there really a benefit to early delivery? H-Why/does being prescribed metformin affect my birthing plans?
31	Labour and birth	When is it safe for pregnant women with diabetes to have a vaginal birth compared to e.g. a caesarean section?	48	19	15	3	1	W-After the birth of my son I was extremely traumatised, one of the reasons which was that I felt forced into having an induction at 38 weeks. The induction went wrong and it was only afterwards that they told me I could have said no but that they don't like to give women with diabetes options because they want to avoid stillbirths. I want to know how many women with diabetes are traumatised because of this and if a more individualised approach would be better. Most research points to that the highest risks of stillbirths are if there is suboptimal glycemic control and other health factors. Surely with the use of continuous glucose monitors and better diabetes care there should be a higher drive for letting diabetic women birth naturally which is better for both mother and baby and less likely to end up in emergency c-sections and assisted deliveries which are detrimental to the bonding process. H-Am I more likely to have a caesarean section? W-Am I more likely to need a C section? W-Can I have a water birth? W-Chances of having a normal delivery U-Do pregnant women with diabetes have to undergo C-sections for the delivery of their baby? W-Does it mean my chances of cesarean section are pretty high? W-How ill GD affect my delivery, the date I give birth and any complications

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								<p>W-How likely is it that I will be able to opt for a normal, vaginal birth versus c-section?</p> <p>W-How likely is it that I will end up having a C-Section?</p> <p>W-How will my diabetes impact the birth of my child?</p> <p>W-Is my baby more likely or less likely to require NICU support if I attempt vaginal delivery (via induction) rather than opting for elective c section (given that there is high rate of emergency section for those induced, and emergency section more likely to result in NICU than elective)</p> <p>H-Mental Health and diabetes and pregnancy. The current drive to improve and identify mental well-being of all pregnant women must also apply to women diabetes, many of whom start pregnancy with depression. The increased risks of stillbirth, miscarriage, large/small babies, intervention in labour and delivery must impact women’s mental health. It would be great to be able to help with that too. Low-risk midwifery and diabetes in pregnancy. It appears to me that women with diabetes have reduced choices when it comes to pregnancy and delivery, often for very good reasons. However, some treatments have been developed for low risk women to help them avoid unnecessary intervention that are not available to women with diabetes. For example, recently a lady with type 1 diabetes had a breech presentation, other women would be offered moxibustion to ‘turn’ the baby and avoid the need for a caesarean section. This lady was declined because she was ‘high risk’. I suspect that the risks associated with moxibustion are a lot less than risks associated with a caesarean section. Women are often told they are high risk due to their diabetes and so must deliver in a consultant led unit so are cared for in very clinical settings which can increase stress and anxiety, sometimes it is necessary but there may be ways to provide more individualised care and perhaps even reducing the amount of intervention.</p> <p>H-Most women enquire about the mode of delivery early in the pregnancy, assuming aCSCS may be offered.</p> <p>W-Which is safer for expectant mothers with type one and their babies - c section or natural birth?</p>

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				All	W&SN	HCP	Other/unk	
								<p>W-Why can't women with diabetes have "normal" delivery experiences such as water birth?</p> <p>W-Will having type 1 diabetes prevent me from having a natural birth</p> <p>W-Will I have a natural labour</p> <p>W-Will I have to be induced/c-section</p>
32	Labour and birth	Is it always necessary for pregnant women with diabetes to be induced?	18	17	15	2	0	<p>W-After the birth of my son I was extremely traumatised, one of the reasons which was that I felt forced into having an induction at 38 weeks. The induction went wrong and it was only afterwards that they told me I could have said no but that they don't like to give women with diabetes options because they want to avoid stillbirths. I want to know how many women with diabetes are traumatised because of this and if a more individualised approach would be better. Most research points to that the highest risks of stillbirths are if there is suboptimal glycemic control and other health factors. Surely with the use of continuous glucose monitors and better diabetes care there should be a higher drive for letting diabetic women birth naturally which is better for both mother and baby and less likely to end up in emergency c-sections and assisted deliveries which are detrimental to the bonding process.</p> <p>W-Do I have to be induced or is it still possible for a pregnant woman with type 1 to be allowed to go into labour naturally/spontaneously?</p> <p>W-Given that current birth guidelines that propose early induction for women with type I diabetes do not have clinical evidence to support this practice (i.e. it is just how things have always been done), can a study be done to see if this leads to better outcomes versus other births (e.g. expectant management, planned C-section, etc)?</p> <p>W-How accurate are the late scans in terms of predicting pregnancy outcome and determining if inducing labour is actually necessary? Induction of labour is very painful, quite stressful and unpleasant and I wonder if it is always necessary.</p> <p>W-Is early induction required in all women who are identified with gestational diabetes</p>

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								<p>H-should women with GDM be induced at or before term? if yes, should induction be for all or reserved for those with severe GDM and would that improve outcomes?</p> <p>W-Why are so many women with diabetes coerced into induction?</p> <p>W-Why are so many women with gd coerced into inductions?</p> <p>W-Why do they recommend diabetic women to be induced?</p> <p>W-Why do you induce diabetic mums?</p> <p>H-Why needed to be induced? can be left term plus 10-14 days</p> <p>W-Will I be induced at 38 weeks?</p> <p>W-Will I be induced with my labour</p> <p>W-Will I have to be induced/c-section</p> <p>W-Will I have to be induced?</p> <p>W-Will I need to be induced?</p> <p>W-Would I go into early labour?</p>
33	Labour and birth	In pregnant women with diabetes, how does diabetes affect whether inducing birth will work?	54	2	2	0	0	<p>W-As induction usually fails to work for women with type I diabetes, what can women do to improve their chances of an induction working?</p> <p>W-Why do most women with diabetes have failed inductions?</p>
34	Labour and birth	When is it safe for pregnant women with diabetes to give birth at full term compared with early delivery via induction or elective caesarean? For example, factors may	5	16	9	4	3	<p>W-2) Does having the baby early have any benefit?</p> <p>W-3) Has anybody ever gone full term?</p> <p>U-Early deliver planning</p> <p>W-If I control my blood sugar can I carry my baby to full term?</p> <p>W-What are the risks of waiting for spontaneous labour for women with diabetes?</p> <p>N-What is the optimal gestation to offer elective delivery to women diagnosed with GDM controlled with medication?</p>

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		include managing timing of delivery according to changes in blood sugar levels, insulin requirements, size of the baby.						<p>W-Why can I not go to full term if I have gestational diabetes and am on insulin? Is there really a benefit to early delivery?</p> <p>W-Why don't T1 mothers go full term?</p> <p>W-Will I be able to go full term?</p> <p>W-Will I carry my baby full term and my baby have no health problems</p> <p>H-Dropping insulin requirements in the late 3rd trimester? At what point should we intervene and consider early delivery?</p> <p>H-How relevant are new hypos in the third trimester - is there a specific insulin reduction that increases the risk of stillbirth and hence guides us to offer early delivery</p> <p>W-If mothers insulin requirements are reducing at the end of a pregnancy (sign of placenta failure), when should the baby be delivered?</p> <p>U-is there a set exact pattern that blood glucose levels/insulin requirements progress through pregnancy which can be used as a sort of algorithm to make predictive changes to insulin doses before or as the changes happen? Could this be used to more accurately predict when these changes are not happening that there are implications with placental function and intervene? or is everyone completely different?</p> <p>H-I have rarely seen shoulder dystocia complicate delivery in a mother with GDM. However, I will deliver early, sometime at 37+ weeks, if the scan suggests a macrosomic baby but don't know if that is actually the right thing to do. So when is the best time to deliver a macrosomic baby in a mother with GDM?</p> <p>H-What is the optimal timing for delivery of the macrosomic fetus?</p>
35	Labour and birth	When is it safe for women with diabetes to give birth at home or in a midwifery unit/birthing centre	24	4	0	4	0	<p>H-How will diabetes affect my options for delivery of my baby and my choices for place of birth?</p> <p>H-If my diabetes is well controlled during pregnancy can I remain at home and have any observations of my baby that deemed necessary undertaken at home?</p> <p>H-Is it safe for women with gdm ,diet controlled to deliver in a birth unit?</p>

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		compared with a hospital birth?						H-Will being diagnosed with gestational diabetes affect my choice of birth place and why?
36	Labour and birth	Do all women with diabetes need continuous Electronic Fetal Monitoring during labour?	35	1	0	1	0	H-Do women with well controlled, diet controlled Gestational Diabetes Melitus require continuous Electronic Fetal Monitoring?
37	Labour and birth	Is it possible to predict shoulder dystocia in pregnant women with diabetes, and does this improve pregnancy and birth outcomes?	43	2	0	2	0	H-Predictor model for shoulder dystopia in pregnant women with diabetes. H-What is the risk of shoulder dystocia in pregnancy and delivery?
38	Labour and birth	What are the labour and birth experiences of women with diabetes, and how can their choices and shared decision making be enhanced?	9	6	3	3	0	W-Can I chose what type of delivery I want? H-Do women with diabetes get a choice in mode of delivery and does it affect their well-being post deliv ery? H-How best to do shared decision making on mode and timing of delivery post-Montgomery ruling H-Pregnant women with diabetes - what is their experience of induction of labour (and does anything need to change)? W-What are my birth options with GD? W-What support is there for diabetics who do not want to be induced?
39	After pregnancy and birth	How does breastfeeding affect diabetes management for the mother? How can women with	32	37	31	6	0	W-Brestfeeding - How does breastfeeding affect diabetes management in the mother? W-Does breasfeeding affect diabetes W-Does breasfeeding affect diabetes manag in the mother? H-Effect of breast feeding in Type 1 and Type 2 diabetes?

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		diabetes be better supported during breastfeeding?						W-How can blood sugars be better managed post pregnancy with suitable support for breast feeding women? W-How can I be better supported with breastfeeding - the impact on blood sugars etc W-How can I best manage my blood glucose levels as breastfeeding fluctuates with baby's demand and gradually decreases during weaning? W-How can I receive more support for breast feeding with type1 diabetes in my next pregnancy? W-How can women be helped to understand insulin requires as blood sugars fluctuate due to hormones and stopping of breast feeding in the year after pregnancy? W-How does breastfeeding affect diabetes management in the mother? W-How does breastfeeding affect diabetes management in the mother? W-How does breastfeeding affect diabetes management in the mother? W-How does breastfeeding affect diabetes management? W-How does breast feeding affect diabetes management and/or my baby? W-How does breastfeeding affect diabetes management in the mother W-How does breastfeeding affect diabetes management in the mother H-How does breastfeeding affect diabetes management in the mother? H-How does breastfeeding affect diabetes management in the mother? H-How does breastfeeding affect diabetes management in the mother? H-How does breastfeeding affect diabetes management in the mother? W-How does breastfeeding affect diabetes management in the mother? W-How does breastfeeding affect diabetes management in the mother? W-How does breastfeeding affect diabetes management in the mother? W-How does breastfeeding affect diabetes management in the mother? W-How does breastfeeding affect diabetes management in the mother?

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								W-How does breastfeeding affect diabetes management in the mother? W-How does breastfeeding affect diabetes management in the mother? W-How does breastfeeding affect diabetes management in the mother? W-How does breastfeeding affect diabetes? W-How to manage diabetes during labour & breastfeeding the baby W-What affect does breastfeeding have etc W-What affects does breastfeeding have on the baby and the mother if mother had diabetes during pregnancy as well as after birth? W-What is the best meal during breastfeeding? W-what is the effect of breast feeding on diabetic women and what can be done to support women in this process? W-What to expect regarding insulin requirements throughout pregnancy and breastfeeding? H-why is it that women who need insulin and breast feed need a reduced amount of insulin? W-Does breastfeeding an older child through pregnancy affect gestational diabetes?
40	After pregnancy and birth	What effect does diabetes have on breastmilk and breastfeeding? For example, the safety of diabetes medications, and low-carbohydrate diets.	41	26	21	5	0	W-Can I still breastfeed with gestational diabetes H-Do high blood glucoses postnatally have an effect on breast milk production? W-Does blood glucose control impact supply in breastfeeding? W-Does diabetes affect breastfeeding? W-Does having diabetes impact on my ability to breastfeed? W-Does it affect breastfeeding? W-Does T1 make breastfeeding harder? W-How does breastfeeding become affected? What do I need to do differently? W-How does diabetes impact milk supply immediately after birth?

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								W-How does gestational diabetes affect breastfeeding? H-How will diabetes affect breastfeeding? W-If I breast feed, will my blood glucose levels at the time of breast feeding affect my breast milk? W-What about for breastfeeding baby? W-What affects does breastfeeding have on the baby and the mother if mother had diabetes during pregnancy as well as after birth? W-Will breastfeeding affect my baby by passing on sugars etc? H-Possible impact of delayed lactation for Diabetic mother following induction of labour or delivery by elective LSCS W-Is it ok to be in ketosis when breastfeeding? W-Can being on medication (metformin & insulin) have any affects on baby? W-does metformin have any lasting effects W-How does insulin and metformin affect my baby? W-How does insulin and metformin affect my baby? W-Can I still breast feed when on so much medication & insulin W-If what I have eaten/drank when breastfeeding does effect the baby, how can you be sure that artificial insulin doesn't effect the baby? H-Is metformin safe in the long-term to offspring? H-Is metformin safe? W-Is breastfeeding affect by taking meds for diabetes in pregnancy
41	After pregnancy and birth	How effective is collecting colostrum/breast milk before birth in improving clinical	28	8	3	5	0	H-discussion around expressing in the antenatal period to reduce risk of baby developing Hypoglycaemia following delivery. H-Do babies, of mothers with any form of diabetes, given colostrum harvested antenatally, have better clinical outcomes than babies given formula top ups?

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				All	W&SN	HCP	Other/unk	
		outcomes for the baby when born? When is the best time to collect this?						H-Do I need to express my breastmilk antenatally? W-How and when will I need to begin harvesting colostrum and more detail on the reasons why? W-How/when to harvest colostrum H-Is Colostrum harvesting really associated with clinical benefits? H-When should we talk about antenatal expression of colostrum? W-Would the NHS consider full practical support for mothers wishing to harvest colostrum antenatally?
42	After pregnancy and birth	Does diabetes in the mother affect the short and long-term risk of the child (and future generations) developing diabetes and can it be prevented?	12	64	52	8	4	N-Baby not develop diabetes W-Could diabetes be passed onto the baby? H-Diabetes and childhood obesity for my baby W-Did my Gestational Diabetes put me and/or my son at a higher risk of diabetes? W-Do my children have an increased risk or. Diabetes or other auto immune disorders? W-Does diabetes management in pregnancy impact on the likelihood of my child developing diabetes? U-Does gestational diabetes in the mother have any klong term effect on the child's risk of developing any form of diabetes? W-Does gestational diabetes increase the risk of my baby having diabetes later on? W-Does how well my diabetes is controlled during pregnancy effect babies chances of developing it? S-During pregnancy will baby grow healthlyy ..is there a chance baby might be diabetic when he/she born W-Effect of diabetes on the baby - more likely to have it? Type 1/type 2? H-GDM ladies often ask if their baby will be born with Diabetes. H-How can affect my baby after birth, regarding diabetes?

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Supplementary information

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#	Phase of pregnancy	Indicative Question	FINAL RANK	Initial survey submissions count by group				Initial survey questions
				All	W&SN	HCP	Other/unk	
								W-How can I reduce the risk of my baby developing diabetes in his / her life? W-How it will effect myself & baby after baby birth. Will my baby get any diabetes W-How likely am I or my child to develop type 2 diabetes later in life after GD? S-How likely is it that diabetes will be passed from a pregnant mother to her baby? W-How likely is it that I will pass T1 on to my daughter? W-How likely is it that my child will also develop type 1 diabetes at some point in their lives? W-How likely is my baby to have diabetes? W-How likely is that my child will develop type 1 diabetes if a parent has it? H-How will this affect risk of developing Type 1 Diabetes or Type 2 Diabetes later in life? W-I have type 2 diabetes as do my parents. How likely are my kids to inherit it too? W-I understand that gestational diabetes increases the risk of diabetes for my child too. What can I do during childhood to reduce her risk? S-Is diabetes hereditary? W-Is it possible my type 1 could pass on to my children even though there is little family history of the illness and it is not thought to be genetic reasons I've ended up with it? W-Is my baby likely to have complications/diabetes when they are born? W-Is my baby likely to have diabetes later in life? W-Is my baby more at risk from developing diabetes in later life W-Is my child more likely to develop type 2 later in life W-Is my MODY diabetes likely to be inherited by my baby? Is there a way of testing before birth? W-Is there a chance of my child having diabetes later in life because of me U-Is there a risk that mother and/or baby will become diabetic after the birth?

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#	Phase of pregnancy	Indicative Question	FINAL RANK	Initial survey submissions count by group				Initial survey questions
				All	W&SN	HCP	Other/unk	
								W-Is there evidence that my baby will have a higher chance of developing type 2 diabetes later in life? H-what are the chances of the baby developing diabetes in the future? W-What are the chances that my child would develop diabetes? W-What are the risks to my babies of having diabetes W-What effect does the diabetes have on the baby ? Will the baby develop diabetes later in life ? W-What effects does diabetes have on both during and after pregnancy on my child? Higher risk of having diabetes W-Whats the chance of the baby getting diabetes? W-Will I or my baby develop diabetes later in life? W-Will my baby be affected by diabetes in their life? W-Will my baby be diabetic also? H-Will my baby be diabetic? W-Will my baby be diabetic? H-Will my baby be likely to have diabetes? W-Will my baby develop diabetes more than likely? W-Will my baby get diabetes in the future? W-Will my baby get type 1 W-Will my baby go on to struggle with diabetes later on in life? W-Will my baby have diabetes? W-Will my baby have diabetes? W-Will my baby suffer from diabetes? I know there is a 10% chance W-Will the baby and me be affected by the diabetes after labour/future S-Will the baby be born with diabetes

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#	Phase of pregnancy	Indicative Question	FINAL RANK	Initial survey submissions count by group				Initial survey questions
				All	W&SN	HCP	Other/unk	
								U-Will the baby be born with diabetes? W-Would breast feeding have helped lower my baby's chances of developing type 2 diabetes later in life? W-Would my child be diabetic? W-Would my child have a higher chance of developing diabetes W-Could my child have a child with diabetes or have issues later in life H-How/can breastfeeding prevent diabetes in your children? W-Is my female child likely to develop gestational diabetes as I did? W-When my baby girl will be pregnant is she will be diabetic either? W-Does glucose control in pregnancy affect the level of risk my child has for developing diabetes in the future? (specifically Type 1)
43	After pregnancy and birth	What are the long-term effects on the child (apart from risk of diabetes) due to the mother having diabetes during pregnancy? For example, weight in the short and long term, and mental development.	11	86	72	12	2	S-Are there any long term health effects for the child even if they are born healthy W-Baby's health after pregnancy W-Babys health in childhood - Is my diabetes likely to affect my baby's health later on in their childhood or adulthood? W-Do diabetic blood sugar levels in pregnancy affect the health of baby longer term after birth? W-Does having gestational diabetes impact my baby and their future health? W-Does it affect baby after birth? W-Does my blood sugar effect my baby's health later during their childhood or adulthood? H-How diabetes in pregnancy affects the baby born and mother's life after pregnancy? U-How does having diabetes during pregnancy affect the health of my baby in childhood and adulthood? W-How will diabetes affect my baby

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#	Phase of pregnancy	Indicative Question	FINAL RANK	Initial survey submissions count by group				Initial survey questions
				All	W&SN	HCP	Other/unk	
								W-How will diabetes effect my child throughout his life? W-How will it affect baby in their future? W-How will it affect my baby in the future and immediately after birth? W-How would it affect me and/or my baby in the future W-Impact of diabete on baby's health longterm W-Is baby likely to have health issues due to diabetes W-Is diabetes affect my baby later on in their childhood? W-Is diabetes likely to effect my baby in childhood W-Is it likely to affect my baby later on in life H-Is my diabetes affecting my child in the future? W-Is my diabetes likely affect my babies heath later W-Is my diabetes likely to affect baby's health later in life? W-Is my diabetes likely to affect my baby's health later on W-Is my diabetes likely to affect my baby's health later on in life W-Is my diabetes likely to affect my baby's health later on in their adulthood? W-Is my diabetes likely to affect my baby's health later on in their adulthood? H-Is my diabetes likely to affect my baby's health later on in their childhood or adulthood? H-Is my diabetes likely to affect my baby's health later on in their childhood or adulthood? W-Is my diabetes likely to affect my baby's health later on in their childhood or adulthood? W-Is my diabetes likely to affect my baby's health later on in their childhood or adulthood?

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#	Phase of pregnancy	Indicative Question	FINAL RANK	Initial survey submissions count by group				Initial survey questions
				All	W&SN	HCP	Other/unk	
								W-Is my diabetes likely to affect my baby's health later on in their childhood or adulthood? W-Is my diabetes likely to affect my baby's health later on in their childhood or adulthood? W-Is my diabetes likely to affect my baby's health later on in their childhood or adulthood? W-Is my diabetes likely to affect my baby's health later on in their childhood or adulthood? W-Is my diabetes likely to affect my baby's health later on in their childhood or adulthood? W-Is my diabetes likely to affect my baby's health later on in their childhood or adulthood? W-Is my diabetes likely to affect my baby's health later on in their childhood or adulthood? W-Is my diabetes likely to affect my baby's health later on in their childhood or adulthood? W-Is my diabetes likely to affect my baby's health later on in their childhood/adulthood? W-Is my diabetes likely to affect my baby's health later on in their life? W-Is my diabetes likely to affect my baby's health later on their childhood? W-Is my diabetes likely to affect my baby's health later on? W-Is my diabetes likely to affect my baby's health later on? W-Is my diabetes likely to affect my baby's health later? W-Is my diabetes likely to effect my baby & myself after pregnancy? W-Is my diabetes likely to effect my babys health later on in their childhood or adulthood

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#	Phase of pregnancy	Indicative Question	FINAL RANK	Initial survey submissions count by group				Initial survey questions
				All	W&SN	HCP	Other/unk	
								<p>W-I've had Type1 for XX years. My son is XX. I was poorly controlled in pregnancy (no meters back then). Did this cause his schizophrenia (diagnosed X years ago)?</p> <p>W-My babies health/development is my biggest priority. I would have liked to know more statistics and the impact on my baby's health later on in their childhood/adulthood during early pregnancy stages, and before I became pregnant.</p> <p>W-That's right is my diabetes likely to affect my baby's health in child or adulthood?</p> <p>W-What are the long term effects for me/ baby</p> <p>H-what effect having raised or low blood glucose levels will have on the baby in the long and short term?</p> <p>W-What effects will the diabetes on my baby in the future?</p> <p>W-What is known about the inflated birth weight and associated weight stability period (which does not often follow the usual Midwife rules or time frame) of babies born to mothers with Type 1 diabetes.</p> <p>W-Will diabetes have long term effects on my baby?</p> <p>W-Will it affect my baby in childhood/adulthood?</p> <p>N-Will it effect my baby's health later in life</p> <p>W-Will my baby be affected after birth if they don't have diabetes at birth?</p> <p>W-Will my baby go on to lead a normal and healthy life?</p> <p>W-Will my baby suffer any side effects once born?</p> <p>W-Will my diabetes affect my baby later in life?</p> <p>S-Will there be any continuing effects from my partners diabetes in our child</p> <p>W-Will my diabetes affect my child's mental development</p> <p>H-Diabetes and childhood obesity for my baby</p> <p>W-Is my baby at a higher risk of struggling with his weight after birth and onwards?</p>

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#	Phase of pregnancy	Indicative Question	FINAL RANK	Initial survey submissions count by group				Initial survey questions
				All	W&SN	HCP	Other/unk	
								H-Are you aware of the potential long term effects of gestational diabetes on your new baby? W-Can cause any harm to my baby that diabetes during pregnancy? H-Could gestational DM affect baby's health in childhood/adulthood? W-Does GDM affect baby post birth H-Does treating GDM improve long term consequences for offspring? W-Dose GDM affect the baby's health e.g. chances of developing DM in the future, being obese, appetite etc? W-How does diabetes affect my baby after delivery W-How GD can affect me and baby now and in the future W-How likely is GDM to effect my baby once born? W-How likely will the gestational diabetes that I had, affect my child's health later on in their childhood or adulthood? W-How will GD effect my baby in the short/long term W-How will gestational diabetes affect mine/baby after birth? W-How will gestational diabetes affect the birth and future health of my baby? W-Is my child more likely to develop diabetes because I had insulin dependant gestational diabetes? W-Long term effect of GD on child? H-What are the implications for the baby in adulthood when his/her had GDM? H-What are the lasting effects of gestational diabetes on the baby in the womb, and are there treatments in pregnancy that can prevent these? W-Will having gestational diabetes in pregnancy have any effect on my baby's likelihood of developing diabetes in later life if I have used a donor egg? W-Will it affect my baby now and in the future?

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#	Phase of pregnancy	Indicative Question	FINAL RANK	Initial survey submissions count by group				Initial survey questions
				All	W&SN	HCP	Other/unk	
								<p>W-Will there be any long term problems that my baby might be more likely to have as a result of being born to a mother with gestational diabetes?</p> <p>W-Will there be any ongoing health issues for my baby after they are born?</p> <p>H-Do large for gestational age babies of Mums with diabetes lose a bigger % of their birth weight in the first 2 months of life?</p>
44	After pregnancy and birth	What is the best way to prevent, monitor, and manage low blood sugar levels of babies born to mothers with diabetes during pregnancy?	22	18	12	6	0	<p>H-Are there any certain predictors of neonatal hypoglycaemia</p> <p>H-Glycaemia control in labour v glycaemic control in pregnancy. The evidence seems to be sparse and without clear differentiation between gestational and pre-existing diabetes. It would be great to have better understanding of the impact of glycaemic control during pregnancy and delivery in relation to neonatal hypoglycaemia which would also be in keeping with ATAIN.</p> <p>W-How can I prevent or minimize severe lows during the first trimester in my next pregnancy? And how can I better prevent my next baby from experiencing low blood sugar in the 24 hours after birth (other than keeping my levels within target)?</p> <p>W-Is my baby going to experience low blood sugar and what can I do to help avoid it</p> <p>H-What period of time is needed for hyperglycemia to cause neonatal hypoglycaemia.</p> <p>W-Would like to understand more about neonatal hypoglycaemia-do we know when mother's BG has biggest impact on this? My first child born with neonatal hypoglycaemia and throughout last 2 weeks and labour my BG levels were excellent.</p> <p>W-When I give birth and stop taking medication will my baby need time to adjust?</p> <p>H-do we need to monitor the baby's blood sugar for 24 hours in those that are diet controlled?</p> <p>W-Should I or my son be regularly checked for diabetes? If so, how often?</p> <p>W-When will doctors be able to tell if my baby has diabetes?</p> <p>W-Why isn't there a simple and quick way of testing a babies blood glucose? Eg via a bm monitor and not a capillary ABG.</p>

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#	Phase of pregnancy	Indicative Question	FINAL RANK	Initial survey submissions count by group				Initial survey questions
				All	W&SN	HCP	Other/unk	
								W-Will my baby be tested for diabetes at any stage? W-Will the baby be tested for diabetes? W-Does expressing colostrum prior to birth, and syringe feeding it to the baby immediately after birth (especially in the case of a C-section where baby is unable to feed immediately) reduce the risk of hypoglycaemia in the baby? H-How can breastmilk stabilise baby's blood glucose levels after birth? W-Will breastfeeding help baby as regards to hypoglycemia H-Does delayed cord-clamping reduce incidents of neonatal hypoglycaemia? W-Does delaying the cutting of the umbilical cord until it has stopped pulsating reduce the risk of hypoglycaemia in the baby?
45	After pregnancy and birth	In women with diabetes, what effect does pregnancy have on diabetes-related complications (pre-existing and new) later on in their life?	39	29	23	6	0	W-Am I likely to experience any issues down the line connected to type 1 and having been pregnant? W-Later life effects - What effect does pregnancy have on getting diabetes complications later on in life? W-The effect it will have later on me H-What affect does pregnancy have on getting diabetes complications later on in life? W-What complications might you get later in life W-What effect does pregnancy have (on myself) on getting diabetes related complications later on in life? Will I have a shorter life expectancy? W-What effect does pregnancy have on getting diabetes complication later on in life H-What effect does pregnancy have on getting diabetes complications later on in life? H-What effect does pregnancy have on getting diabetes complications later on in life? H-What effect does pregnancy have on getting diabetes complications later on in life? H-What effect does pregnancy have on getting diabetes complications later on in life? W-What effect does pregnancy have on getting diabetes complications later on in life?

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#	Phase of pregnancy	Indicative Question	FINAL RANK	Initial survey submissions count by group				Initial survey questions
				All	W&SN	HCP	Other/unk	
								W-At what stage in 'later life' might I get diabetes problems? W-What effect does pregnancy have on getting diabetes complications later on in life? W-What effect does pregnancy have on getting diabetes complications later on in life? W-What effect does pregnancy have on getting diabetes complications later on in life? W-What effect does pregnancy have on getting diabetes complications later on in life? W-What effect does pregnancy have on getting diabetes complications later on in life? W-What effect does pregnancy have on getting diabetes complications later on in life? W-What effect does pregnancy have on getting diabetes complications later on in life? W-What effect does pregnancy have on getting diabetes complications later on in life? W-What effect does pregnancy have on getting diabetes complications later on in life? W-What effect does pregnancy have on getting diabetes complications later on in life? W-What effect does pregnancy have on getting diabetes complications later? W-What effect does pregnancy have on getting diabetes complications later? W-What effects does pregnancy have on complications in type 1 diabetes for the mother in coming years? W-What effects does pregnancy have on getting diabetes complications later on in life W-Does pregnancy and/or breastfeeding offer any protection against developing complications later in life? W-How does pregnancy affect diabetic retinopathy and does the trajectory of diabetic retinopathy change post-birth? H-How to manage eye-complications best? Establish a register of accidental anti-VEGF injections in early pregnancy so outcomes can be monitored
46	After pregnancy and birth	In women with gestational diabetes, what is best way to reduce their risk or prevent them from	8	64	46	14	4	W-After gestational diabetes would I continue or be more likely to develop diabetes W-After gestational, what likeliness I get type 2 for second gestational pregnancy? W-Am I going to have diabetes after delivery? W-Am I still have diabetes after delivery?

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#	Phase of pregnancy	Indicative Question	FINAL RANK	Initial survey submissions count by group				Initial survey questions
				All	W&SN	HCP	Other/unk	
		developing other types of diabetes any time after pregnancy?						W-Did my Gestational Diabetes put me and/or my son at a higher risk of diabetes? H-Do apps work for prevention of type 2 diabetes post- delivery in women who had gestational diabetes? W-Do I have chances to get diabetes after pregnancy? U-Does gestational diabetes increase ones chances of developing either T1, T2 or other less common diabetes? W-Does having GD put me at higher risk of T1/2 diabetes? H-Does having metformin during pregnancy have any protective effects of developing Type 2 in the future H-GDM ladies often ask if my Blood glucose levelsc are normal with diet does that mean the diabetes has gone. W-Having gestational diabetes, what are the chances of going on to develop diabetes later in life? H-How can gestational patients help prevent the development of type 2 diabetes. W-How can I avoid developing Type 2 diabetes later in life/after pregnancy? W-How can I avoid getting diabetes permanently? H-How can I predict whether the women in front of me will develop type 2 diabetes after GDM or not ? W-How can I prevent it? H-How can women who had gestational diabetes be best helped to avoid progression to type 2 diabetes, considering the current Diabetes Prevention Project does not automatically include this as a referral criteria (unless glycaemia indicates)? H-How can women with GDM reduce their risk of T2DM in the future W-How can you prevent developing GDM into DM? any research in this area would be helpful especially the role of nutritional and exercise- with tailored programmes developed

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#	Phase of pregnancy	Indicative Question	FINAL RANK	Initial survey submissions count by group				Initial survey questions
				All	W&SN	HCP	Other/unk	
								W-How could I prevent the diabetes returning in my later life? W-How does diabetes evolve once I have given birth (me & my baby)? W-How likely am I or my child to develop type 2 diabetes later in life after GD? W-How likely are women with gestational diabetes in pregnancy to develop diabetes post pregnancy? W-How long does it take for gestational diabetes to go after givign birth W-How long will it take to go away once I give birth W-How much more likely am I to develop type 2 diabetes in the future? W-How to stop diabetes to not have it in the future H-How will this affect risk of developing Type 1 Diabetes or Type 2 Diabetes later in life? H-If a woman is diagnosed as GDM what measures should she adopt to avoid diabetes in later life W-If you have diabetes in pregnancy, will you have it for life? W-Is my diabetes gonna stay with me after baby born? U-Is there a risk that mother and/or baby will become diabetic after the birth? W-Is there more chance of me becoming a diabetic later in life now I've had it gestationally? W-It will go after pregnancy? W-Should I or my son be regularly checked for diabetes? If so, how often? U-What are the best ways to manage post-pregnancy disease risk for women diagnosed with diabetes during pregnancy? W-What are the chances of having diabetes straight after pregnancy? H-What are the most recent figures in relation to GDM becoming type 2 diabetes in later life

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				All	W&SN	HCP	Other/unk	
								H-What is the most effective way of preventing type 2 diabetes in later life in women who have had gestational diabetes? W-What percentage of women who had gestational diabetes developed type 2 diabetes after pregnancy? W-What percentage of women with gestational diabetes acquire type 2 diabetes in future W-What usually happens with GDM after giving birth? H-What's the best way of preventing type 2 diabetes for those who have had gestational diabetes? W-Whats the best way to avoid developing diabetes after pregnancy W-When is type 2 likely to affect if I get it? W-Will breastfeeding improve my risk of type 2 later in life, how likely is that? W-Will diabetes go once I have had the baby? W-Will diabetic patients (me) have to keep injecting insulin after I give birth? H-Will I always have diabetes if I developed it pregnancy? W-Will I develop diabetes later in life? W-Will I get diabetes if I've had g.d? W-Will I go on to have permanent type 2 diabetes after my baby is born? How can I prevent this? W-Will I have diabetes after pregnancy? W-Will I have diabetes after the baby is born W-Will I have diabetes forever? W-Will I or my baby develop diabetes later in life? W-Will I still have diabetes after pregnancy W-Will my diabetes go after birth

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				All	W&SN	HCP	Other/unk	
								W-Will my diabetes go after pregnancy U-Will the diabetes "go" after I have given birth? W-Will I be insulin dependent after pregnancy? H-Women affected by GDM frequently ask if they will automatically develop Type 2 DM. W-What effect does pregnancy have on getting diabetes later
47	After pregnancy and birth	In women with gestational diabetes, what are the long-term effects of diabetes on their health, such as heart disease, any time after pregnancy? Can this be prevented?	19	22	16	4	2	H-Are mothers more likely to address cardiovascular risk factors (such as obesity, sedentary lifestyle, hypertension, or smoking) after pregnancy if pregnancy was complicated by GDM? H-How can we influence long term cardiometabolic health in women after a pregnancy affected by GDM? H-Should we be telling gestational diabetics about long term cardiovascular risks in addition to Type 2 diabetes prevention? W-Affect on my long-term health H-How diabetes in pregnancy affects the baby born and mother's life after pregnancy? W-How does diabetes affect me after delivery W-How will diabetes affect me after birth? W-How would it affect me and/or my baby in the future W-Is my diabetes can affect my life in the future W-Is my diabetes likely to effect my baby & myself after pregnancy? W-Is there any possible complications for me W-What are the biggest risks to me and my baby post partum if i have insulin dependant gestational diabetes post ? N-What effect does it have later on in life W-What effect pregnancy diabetes have later in life W-What impact does having gestational diabetes have on my future health?

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#	Phase of pregnancy	Indicative Question	FINAL RANK	Initial survey submissions count by group				Initial survey questions
				All	W&SN	HCP	Other/unk	
								W-Will effect me after pregnancy W-Will I be ok after giving birth U-Will I have any lasting side effects? W-Will it affect me after the birth? W-Will it affect me later in life? W-Will it affect my health later in life? W-Will the baby and me be affected by the diabetes after labour/future
48	After pregnancy and birth	What are the specific postnatal care and support needs of women with diabetes and their infants? For example, breastfeeding, recovery from childbirth, managing diabetes with a newborn.	6	9	8	1	0	W-What support do fathers with diabetes need when transitioning to parenthood? (Recognising significant change in routine/sleep patterns etc). W-How does life with a newborn affect diabetes management? (Sleep deprivation; erratic and unpredictable schedule; stress: breastfeeding; birth recovery; dietary changes etc.) W-Sleep affects my sugars so much and friends say that they are awake every 2 hours. How will I cope with postnatal sugar control due to lack of sleep? W-Why is there very little advice/education given about breastfeeding a baby born to a diabetic mother? I struggled to breastfeed because of this W-Will I be allowed to exclusively breastfeed or will HCPs insist that I must supplement with formula? What are my rights to refuse that formula be given to my baby if I plan to breastfeed on demand? H-What information about the benefits of breastmilk and the link with diabetes do women want in pregnancy? W-Operative recovery post birth for a diabetic - after care plan W-How does diabetes affect recovery from childbirth and interventions eg emergency c section? W-What are the specific things women with diabetes need to consider when healing from a c-section?

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49	After pregnancy and birth	What is the best way to follow-up and screen women with gestational diabetes after their pregnancy?	25	10	4	6	0	<p>H-Are there examples of good follow-up programmes for women who had GDM during pregnancy?</p> <p>W-Do I have my bloods check post birth -3/6 months?</p> <p>H-How can we encourage women to keep in touch about GDM post delivery (apart from post delivery BS)</p> <p>H-How can we maintain contact with GDMs when out of the 28 days midwife care criteria</p> <p>H-How could more effective screening after gestational diabetes help women in the future?</p> <p>W-How long do you continue monitoring bloods post birth?</p> <p>W-How long does it take for gestational diabetes to go after giving birth</p> <p>W-How many years after gestational diabetes do you have to be tested?</p> <p>H-What is the optimal strategy for engaging mothers with GDM after pregnancy?</p> <p>H-What's the best way to encourage and organise postnatal screening for women who have had gdm?</p>
50	Cross-cutting	How can diabetes technology be used to improve pregnancy, birth, and mother and child health outcomes? For example, continuous and glucose flash monitoring, insulin pumps, closed loop systems, apps, etc.	1	10	3	6	1	<p>H-Broad question would be how successful new technologies (closed loop, CGM, FSL) are in improving outcomes of pregnancy on women with diabetes.</p> <p>W-What technology can be developed such as closed loop insulin pumps/cgms to aid diabetic women preconception and during pregnancy?</p> <p>U-how much does technology improve the pregnancy outcomes? CGM, flash, pumps and looping. How much do these change the outcomes for mums and babies and subsequent cost implications? i.e. NICU savings etc</p> <p>H-How to use technology most effectively</p> <p>H-Technology to help pregnant women</p> <p>W-To ensure my levels are kept in a safe range during pregnancy, what help/technology is available to assist me?</p>

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								H-What are the best new technologies to evaluate in pregnancy? W-What technology will be available to help manage my diabetes in preparation/during and after pregnancy? H-What role will continuous glucose monitoring, pumps and closed loop technologies play in improving outcomes? H-Do insulin pumps have any impact on neonatal outcomes?
51	Cross-cutting	How effective (clinically and cost) is the use of continuous glucose monitoring in pregnant women with diabetes?	36	7	2	5	0	W-Does the CGM work equally well in pregnancy as in other circumstances? H-How to support HCPs to most effectively implement real-time CGM in T1D pregnancy for all women in all clinics H-use of technology in BG monitoring for all ladies with diabetes who are pregnant- does it help improve BG control? W-Would access to continuous monitoring of blood/interstitial glucose levels improve outcomes for mothers and babies and reduce the need for medication? H-Is continuous blood glucose monitoring safe/appropriate to use for labour and delivery/LSCS. H-CGMS in other types of diabetes during pregnancy H-Would women with Type 2 diabetes in pregnancy benefit from using CGM/Libre?
52	Cross-cutting	How safe and effective is the use of closed loop systems (also known as artificial pancreas) in improving outcomes of pregnancy and birth?	50	3	2	1	0	S-I use a DIY closed-Loop system with a pump to manage my T1 Diabetes. Will I get support using this in pregnancy and especially during the birth? W-Impact of closed loop systems on pregnancy outcomes H-Is there much research regarding the use of artificial pancreas in pregnancy
53	Cross-cutting	What are the emotional and	4	14	12	2	0	W-Emoitiall How do you fees about having GD

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		mental well-being needs of women with diabetes before, during, and after pregnancy, and how can they best be supported?						<p>W-How can I manage my pregnancy and type 1 diabetes without the feelings of guilt around blood sugar levels?</p> <p>W-How can medical professionals treat type 1 pregnancy mums with empathy and understanding more consistently?</p> <p>W-How prevalent is psychological distress in women with diabetes who are pregnant? Can this be reduced?</p> <p>H-Mental Health and diabetes and pregnancy. The current drive to improve and identify mental well-being of all pregnant women must also apply to women diabetes, many of whom start pregnancy with depression. The increased risks of stillbirth, miscarriage, large/small babies, intervention in labour and delivery must impact women’s mental health. It would be great to be able to help with that too. Low-risk midwifery and diabetes in pregnancy. It appears to me that women with diabetes have reduced choices when it comes to pregnancy and delivery, often for very good reasons. However, some treatments have been developed for low risk women to help them avoid unnecessary intervention that are not available to women with diabetes. For example, recently a lady with type 1 diabetes had a breech presentation, other women would be offered moxibustion to ‘turn’ the baby and avoid the need for a caesarean section. This lady was declined because she was ‘high risk’. I suspect that the risks associated with moxibustion are a lot less than risks associated with a caesarean section. Women are often told they are high risk due to their diabetes and so must deliver in a consultant led unit so are cared for in very clinical settings which can increase stress and anxiety, sometimes it is necessary but there may be ways to provide more individualised care and perhaps even reducing the amount of intervention.</p> <p>W-What are the mental health implications of trying to manage diabetes during pregnancy. Particularly those with pre existing mental health conditions</p> <p>W-Are women with type 1 diabetes at higher risk of diabetes burnout /reduced self care with their diabetes following the birth? If so how can they be better supported?</p>

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								<p>W-If women are forced to have inductions because of their diabetes the health care providers should do their utmost to prepare women for it mentally and to care for them afterwards. I felt like such a failure as a woman after the induction failed and it will stay with me for the rest of my life. No one spoke to me about this beforehand and no one cared afterwards.</p> <p>W-What emotional support needs do women need during and following pregnancy if their diabetes has impacted the baby in some way?</p> <p>H-What impact does the sudden drop in follow up after baby is born have for women and babies long and short term (especially wellbeing)</p> <p>W-Why diabetics/persons with diabetes do not have post-pregnancy psychological support readily available?</p> <p>W-Is there a link between diabetes in pregnancy and mental health? Are women with diabetes more likely to develop antenatal or postnatal depression, or severe anxiety?</p> <p>W-What impact does having and managing diabetes plus a newborn have on mental health, including PND?</p> <p>W-Will diabetes & pregnancy cause postpartum depression</p>
54	Cross-cutting	How can support networks i.e. family and friends, help to support women with the challenges they face in pregnancy? Also, how can support networks themselves be supported?	58	6	5	1	0	<p>W-A large amount of mothers with gestational diabetes - groups/talking - what works best</p> <p>S-How can a member of someone's support network help to alleviate these worries and challenges around type 1 diabetes in pregnancy?</p> <p>W-How can I get in touch with other mum's during and straight after pregnancy to support each other?</p> <p>S-How do I help my partner maintain tight control and try to avoid too many hypos</p> <p>S-What can I do to help ?</p> <p>H-What information would partners / significant others find helpful when supporting someone through a pregnancy with diabetes</p>

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55	Cross-cutting	How should diabetes specialists and clinics be involved at all stages, pre-pregnancy to after birth, for women with diabetes?	46	3	3	0	0	W-Why are the Endocrine team not actively involved during inpatient stays in hospital when they are the experts in glucose management? Why is dosing of insulin left to Obstetricians?? W-Why diabetics/persons with diabetes are not treated with MDT during pregnancy W-What is the plan for care during pregnancy and is there a joint pregnancy and diabetes clinic?
56	Cross-cutting	How can remote clinics (telemedicine) be used to improve care for pregnant women with diabetes?	13	4	0	4	0	H-How can remote consultations work best? H-Which is the best service model for delivering care? Combination of Appointment? Virtual? Talks? Drop ins? Group work? Telephone clinics? H-How does IT - help or perhaps slowed us down? H-Are there any tools/technology such as titration guides, telemedicine instead of clinic appointments or self reported weights that could support glucose optimisation between clinic appointments
57	Cross-cutting	How can community care services for pregnant women with diabetes be improved?	53	3	0	3	0	H-How best to support these mothers in the community H-How can Community Midwives add value to women who are attending frequent ANC appointments for Diabetes? H-How can Midwives best support pregnant women affected by diabetes to manage their condition and achieve best outcomes for themselves and their babies?
58	Cross-cutting	Why do standards and advice for pregnant women with diabetes vary across NHS Trusts?	16	3	3	0	0	W-Are there national guidelines for care of people with diabetes during pregnancy; such as consistency in blood glucose target range, midwife or consultant care etc? W-Why does advice e.g. fasting level values differ trust to trust? W-Why is information so varied between hospital trusts? Surely it should be the same - EG testing levels and levels which determine whether or not someone has gestational diabetes
59	Cross-cutting	How can continuity of care and support	20	18	14	4	0	W-Are there any aftercare classes post-birth?

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		services be improved for women with diabetes before, during and after pregnancy?						<p>W-How do we ensure continuity of care for mothers before, during and after pregnancy including during the early months with a newborn.</p> <p>H-How should women with diabetes be supported during the postnatal period?</p> <p>W-How do I modify my insulin requirements post birth? Hospital food is high in sugar, wards tend to be very hot in summer months. More support and care is needed from the diabetes pregnancy / post natal consultant team.</p> <p>H-I have T1 diabetes, when will I be reviewed in OPD post-natally?</p> <p>W-Should not a diabetic/person with diabetes mother receive more support if she has a premature baby? She would be unable of "skin to skin" after birth.</p> <p>W-What advice and support will I be given for managing my diabetes after the birth?</p> <p>H-What is the best way to ensure women receive correct follow up after giving birth</p> <p>W-What postpartum supports are available to expectant mothers with diabetes?</p> <p>W-What support available after my pregnancy</p> <p>W-What support is available to help me manage my gestational diabetes as well as post natal support available?</p> <p>H-What support is offered for new mothers for managing their diabetes?</p> <p>W-What support will be available after giving birth?</p> <p>W-What support will there be for me post-delivery and in the weeks/months after giving birth as I try to keep my diabetes well managed?</p> <p>W-What type of family support is available before/during/after pregnancy?</p> <p>W-Where is the care and support after you have had the baby? Medical professionals kept going on at me about how my diabetes affected my growing foetus but no one cared about how it affected him afterwards which is find highly hypocritical.</p> <p>W-Why is there not enough post partum care for type one mothers?</p> <p>W-Can I see the same doctor, nurse and midwife each time I visit the clinic or will it be an ever changing team who never get to know me?</p>

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60	Cross-cutting	What information e.g. on risks or complications, should be given to women with diabetes during their pregnancy? What is the best way to give this information?	21	15	12	2	1	<p>W-During diagnosis I would of felt more comfortable to attend an appointment to ask the side effects and how to manage sooner rather than waiting a few days.</p> <p>W-How can you ge existing info on diabetes and pregnancy (e.g RCOG patient guidelines, NICE guidelines and info from Diabetes UK available to mothers in diabetic and midwife clinics. Printed materials work. People only find things online if they are looking. But putting printed materials in clinics will help people be aware of what they don't know.</p> <p>W-How can you make women aware of the implications of managing their diabetes effectively when pregnant. Education needs to be clear about implications of poor management on baby and women's health - in very simple terms.</p> <p>W-How do we know what impact the diabetes in pregnancy will have on the baby? At what point does it become clear if there is an impact or not? How can we communicate this to the mother effectively?</p> <p>N-How much information should we give women on stillbirth</p> <p>W-Why do doctors not know more about use of pumps or GCMs during the birthing process?</p> <p>W-How do we ensure guidelines and staff knowledge are up to date with the latest technology such as CGMS.</p> <p>W-Why is it still so difficult to get on the pump when you are pregnant if you haven't been before? My team tried to say that the libre sensor was enough to gain optimum control and I've been TY1 -D since I was 19 months old.</p> <p>W-How can women better access new technology to improve their control when planning a pregnancy?</p> <p>W-How to better educate women & family about pregnancy & diabetes?</p> <p>H-Is the information women receive on risks in pregnancy easy to understand/access. What are the online options</p>

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								<p>W-More information should be given on the stages of insulin resistance/usage going up towards the end & what to look out for (like placental problems and decreasing insulin needs)</p> <p>W-What is the best way to facilitate constructive conversations between HCPs and pregnant women with diabetes? Anecdotally it seems that often HCPs appear unwilling to discuss things that they can't give a firm answer on, but what the patient is actually looking for isn't a firm answer, just a sense of direction. This miscommunication causes frustration - how can we better facilitate those conversations.</p>